Long-term Management Plan

PETERSEN RANCH MITIGATION BANK
LEONA VALLEY, LOS ANGELES COUNTY, CALIFORNIA

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Interagency Review Team

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TABLE OF CONTENTS

[TOC \O "1-1" \T "HEADING 2,2"]

LIST OF TABLES

[TOC \t "Table placeholder" \c]**LIST OF APPENDICES**

Appendix A: Figures
- Figure 1- General Vicinity Map
- Figure 2- Elizabeth Lake Bank Property
- Figure 3- Petersen Ranch Bank Property
- Figure 4- Plat Map for the Elizabeth Lake Bank Property
- Figure 5- Development Plan for the Elizabeth Lake Bank Property
- Figure 6- Plat Map for the Petersen Ranch Bank Property
- Figure 7- Development Plan for the Petersen Ranch Bank Property
- Figure 8- Infrastructure Map for the Petersen Ranch bank Property
- Figure 9- Infrastructure Figure for the Elizabeth Lake Bank Property

Appendix B: Grazing Plan

Appendix C: Hunting Rules, Regulations, and Impact-Minimizations Measures for State of California and the Petersen Ranch Mitigation Bank

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1.0 INTRODUCTION

1.1 Purpose of Establishment

The Petersen Ranch Mitigation Bank (Bank) was established by the Bank Enabling Instrument (BEI) to compensate for unavoidable impacts to, and to conserve and to protect Waters of the U.S., Waters of the State, covered species and covered habitats. The Bank Properties (Figure 1) are located near Leona Valley, in Los Angeles County, California and consist of the Elizabeth Lake Bank Property (314 acres; Figure 2) and the Petersen Ranch Bank Property (3,789 acres; Figure 3). The BEI Signatory Agencies are the Los Angeles District of the U.S. Army Corps of Engineers ("USACE"), Region 9 of the U.S. Environmental Protection Agency ("EPA"), the Lahontan Regional Boards ("Lahontan RWQCB"), and the California Department of Fish and Wildlife ("CDFW"). These agencies comprise and are referred to jointly as the Interagency Review Team ("IRT"). Terms used in this Long-term Management Plan have the same meaning as defined in the BEI.

After complete implementation of the Development Plan (Exhibit C-1 of the BEI), the Bank Properties will include aquatic resources that are considered waters of the U.S., and/or Waters of the State which have been preserved, enhanced, rehabilitated, re-established, and established as described in the Development Plan. The Bank Properties will also support habitat for covered species including Swainson's hawk (*Buteo swainsoni*) foraging habitat and nesting habitat. In addition, the Bank Properties will support numerous sensitive vegetation communities which are detailed in the Biological Resources Inventory (BRI) reports for each Bank property (WRA 2012a; WRA 2013a).

1.2 Purpose of this Long-term Management Plan

The purpose of this Long-term Management Plan is to ensure the Bank Properties are managed, monitored, and maintained in perpetuity. This management plan establishes objectives, priorities and tasks to monitor, manage, maintain and report on the Waters of the U.S., Waters of the State, covered species and covered habitat on the Bank Properties. This management plan is a binding and enforceable instrument, implemented by the Conservation Easements (CE) covering the Bank Properties.

The Bank will be established in Phases ~~overtimeover time~~ with each subsequent Phase being incorporated into the Bank through recordation of separate CEs and approval from the IRT, as outlined in the BEI. Initially, the BEI includes the approval and recordation of conservation easements over Area E of the Elizabeth Lake Property (160 Acres) and Area A of the Petersen Ranch Property (1,386 acres), including the previously recorded Southern California Edison (SCE) easement (see Section 3.1.6 below), which will comprise Phase 1. For the purposes of this Long-term Management Plan "Bank Properties" refers to only those Areas for which the CEs have been recorded.

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1.3 Land Manager and Responsibilities

The Land Manager will be determined by the Property Owners, LV Lake Elizabeth, LLC (Elizabeth Lake Bank Property) and LV-BP Investors Ranch, LLC (Petersen Ranch Bank Property). The Land Manager, and subsequent Land Managers upon transfer, shall implement this Long-term Management Plan, managing and monitoring the Bank Property in perpetuity to preserve its habitat and conservation values in accordance with the BEI, and the conservation easement. Long-term management tasks shall be funded through the Endowment Fund. The Land Manager shall be responsible for providing an annual report to the IRT detailing the time period covered, an itemized account of the management tasks and total amount expended.

2.0 ELIZABETH LAKE BANK PROPERTY

2.1 Property Description

2.1.1 Setting and Location

The Elizabeth Lake Bank Property is approximately 314 acres, is located adjacent to the Angeles National Forest (ANF) on the western shores of Elizabeth Lake, and is depicted on the United States Geologic Survey (USGS) Lake Hughes 7.5-minute quadrangle (Figure 2). The Elizabeth Lake Bank Property is composed of designated Assessor's Parcel No. 3235-005-020, 3235-005-015, 3235-005-026, 3235-005-027, 3235-006-003, 3235-006-001, 3235-006-002, 3235-008-002, 3235-008-003, and 3235-008-017.

A large portion of the Elizabeth Lake Bank Property consists of historic alluvial fans in the flat valley bottoms. The southern portions of the Elizabeth Lake Bank Property contain steep slopes and narrow side canyons. Several earthen berms and surface water control structures had been constructed in these southern canyons that resulted in altered drainage patterns, incised stream channels and a substantial reduction of the active alluvial floodplain. Implementation of the Bank Development Plan will restore flows to these historic floodplains and will re-establish alluvial floodplain communities.

In 2013 a large wildfire, the Powerhouse Fire, burned through the Elizabeth Lake Bank Property and the surrounding National Forest lands. This fire resulted in a nearly complete burn of the Elizabeth Lake Bank Property, removing almost all surface vegetation and structures.

2.1.2 History and Land Use

The Elizabeth Lake Bank Property has historically been used for agriculture, rural residential, and recreation.

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2.1.3 Cultural Resources

A cultural resources investigation has been completed by Michael Brandman Associates (Exhibit J of the BEI). During the investigation, remnants of building foundations and old residences were observed on the Elizabeth Lake Bank Property along with an historic era family burial plot. The identified burial plot is located in a separate parcel that is not a component of the Bank Property. The cultural resources consultant recommended measures to ensure protection of the burial site. While the burial plot is not a part of the Bank Property, the family of the interred has the right to access the burial plot through the Bank Property using the existing access routes established for the exclusion area. This feature will be preserved and no restoration or active management activities are planned in the parcel that contains the burial site. More information on cultural resources in both Bank Properties is included in Section 8.0 below.

2.1.4 Hydrology and Topography

The Elizabeth Lake Bank Property is located along the boundary between the San Gabriel Mountains and the Antelope Valley and is situated within the San Andreas Fault Zone. This area consists of northwest-to-southeast-aligned trough-like valleys, linear hills, and closed depressions that contain sag ponds and natural lakes including Elizabeth Lake, Munz Lakes, and Lake Hughes. The San Andreas and Hitchbrook faults both occur within the valley floor of the Elizabeth Lake Bank Property (Dibblee 1961).

Hydrology

The primary source of hydrology for the Elizabeth Lake Bank Property is surface water runoff, groundwater infiltration from adjacent lands, and direct precipitation. Generally, water movement within the Elizabeth Lake Bank Property is to the north and west. Flows originating in the steep hillsides, drain north via surface water or groundwater movement to the valley floor. Flows move east to west along the valley floor via groundwater movement, and discontinuous seasonal surface water flow. Water from Elizabeth Lake drains through the Elizabeth Lake Bank Property via groundwater infiltration and occasional surface water flows during wet years.

The hydrological regime within the Elizabeth Lake Bank Property has been greatly influenced by prior development and agricultural activities. Three USGS blue-line streams and several unnamed streams drain the steep canyons in the southern portion of the Elizabeth Lake Bank Property. Almost every stream feature mapped within the Elizabeth Lake Bank Property was at one time dammed or altered for agricultural purposes. Dam installation resulted in destruction of historic dry wash and stream features, creation of new features as some dams failed and re-directed flows, and modification of the groundwater regime within portions of the Elizabeth Lake Bank Property. Implementation of the Bank Development Plan will restore flows to historic features.

Several seasonal seep wetlands are located directly on fault lines mapped within the Elizabeth Lake Bank Property (Hernandez 2011). These faults may facilitate the passage of groundwater to the surface in these areas and supply seasonal hydrology for seasonal wetlands.

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Topography
Elevations within the Elizabeth Lake Bank Property range from approximately 3,245 to 3,600 feet. Ridges with rounded shoulders and summits and deep, U-shaped canyons characterize the southern portions of the Elizabeth Lake Bank Property. The terrain transitions to gently-sloping alluvial fans and rolling to flat topography on the lower slopes and in the bottom of the San Andreas Fault Zone. The lowest elevations of the Elizabeth Lake Bank Property are located in the northern portion of the property, just south of Elizabeth Lake Road.

2.1.5 Soils and Geology

The Soil Survey of Angeles National Forest Area, California (USDA 1980) indicates that the Elizabeth Lake Bank Property has four native soil map units containing eight soil series. These map units include: Tujunga-Capistrano families association, 2 to 20 percent slopes, Caperton-San Andreas-Modesto families complex, 15 to 60 percent slopes, Trigo, granitic substratum-Pismo families complex, 20 to 60 percent slopes, Hanford family, 3 to 25 percent slopes, and open water. Soils within the Elizabeth Lake Bank Property consist primarily of deep, well drained alluvium derived from sedimentary and granitic parent materials, although hill sides and slopes consist of weathered sedimentary and granitic parent materials. These coarse soils are well to excessively well drained, and have low structural stability. As a result, substantial movements of surface soils are expected to occur within alluvial floodplains during storm events, but risk of erosion from wind or surface runoff is low. Detailed descriptions of soils are included in the Delineation Report (Exhibit I of the BEI).

2.1.6 Existing Easements and Encumbrances

A Preliminary Title Report has been obtained and reviewed by the Bank Sponsor, and is included in Exhibit E-1 of the BEI. The title report identified several easements which encumber the Elizabeth Lake Bank Property (Figure 4). Elizabeth Lake Road is a public road that forms the northern border of the Elizabeth Lake Bank Property. This road is managed by Los Angeles County and the right-of-way for this road has been excluded from the Elizabeth Lake Bank Property.

Three utility easements are recorded on the eastern region of the Bank. One runs parallel to the shore of Elizabeth Lake and is a 1971 telephone easement to General Telephone Company and the two others are utility line easements for Southern California Edison. These easements were likely intended to convey electricity and telephone service to the structures that previously existed on the Elizabeth Lake Bank Property and ongoing maintenance or activity within these easements is not expected.

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Additionally there is an easement that grants access to an area just south of Elizabeth Lake Road, for a well that provides water to two single-family homes near the Bank Property. The easement includes restrictions that prevent new facilities or transfer of water rights.

Furthermore, there is an easement agreement (the "Agreement") for introduction and management of San Fernando Valley Spineflower (*Chorizanthe parryi* var. *fernandina*) located within Area F of the Elizabeth Lake Property. This easement is 6.76 acres and is legally described and depicted in Exhibit C and Exhibit D of the Agreement. The Agreement also includes pedestrian access from Elizabeth Lake Road to the Introduction Area. Pursuant of the Spineflower Easement Agreement, the Introduction Area will be managed and maintained by The Newhall Land and Farming Company ("Newhall"). In the event that the Agreement is terminated for any reason, the Introduction Area will revert to management by the Property Owner consistent with this Long-term Management Plan. In the event the Introduction Area reverts back to Property Owner control, this Long-term Management Plan will be modified to account for the additional acreage and resources and approved by the IRT.

Finally, there is a right of access granted in the deed which allows for ingress and egress from the burial plot. The burial plot is located on a parcel which is surrounded by, but is not a part of, the Elizabeth Lake Bank Property. All existing easements and the burial plot are depicted on the map included in Figure 4, and are described in the Property Assessment and Warranty (Exhibit E-2 of the BEI).

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2.1.7 Adjacent Land Uses

The Elizabeth Lake Bank Property borders the ANF to the north and south, a residential development to the east and the Painted Turtle, a camp for children with serious illnesses, to the west. The northern shores of Elizabeth Lake are managed as a day use area by the ANF and the lake itself is used for non-motorized boating, fishing, swimming, nature observation and picnics.

2.2 Habitat and Species Descriptions

2.2.1 Documented Biological Resources

Biological studies documenting the resources observed within the Elizabeth Lake Bank Property have been conducted and are included in Exhibit H and Exhibit I of the BEI. These include:

- Biological Resources Inventory (BRI; WRA 2012a)
- Wetland Delineation Report (WRA 2012b)

2.2.2 Biological Community Descriptions

Five major biological communities were observed during 2011 within the Elizabeth Lake Bank Property: wetlands, non-wetland waters, woodlands, scrublands, and grasslands; however, in June 2013 a catastrophic fire, known as the Powerhouse Fire, burned the entirety of the Lake Elizabeth Lake Bank Property. The five biological communities originally mapped were significantly altered by the fire. Though it may take many years to fully recover, WRA expects the same five biological communities to return post recovery and to consist of the same vegetation alliances observed pre-fire.

The five biological communities observed were composed of 25 vegetation alliances containing 30 vegetation associations. Wetlands, non-wetland waters, and seven additional vegetation

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alliances were considered to be sensitive, for a total of 14 sensitive vegetation alliances (including non-wetland waters). Eleven vegetation alliances were not considered sensitive. The corresponding Holland (1986) community type was assigned to each vegetation alliance to aid in reference. All the biological communities are mapped and described in detail in the Biological Resources Inventory (BRI) in Exhibit H of the BEI. In addition, implementation of the Development Plan includes planting of one new vegetation alliance, Big Sagebrush Scrub dominated by *Artemisia tridentate ssp. parishii.* This will be the dominant plant community on the re-established alluvial floodplains.

2.2.3 Special-Status Species

Special Status Plant Species

Special-status plant species determined to have a high or moderate potential to occur in the Elizabeth Lake Bank Property, as well as the two special-status plant species observed in the Elizabeth Lake Bank Property, are discussed in the BRI (Exhibit H of the BEI). Two special-status plant species have been observed in the Elizabeth Lake Bank Property during site visits: Peirson's morning-glory (*Calystegia peirsonii*, CNPS List 4) and adobe yampah (*Perideridia pringlei,* CNPS List 4). Additionally, the Development Plan identifies planting of Parish's sagebrush (locally rare) on restored alluvial floodplains. In addition, Newhall plans for the introduction, monitoring, and maintenance of San Fernando Valley spineflower (*Chorizanthe parryi* var. *fernandina*, State Endangered) within the Introduction Area, as per the Spineflower Introduction Plan.

Special Status Wildlife Species

Four special-status wildlife species were observed in the Elizabeth Lake Bank Property by WRA during site visits: Nuttall's woodpecker (*Picoides nuttallii*), Lawrence's goldfinch (*Spinus lawrencei*), pacific pond turtle (*Actinemys marmorata*), and Coast Horned Lizard (*Phrynosoma blainvillii*). Special-status wildlife species observed or which have a moderate or high potential to occur in the Elizabeth Lake Bank Property are discussed in the BRI (Exhibit H of the BEI). Several special-status species have not been observed, but have the potential to occur within the Elizabeth Lake Bank Property including Swainson's hawk. A brief discussion of habitat conditions required to sustain populations of Swainson's hawk is included below.

Swainson's hawk

Swainson's hawk is a summer (breeding) resident and migrant in California's Central Valley and scattered portions of the southern California interior. Foraging habitat consists of a mosaic of grassland and scrub with an abundant and diverse prey base, including insects, rodents, and small birds. Stands of cottonwoods, willows, junipers, and exotic mature trees within the Property provide suitable nesting substrates.

2.2.4 Invasive Plant Species

Twenty-one invasive plant species listed by the California Invasive Plant Council (Cal-IPC, (2006) were observed prior to the Powerhouse Fire within the Elizabeth Lake Bank Property, with eleven posing a potential threat (generally Cal-IPC Moderate or High rated species) and are discussed below. For practical reasons, non-native annual grasses have been excluded from the list to focus management efforts on species that can be feasibly controlled given the available resources. Invasive species can alter the fire regime and intensity, contribute to erosion, alter soil moisture regimes, and compete with native plant species, particularly in disturbed habitats. Observed invasive species, their Cal-IPC rating, and bloom periods are included in Table 1.

Mediterranean mustard (*Hirschfeldia incana)* Cal-IPC Moderate

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Mediterranean mustard is a biennial or short-lived perennial in the mustard (Brassicaceae) family which blooms year round (CalFlora 2013) particularly on recently disturbed soils. Mediterranean mustard generally reproduces by producing prodigious amounts of seed, generally very close to the parent plant. While the volume of seed dropped is very high, the seeds generally do not disperse very far from the host plant, this often leads to large monotypic stands of Mediterranean mustard. Manual removal can be an effective means of control provided it is completed before viable seeds develop (Weed Research & Information Center 2013). Grazing has not been shown to be an effective means of control. There are a limited number of chemicals that have been shown to be effective, including Glyphosate. Unfortunately, Mediterranean mustard seeds can remain viable in the soil for several years, so all control methods must be repeated until the seed bank is fully exhausted.

Whitetop (*Lepidium chalapense* [*Cardaria chalepensis*]) Cal-IPC Moderate
Whitetop is an erect perennial in the mustard (Brassicaceae) family which blooms May through June and thrives in recently disturbed sunny mesic habitats. Any fragment of whitetop's roots can resprout and grow into a new plant and often grow longer than 10 feet long, making mechanical removal impractical. Additionally, a single whitetop plant is capable of producing up to 4,800 viable seeds making the timing of any control measure very important to the success of the effort. Herbicide application can be an effective means of control, however, it is important that all herbicides are handled and applied carefully to ensure they do not affect desirable species or habitats.

Himalayan blackberry (*Rubus armeniacus* [*R. discolor*]) Cal-IPC High
Himalayan blackberry is an evergreen perennial shrub in the rose (Rosaceae) with climbing, mounded, and trailing stalks which flowers April through August and thrives in mesic open fields, ditches, roadsides, and riparian habitats. Himalayan blackberry has an extensive perennial root system from which new above ground stalks, which are protected by large claw shaped thorns, readily sprout. Cattle grazing does not provide an effective means of control due to Himalayan blackberry's thorns and ability to quickly resprout above ground biomass. Mechanical removal presents the same hurdles, and is only effective on small populations. Herbicide application, particularly 'cut stump treatment', can be an effective means of control, however, it is important that all herbicides are handled and applied carefully to ensure they do not affect desirable species or habitats.

Sheep Sorrel (*Rumex acetosella)* Cal-IPC Moderate
Sheep sorrel is an erect perennial in the buckwheat family (Polygonaceae) which grows in clonal patches with a large perennial root network. New vegetative growth readily sprouts from the underground root network, and buried seeds have been shown to be viable for more than 25 years. Small infestations can be controlled with mechanical removal, however, care must be taken to remove the entire root system or the plant will likely resprout. Grazing can be an effective means of control; however, due to a concentration of oxalates, most ungulates avoid sheep sorrel. Herbicide application can be an effective means of control, however, it is important that all herbicides are handled and applied carefully to ensure they do not affect desirable species or habitats.

The Powerhouse fire of 2013 burned all above ground vegetation within the Lake Elizabeth Bank Property. The fire has presented both an opportunity and challenge as vegetation becomes reestablished. As previously noted, most invasive species thrive in disturbed conditions, such as the conditions created by the Powerhouse Fire; however, the fire also eliminated the invasive species populations from the Lake Elizabeth Bank Property. This dynamic makes invasive species management particularly important as vegetation becomes reestablished because while

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the community structure will change and develop as the property recovers from the fire, any vegetation which is established immediately after recovery will likely remain as the vegetation community develops. Post fire management guidelines for invasive plant species should consider the following:

- Ensure eradication of Himalayan blackberry within seasonal seep wetlands to allow recolonization by native species.
- Maintain eradication of invasive annual and perennial forb species to reduce competitive pressure and erosion, especially in sensitive terrestrial vegetation alliances.
- Encourage recolonization by native plant species.

2.2.5 Summary of Bank Development Plan

The Development Plan (Exhibit C of the BEI) includes restoration of alluvial floodplain, riparian wetland, non-wetland riparian, marsh, seasonal wetland, sensitive natural community and special status species habitats. Desert wash and alluvial fan creation will primarily occur through removal of the earthen berms and restoring natural flows to the historic floodplains in the valley bottom (Figure 5). Seasonal wetlands and riparian areas will also be enhanced through planting, weeding and improved management practices.

Alluvial Floodplain Restoration

Restoration plans have been designed to remove the dams and surface water diversions within the Elizabeth Lake Bank Property and redirect flows to the historic alluvial fans on the valley floor. Alluvial floodplains will be planted with big sagebrush, native grasses and other species appropriate for this habitat type. After restoration, the active alluvial fan surfaces will be exposed to periodic flooding and sediment transport associated with flood events. Active channels will form naturally on the fan surface and are expected to migrate across the surface with subsequent flood events. This regular pattern of hydrologic influence and disturbance will create suitable habitat for alluvial fan species.

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Table 1. Invasive plant species observed in the Elizabeth Lake Bank Property during visits in 2011-2012.

Family	Scientific Name*	Common Name	Origin	Form	Invasive Status[2]	Blooming Period
Asteraceae	*Lactuca serriola*	prickly lettuce	non-native	annual forb	assessed	May-September
Asteraceae	*Sonchus asper*	spiny sow thistle	non-native	annual forb	assessed	February-October
Asteraceae	*Tragopogon dubius*	yellow salsify	non-native	perennial forb	assessed	April-May
Brassicaceae	*Descurainia sophia*	flix weed	non-native	annual forb	limited	March-August
Brassicaceae	*Hirschfeldia incana*	Mediterranean mustard	non-native	biennial or perennial forb	moderate	January-December
Brassicaceae	*Lepidium chalapense* [*Cardaria chalepensis*]	lens-podded hoary cress	non-native	perennial forb	moderate	May-June
Convolvulaceae	*Convolvulus arvensis*	field bindweed	non-native	perennial forb	assessed	April-September
Fabaceae	*Medicago polymorpha*	burweed	non-native	annual forb	limited	February-June
Geraniaceae	*Erodium cicutarium*	redstem filaree	non-native	annual forb	limited	February-June
Lamiaceae	*Marrubium vulgare*	horehound	non-native	perennial forb	limited	May-August
Plantaginaceae	*Plantago lanceolata*	English plantain	non-native	perennial forb	limited	March-August
Poaceae	*Avena fatua*	oat grass	non-native	annual graminoid	moderate	April-May
Poaceae	*Bromus diandrus*	ripgut brome	non-native	annual graminoid	moderate	April-June
Poaceae	*Bromus hordeaceus*	soft chess	non-native	annual graminoid	limited	April-May
Poaceae	*Bromus tectorum*	cheatgrass	non-native	annual graminoid	high	May-June
Poaceae	*Festuca* [*Vulpia*] *myuros*	rattail fescue	non-native	annual graminoid	moderate	February-May
Poaceae	*Festuca perennis* [*Lolium multiflorum*]	Italian ryegrass	non-native	annual or biennial graminoid	moderate	May-September
Poaceae	*Hordeum murinum*	mouse barley	non-native	annual graminoid	moderate	April-May
Poaceae	*Polypogon monspeliensis*	rabbit's-foot grass	non-native	annual graminoid	limited	May-June
Polygonaceae	*Rumex acetosella*	sheep sorrel	non-native	perennial forb	moderate	March-November
Polygonaceae	*Rumex crispus*	curly dock	non-native	perennial forb	limited	January-December
Rosaceae	*Rubus armeniacus* [*R. discolor*]	Himalayan blackberry	non-native	deciduous to evergreen shrub	high	April-August

All species identified using the *Jepson Manual: Vascular Plants of California* (Baldwin et al. 2012); nomenclature follows Baldwin et al. 2012
[1]Invasive Status: California Invasive Plant Inventory (Cal-IPC 2006)
[2]Blooming Period : CalFlora (CalFlora 2013)

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Riparian Woodland and Wetland Enhancement and Rehabilitation
Existing wetland and riparian communities within the Elizabeth Lake Bank Property will be monitored during post-fire recovery and will be managed to maintain and improve the functions and values that these habitats provide. These habitats will be managed to control invasive species and may be replanted if native species are not found to be recolonizing naturally.

Sensitive Natural Communities Enhancement and Rehabilitation
The terrestrial habitats will be monitored during post-fire recovery and will be managed to maintain or improve habitat quality. These habitats will be managed to control invasive species and may be replanted if native species are not found to be recolonizing naturally.

Special Status Species Preservation
The Bank supports habitat for numerous special status species (see section 5.3 above and the BRI in Appendix, C). These habitats will be preserved in perpetuity and managed for the benefit of the species. The proposed restoration actions discussed above will also increase the amount and quality of habitat available for special status species, particularly Swainsons Hawk, within the Elizabeth Lake Bank Property.

3.0 PETERSEN RANCH PROPERTY

3.1 Property Description

3.1.1 Setting and Location

The Petersen Ranch Bank Property is located in unincorporated Los Angeles County, California, approximately 4 miles southeast of the town of Lake Hughes. The Bank Property is approximately 3,789 acres located in the Del Sur USGS quadrangle (Figure 3), near the northern boundary of the Angeles National Forest (ANF), west of the City of Palmdale and South of Antelope Valley. The Bank Property is in the State of California, designated Assessor's Parcel Numbers: 3205-022-019, 3215-004-003, 3215-018-005, 3215-018-006, 3215-018-007, 3215-018-013, 3215-018-017, 3215-018-018, 3215-018-019, 3215-018-020, 3215-018-021, 3215-018-022, 3215-018-023, 3215-018-024, 3215-018-025, 3215-018-026, 3215-018-027, 3215-018-028, 3215-018-033, 3215-018-034, 3215-019-006, 3215-019-007, 3215-019-008, 3215-019-013, 3215-019-021, 3215-019-022, 3215-019-023, 3224-001-016, 3224-001-017, 3224-001-018, 3224-001-019, 3224-001-020, 3224-001-021, 3224-001-022, 3224-001-023, 3224-001-024, 3224-001-025, 3224-001-026, 3224-001-027, 3224-001-028, 3224-001-029, 3224-001-030, 3224-001-031, 3224-035-001, 3224-035-002, 3224-035-003, 3224-035-004, 3224-035-005, 3224-035-006, 3224-035-007, 3224-035-008, 3224-035-009, 3224-035-010, 3224-035-011, 3224-035-012, 3224-035-013, 3224-035-014, 3224-035-015, 3224-035-016, 3224-035-017, 3224-035-018, 3224-035-019, 3224-035-020, 3224-035-021, 3224-035-022, 3224-035-023, 3224-035-024, 3224-035-025, 3224-035-026, 3224-035-027, 3224-035-028, 3225-023-004, 3225-023-005, 3225-023-006, 3225-023-011, 3225-023-032, 3225-023-033, 3225-023-054, 3225-023-061, 3225-024-001, 3225-024-008, 3225-024-009, 3225-024-010, 3225-024-013, 3225-024-016, 3225-024-020, 3225-024-021, 3225-024-022, 3225-024-024, 3225-024-035, 3225-025-001, 3225-025-006, 3225-025-012. The Petersen Ranch Bank Property is shown on the General Vicinity Map (Figure 1) and the Petersen Ranch Bank Property Map (Figure 3).

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The Petersen Ranch Bank Property is adjacent to the ANF to the southwest. Ranches and agricultural fields with small, individual houses separate the ANF (Angeles National Forest) from the Petersen Ranch Bank Property. A residential development is located southeast, the residential and recreational areas in and near the community of Elizabeth Lake are located to the west, and the California Aqueduct borders the Petersen Ranch Bank Property to the north.

3.1.2 History and Land Use

Historically, the primary land uses within the Petersen Ranch Bank Property have been cattle ranching, hay farming and hunting. Evidence of past uses still remain, including numerous buildings, dirt roads, wire fencing, ponds, and water tanks. A review of historic aerial photographs from 1948 indicate early land uses included wide-spread manipulation of natural habitats through clearing brush to create and maintain open pasture and hay fields, alteration of natural drainages to create ponds or to redirect flows, and the pumping of water to irrigate fields and fill constructed ponds (WRA 2013). The lasting effects of these land use practices can still be observed on the Property, however many of these practices have been reduced considerably compared to past uses.

3.1.3 Cultural Resources

A cultural resources investigation has been completed within the Petersen Ranch Bank Property and was completed by Duke Cultural Resources Management (Exhibit J of the BEI). More information on cultural resources in both Bank Properties can be seen in Section 8.0 below.

3.1.4 Hydrology and Topography

The Petersen Ranch Bank Property is in Leona Valley along the San Andreas Rift Zone and encompasses portions of Portal Ridge, which contains the highest elevation points within the Petersen Ranch Bank Property. Due to its location on the San Andreas Rift Zone, the Petersen Ranch Bank Property includes many fault lines.

The primary source of hydrology for the Petersen Ranch Property is surface water runoff and groundwater infiltration from adjacent lands, as well as direct precipitation. The largest aquatic feature is a complex of freshwater marshes, ponds and meadows along the rift valley. These areas are fed by runoff and groundwater and historically received additional inputs of water through pumping of municipal and well water. Historic aerials show areas of saturation and discontinuous channels through this wetland complex prior to the construction of the numerous ponds and presumably prior to the commencement of pumping water into this system. Historic USGS topographic maps show a dashed blue-line stream through this valley. Implementation of the Development Plan will result in restoration of many of the ponds in this valley back to wet meadow.

Several other drainages originate within the Petersen Ranch Property. These ephemeral drainages convey surface and subsurface flows during heavy rainfall through steep sided canyons to either Leona Valley to the southeast, Antelope Valley to the north, or to Elizabeth Lake to the west.

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Several seasonal seep wetlands are located in complexes consisting of depressions, swales and slope seeps along the south facing slopes of the ridge adjacent to Elizabeth Lake Road. Many of these wetlands appear to be associated with mapped fault lines within the Petersen Ranch Property (Hernandez 2010). These faults may facilitate the passage of groundwater to the surface in and supply seasonal hydrology for these features.

3.1.5 Soils and Geology

The Los Angeles County Soil Series (USDA 1969), Lancaster Area Soil Series (USDA 1922), Angeles National Forest Area (USDA 1980), and Soilweb (CSRL 2013) indicates that the Petersen Ranch Bank Property is composed of 23 different types of soil within 9 soil series: the Armargosa series, Castaic-Balcom series, Gaviota series, Greenfield series, Hanford series, Millsholm series, Ramona series, Vista series, and Yolo series. These soil series are described in detail in the Delineation Report (Exhibit I of the BEI). The soils on the Petersen Ranch Bank Property exhibit diverse properties, with most being well to excessively well drained soils with low structural stability, however poorly drained soils are found in and around the wetland complexes and some rock outcrops are present in higher slope areas.

3.1.6 Existing Easements

Preliminary Title Reports have been obtained and reviewed by the Bank Sponsor. According to title records, the Bank Property has a number of easements established on site (Figure 6). Elizabeth Lake Road is a public road that primarily delineates the southern boundary, and the western edge of Petersen Ranch Bank Property. Johnson Road runs through the north-central region of the Petersen Ranch Bank Property. These roads are not a part of the Petersen Ranch Bank Property and are managed by Los Angeles County.

A number of easements for future street and utility improvements are recorded in the northern portion of the Petersen Ranch Bank Property (Parcel 13), associated with previously planned residential development. However, no residential development is currently planned in this area. Other dirt roads and right of way easements exist in a variety of locations.

Utility easements exist within the Petersen Ranch Bank Property in a number of locations. The Tehachapi Renewable Transmission Project bisects the central portion of the Petersen Ranch Bank Property from the north to the south, and includes a combination of easements for unpaved access roads, utility poles, and high voltage power lines. Another transmission line owned and maintained by the Los Angeles Department of Water and Power crosses the western portion of the Bank Property. Maintenance of these utility lines may occur periodically, including modification of vegetation, and the holders of these easements have legal access rights to these portions of the Bank Property.

In addition to the easements outlined in the Title Report, a 320-acre portion of Petersen Ranch Area A, has been used previously as mitigation for SCE and has a separate Conservation Easement. This SCE easement will be managed as part of the Bank, and the annual monitoring reports will cover the Bank easements as well as the SCE easement, but Credits will not be requested for the Petersen Ranch Mitigation Bank for land located under the SCE easement. This easement will be monitored and maintained pursuant to the requirements of the BEI.

Commented [GL5]: Add description of spineflower introduction area (and pedestrian easement?) not being creditable area of the bank.

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3.1.7 Adjacent Land Uses

There are exclusion areas that are controlled by (and under ownership of) the Property Owner but that will not be a part of the Petersen Ranch Bank Property. These areas are located primarily around the main lodge. In addition, there is a utility line parcel owned by Los Angeles Department of Water and Power (LADWP) and several parcels along Johnson Road that are not owned by the Property Owner. The LADWP parcel bisects the rift valley wetland complex. Pursuant to an agreement with LADWP, wetland restoration will be conducted underneath its utility lines, but credits will not be requested for this area. However, LADWP may use the wetlands generated on its parcel for permittee-responsible mitigation.

Within the Petersen Ranch Property,there are six small exclusion areas that are not part of the Bank Property. The conservation easement will not be established over these "Not a Part" areas and these "Not a Part" areas will not be subject to the restrictions within the conservation easement. Monitoring and management actions will be conducted in lands immediately adjacent to these "Not a Part" areas to ensure activities within these areas do not result in deleterious effects to the Bank's resources. See Section 4.6 below for more information on monitoring around these "Not a Part" areas.

3.2 Habitat and Species Descriptions

3.2.1 Documented Biological Resources

Several biological studies have been conducted within the Petersen Ranch Bank Property and are included in Exhibit H and Exhibit I of the BEI. These include:

- Biological Resources Inventory (BRI; WRA 2013a);
- Wetland Delineation Report (WRA 2013b);
- Swainson's Hawk Habitat Assessment (Bloom 2013);

3.2.2 Biological Communities

Five major biological communities were observed during 2013 within the Petersen Ranch Bank Property: wetlands, non-wetland waters, woodlands, scrublands, and grasslands. These five biological communities were composed of 32 vegetation alliances containing 36 vegetation associations. Wetlands, non-wetland waters, associated aquatic vegetation communities, and 10 terrestrial vegetation alliances were considered to be sensitive. A total of 22 sensitive vegetation alliances (including wetlands and non-wetland waters) have been mapped within the Petersen Ranch Bank Property. These vegetation alliances and associations are described in the BRI (Exhibit H of the BEI).

3.2.3 Special Status Species

Special-status plant species determined to have a high or moderate potential to occur in the Petersen Ranch Bank Property, as well as the special-status plant species observed in the Petersen Ranch Bank Property, are discussed in the BRI (Exhibit H of the BEI). One list 4 special status plant species and one locally rare species that is of management interest have been observed within the Petersen Ranch Bank Property, Pierson's morning glory and Parish's sagebrush.

Commented [GL6]: mention spineflower reintroduction and potential to occur outside easement area?

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Special-Status Wildlife Species

Ten special-status wildlife species were observed in the Petersen Ranch Bank Property by WRA during site visits: American white pelican (*Pelecanus erythrorhynchos*), Swainson's hawk (*Buteo swainsoni*), ferruginous hawk (*Buteo regalis*), prairie falcon (*Falco mexicanus*), Nuttall's woodpecker (*Picoides nuttallii*), loggerhead shrike (*Lanius ludovicianus*), oak titmouse (*Baeolophus inornatus*), tricolored blackbird (*Agelaius tricolor*), Pacific pond turtle (*Actinemys marmorata*), and coast horned lizard (*Phrynosoma blainvillii*). Special-status wildlife species observed or which have a moderate or high potential to occur in the Petersen Ranch Bank Property are discussed described in detail in the BRI (Exhibit H of the BEI). A brief discussion of habitat conditions required to sustain populations of the special-status species for which the Petersen Ranch Bank has been established is included below.

Swainson's hawk

Swainson's hawk is a summer (breeding) resident and migrant in California's Central Valley and scattered portions of the southern California interior. Foraging habitat consists of a mosaic of grassland and scrub with an abundant and diverse prey base, including insects, rodents, and small birds. Stands of cottonwoods, willows, junipers, and exotic mature trees within the Property provide suitable nesting substrates.

3.2.4 Invasive Plant Species

Twenty-seven invasive plant species listed by Cal-IPC (2006) have been documented to occur within the Petersen Ranch Bank Property, with nine posing a potential threat (generally Cal-IPC Moderate or High rated species) and are discussed below. For practical reasons, non-native annual grasses have been excluded from the list to focus management efforts on species that can be feasibly controlled given the available resources. Invasive species can alter the fire regime and intensity, contribute to erosion, alter soil moisture regimes, and compete with native plant species, particularly in disturbed habitats. Those species of highest concern for the Petersen Ranch Bank Property are summarized in Table 2. Mechanical or chemical treatments may be used and should be timed to take advantage of the phenology of the target species. Management guidelines for invasive species Cal-IPC rated High are discussed in greater detail below. Specific management tasks are discussed in greater detail in the Management and Monitoring guidelines below.

Russian knapweed (*Acroptilon repens)* Cal-IPC Moderate

Russian knapweed is a long-lived perennial forb in the sunflower (Asteraceae) family which blooms between March and September (CalFlora 2013) and thrives in a wide variety of recently disturbed mesic habitats. Over time Russian knapweed is capable of forming large monotypic stands with a deep root network from which vegetation can easily spread and resprout. Due to the extensive root-network hand removal is only effective on seedlings (Weed Research & Information Center 2013). Russian knapweed is toxic to horses and is often avoided by cattle making grazing an infeasible form of control. Chemical control can be effective; however it is important that any herbicides are handled and applied carefully to ensure they do not affect desirable species or habitats.

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Bull thistle (*Cirsium vulgare*) Cal-IPC Moderate

Bull thistle is a biennial, or annual forb in the sunflower (Asteraceae) family which blooms between June and September (CalFlora 2013) and thrives many habitats, particularly on recently disturbed soils. Bull thistle reproduces and spreads entirely from seed which is carried by the wind, though most seeds fall within a few feet of the parent plant (Weed Research & Information Center 2013). Most seeds will germinate or die after the first year, but seeds which have been buried more than 6 inches may survive several years. Goats and sheep grazing can be an effective control method for immature plants, however cattle will avoid bull thistle completely. Other forms of mechanical control(e.g. hoeing and tilling) can be very effective provided the tap root is damaged below the soil surface. If the tap root is not sufficiently damaged the plant can easily recover and flower. Herbicide application can be an effective means of control, however, it is important that all herbicides are handled and applied carefully to ensure they do not affect desirable species or habitats.

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Table 2. Invasive plant species observed in the Petersen Ranch Bank Property during visits on January 28 through February 6, 2013 and May 20 through 21, 2013.

Family	*Scientific Name*	Common Name	Origin	Life-Form	Invasive Status[1]	Blooming Period[2]
Asteraceae	*Acroptilon repens*	Russian knapweed	non-native	perennial forb	moderate	March-September
Asteraceae	*Cirsium vulgare*	bull thistle	non-native	annual or biennial forb	moderate	June-September
Asteraceae	*Helminthotheca [Picris] echioides*	bristly ox--tongue	non-native	perennial forb	limited	June-December
Asteraceae	*Hypochaeris glabra*	smooth catsear	non-native	annual forb	limited	March-June
Asteraceae	*Lactuca serriola*	prickly lettuce	non-native	annual forb	assessed	May-September
Asteraceae	*Sonchus asper ssp. asper*	prickly sow thistle	non-native	annual forb	assessed	February-October
Asteraceae	*Taraxacum officinale*	common dandelion	non-native	perennial forb	assessed	February-March
Asteraceae	*Tragopogon dubius*	yellow salsify	non-native	perennial forb	assessed	April-May
Brassicaceae	*Descurainia sophia*	flix weed	non-native	annual forb	limited	March-August
Brassicaceae	*Hirschfeldia incana*	Mediterranean mustard	non-native	biennial or perennial forb	moderate	January-December
Brassicaceae	*Lepidium appelianum*	Hairy whitetop	non-native	perennial forb	limited	April-Sep
Convolvulaceae	*Convolvulus arvensis*	field bindweed	non-native	perennial forb	assessed	April-September
Fabaceae	*Lotus corniculatus*	bird's-foot trefoil	non-native	perennial forb	assessed	March-July
Fabaceae	*Medicago polymorpha*	burweed	non-native	annual forb	limited	February-June
Fabaceae	*Robinia pseudoacacia*	black locust	non-native	deciduous tree	limited	March-June
Geraniaceae	*Erodium cicutarium*	redstem filaree	non-native	annual forb	limited	February-June

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Family	*Scientific Name*	Common Name	Origin	Life-Form	Invasive Status[1]	Blooming Period[2]
Lamiaceae	*Marrubium vulgare*	horehound	non-native	perennial forb	limited	May-August
Plantaginaceae	*Plantago lanceolata*	English plantain	non-native	perennial forb	limited	March-August
Poaceae	*Avena barbata*	slender oat	non-native	annual graminoid	moderate	March-June
Poaceae	*Avena fatua*	oat grass	non-native	annual graminoid	moderate	April-May
Poaceae	*Bromus diandrus*	ripgut brome	non-native	annual graminoid	moderate	April-June
Poaceae	*Bromus hordeaceus*	soft chess	non-native	annual graminoid	limited	April-May
Poaceae	*Bromus tectorum*	cheatgrass	non-native	annual graminoid	high	May-June
Poaceae	*Festuca [Vulpia] myuros*	rattail fescue	non-native	annual graminoid	moderate	February-May
Poaceae	*Festuca perennis [Lolium multiflorum]*	Italian ryegrass	non-native	annual or biennial graminoid	moderate	May-September
Poaceae	*Hordeum murinum*	mouse barley	non-native	annual graminoid	moderate	April-May
Poaceae	*Polypogon monspeliensis*	rabbit's--foot grass	non-native	annual graminoid	limited	May-June
Polygonaceae	*Rumex crispus*	curly dock	non-native	perennial forb	limited	January-December

All species identified using the *Jepson Manual: Vascular Plants of California* (Baldwin et al. 2012); nomenclature follows Baldwin et al. 2012
[1]Invasive Status: California Invasive Plant Inventory (Cal-IPC 2006)
[2]Blooming Period : CalFlora (CalFlora 2013)

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Mediterranean mustard (*Hirschfeldia incana)* Cal-IPC Moderate
Mediterranean mustard is a biennial or short-lived perennial in the mustard (Brassicaceae) family which blooms year round (CalFlora 2013) and thrives in a variety of habitats, particularly on recently disturbed soils. Mediterranean mustard generally reproduces by producing prodigious amounts of seed, generally very close to the parent plant. While the volume of seed dropped is very high, the seeds generally do not disperse very far from the host plant, this often leads to large monotypic stands of Mediterranean mustard (Weed Research & Information Center 2013). Manual removal can be an effective means of control provided it is completed before viable seeds develop (Weed Research & Information Center 2013). Grazing has not been shown to be an effective means of control. There are a limited number of chemicals that have been shown to be effective, including Glyphosate. Unfortunately, Mediterranean mustard seeds can remain viable in the soil for several years, so all control methods must be repeated until the seed bank is fully exhausted.

3.2.5 Summary of Bank Development Plan

The Development Plan (Exhibit C-1 of the BEI) identifies restoration activities that will result in increased area, condition and functions of aquatic resources and habitats for special-status species. Prior to implementation of the Development Plan, the Petersen Ranch Bank Property contained many man-made stock ponds within the central wetland system. Historically, water was pumped into these ponds to create waterfowl hunting ponds and allowing them to support open water and freshwater marsh habitat dominated by cattail and tule. Pumping was ceased and the ponds became unable to support the same habitat with natural hydrology. These ponds became degraded, and likely reduced the hydrology of surrounding wetlands, while unable to support wetland hydrology themselves. The Development Plan (Figure 7) focuses on grading and planting to provide connectivity of habitats and hydrologic flows and also include micro-topographic variations that will allow for structural and habitat complexity within this wetland complex.

Wetland Re-establishment
Re-establishment of wetland/riparian habitats will occur in areas that are currently characterized by berms exhibiting upland vegetation that were built within the historic boundary of the wetland complex. Wetland re-establishment will return the landscape to its natural topography and historic wetland condition. This will increase the area of wetland habitats but will also increase the function of surrounding wetland habitats.

Wetland Rehabilitation
Wetland rehabilitation will include restoration of degraded ponds to wetland habitats that create more natural topography, water storage, and increased flow, thereby restoring the historic functions of habitat, nutrient filtering, habitat complexity, and hydrologic connectivity. Habitat complexity will include areas of varying inundation and soil saturation depths, and may include smaller areas of open water or freshwater marsh habitat. Once the ponds have been regraded, they will be replanted with native, hydrophytic vegetation which will stabilize the soil, prevent the establishment of weedy, non-native species, and create habitat for native plants and animals. Additionally, the vegetation will increase nutrient filtration and slow runoff. By eliminating the berms and restoring the ponds as part of the rehabilitation and reestablishment activities discussed above, displaced water will be available to the surrounding wetlands. This will improve hydrologic connectivity, and improve the habitat for wetland dependent plant and wildlife species throughout adjoining wetlands. With time, the increase in hydrology from displaced pond water may also expand the extent of wetlands in this area.

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To alleviate nutrient inputs into the watershed, 35 foot grazing setbacks around wetlands in the rift valley and more mesic wetland and riparian areas (Appendix B - Figure 1 and Figure 2) will be fenced to exclude cattle. By excluding cattle, fenced wetlands will have increased filtering of nutrients by allowing the buildup of non-compacted silt and healthy stands of vegetation which trap nutrients and other contaminants, thereby preventing their transport into downstream watersources. Ultimately, the establishment of abundant vegetation and trapping of additional silt/sediment will reduce nutrient stress for the entire watershed. These restoration measures will increase the functionality of the system as a whole and will aid in the repair of degraded wetland habitats to pre-disturbance conditions.

Wetland Riparian Rehabilitation

Riparian rehabilitation will integrate with wetland rehabilitation activities discussed above to encourage and sustain the long-term survival of mature riparian habitats that exist adjacent to, or within, the man-made ponds.

Some of the riparian habitats in the Petersen Ranch Bank Property were located within, or adjacent to, large, deep, man-made ponds excavated in what was historically a wetland. Water was pumped into these ponds until 2010. Since pumping was ceased, the ponds had dried and became unlikely to continue supporting riparian habitat due to the decreased water levels resulting in smaller ponded areas that are often well beyond the dripline, and root zone, of riparian trees.

As part of wetland restoration plans, the pond bottom elevations will be raised, but small deep depressions will be left providing small open water areas beneath the drip-line of riparian species. These depressions, though deep, will not cover the wide area of the original pond. Because of this, natural hydrologic processes are expected to fill the small ponds and sustain them without pumping. Water will be able to concentrate in the ponds and will be stored there for a duration long enough to sustain the mature riparian habitat. By eliminating berms and restoring the ponds as part of the rehabilitation and reestablishment of wetland and riparian habitats, displaced water is expected to increase the hydrologic inputs to adjacent riparian habitats. With time, the increase in hydrologic inputs from displaced pond water may also result in expanded riparian habitats. This will improve the hydrologic function and health of the riparian system in areas outside of the footprint of the restoration activities. Implementation of these design elements will result in the rehabilitation of wetland riparian habitat.

To alleviate nutrient inputs into the watershed and excessive grazing pressure on riparian vegetation, 35 foot grazing setbacks around wetland riparian areas in the rift valley will be fenced to exclude cattle. By excluding cattle, fenced riparian wetlands will have the ability to perform increased filtering of nutrients by allowing the establishment of healthy stands of vegetation which trap nutrients and other contaminants, thereby preventing their transport into downstream water sources. Ultimately, the establishment of healthy wetland vegetation and trapping of additional silt/sediment will reduce nutrient stress for the entire watershed. These restoration measures will increase the functionality of the system as a whole and will aid in the repair of degraded wetland riparian habitats to pre-disturbance conditions.

Non-Wetland Riparian Establishment

Non-wetland riparian establishment is occurring in areas that have suitable soils and topographic position and are located adjacent to existing, or proposed, aquatic resources. This will primarily include planting Parish's sagebrush (*Artemisia tridentata ssp. parishii*), a locally rare and genetically unique sub-species found in the Petersen Ranch Bank Property (WRA 2013a).

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Non-Wetland Riparian Rehabilitation
Non-wetland riparian rehabilitation will occur in upland areas containing woody, riparian species that abut aquatic resources. Non-wetland riparian rehabilitation will be achieved through the wetland and riparian rehabilitation and reestablishment activities described above. By eliminating the berms and restoring the ponds as part of the wetland and riparian rehabilitation and reestablishment, displaced water is expected to be redistributed to the root zones of surrounding non-wetland riparian communities. This will enhance the hydrologic function and health of the non-wetland riparian system in areas outside of the footprint of restoration activities.

To alleviate nutrient inputs into the watershed and excessive grazing pressure on riparian vegetation, 35 foot grazing setbacks around wetland riparian areas in the rift valley will be fenced to exclude cattle. By excluding cattle, fenced riparian areas will have the capacity to perform increased filtering of nutrients, and ungrazed habitats will allow for more robust understory growth and tree seedling development. These restoration measures will increase the functionality of the system as a whole and will aid in repairing degraded riparian habitats to pre-disturbance conditions.

Stream Rehabilitation
Stream rehabilitation will be implemented along the stream at the western boundary of the Petersen Ranch Bank Property. This stream conveys flows from off-site residential areas, beneath Elizabeth Lake Road and into a channel along the western boundary. Prior to implementation of the Development Plan this stream consisted of a straightened channel and a constructed berm separating the stream from the wetland complexes within the Petersen Ranch Bank Property which hydrologically isolated this stream from its floodplain. Stream rehabilitation activities will involve removing the berm and widening the stream channel to increase habitat and allow for overbank flows onto an active floodplain. Once the stream has been rehabilitated, floodwaters from will be able to spill into the restored wetland complexes thereby reducing downstream flood pressures and improving water quality and hydrologic connectivity.

Alluvial Floodplain Re-establishment
Alluvial floodplain re-establishment will occur in the floodplain adjacent to the Stream Rehabilitation actions discussed above. High flows will be restored to the adjacent floodplain on the valley floor. After restoration, the active alluvial floodplain surfaces will be exposed to periodic flooding and sediment transport associated with flood events.

4.0 MANAGEMENT AND MONITORING

The overall goal of long-term management is to foster the long term viability of the Bank Properties' Waters of the U.S., Waters of the State, covered species, and covered habitat. Routine monitoring and minor maintenance tasks are intended to assure the quality of the Bank Properties' biological resources in perpetuity.

The approach to the long-term management of the Bank Properties' biological resources is to conduct annual site examinations and monitor selected characteristics to determine the stability and trends of the waters of the U.S., including wetlands, Waters of the State, sensitive vegetation communities, and special-status species' habitats.

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Annual monitoring will assess the Bank's condition, degree of erosion, invasion of exotic or deleterious (e.g., thatch producing) species, water quality, fire hazard, and/or other aspects that may warrant management actions. The objective of this Long-term Management Plan is to conduct monitoring to identify any issues that arise, and use adaptive management to determine what actions might be appropriate. Those chosen to accomplish monitoring responsibilities will have the knowledge, training, and experience to accomplish monitoring responsibilities.

Adaptive management means an approach to natural resource management which incorporates changes to management practices, including corrective actions as determined to be appropriate by the IRT in discussion with the Land Manager. Adaptive management includes those activities necessary to address the effects of climate change, fire, flood, or other natural events, force majeure, etc. Before considering any adaptive management changes to the Long-term Management Plan, the IRT will consider whether such actions will help ensure the continued viability of Bank Property's biological resources.

Responsibility for the management and maintenance of the Introduction Area, as defined in the Agreement and the Introduction Plan, will rest with Newhall. The objective of the Introduction Area is to provide space for the introduction and protection of San Fernando Valley spineflower, a California listed endangered species. The Agreement, as agreed upon by LV Lake Elizabeth LLC, Land Veritas Corp., and Newhall, allows Newhall pedestrian access to the Introduction ~~Site~~Area, as well as the ability to conduct certain activities pursuant of ~~this~~the ~~a~~Agreement, including seeding trials, introduction, maintenance, and management of Spineflower ~~in~~and the Introduction Area. Fencing surrounding the Introduction Area will be installed and maintained by Newhall.

The Land Manager for the Bank site shall implement the following:

4.1 Waters of the U.S. and State

The Bank Properties' aquatic resources will be monitored and managed to ensure that the hydrologic, biotic and geomorphic functions are maintained to the extent feasible.

Objective: Monitor, and conserve the Bank Properties' Waters of the U.S. and Waters of the State.

Task 4.1.1: One annual walk-through survey will be conducted each spring to qualitatively monitor the general condition of the main wetland/riparian complexes in the rift valley, and in the cattle exclusion areas. General conditions regarding presence of ponding or saturation, extent and health of wetland plant species (FAC, FACW or OBL), estimates of invasive species cover, condition of exclusion fencing and any erosion problems will be noted, with specific locations and extents mapped on a site aerial.

Task 4.1.2: During the annual spring walk-through survey qualitatively monitor the general condition of the alluvial floodplains and the stream rehabilitation area. General conditions regarding extent of active flood plain showing indicators of Ordinary High Water Mark (OHWM), estimates of invasive species cover, and cover of xeric riparian species (as described in 2012 Wetland Delineation Report included in Exhibit I of BEI) will be noted, with specific locations and extents mapped on a site aerial.

Task 4.1.3: One annual drive-through survey of the entire Bank Properties will be conducted each spring to qualitatively monitor the general condition

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of the wetlands and waters. General conditions regarding any major changes in habitat quality including presence of invasive plant species, and any erosion problems will be noted, with specific locations and extents mapped on a site aerial.

Task 4.1.4: Establish representative photographic reference points in each of the aquatic resource habitat types to be monitored annually, and include photographs in each annual monitoring report.

4.2 Covered Habitat

The Bank Properties' covered habitats including non-wetland riparian and all terrestrial vegetative communities will be examined for major changes or threats to habitat quality.

Objective: Monitor, conserve, and maintain the Bank Properties' covered habitats.

Task 4.2.1: As part of the spring walk-through surveys, the riparian habitats will be examined for any major changes in habitat quality. Presence of invasive plant species and erosion problems will be noted. Any potential threats to the viability of this habitat will be mapped and documented in the annual report.

Task 4.2.2: As part of the annual drive-through survey, the Bank Properties' terrestrial habitats will be examined for any major changes in habitat quality including presence of invasive plant species, erosion problems or any other disturbance will be noted. Any potential threats to the viability of this habitat will be mapped and documented in the annual report.

Task 4.2.3: Establish representative photographic reference points in each of the covered upland habitat types to be monitored annually, and include photographs in each annual monitoring report. These photo-points shall provide good views of expanses of upland habitats, which will provide a mechanism to monitor changes in upland habitats, including shrub encroachment into grasslands.

4.3 Covered Species Monitoring

Objective: Monitor, manage and maintain habitat for Swainson's hawk.

Task 4.3.1: Annually conduct a drive-through assessment during the period best timed to observe nesting birds (typically April-May), the Bank Properties' Swainson's hawk foraging habitat will be monitored for major changes in area and quality. In particular, shrub encroachment in grasslands, changes in prey base, and observations of individuals will be noted. Any potential threats to the viability of these habitats will be noted in the annual report.

Task 4.3.2: Annually during the nesting bird drive-through assessment, the Bank Properties will be examined for major changes in area and quality of Swainson's hawk nesting habitat. In particular, significant changes to riparian forest and woodland habitats will be documented along with any

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observed individuals or potential nest sites. Any potential threats to the viability of these habitats will be noted in the annual report

Multiple angles will be utilized to help increase the observer's chance of detecting a nest or hawk (pair), especially after trees are fully leafed-out and when surveying multiple trees in close proximity to each other. When surveying from an access road, surveys will be conducted in both directions, usually maintaining a distance of 50 to 200 meters from subject trees. This is usually optimal for observing perched and flying hawks without reducing the chance of detecting a nest or young. Once a nest is found, closer inspection may be, and usually is, necessary.

Surveys will focus on both visual observations and vocalizations. Observations of nests, perched adults, displaying adults, and chicks during the nesting season are all indicators of nesting hawks. In addition, vocalizations of birds are extremely helpful in locating nesting territories. Vocal communication between hawks is frequent (1) during territorial displays, (2) during courtship and mating, (3) through the nesting period as mates notify each other that food is available or that a threat exists, and (4) as older chicks and fledglings beg for food.

Information collected will include all observed nest sites, including date and time of observation, location name, UTM coordinates, number of young, and any behavioral observations. The occurrence of nesting great horned owls, red-tailed hawks, red-shouldered hawks, and other potentially competitive species will also be documented. These species will infrequently nest within 100 meters of each other, so the presence of one species will not necessarily exclude another, but should be noted in the survey report.

4.4 Non-native Invasive Species Monitoring and Management

Objective: Monitor and maintain control over non-native invasive species, including but not limited to noxious weeds that diminish site quality for which the bank was established. The Land Manager shall consult the Cal-IPC list of high rated invasives in determining species of management concern.

Task 4.4.1: Annually, during the spring drive-through survey, the Bank Properties will be surveyed for infestations of noxious weeds. Observed noxious weed populations will be mapped and population estimates of perennial species will be recorded. A discussion of observed noxious weeds, the level of threat posed, and recommended management measures will be included in each monitoring report.

Task 4.4.2: As needed, weed management measures will be implemented to control infestations of noxious weeds. Recommended management measures will be prioritized, and implemented as funding is available. Actions to control invasive weed species may include prescribed grazing treatments, mowing, physical removal by hand, hand powered tools, or

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application of herbicides approved by the IRT and will be appropriately timed based on the biology of the target invasive species.

4.5 Vegetation Management

Objective: Analyze effects of grazing on habitat quality, and use adaptive management techniques to maintain habitat quality. For a detailed summary of the Grazing Plan refer to Appendix B.

Task 4.5.1: At the end of each growing season (October) the Bank Properties will be monitored and any deleterious effects of grazing on covered resources will be noted. In particular, vegetation height and the presence of high impact areas will be noted in the annual report.

Task 4.5.2: At the end of each year's growing season (October), the residual dry matter (RDM) will be sampled in multiple locations within each pasture.

Task 4.5.3: Each year, calculate grazing carrying capacity for each pasture based on productivity estimates using the previous years' measurements.

Task 4.5.4: Adjust stocking rates and timing based on RDM monitoring, invasive species presence, and habitat condition in accordance with the grazing plan. Manage grazing rates to maintain vegetation height and composition similar to baseline conditions or as determined likely to maintain aquatic resource function and covered species habitat.

Task 4.5.5: Monitor cattle water sources and attractants, such as salt licks, for evidence of habitat degradation, such as erosion and changes in vegetation type and cover.

4.6 Monitoring around Exclusion Areas

Habitats surrounding "Not a Part" areas and the Introduction Area will be monitored to ensure activities outside of the Bank Property or easement areas not managed under this Long-term Management Plan are not adversely affecting the Bank's resources. If monitoring results show any negative impact on the lands surrounding the "Not a Part" areas or easement areas not managed under this Long-term Management Plan, any identified issues will be discussed in the annual monitoring report and adaptive management actions will be taken to ameliorate the degradation caused by these activities. The monitoring and management activities will be conducted on an annual basis and will include the tasks discussed below.

Objective: Analyze and monitor the quality of habitats surrounding the "Not a Part" areas and easement areas not managed under this Long-term Management Plan, and use adaptive management techniques to maintain habitat quality if degradations to the habitat are observed.

Task 4.6.1: Monitor for social trails, erosion, reduced vegetation cover, evidence of trampling or compaction, and other evidence of significant soil or vegetation disturbance in adjacent habitats ~~adjacent to the "Not a Part" areas~~;

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Task 4.6.2: Monitor for trash, vandalism, or other forms of litter and property destruction on surrounding habitatsthe "Not a Part" areas;

Task 4.6.3: Monitor for runoff from irrigation, septic systems, or other infrastructure that may be affecting surrounding habitats surrounding the "Not a Part" areas;

Task 4.6.4: Monitor for invasive species in surrounding habitats the "Not a Part" areas;

Task 4.6.5: Monitor for fire hazards on surrounding habitats the "Not a Part" areas; and

Task 4.6.6: Monitor for evidence of non-permitted uses in the surrounding land surrounding the "Not a Part" areas including off-highway vehicle use (OHV), out of season hunting, outdoor fires, and other potential violations to the Conservation Easement, local laws/ordinances, or state laws.

5.0 SECURITY, SAFETY, AND PUBLIC ACCESS

The Bank Properties will be fenced and shall have no general public access, nor any regular public or private use, except as allowed by the Conservation Easement. Research and/or other educational programs or efforts may be allowed on the Bank Properties as deemed appropriate by the IRT, but are not specifically funded or a part of this Long-term Management Plan.

5.1 Trash and Trespass

Objective: Monitor and minimize sources of trash and trespass.

Task 5.1.1: During each site visit, record occurrences of trash. Record type, location, and management recommendations to avoid, minimize, or rectify trash impacts.

Task 5.1.2: Replace "No Trespassing" signs which have been damaged or are otherwise illegible. Legible "No Trespassing" signs should be posted no more than 600 feet apart on all exterior fencing.

Task 5.1.3: On a monthly basis, survey for and record evidence of trespass and condition of gates, locks and "No Trespassing" signs. Record type, location, and management recommendations to avoid, minimize, or rectify trespass impacts.

Objective: Collect and remove trash, repair vandalized structures, and rectify trespass impacts.

Task 5.1.4: At least once yearly collect and remove any accumulated trash.

Task 5.1.5: Within 30-days of the identification of trespass impacts (broken or missing fences, gates, locks, or "No Trespassing" signs), impacts will be repaired. Any additional measures to prevent trespass will be prioritized and implemented as funding allows.

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5.2 Fire Hazard Reduction

Objective: Maintain the site as required for fire control while limiting impacts to biological values.

Task 5.2.1: Graze to reduce vegetation height and reduce fuel loads to reduce risk and intensity of future fires.

5.3 Infrastructure

Objective: Monitor condition of perimeter and exclusion fences and gates.

Task 5.3.1: During the monthly trespass monitoring visit, record the condition of fences, gates, and roads. Any necessary tasks will be identified in the annual monitoring report.

Objective: Maintain fences and gates to prevent casual trespass, allow necessary access, and facilitate grazing management.

Task 5.3.2: Maintain fences and gates as necessary by replacing posts, wire, and/or gates.

Objective: Maintain existing roads to allow necessary access.

Task 5.3.4: Maintain primary access roads by grading, filling gullies, and reducing encroaching vegetation, as necessary, and as funding allows.

Objective: Maintain water trough infrastructure to ensure grazing regime and management can be fully implemented.

Task 5.3.5: Maintain trough infrastructure by replacing and repairing plumbing and troughs, as necessary, and as funding allows.

Objective: Maintain engineered structures associated with the Munz Canyon, Turkey Tail Floodplain, and Joey Stream Restoration Site (Restoration Sites 1, 4, and 5).

Task 5.3.6: Maintenance of engineered structures associated with the Munz Canyon, Turkey Tail Floodplain, and Joey Stream Restoration Site (Restoration Sites 1, 4, and 5) may need to occur at infrequent intervals (every 100 years). Maintenance requirements could include riprap replacement, riprap removal, concrete replacement, and concrete removal.

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6.0 REPORTING AND ADMINISTRATION

6.1 Annual Report

Objective: Provide annual report on all management tasks conducted and general site conditions to IRT and any other appropriate parties.

Task 6.1.1: Prepare annual report and any other additional documentation. Include a summary of all above mentioned monitoring and maintenance requirements. Complete and circulate to the IRT and other parties by November 15 of each year.

Task 6.1.2: Make recommendations with regard to (1) any habitat enhancement measures deemed to be warranted, (2) any problems requiring short and long-term attention (e.g., weed removal, fence repair, erosion control), and (3) any changes in the monitoring or management program that appear to be warranted based on monitoring results to date.

6.2 Long-Term Management Plan Updates

Objective: Provide updates to the long-term management plan to account for changes in bank conditions and changes approved by the IRT based on these new management priorities or considerations.

Task 6.2.1: Review the long-term management plan every five years and update accordingly based on any changes in the bank conditions or changes to the plan approved by the IRT. This task will include reviewing and, if necessary, updating the vegetation map based on current aerial imagery.

7.0 PERMITTED ACTIVITIES

The above listed activities represent the activities which will be required to ensure the Bank Properties continue to fulfill the requirements set forth in the BEI in perpetuity. Several additional activities which do not conflict with the successful function of the Bank will be permitted within the Bank Properties.

7.1 Permitted Uses

Limited private access will be available for out-door recreation for the Property Owner and their guests. No permitted recreation activity will conflict with the above-listed tasks, nor any requirement set forth in the BEI. The Property Owner reserves to itself and to its personal representatives, heirs, successors, and assigns the following uses:

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- Hunting shall be allowed on the Property in accordance with the following restrictions: (i) hunting activities shall not adversely affect the Conservation Values; (ii) no hunting activities shall take place from March 1 through July 15 of any year, and this closure period may be extended in writing by either Grantee, in consultation with CDFW, or CDFW to accommodate early or late Swainson's Hawk presence in any given year; (iii) no hunting activities shall take place within the cattle exclusion zone along the rift valley until all final restoration performance standards associated with the original restoration or any required remediation have been met and approved by the interagency review team (IRT) as specified in the BEI; (iv) recreational or target shooting not directly associated with the lawful take of game is strictly prohibited; and (v) commercial hunting shall be allowed on an annual basis with the prior, written approval of CDFW and subject to any terms and conditions set forth in that written approval;

- The Property Owner may continue to engage in non-motorized recreational activities on the Property in the same manner as Grantor currently utilizes the Property. These uses include, by way of example and not limitation, hiking, horseback riding, and hunting (subject to the restrictions described above). No motorized recreational activities (e.g., recreational off-highway vehicle activities) are permitted except on existing roads and trails.

- The infrastructure currently existing on the Property includes storage tanks, ponds and a pipeline (largely located within existing roadways) for water extraction, storage and delivery; livestock structures; agricultural equipment; and safety equipment (fire and general). Infrastructure that currently exists on the Property may continue to be used, replaced and maintained by Grantor. Grantor may not expand the use of such infrastructure (including existing ponds) or change the nature of such infrastructure if such expansion or change would have a material, adverse impact on the Conservation Values without prior written approval from the IRT.

- The Property Owner reserves the right to continue to use the Bank Properties for outdoor education events, educational tours, and school-related events.

Infrastructure may be repaired, replaced or installed if necessary for the repair and function of houses, structures, restoration activities or other permitted activities in the Bank Properties. Prior to installation, the property owner must provide evidence that new infrastructure will not negatively impact the creditable resources in the Bank Properties and such installation must be approved by the IRT.

7.2 Permitted Maintenance Activities

Existing infrastructure, such as roads, pipelines, fences, utility lines, wells, water tanks, etc., will require occasional maintenance to facilitate the permitted uses of the Bank Properties by the Property Owner. Funding and scheduling the maintenance of this infrastructure is not a component of this Long-term TMP Management Plan or of the endowment as these maintenance activities are not required to achieve the objectives of the Bank, this LTMPong-term Management Plan or the CE. Maintenance of these facilities may require limited work within the Bank Properties; however, this work will be limited to the existing infrastructure and roads.

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8.0 CULTURAL RESOURCES

Although cultural sites that are older than 50 years have been observed in the Bank Properties, including a reservoir, buildings and a turkey enclosure associated with the Munz Ranch and Frakes homestead, and distribution line from 1922, none of these sites are considered to be culturally or historically significant since they do not meet the standards as determined by Criterion 4/D, which states that in order for buildings, structures, or objects to be significant, they need to "be, or must have been, the principal source of information." Additionally, all of the building structures in the Elizabeth Lake Bank Property were destroyed in the Powerhouse fire. More information can be seen in the Cultural Report (Exhibit J of the BEI).

Despite the low quality of the cultural sites in the Bank Properties warrant further protection. These include two features in close proximity to the Bank Properties, which are Not a Part of the Bank Properties and three prehistoric items in the Petersen Ranch Bank Properties. The two features that are not a part of the Bank Properties include an old adobe structure and a gravesite known as the Frakes burial plot. The adobe structure is located near the Petersen Ranch lodge and located outside of the Petersen Ranch Bank Property, far from any development areas. This adobe structure will be completely avoided during Bank development activities. As stated previously, the Frakes burial plot is also Not a Part of the Elizabeth Lake Bank Property, it will be avoided during development since the Health and Safety Code Section 7050.5 prohibits disinterring, disturbing, or removing human remains from any location other than a dedicated cemetery. It should be noted that this burial plot is located far from any grading or other ground-work and development activities, as they are planned, pose little to no risk of damaging this burial plot.

Three prehistoric items were located in the Petersen Ranch Bank Property. Two of these resources were isolated finds (Iso-1 and Iso-2) and are not eligible for National Register. The third resource, a lithic scatter comprised of two mano fragments and a quartzite core (S-1), may be eligible for the National Register since there may be additional artifacts that are not visible or buried in this area, but until it is excavated/evaluated this determination cannot be made. The areas where Iso-1, Iso-2, and S-1 were located are not subject to any Development Activities and are located far from roads, within preservation areas. Monitoring, weed management, and any other long-term or interim management activities in these areas will be conducted on foot. No groundbreaking activities will occur within this area and long-term management activities, as they are planned, pose no risk of damaging this site.

As recommended in the cultural resources report for Petersen Ranch, which was completed by Duke Cultural Resources Management (Exhibit J of the BEI), if maintenance work is ever required in these areas, then a monitor shall be present during any ground disturbance within 50 feet of Iso-1, Iso-2, and S-1. The archaeological monitor shall work under the direct supervision of a qualified archaeologist who meets the Secretary of the Interior professional qualifications for prehistoric archaeology. If an archaeological deposit or any artifacts are discovered the archaeological monitor shall have the authority to temporarily halt or divert construction. The monitor shall quickly assess the nature and significance of the find and in consultation with the qualified archaeologist make further recommendations to the Corps for consideration and compliance with section 106 of the National Historic Preservation Act and to the State Historic Preservation Officer (SHPO). In the event of any discoveries during construction of either human remains, archeological deposits, or any other type of historic property, the Corps' Archeology Staff will be notified within 24 hours. Work in any area(s) where potential cultural resources are discovered will be suspended, and construction will not resume in that area until authorized by the Corps.

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Additionally, if human remains are encountered during any Management or Development Activities, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of the origin and disposition of the remains pursuant to State Public Resources Code Section 5097.98. The County Coroner must be notified immediately.

9.0 TRANSFER, AMENDMENTS, AND NOTICES

9.1 Transfer

The Petersen Ranch Property Owner and Elizabeth Lake Property Owner shall have the right to sell, assign, transfer or convey (each a "transfer") its interest in the Bank Property at any time, provided, however, that any such transfer on or after the execution date of the BEI must be made in accordance with the BEI and the Conservation Easements, and shall be subject to written concurrence by the IRT. Such concurrence shall be subject to the requirement that the transferee assumes and agrees in writing to observe and perform all of the property owner's obligations pursuant to the BEI and Conservation Easements. From and after the date of any transfer by Petersen Ranch Property Owner or Elizabeth Lake Property Owner of its interest in the Bank Property, the transferor shall have not further obligations hereunder and all references to the Petersen Ranch Property Owner or Elizabeth Lake Property Owner in the BEI shall thereafter refer to such transferee, except that the transferor's liability for acts, omissions, or breaches occurring prior to the transfer shall survive the transfer.

9.2 Amendments

The Petersen Ranch Property Owner, Elizabeth Lake Property Owner, and the IRT may meet and confer from time to time, upon the request of any one of them, to revise the Long-term Management Plan to better meet management objectives and preserve the habitat and conservation values of the Bank Property. Any proposed changes to the Long-term Management Plan shall be discussed with the IRT. Any proposed changes will be designed with input from all parties. Amendments to the Long-term Management Plan shall be approved by the IRT in writing shall be required management components and shall be implemented by Petersen Ranch Property Owner and Elizabeth Lake Property Owner.

If the CDFW determines, in writing, that continued implementation of the Long-term Management Plan would jeopardize the continued existence of a state listed species, any written amendment to this Long-term Management Plan, determined by the CDFW as necessary to avoid jeopardy, shall be approved by the IRT in writing, shall be a required management component, and shall be implemented by the Petersen Ranch Property Owner and Elizabeth Lake Property Owner.

ED_013814_00002192-00032

9.3 Notices

Any notices regarding this Long-term Management Plan shall be directed as follows:

Elizabeth Lake Property Owner:
LV Lake Elizabeth, LLC
1001 Bridgeway #246
Sausalito, CA 94965
(415) 729-3734
Contact: Tracey Brownfield

Petersen Ranch Property Owner:
LV-BP Investors Ranch, LLC
1001 Bridgeway #246
Sausalito, CA 94965
(415) 729-3734
Contact: Tracey Brownfield

IRT:

U.S. Army Corps of Engineers
Los Angeles District
915 Wilshire Boulevard
Suite 13073
Los Angeles, CA 90017
Attn: Chief, Regulatory Division

U.S. Environmental Protection Agency
Region IX
75 Hawthorne Street
San Francisco, CA 94105
Attn: Director, Water Division
Telephone: 415-947-8707
Fax: 415-947-3549

California Regional Water Quality Control Board
Lahontan Region
14440 Civic Drive, Suite 200
Victorville, CA 92392
Attn: Executive Officer

California Department of Fish and Wildlife
South Coast Region
3883 Ruffin Road
San Diego, CA 92123
Attn: Regional Manager

ED_013814_00002192-00033

California Department of Fish and Wildlife
Habitat Conservation Branch
1416 Ninth Street, 12th Floor
Sacramento, CA 95814
Attn: Branch Chief
Telephone: 916-653-4875
Fax: 916-653-2588

10.0 FUNDING AND TASK PRIORITIZATION

10.1 Funding

The Endowment Fund Analysis and Schedule (Exhibit D-2 of the BEI) summarizes the anticipated costs of long-term management for the Bank as outlined in this Long-term Management Plan. These costs include estimates of time and funding needed to conduct the basic monitoring site visits and reporting, weed mowing, trash removal, fence repair, and a prorated calculation of funding needed to fully replace the fences every 20 years. The Endowment Amount will be funded for each Area, by Phase, following the schedule outlined in the BEI.

Southwest Resource Management Association (SMRA) shall hold the Endowment Fund in accordance with the Endowment Agreement (Exhibit D-3 of the BEI). These interest monies from the Endowment Fund will fund the long-term management activities on the Bank Property in a manner consistent with this Long-term Management Plan.

The Petersen Ranch Property Owner and Elizabeth Lake Property Owner shall consult with SMRA on a year to year basis to determine the amount of funding available for long-term management activities. Interest monies from the Endowment Fund will be disbursed to the Petersen Ranch Property Owner and Elizabeth Lake Property Owner as outlined in the Endowment Agreement (Exhibit D-3 of the BEI).

10.2 Task Prioritization

Due to unforeseen circumstances, prioritization of tasks, including tasks resulting from new requirements, may be necessary if insufficient funding is available to accomplish all tasks. The Petersen Ranch Property Owner, Elizabeth Lake Property Owner, and the IRT shall discuss task priorities and funding availability to determine which tasks will be implemented. In general, tasks are prioritized in this order: 1) required by a local, state, or federal agency; 2) tasks necessary to maintain or remediate habitat quality; and 3) tasks that monitor resources, particularly if past monitoring has not shown downward trends. Equipment and materials necessary to implement priority tasks will also be considered priorities. Final determination of task priorities in any given year of insufficient funding will be determined in consultation with the IRT and as authorized by the IRT in writing.

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11.0 REFERENCES

Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken (eds.). 2012. The Jepson Manual: Vascular Plants of California, second edition. University of California Press, Berkeley, CA.

Bloom Biological, Inc. 2013. Results of a Swainson's Hawk (*Buteo swainsoni*) habitat assessment to evaluate the biological suitability of properties for mitigation for the Tehachapi Renewable Transmission Project. February 18, 2013.

CalFlora. 2013. Berkeley, California. Online at: www.CalFlora.org. Accessed July, 2013.

California Geological Survey . 2003. Seismic Hazard Zone Report for the Lake Hughes 7.5-Minute Quadrangle, Los Angeles County California.

California Invasive Plant Council (Cal-IPC). 2006. California Invasive Plant Inventory: Cal-IPC Publication 2006-2. California Invasive Plant Council, Berkeley, CA. Online at: [SEQ CHAPTER \h \r 1]http://www.cal-ipc.org/ip/inventory/index.php. Accessed October 2013.

California Native Plant Society (CNPS). 2013. Electronic Inventory of Rare and Endangered Vascular Plants of California. California Native Plant Society, Sacramento, California. Online at: http://www.cnps.org/inventory. Accessed August 2013.

California Soil Resources Laboratory (CSRL). 2013. Online at: http://casoilresource.lawr.ucdavis.edu/gmap/. Accessed July 2013.

Dibblee, T.W. 1961. Geologic map of the Bouquet Reservoir quadrangle, Los Angeles County, California: U.S. Geological Survey, Mineral Investigations Field Studies Map MF-79, scale 1:62500. Online at: http://ngmdb.usgs.gov/ngm-bin/ILView.pl?sid=2984_1.sid&vtype=b&sfact=1.5. Accessed: November 17, 2011.

Hernandez, J.L. 2011. Preliminary Geologic Map of the Lake Hughes 7.5-minute Quadrangle, Los Angeles County, California: A Digital Database. California Geologic Survey. Online at ftp://ftp.consrv.ca.gov/pub/dmg/rgmp/Prelim_geo_pdf/Lake_Hughes24k_preliminary-.pdf. Accessed: November 17, 2011.

Holland, R.F. 1986. Preliminary descriptions of the terrestrial natural communities of California. State of California, The Resources Agency, Nongame Heritage Program, Department of Fish and Game, Sacramento, CA.

Shuford, W.D. and T. Gardali, eds. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game,

[TRPA] Tahoe Regional Planning Association. 2012. TRPA Code of Ordinances. Adopted by Governing Board December, 12, 2012. Effective February 9, 2013. Available online at: http://www.trpa.org/regional-plan/code-of-ordinances/

U.S. Department of Agriculture (USDA.) 1980. Soil Survey of Angeles National Forest Area. In cooperation with the University of California Agricultural Experiment Station.

U.S. Department of Agriculture (USDA). 1922. Soil Survey of the Lancaster Area. California. In cooperation with the University of California Agricultural Experiment Station.

U.S. Department of Agriculture (USDA). 1969. Soil Survey of the Los Angeles Area, California. In cooperation with the University of California Agricultural Experiment Station.

The Los Angeles County Soil Series (USDA 1969), Lancaster Area Soil Series (USDA 1922),

U.S. Geologic Survey (USGS). 1995. Lake Hughes 7.5-minute quadrangle map.

WRA, Inc. (WRA) 2012a. Biological Resource Inventory Report: Proposed Elizabeth Lake Mitigation/ Conservation Bank. Los Angeles County, California. July 2012

WRA, Inc. (WRA) 2012b. Preliminary Delineation of Waters of the U.S. and CDFW Section 1602 Jurisdiction: Proposed Elizabeth Lake Mitigation/Conservation Bank. Los Angeles County, California. April 2012.

WRA, Inc. (WRA) a. 2013 Biological Resources Inventory: Petersen Ranch. Leona Valley, Los Angeles County, California. March 2013.

WRA, Inc. (WRA) b. 2013. Delineation of Potential Jurisdictional Wetlands and Non-Wetland Waters Under Section 404 of the Clean Water Act, Porter-Cologne Water Quality Control Act, and Section 1600 of the California Fish and Game Code: Petersen Ranch. Leona Valley, Los Angeles County, California. July 2013.

APPENDIX A:

FIGURES

APPENDIX B:

GRAZING PLAN

APPENDIX C:

HUNTING RULES, REGULATIONS, AND IMPACT-MINIMIZATIONS MEASURES FOR STATE OF CALIFORNIA AND THE PETERSEN RANCH MITIGATION BANK