

INTENTIONALLY LEFT BLANK

Conceptual Resource Management Plan for Warner Ranch

3 BIOLOGICAL RESOURCES DESCRIPTION

A biological resources technical report is being prepared in conjunction with this CRMP (Dudek 2015). The following information is based on surveys and resource mapping that were completed in 2005, 2008, and 2010.

3.1 Habitat Types/Vegetation Communities

The biological open space will include the following upland vegetation: Diegan coastal sage scrub (including disturbed), non-native grassland, southern mixed chaparral (including disturbed), southern cactus scrub, scrub oak chaparral, and valley needlegrass grassland. Riparian and wetland vegetation communities preserved in open space include: southern coast live oak riparian forest (including disturbed), mulefat scrub, non-vegetated channel, sycamore alluvial woodland, and southern cottonwood-willow riparian forest. Disturbed habitat, orchards, and developed and agricultural lands will also be part of the biological open space.

These vegetation communities and land cover types are described below; their acreages are presented in Table 2, and their spatial distributions are shown on Figure 3.

Table 2
Vegetation Communities and Land Cover Types in Biological Open Space

Habitat Types/Vegetation Communities	Code ¹	Open Space (Ac.)
<i>Upland Scrub</i>		
southern cactus scrub	N/A	1.9
Diegan coastal sage scrub*	32500	122.1
disturbed Diegan coastal sage scrub*	32500	24.9
<i>Subtotal</i>		<i>148.9</i>
<i>Upland Woodland and Savannah</i>		
scrub oak chaparral*	37900	8.0
southern mixed chaparral (granitic and mafic)*	37120	113.8
coast live oak woodland*	71160	0.4
disturbed southern mixed chaparral*	37120	0.2
<i>Subtotal</i>		<i>122.4</i>
<i>Upland Grassland</i>		
valley needlegrass grassland*	42110	1.2
non-native grassland*	42200	7.3
<i>Subtotal</i>		<i>8.5</i>
<i>Riparian Scrub</i>		
mulefat scrub*	63310	1.7

Conceptual Resource Management Plan for Warner Ranch

Table 2
Vegetation Communities and Land Cover Types in Biological Open Space

Habitat Types/Vegetation Communities	Code ¹	Open Space (Ac.)
<i>Riparian Woodlands/Forests</i>		
southern cottonwood-willow riparian forest*	61330	6.9
sycamore alluvial woodland*	62100	4.3
southern coast live oak riparian forest*	61310	10.2
disturbed southern coast live oak riparian forest*	61310	0.7
<i>Subtotal</i>		22.1
<i>Unvegetated Waters</i>		
non-vegetated channel*	64200	<0.1
<i>Non-Natural Land Covers</i>		
agriculture (intensive)	18200	0.1
agriculture (extensive)	18300	8.9
Disturbed/developed	11300	2.2
orchard	18100	44.2
<i>Subtotal</i>		55.4
Total		359.0

¹ Holland (1986) as modified by Oberbauer et al. (2008).

* Considered special-status by the County (2010a).

3.1.1 Coastal Sage Scrub

The coastal sage scrub community is characterized by shrubs up to 1 meter tall, with many species being facultative drought-deciduous, and thus most active during winter and early spring. This community is usually located on sites with low moisture; clay-rich soils; or steep, xeric slopes. Stem- and leaf-succulents are present, but this community is dominated by California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), laurel sumac, and white sage (*Salvia apiana*). Other shrubs associated with the coastal sage scrub community include lemonade berry (*Rhus integrifolia*), deerweed (*Lotus scoparius*), and small-flowered needlegrass (*Nassella lepida*) (Holland 1986).

Coastal sage scrub is mapped on gentle slopes and south-facing exposures in both the western and eastern portions of the site. In general, shrub cover in these areas is relatively low (approximately 30%–60%) with common species including California sagebrush, flat-top buckwheat, and laurel sumac. Where coastal sage scrub occurs as a mosaic with southern mixed chaparral in the northern portion of the site, yellow bush-penstemon (*Keckiella antirrhinoides* ssp. *antirrhinoides*) is a common component. Understory species are varied and include fringed spineflower (*Chorizanthe fimbriata*), yellow pincushion (*Chaenactis glabriuscula* var. *glabriuscula*), California everlasting (*Gnaphalium californicum*), chalk dudleya (*Dudleya pulverenta*), caterpillar phacelia (*Phacelia cicutaria*), silver puffs (*Uropappus lindleyi*), bromes, and starthistle (*Centaurea melitensis*).

Conceptual Resource Management Plan for Warner Ranch

3.1.2 Non-Native Grassland

In his description of California annual grassland, Holland (1986) states that this habitat type typically occurs on fine-textured clay soils. Sites are often moist or waterlogged during the winter rainy season and very dry during the summer and fall months. Adjacent areas with moister, better-drained soils often support oak woodland. According to Sawyer and Keeler-Wolf (1995), California annual grasslands occur in uplands of all topographic orientation. Grasses that occur in California annual grasslands include oats (*Avena* spp.), bromes, fescue (*Vulpia* spp.), and Italian ryegrass (*Lolium multiflorum*). Forbs that occur with these grasses include California poppy (*Eschscholzia californica*), filaree, goldfields (*Lasthenia* spp.), phacelia (*Phacelia* spp.), and gilias (*Gilia* spp.) (Holland 1986; CDFG 2003).

Annual grassland is present mainly within the south–central portion of the site in flat to gently sloped areas adjacent to the existing ranch operation. Predominant species include non-native annual grasses, such as slender wild oat, red brome (*Bromus madritensis* ssp. *rubens*), and non-native forbs, such as red-stemmed filaree (*Erodium cicutarium*). Annual grasslands on the project site appear to have been regularly disturbed through mowing. Native species are limited and include species such as Nievitas cryptantha (*Cryptantha intermedia*), spreading goldenbush (*Isocoma menziesii* ssp. *menziesii*), morning glory (*Calystegia macrostegia*), calabazilla (*Cucurbita foetidissima*), and deerweed.

3.1.3 Mulefat Scrub

According to Holland (1986), the mulefat scrub vegetative community is composed of tall, herbaceous riparian shrubs and trees, strongly dominated by mulefat (*Baccharis salisifolia*). If not for regular flooding, this early seral community would generally succeed to sycamore- or cottonwood-dominated riparian woodlands or forests. This community often occurs as an irregular understory in gaps in the sycamore alluvial woodland community, and usually occurs in intermittent stream channels with coarse substrate and a water table of moderate depth. Besides mulefat, several willow species (*Salix exigua* and *S. lasiolepis*) and hoary nettle (*Urtica dioica* ssp. *holosericea*) are characteristic of this community.

Mulefat scrub is found within the southern, downstream segment of Gomez Creek, from just above the existing concrete Arizona crossing of the creek within the ranch to SR-76 along the southern border. This segment is characterized by an approximately 5–15-foot-deep, mostly steeply incised channel. Vegetation cover varies from 5%–100%, generally with lower cover, isolated to channel bed margins, occurring in more highly scoured (i.e., less topsoil) situations. It is likely, based on the general hydrological character observed, that this segment is subject to high stormwater flow velocities and therefore may have been particularly affected by the previous winter storm events (winter of 2004/2005). Mulefat occurs throughout the channel

Conceptual Resource Management Plan for Warner Ranch

segment; associated species include salt-cedar (*Tamarisk ramossisma*), Mexican-tea (*Chenopodium ambrosioides*), cockle-bur (*Xanthium strumarium*), Parish's monkeyflower (*Mimulus parishii*), and dock (*Rumex conglomerates*). Mulefat is also mapped in an isolated section of riparian vegetation that occurs in the eastern portion of the project site.

Mulefat is a hydrophytic plant species that typically indicates the presence of waters of the U.S. and/or state. The mulefat that occurs in Gomez Creek is considered wetlands under the jurisdiction of the Army Corps of Engineers (ACOE), CDFW, Regional Water Quality Control Board (RWQCB), and County. The isolated section of mulefat in the eastern portion is mapped as a CDFW and County wetland.

3.1.4 Southern Mixed Chaparral

This drought- and fire-adapted community is composed of woody shrubs, 1.5–3.0 meters tall, frequently forming dense, impenetrable stands. It develops primarily on mesic, north-facing slopes and in canyons, and is characterized by crown- or stump-sprouting species that regenerate following burns or other ecological catastrophes. This vegetation community is typically a mixture of chamise, mission manzanita (*Xylococcus bicolor*), ceanothus, scrub oak, laurel sumac, and yucca (*Yucca* spp.) (Holland 1986).

Southern mixed chaparral occurs throughout the northern portions of the site, often in a mosaic with coastal sage scrub. Predominant species on site include chamise, mission manzanita, greenbark ceanothus (*Ceanothus tomentosus*), hoary-leaf ceanothus (*Ceanthous crassifolia*), and scrub oak. Other associated species include poison oak (*Toxicodendron diversilobium*), San Diego bedstraw (*Galium nuttallii* ssp. *nuttallii*), caterpillar phacelia, littleseed muhly (*Muhlenbergia microsperma*), miner's lettuce (*Claytonia perfoliata* var. *perfoliata*), bull thistle (*Cirsium vulgare*), ropevine (*Clematis pauciflora*), and Nuttall's snapdragon (*Antirrhinum nuttallianum* ssp. *nuttallianum*).

3.1.5 Southern Cactus Scrub

Southern cactus scrub is not described in Holland (1986) or Oberbauer (1996) but is a distinct community occurring in relatively isolated areas throughout the County (e.g., Chula Vista, San Pasqual). The vegetation community is recognized by Gray and Bamlet (1992) for Orange County. The community can be considered a subtype of coastal sage scrub, but generally consists of over 50% cover of cactus species (*Cylindropuntia* spp. or *Opuntia* spp.) with associated species often being typical coastal sage scrub species.

Portions of the southeastern study area are dominated by prickly-pear cactus (*Opuntia littoralis*) with relatively large gaps occupied by non-native grasses and coastal sage scrub shrubs.

Conceptual Resource Management Plan for Warner Ranch

3.1.6 Scrub Oak Chaparral

Holland describes this community as a thick, evergreen chaparral up to 20 feet tall, with scrub oak and mountain mahogany (*Cercocarpus betuloides*) dominating the community. More mesic than most chaparrals, scrub oak chaparral occurs at higher elevations and recovers faster from fire, despite considerable leaf litter accumulation. Oaks, buckthorns (*Rhamnus* spp.), ceanothuses, and poison oak are commonly found species in this community (Holland 1986).

Scrub oak chaparral was identified in the central–western portion of the site on gentle to steep slopes east and west of Gomez Creek. Scrub oak is the dominant species with an open, tall stature (approximately 60% cover and 10 to 15 feet in height) on gentle slopes, where understory and gap species include purple needlegrass (*Stipa pulchra*), California buckwheat, and bromes. On steep slopes, the composition of the scrub oaks is dense and of reduced height (approx. 90% cover and 6–10 feet in height) with an understory dominated by poison oak with other species including common eucrypta (*Eucrypta chrysanthemifolia*), yellow bush-penstemon, and toyon (*Heteromeles arbutifolia*).

3.1.7 Valley Needlegrass Grassland

According to Holland (1986), valley needlegrass (native) grassland is dominated by perennial, tussock-forming purple needlegrass of up to 2 feet in height. Native and introduced annuals often outnumber the bunchgrass in cover. This habitat type usually occurs on fine-textured clay soils that are extremely dry in the summer and moist in the winter. It often intergrades with oak woodlands on wetter, well-drained sites. Common species include melic grass (*Melica* spp.), boreal yarrow (*Achillea borealis*), brome grasses, and nodding needlegrass (*Nassella cernua*).

Native grasslands on the project site are found in only three locations, on an east-facing exposure, mid-slope above Gomez Creek. Shrub cover is below 20% and native grasses compose at least 10% cover, with the remainder of the plant cover composed of a combination of native and non-native annuals, such as osmadenia (*Osmadenia tennela*), soft chess, dot-seed plantain (*Plantago erecta*), narrow-leaf filago (*Filago gallica*), slender wild oat, Douglas' microseris (*Microseris douglasii* ssp. *douglasii*), everlasting nest straw (*Stylocline gnaphalioides*), and canchalagua (*Centaurium venustum*).

3.1.8 Sycamore Alluvial Woodland

This is a winter-deciduous, open, broad-leaved riparian community, with sycamores (*Platanus racemosa*) being the predominate species present and blue elderberry (*Sambucus nigra* ssp. *cerulea*) and California buckeye (*Aesculus californica*) often appearing in the subcanopy. Introduced grasses and mulefat comprise the understories of these communities.

Conceptual Resource Management Plan for Warner Ranch

Sycamore alluvial woodland is described in Holland (1986) for the Central California coastal areas. The variant that occurs in the County is found in wide, cobble, braided channels that are subject to scour during flooding events and support an open canopy of mature western sycamore. Other common species found in this community include oaks, Fremont cottonwood (*Populus fremontii*), willows (*Salix* spp.), and introduced herbaceous plants (Holland 1986). On-site, sycamore alluvial woodland occurs both alongside Gomez Creek and the eastern tributary channel, but clearly above the ordinary high water mark (OHWM) for both channels. Mature western sycamores are the predominant species, occurring as an open, tall structure with a relatively dense non-native understory along Gomez Creek and a sparser understory along the eastern tributary channel. Associated species in both locations include bull thistle, bristly ox-tongue, wild mustard (*Hirshfeldia incana*), and rip-gut grass (*Bromus diandrus*). Soils in both areas are sandy; disturbance, likely through mowing and grazing, appears have been more intensive in the western areas. Sycamore alluvial woodland is also mapped in an isolated area of riparian vegetation in the eastern portion of the project site.

Sycamore alluvial woodland is typically considered hydrophytic vegetation that indicates the presence of waters of the U.S. and/or state. The sycamore alluvial woodland that occurs adjacent to Gomez Creek is considered a wetland under the jurisdiction of CDFW and the County. The isolated section of sycamore alluvial woodland in the eastern portion is also mapped as a CDFW and County wetland.

3.1.9 Southern Coast Live Oak Riparian Forest

According to Holland (1986), this community can range from an open to a dense evergreen, riparian, and sclerophyllous woodland. Coast live oak (*Quercus agrifolia*) is the dominant species, and seems to have richer herb diversity and fewer understory shrubs compared to other riparian communities. This community flourishes on fine-grained alluvium in bottomlands and outer floodplains of bigger streams, and is found primarily south of Point Conception. Big-leaf maple (*Acer macrophyllum*), mugwort (*Artemisia douglasiana*), manroot (*Marah macrocarpus*), California wild rose (*Rosa californica*), blue elderberry, and poison oak are among the species contained in the southern coast live oak riparian forest.

Southern coast live oak riparian forest on the Warner Ranch project site occurs as two subtypes according wetlands jurisdictional designation; each also occurs in disturbed phases, for a total of four mapping categories.

Southern coast live oak riparian forest, under the jurisdiction of ACOE, CDFW, RWQCB, and the County as a wetlands community, occupies the OHWM within the northern tributary to Gomez Creek. In this area, the channel also contains arroyo willow, mulefat, and a herbaceous understory. Along the small stretch of Pala–Temecula Creek on site, oaks occur sparsely along

Conceptual Resource Management Plan for Warner Ranch

an open sandy channel. Although no substantial populations of invasive exotic species were found in this creek segment on site, off-road vehicular activity was observed and appears to be a regular occurrence and, therefore, the area is mapped as disturbed.

Southern coast live oak riparian forest, under the jurisdiction of CDFW and the County only, occurs on slopes above the OHWM on either side of Gomez Creek, and along Pala–Temecula Creek. Associated species in this community include poison oak, prickly ox-tongue (*Picris echioides*), California mugwort (*Artemisia douglasii*), and bull thistle. The disturbed phase of this subtype, located on the east side of Gomez Creek, has been altered by mechanical disturbance (apparently regular mowing and parking/driving) creating a compacted soil condition substantially reducing understory cover and oak recruitment.

3.1.10 Coast Live Oak Woodland

According to Holland (1986), coast live oak is the singular evergreen species dominating this community, with the canopy height reaching 10 to 25 meters in height. The shrub layer is poorly developed, but may include toyon, gooseberry (*Ribes* spp.), laurel sumac, and Mexican elderberry (*Sambucus nigra*), as well as many introduced species like ripgut brome (*Bromus diandrus*). This community tends to occupy relatively exposed sites in the north and shaded ravines in the south, and it intergrades with other communities depending on location and conditions.

Coast live oak woodland occurs in a few locations on the project site, where coast live oak occurs on hillsides with a moderately dense, tall structure and is not associated with a drainage. Understory species include species typical of southern mixed chaparral, such as toyon and ropevine, and non-native annuals such as black mustard (*Brassica nigra*) and bull thistle. Areas mapped as coast live oak woodlands are not associated with stream channels and do not support hydrophytic vegetation; therefore, they are not considered wetlands of the U.S., state, or County.

3.1.11 Southern Cottonwood-Willow Riparian Forest

Open, winter-deciduous broadleaved riparian forests with shrubby willow understories and dominating cottonwood (*Populus* spp.) and willow species characterize this community. Frequently overflowed and sub-irrigated lands alongside streams and rivers provide the moist, mineral soil necessary for dominant species recruitment in this seral type, as well as recruitment for common species, such as mulefat, sycamore, hoary nettle, and big-leaf maple (*Marah macrocarpus*) (Holland 1986).

The majority of vegetation within Gomez Creek within the OHWM is mapped as southern cottonwood-willow riparian forest and falls under the jurisdiction of ACOE, CDFW, RWQCB, and the County as a wetlands community. Species composition includes a mixture of arroyo willow, Fremont's cottonwood, and coast live oak in the tree layer; a shrub layer of mulefat and

Conceptual Resource Management Plan for Warner Ranch

giant cane (*Arundo donax*), which varies from sparse to dense; and a herbaceous layer that varies in cover according to shrub density and rock exposure and includes dwarf nettle (*Urtica urens*), water speedwell (*Veronica angallis-aquatica*), Parish's monkeyflower, narrow-leaved willow, and cocklebur (*Xanthium strumarium*).

3.1.12 Non-Vegetated Channel

Non-vegetated channel refers to ephemeral and intermittent stream channels that are barren or sparsely vegetated, and thus does not fit into other wetland habitat categories. The lack of vegetation may be due to the scouring effects of floods, or human-caused vegetation removal for flood control, access, sand mining, or other purposes (Oberbauer et al. 2008).

On site, non-vegetated channel is mapped within Pala–Temecula Creek as waters under the jurisdiction of ACOE, CDFW, RWQCB, and the County and consists of a wide, sandy bottom channel with southern coast live oak riparian forest mapped outside of the OHWM.

3.1.13 Orchard

This on-site community is comprised of artificially irrigated land dominated by citrus and avocado trees. These trees are typically low and bushy with an open understory, where short grasses and other herbaceous plants grow between rows (Oberbauer et al. 2008).

3.1.14 Agricultural

According to Oberbauer et al. (2008), this type of community describes lands that support an active agricultural operation and may be classified as general agriculture. In the study area, the agricultural areas are separated into intensive agriculture, which includes the corrals and ranch buildings; and extensive agriculture, which includes the pasture lands.

3.1.15 Disturbed Habitat

While Holland's *Terrestrial Natural Communities of California* descriptions (1986) do not address disturbed habitat, Oberbauer et al. (2008) explains disturbed habitat as areas that are not developed, yet lack vegetation, and usually result from harsh or repeated mechanical perturbations.

3.1.16 Developed

The areas mapped as developed lands include portions of SR-76 and Pala-Temecula Road.

Conceptual Resource Management Plan for Warner Ranch

3.2 Jurisdictional Wetlands and Waters

Included in the vegetation communities above are several wetlands/waters mapped under the jurisdiction of ACOE, RWQCB, CDFW, and the County, including mulefat scrub, southern coast live oak riparian forest, southern cottonwood-willow riparian forest, and non-vegetated channel. In addition, the following communities are mapped under the jurisdiction of CDFW and the County: mulefat scrub, southern coast live oak riparian forest (including disturbed), and sycamore alluvial woodland.

In addition, 0.86 acre (13,451 linear feet) of non-wetland drainages (ephemeral stream channel) under the jurisdiction of ACOE, RWQCB, and CDFW was mapped within the project open space as waters of the U.S.; and 0.25 acre (5,447 linear feet) of isolated non-wetland drainages under the jurisdiction of CDFW only was mapped as waters of the State. It should be noted that these drainages are mapped as an overlay in relation to the vegetation community mapping and therefore are not added in the cumulative total acreages of the site; all stream channels are mapped within non-jurisdictional upland vegetation communities.

3.3 Flora

A total of 132 species of vascular plants were observed within the project area. Some 75% of the species (99) were native, nearly all of which are associated with undisturbed native San Diego vegetation communities like coastal sage scrub and southern cottonwood-willow riparian forest. The remaining 25% of the total species (33) were non-native species, and are generally commonly invasive plants, such as bromes.

3.4 Fauna

The project site supports habitat for a number of common upland and riparian species. Cumulatively, 137 species of wildlife were observed during the 2005, 2008, and 2010 biological surveys. Wildlife species observed are typical of species that occur within the upland and riparian vegetation on site and in San Diego County.

3.5 Special-Status Plants

Dudek conducted rare plant surveys in 2005 and 2010. Populations of six special-status plant species will be preserved in on-site open space: rainbow manzanita (*Arctostaphylos rainbowensis*), a California Rare Plant Rank (CPRP) 1B.1 and County Group A species; Parry's tetracoccus (*Tetracoccus dioicus*), a CPRP 1B.2 and County Group A species; rush-like bristleweed (*Xanthisma junceum*), a CPRP 4.3 and County Group D species; Palmer's grappling hook (*Harpagonella palmeri*), a CPRP 4.2 and County Group D species; Engelmann oak

Conceptual Resource Management Plan for Warner Ranch

(*Quercus engelmannii*), a CPRP 4.2 and County Group D species; and prostrate spineflower¹ (*Chorizanthe procumbens*). See Figure 3 for species' locations within open space.

3.6 Special-Status Wildlife

Dudek conducted focused surveys for California gnatcatcher (*Polioptila californica*), southwestern willow flycatcher (*Empidonax traillii extimus*), and least Bell's vireo (*Vireo bellii pusillus*) in May through August 2005 and May through September 2010; focused surveys for Quino checkerspot butterfly (*Euphydryas editha quino*) were conducted in May 2005 and protocol surveys for Quino checkerspot butterfly were conducted March through April 2008; protocol surveys to determine presence/absence of arroyo toad (*Bufo californicus*) were conducted April through July 2005 and April through September 2010; focused surveys for trout were conducted in 2005 and 2006; and trapping studies for Stephens' kangaroo rat were conducted in October 2010. No listed species were observed during these focused surveys.

Fifteen special-status wildlife species were detected during the 2010 focused animal and plant surveys: Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), a CDFW Watch List species and County Group 1 species; Cooper's hawk (*Accipiter cooperii*), a CDFW Watch List species and County Group 1 species; sharp-shinned hawk (*Accipiter striatus*), a California Species of Special Concern (CSC) and County Group 1 species; great blue heron (*Ardea herodias*), a County Group 2 species; red-shouldered hawk (*Buteo lineatus*), a County Group 1 species; turkey vulture (*Cathartes aura*), a County Group 1 species; northern harrier (*Circus cyaneus*), a CSC species and County Group 1 species; coastal cactus wren (*Campylorhynchus brunneicapillus sandiegensis*), a CSC species and County Group 1 species; yellow warbler (*Dendroica petechia brewsteri*), a CSC species and County Group 2 species; white-tailed kite (*Elanus leucurus*), a fully protected species and County Group 1 species; northern red-diamond rattlesnake (*Crotalus ruber ruber*), a CSC species and County Group 2 species; coastal western whiptail (*Aspidoscelis tigris stejnegeri*), a County Group 2 species; Blainville's horned lizard (*Phrynosoma blainvillei*), a CSC species and County Group 2 species; northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*), a CSC and County Group 2 species; and San Diego woodrat (*Neotoma lepida intermedia*), a CSC and County Group 2 species. See Figure 3 for locations of some of these species within open space.

3.7 Overall Biological Value

The vegetation communities/habitats that will be preserved and managed are described in Table 2. The open space areas are shown on Figure 3. These open space areas consist primarily of two

¹ Although this species does not have any federal, state, or County status, the County recommended that this species be included in the environmental analysis (Dudek 2013).

Conceptual Resource Management Plan for Warner Ranch

large, contiguous patches of habitat within the project boundary. Consideration was given to the viability of small areas of open space, especially in the southeastern portion of the project site. Although a small portion of the on-site property will be preserved in the southeastern area, adjacent off-site lands, under the land use jurisdiction of the Pala tribe, occur on steep slopes, support coastal sage scrub and southern cactus scrub vegetation, and have not been developed/impacted even though development has occurred within tribal lands in the area over the past decade. These factors indicate that the off-site habitat, consisting of approximately 36 acres, will likely be present in the future and will contribute to the viability of adjacent on-site open space. Furthermore, these areas of on-site open space in the southeastern portion of the site will have some connectivity with the majority of on-site open space due to the low levels of traffic expected along the northeastern access road.

The on-site open space connects to open space habitat located north and west of the study area. This design will help establish large blocks of habitat to reduce edge effects and to connect to adjacent open space areas; conserve Gomez Creek and surrounding riparian habitat, which functions as a wildlife corridor and habitat linkage to the San Luis Rey River; and conserve a variety of upland and riparian habitats for use by multiple plant and wildlife species. Wetland buffers were established around County wetlands per the County guidelines (2010b) and included as lands under the County's Resource Protection Ordinance (RPO) (County 2007). RPO lands are shown on Figure 3.

Conceptual Resource Management Plan for Warner Ranch

INTENTIONALLY LEFT BLANK

4 BIOLOGICAL RESOURCE MANAGEMENT

4.1 Management Goals

Goal 1: To preserve and manage lands to the benefit of the flora, fauna, and native ecosystem functions reflected in the natural communities occurring within the open space preserve.

A baseline inventory has been collected during the evaluation of the project under the California Environmental Quality Act. As such, ongoing species and habitat monitoring shall occur in accordance with County and regional standards. These standards typically include vegetation mapping every 5 years. Habitat maintenance may be required if vegetation mapping indicates habitat conversion that is detrimental to the preservation of native ecosystem functions.

Goal 2: To manage land for the benefit of sensitive species, multiple species conservation plan (MSCP)–covered species, and existing natural communities occurring within the CRMP land.

An assessment of threats to special-status species, MSCP-covered species, and native communities shall be developed, and specific measures, such as predator control, invasive species removals, and management of public use, shall be implemented to manage lands to the benefit of these biological resources. Effectiveness monitoring shall be implemented to determine the effects of management activities on species and habitats of concern.

Goal 3: To reduce, control, and, where feasible, eradicate non-native, invasive flora and/or fauna known to be detrimental to native species and/or the local ecosystem.

As discussed above, specific locations of non-native, invasive plants or animals shall be identified and targeted for eradication. Mapping and eradication efforts will be focused on perennial, non-native species that have a rating of moderate or high by California Invasive Plant Council (Cal-IPC 2006, 2007). Currently, the site supports relatively limited areas of non-native invasive plants or animals. There are suitable areas for restoration on site within areas of disturbed and agricultural lands, and these areas should be targeted for restoration over the long term.

4.2 Biological Management Tasks

The biological management tasks are outlined in Table 1, and are discussed below.

4.2.1 Update Biological Mapping

Every 5 years, the Resource Manager will update the vegetation map on a current aerial photograph of the site. This task includes mapping vegetation over the entire open space and updating the aerial photography.

Conceptual Resource Management Plan for Warner Ranch

4.2.2 Exotic Plant Control

The Resource Manager will map occurrences of perennial, non-native species that have a rating of moderate or high by the California Invasive Plant Council (Cal-IPC 2006, 2007). Perennial invasive plants with a rating of moderate or high (Cal-IPC 2006, 2007) observed on site include giant reed (*Arundo donax*), hottentot-fig (*Carpobrotus edulis*), fennel (*Foeniculum vulgare*), Australian saltbush (*Atriplex semibaccata*), white horehound (*Marrubium vulgare*), eucalyptus (*Eucalyptus* sp.), tree tobacco (*Nicotiana glauc*), salt-cedar, and Mexican fan palm (*Washingtonia robus*). The goal of the exotic plant control is to prevent expansion of existing or establishment of new exotic species in the open space.

If the use of herbicide is deemed necessary, application should be minimal and may only occur in compliance with all federal and state laws. Use of chemical herbicides should be determined in coordination with the County DEH. All herbicide use will be applied by backpack sprayers or stump painting directly on target weeds and will involve short-duration, biodegradable chemicals. This task includes quarterly removal of invasive species.

4.2.3 Predator/Pest Control

The Resource Manager will evaluate the need for predator/pest control and identify appropriate measures (pesticides, traps, etc.) to reduce/eliminate the problem. In general, predator control will be conducted as needed based on adaptive measures for special-status species (described in 4.2.5 below). If significant predator/pest eradication actions are determined to be necessary, the Resource Manager will notify the appropriate regulatory oversight agencies. This task includes annual evaluation and set up of traps, if necessary, for feral cats and/or other predators that are determined by the Resource Manager to have a detrimental effect on managed species.

4.2.4 Species Surveys

Several special-status species were documented throughout the project site, including in the proposed open space areas. Special-status plant populations documented within the open space include rainbow manzanita, Parry's tetracoccus, rush-like bristleweed, Palmer's grappling hook, Engelmann oak, and prostrate spineflower. Numerous special-status wildlife species were documented in the project area and are listed in Section 3.6.

Protective measures to monitor and manage these species should be implemented, as necessary, to help ensure the persistence of preserved biological resources in the open space. Although arroyo toad, least Bell's vireo, southwestern willow flycatcher, and California gnatcatcher have not been detected in the project area (including open space areas), the County requires focused surveys be conducted every 5 years. There is a nesting pair of cactus wren in the southeastern open space.

Conceptual Resource Management Plan for Warner Ranch

The following surveys shall be conducted every 5 years (unless where noted below) for special-status plant and wildlife species.

- **Rare plant surveys.** Rare plant surveys shall be conducted within open space, with emphasis on surveying the known locations of rare plants. Additional locations of plants that are state- or federally listed, have a CRPR 1B and 2, and/or are County lists A–D will be recorded. All special-status species locations will be mapped and the population estimated.
- **Arroyo toad.** Surveys shall follow the currently accepted USFWS survey protocol (USFWS 1999) that requires six diurnal (daytime) and six nocturnal (nighttime) surveys to be conducted between March 15 and July 1 during non-full-moon situations (or the most current protocol available). Each diurnal/nocturnal survey pair must be completed within 24 hours of each other and paired surveys must occur at least 7 days apart. At least one survey pair must occur in April, May, and June.
- **Least Bell's vireo and southwestern willow flycatcher.** Surveys shall be conducted according to accepted protocols. Surveys for least Bell's vireo will follow the Least Bell's Vireo Survey Guidelines (USFWS 2001); surveys for southwestern willow flycatcher will follow the currently accepted protocol (Sogge et al. 2010) in conjunction with the 2000 Southwestern Willow Flycatcher Protocol Revision (USFWS 2000), or the most current protocol available. For the least Bell's vireo, eight site visits must be conducted with 10-day intervals between each visit. Surveys may only be conducted between April 10 and July 31. For southwestern willow flycatcher, a minimum of five survey visits is needed, with one survey during the period from May 15–31, one survey from June 1–21, and three surveys between June 22 and July 17. Because the habitat requirements for the two species overlap, most of the surveys will be conducted concurrently. Due to survey restrictions and protocol conflicts, a total of nine visits are required to cover both species.
- **California gnatcatcher.** Surveys shall follow the USFWS California gnatcatcher 1997 presence/absence survey protocol (USFWS 1997), or the most current protocol available. A minimum of three surveys are required within suitable habitat.
- **Cactus wren.** There are no published protocols for cactus wren surveys at this time. Focused cactus wren surveys shall be conducted in southern cactus scrub and a tape of recorded cactus wren vocalizations played approximately every 50–100 feet will be used to induce responses from potentially present cactus wrens. Surveys will be conducted every 2.5 years and three visits will occur during each survey period. Every 5 years, this survey will be combined with the California gnatcatcher surveys.

Conceptual Resource Management Plan for Warner Ranch

- **Golden eagle (*Aquila chrysaetos*) foraging.** The likelihood of golden eagle nesting on the project site is low; however the project site is within the range of at least one known golden eagle nest location (Gregory Canyon). As such, there is potential for golden eagle foraging on the project site. Based on consultation with the USFWS, focused surveys to determine the use of the site by golden eagle shall be conducted and, if necessary appropriate management measures implemented. The Resource Manager should coordinate closely with USFWS staff to determine the annual nesting status of the Gregory Canyon golden eagle pair (and any other pairs that may have a territory that overlaps with the project site). If a nest site is active in a particular year, foraging surveys shall be conducted in accordance with current protocols (currently Pagel et al. 2010) during a 6–8 week period during the most active part of the nesting season (typically after chicks have hatched and before they have fledged). These surveys are expected to occur every 2 years for a period of 7–10 years to determine the extent of foraging use of the site by golden eagle. The Resource Manager will then consult with the USFWS regarding the need for additional surveys and/or management measures. Over the long-term, additional foraging assessments are assumed to be conducted approximately once every 5 years.

4.2.5 Species Management

Based on the species surveys described earlier, management tasks for the rare plant populations and cactus wren may be required. This includes weed control and predator control. Predator control is not anticipated at this time; however, if predators such as feral cats, raccoons, or other species cause nest failure or other detrimental effects on cactus wren, trapping or other predator control methods may be used (see Section 4.2.3).

4.2.6 Monitoring

This plan includes monthly monitoring of the open space preserve. The County requires monthly monitoring of the open space. The Resource Manager shall visit the open space each month in order to monitor the overall conditions of the open space and determine if any management tasks are required.

4.3 Agricultural Resource Management

Approximately 53.1 acres of agricultural and orchard lands are currently planned to be included in a common open space easement. This area, although part of the total project open space, will be separately managed by either the homeowners association (HOA) or a separate hired manager. A portion of this area may be converted to native habitat pending determination of how various mitigation requirements will be fulfilled (i.e., on-site revegetation versus off-site conservation of land or mitigation bank credit purchase).

Conceptual Resource Management Plan for Warner Ranch

All or portions of the agricultural and orchard lands will continue to function as agriculture similar to the existing conditions. The funding of the common open space easement and management will be provided through a separate source than the RMP management.

These lands have no biological value that is required to be maintained. Rather, the agricultural and orchard lands require management solely to ensure that adjacent biological open space is not adversely affected. The RMP Resource Manager will coordinate with the manager of the agricultural and orchard lands to ensure that impacts associated with agricultural activities, such as pesticide and herbicide use, access routes, and watering are minimized so as not to indirectly impact adjacent open space areas. Costs for this coordination are included in the cost estimate for implementation of the RMP. It is assumed that remedial measures, if required, will be implemented by the agricultural manager, using funding established for agricultural management.

If agricultural uses are not maintained, these lands have the potential to become a source of weeds, erosion, and other potential adverse effects. Agricultural management funding must be sufficient to implement measures to control these adverse effects, including potential seeding, installation and maintenance of erosion control materials (e.g., straw wattles), and access control to ensure that trespassing is minimized. Such “decommissioning” efforts should be coordinated with the RMP Resource Manager.

4.4 Cultural Resources Management

One archaeological site, CA-SDI-12,208, is located in a permanent open space easement and no impacts to the site are anticipated. An 1870s Moreno adobe wall associated with the main house (P-37-027238) has historical significance and will either be preserved in place or relocated to another area to be preserved, if possible. Several bedrock milling features associated with prehistoric site CA-SDI-4502 may be relocated and preserved for educational purposes. Finally, there is potential for discovering archaeological deposits during ground-disturbing activities associated with implementation of this management plan.

The Resource Manager will coordinate all cultural resources tasks associated with implementation of this CRMP.

4.4.1 Management Goals

Goal: To preserve and manage cultural resources parallel with biological resources and conservation lands.

As described previously, there are several sensitive cultural resources on site: one archaeological site (CA-SDI-12,208), an 1870s Moreno adobe wall associated with the main house (P-37-027238), and several bedrock milling features associated with prehistoric site CA-SDI-4502.

Conceptual Resource Management Plan for Warner Ranch

There is also potential for discovering archaeological deposits during ground-disturbing activities associated with implementation of this management plan.

The Resource Manager will coordinate all cultural resources tasks associated with implementation of this CRMP and listed in Table 1. These tasks include periodic assessment of the preservation and avoidance of CA-SDI-12,208 and the adobe wall and milling features, if applicable (i.e., if relocation and preservation was possible). Additional tasks include monitoring of initial ground disturbance within 50 feet of a known archaeological site (including excavation for fence installation, signage, trails, etc.), and periodic reporting to the County of cultural resources activities.

4.5 Adaptive Management

The resource manager is responsible for interpreting the results of site monitoring to determine the ongoing success of the RMP. If it is necessary to modify the plan between regularly scheduled updates, plan changes shall be submitted to the County and agencies for approval as required.

4.6 Operations, Maintenance, and Administration Tasks

The operations, maintenance, and administration tasks are outlined in Table 1, and are discussed in the following sections.

4.6.1 Data and Reporting

The following tasks shall be completed annually.

1. Maintain a resource database of pertinent documents and biological resource data;
2. Write and submit a report to the County, described in more detail in Section 1.2.4; and
3. Review fees for county review of annual report.

In addition, every 5 years, the Resource Manager shall review, and if necessary, update the management plan.

4.6.2 Installation of Fencing and Signs

The project developer will be responsible for installing permanent open space signs, as shown on the Tentative Map and Figure 4. The open space signs will be placed every 150 feet along the perimeter of the open space. The project developer will be responsible for installing 3-rail vinyl fence along portions of the open space, as shown on the Tentative Map and Figure 4. Maintenance/replacement of 3-rail vinyl fencing and signs shall be done on an as-needed basis by the Resource Manager based on the PAR. The signs shall be constructed in accordance with the County of San Diego Conditions of Approval Manual.

Conceptual Resource Management Plan for Warner Ranch

The project developer will be responsible for the installation of all rock catchment fences and six-foot tubular steel fences. The HOA shall be responsible for maintenance of these facilities. These tasks are not included in the CRMP or the PAR (Appendix A).

4.6.3 Trash/Debris Removal

The Resource Manager will conduct general trash removal within the open space during regular management site visits. Additionally, damage caused by vandalism will be repaired. Small trash removal and vandalism repair will occur as needed during regular site visits every month. Large trash removal would be conducted quarterly.

4.6.4 Stormwater and Hydrology

As a component of general monitoring responsibilities, and especially following severe storms, fires, floods or other significant disturbance events, the Resource Manager shall inspect the preserve for erosion problems. For the purposes of this RMP, significant unnatural erosion is erosion that affects an area that is greater than 100 square feet and over 6 inches in depth, and/or erosion that may affect water quality and wetland resources or lead to instability of slopes or the loss/conversion of habitat. Should significant erosion be detected, the Resource Manager will evaluate the need for repair; the Resource Manager's investigation will include an attempt to identify the cause(s) and means by which the damage has occurred. The PAR provides a lump sum budget to address potential post-fire erosion issues in the event of a wildfire. In the event of severe erosion with potentially costly remedies not anticipated by the RMP or PAR, funding to implement erosion control will not be derived from annual management funds. In this case, the Resource Manager will consult with the County to determine a plan of action that will include the identification of funding sources. Minor incidents of erosion (e.g., the formation of rivulets through upland areas) shall be left untreated unless it is perceived that the erosion will cause the loss of sensitive habitat and/or create a hazardous situation that would constitute a threat to human health and safety.

The degree of urgency to remediate erosion problems within the preserve will depend on the severity of the erosion, how quickly it is progressing, and what will happen until it is remediated. Erosion that undercuts riparian vegetation will need to be addressed as soon as possible, that is, soon enough to prevent the problem from worsening and under no circumstances later than 60 days from identification.

In the event that erosion becomes a recurring problem or periodic but severe, the Resource Manager will develop an erosion control plan. The plan will address (1) erosion causes and (2) the type and placement of physical features to counteract or stem erosive forces, and (3) may include preparation of a conceptual plan to revegetate affected areas with native seed. If the source of an erosion problem within the preserve lies outside of the preserve, the cause shall be identified and the responsible party or parties made accountable.

Conceptual Resource Management Plan for Warner Ranch

4.6.5 Utilities

The Resource Manager will coordinate with the Yuima water district and other utility services as needed to conduct management activities within the preserve.

4.6.6 Law Enforcement and Emergency Services

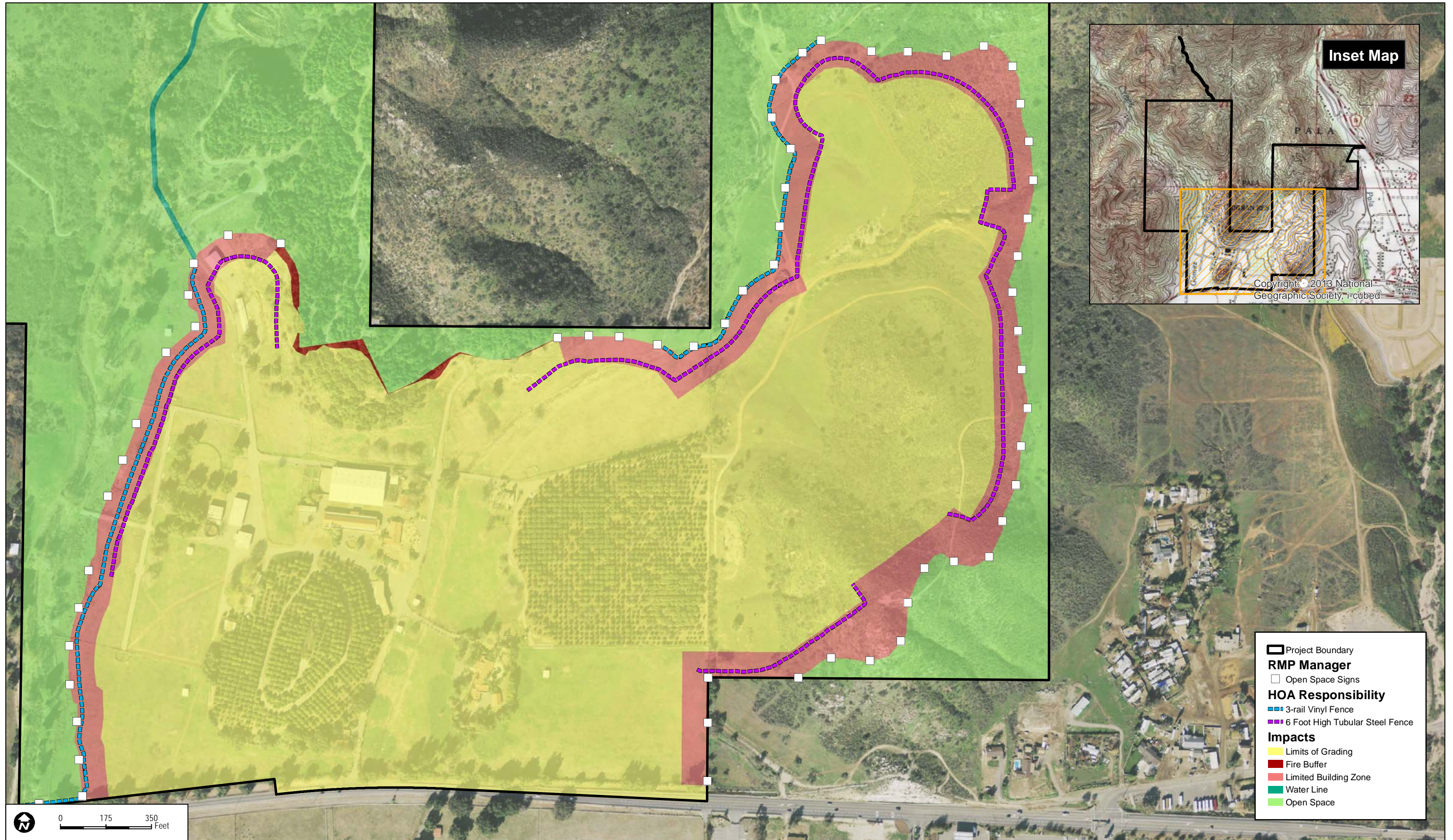
The Resource Manager will coordinate with the local sheriff's department, fire department, and emergency services department on an as-needed basis for activities related to management of the preserve (e.g., illegal trespassing).

4.7 Public Use Tasks

The project developer shall construct new trails. The HOA shall be solely responsible for the maintenance of the agricultural road/trail. These tasks are not included in the CRMP or the PAR (Appendix A).

The Resource Manager may selectively make the preserve available to responsible public groups for educational purposes or volunteer clean-up events, as deemed appropriate. The primary purpose for establishment of the preserve is the conservation of its biological and natural resources. Limited educational and scientific research activities may be authorized at the preserve. These activities will be planned to have a neutral or beneficial effect on the preserve's natural resources. All studies or volunteer events authorized on preserve property will be driven by the goal to conserve and/or enhance its biological value. The Resource Manager will consult with the County for each proposed new use of the preserve.

An educational document will be prepared and distributed to the surrounding residences to inform them of the purpose of the preserve and the need to protect its sensitive biological resources. The document will inform residents about preserve stewardship and similarly describe the protective measures established for the preserve including a list of conservation easement restrictions; a list of access restrictions; the need to avoid direct lighting of the preserve, particularly in the riparian and wetland habitats; and the need to minimize the deposition of trash and other refuse in the vicinity of the preserve. The document will be revised (if necessary) and redistributed every 5 years or as determined to be necessary by the Resource Manager.



INTENTIONALLY LEFT BLANK

Conceptual Resource Management Plan for Warner Ranch

4.8 Fire Management Tasks

Fire is a natural ecological component of the Mediterranean-type climate of San Diego County. The Resource Manager will coordinate with the fire department on an annual basis to plan for fire prevention and control. The Resource Manager could implement prescribed burning if it is part of a regional effort coordinated with the California Department of Forestry and Fire Protection and the future NCMSCP or San Diego Management and Monitoring Programs. If areas within the preserve burn, there will be no initial reseeding of areas, but there will be careful monitoring for the need for weed or erosion controls. The Resource Manager will decide if reseeding is necessary if the natural revegetation process is deemed unsatisfactory. During the vegetation recovery period, the burned areas will be monitored by preserve management staff to control non-native invasive weed species. Weed control measures will be initiated as necessary to prevent these species from replacing native vegetation.

This task includes post-fire erosion and sediment removal activities and revegetation in the event that these activities are necessary. If reseeding of areas is required, the Resource Manager will coordinate and perform this activity. The post-fire tasks are limited to a sum of \$5,000 every 15 years for erosion control and sediment removal, and \$2,500 every 15 years for revegetation. These sums are based on the assumption that a fire that requires erosion control and sediment removal and approximately 1 acre of revegetation would occur once every 15 years.

Conceptual Resource Management Plan for Warner Ranch

INTENTIONALLY LEFT BLANK

Conceptual Resource Management Plan for Warner Ranch

5 REFERENCES

- Cal-IPC (California Invasive Plant Council). 2006. *California Invasive Plant Inventory*. Cal-IPC Publication 2006-02. Berkeley, California: Cal-IPC. February 2006. <http://www.cal-ipc.org/ip/inventory/pdf/Inventory2006.pdf>.
- Cal-IPC. 2007. "New Weeds Added to Cal-IPC Inventory." *Cal-IPC News* 15 (1/2):10. <http://www.cal-ipc.org/ip/inventory/pdf/WebUpdate2007.pdf>.
- County of San Diego. 2010a. County of San Diego Report Format and Content Requirements: Biological Resources. Fourth Revision. September 15, 2010.
- County of San Diego. 2010b. County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements: Biological Resources. Fourth Revision. September 15, 2010.
- Dudek. 2015. *Final Biological Resources Report, Warner Ranch 3810-06-002 (SP), 3800-06-009 (GPA), 3600-06-011 (R), 3100-5508 (TM), 3300-06-016 (MUP), 3500-11-007 (S), 3000-06-040 (AD), 3910-0602020 (ER), County of San Diego, California*. Prepared for the County of San Diego. Proponent: WHP Warner Ranch, LP. March 2013.
- Gray, J., and D. Bramlet. 1992. *Habitat Classification System for the Natural Resources Geographic Information System (GIS) Project*. County of Orange Environmental Management Agency.
- Holland, R.F. 1986. *Preliminary Descriptions of the Terrestrial Natural Communities of California*. Nongame-Heritage Program, California Department of Fish and Game. October 1986.
- Oberbauer, T. 1996. "Terrestrial Vegetation Communities in San Diego County Based on Holland's Descriptions." San Diego, California: San Diego Association of Governments.
- Oberbauer, T., M. Kelly, and J. Buegge. 2008. *Draft Vegetation Communities of San Diego County* prepared by Robert F. Holland, Ph.D. for State of California, The Resources Agency, Department of Fish and Game (October 1986). March 2008.
- Pagel, Joel E., D.M. Whittington, and G.T. Allen. 2010. Interim Golden Eagle Technical Guidance: Inventory and Monitoring Protocols; and Other Recommendations in Support of Golden Eagle Management and Permit Issuance. Division of Migratory Bird Management, U.S. Fish and Wildlife Service. February 2010.

Conceptual Resource Management Plan for Warner Ranch

- Sogge, M.K., D. Ahlers, and S.J. Sferra. 2010. *A Natural History Summary and Survey Protocol for the Southwestern Willow Flycatcher*. U.S. Geological Survey Techniques and Methods 2A-10, 38 p.
- USFWS (U.S. Fish and Wildlife Service). 1997. *Coastal California Gnatcatcher* (*Polioptila californica californica*) *Presence/Absence Survey Guidelines*. February 28, 1997. http://www.fws.gov/ventura/speciesinfo/protocols_guidelines/docs/cagn/coastal-gnatcatcher_survey-guidelines.pdf.
- USFWS. 1999. "Survey Protocol for the Arroyo Toad." May 19, 1999.. http://www.fws.gov/ventura/species_information/protocols_guidelines/docs/arroyotoad/arroyotoad_survey_protocol.pdf
- USFWS. 2000. "2000 Southwestern Willow Flycatcher Protocol Revision." Sacramento, California: USFWS, California/Nevada Operations Office. July 11, 2000.
- USFWS. 2001. *Least Bell's Vireo Survey Guidelines*. January 19. http://www.fws.gov/ventura/speciesinfo/protocols_guidelines/docs/lbv/leastbellsvireo_survey-guidelines.pdf.

APPENDIX A

Property Analysis Record (PAR)

APPENDIX A

Property Analysis Record (PAR)

Introduction

The Property Analysis Record (PAR) for the proposed Warner Ranch project is based on management activities described in the Conceptual Resource Management Plan (RMP). The PAR is divided into two sections: Initial and Capital Tasks and Costs (I&Cs) and the Ongoing Tasks and Costs (OTCs). The I&Cs would be funded directly by the developer to cover the first three years of open space preserve management while the endowment accrues interest. The OTCs will be funded from an endowment established by the developer for open space preserve management in perpetuity.

The PAR is generally based on typical preserve management costs as provided in the Center for Natural Lands Management's PAR3 software, with some minor modifications where necessary to conform to site-specific conditions and updated or estimated costs. Additionally, where staff time for various field tasks was estimated, Dudek relied on the opinions of staff who conducted biological resource inventories on the property, and who are familiar with the access and terrain of the proposed open space.

Analysis Overview

The Warner Ranch open space preserve will be dedicated prior to grading associated with the development of the Warner Ranch project. At that time, the initial endowment will be established and the open space management activities would be implemented.

Dudek did not include the estimated costs to implement the proposed wetland and upland habitat mitigation in the PAR. The implementation costs for the mitigation site will be calculated separately, and will be funded directly by the developer. These mitigation site costs will include implementation and 5 years of maintenance and monitoring. The mitigation areas will be managed as open space preserve lands upon successful completion of the mitigation projects.

Costs associated with management activities will be funded through an initial endowment prior to grading. Management activities during the first 3 years after initiation of management of the open space preserve will be funded by the developer (I&Cs), during which time the endowment will begin to accrue interest to fund ongoing management activities in perpetuity (OTCs).

Rates and Assumptions

Dudek assumed that the open space preserve would be managed by a qualified land management entity and assumed the standard staff rates in the CNLM PAR3 software. Staff rates range from \$30 per hour to \$60 per hour. Dudek retained the default rates in the PAR software for contingency costs and for administrative costs at 10% and 24%, respectively. Contingency costs

APPENDIX A (Continued)

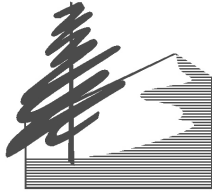
cover unanticipated expenses beyond those outlined in the RMP and PAR, and could include such items as additional fence repairs, additional weed control activities, erosion repairs, etc. Administrative costs include non-direct expenses that affect preserve management costs such as office space rental, computers, secretarial assistance, printers, phone lines, etc. Dudek assumed a capitalization rate of 4.0% for the income provided by the endowment to manage proposed open space. The capitalization rate usually varies between 2.5% and 5%, depending on the foundation used and type of investment. For instance, privately held preserve lands usually have a higher capitalization rate than publicly held preserve lands due to the restrictions on types of investments that public entities can make.

For field supplies (e.g., binoculars, notebooks, measuring tapes, cameras, GPS unit, etc.), rather than itemize specific items, the PAR includes an annual allotment for miscellaneous supplies. The same approach was used for office supplies (e.g., paper, staplers, pens, tape, printer ink) wherein an annual allotment for miscellaneous office supplies is provided in the PAR. This approach provides the reserve manager with flexibility to purchase the supplies that are needed to accomplish work for each year, rather than purchasing supplies on a timeline as scheduled by the PAR. Similarly, for travel, the PAR includes a simple mileage allotment, which includes all costs associated with owning and operating a vehicle (e.g., vehicle, fuel, registration, insurance, maintenance). The mileage cost is based on the PAR default rate for a 4X4 vehicle (\$0.84 per mile).

As proposed, the project fencing would be a combination of 3-rail vinyl fencing and tubular steel fencing installed by the developer. The tubular steel fencing would abut residential development, and would be maintained and replaced as needed by the HOA. Any costs associated with maintenance or replacement of the tubular steel fencing are not included in the PAR. Maintenance and replacement of the proposed 4,062 linear feet of 3-rail vinyl fencing bounding portions of the open space would be the responsibility of the reserve manager and is included in the PAR. The PAR also includes costs for maintenance and replacement of two gates.

Baseline studies for golden eagle foraging use and habitat monitoring will occur every two years over an eight-year period upon initiation of management activities. The golden eagle foraging baseline studies will be funded with the I&Cs. Subsequent monitoring for golden eagle foraging studies will be funded by the endowment from annual funding designated in the PAR. Once the baseline studies are complete, ongoing monitoring will commence in accordance with the RMP. All other wildlife and botanical surveys would not be initiated until after the three-year initial period, and would be funded from the endowment.

Cultural tasks will occur every 1 to 15 years. The cultural tasks are based on the assumption that ongoing monitoring of existing and potentially new discoveries within open space would occur.



PAR

Habitat Planning In Perpetuity

The Property Analysis Record

Title: Warner Ranch

Par Code: Warner

Prepared by: ACT

Dudek

Date: 11/17/2015

The Center for Natural Lands Management prepared this software to assist habitat conservation planners to develop the management tasks and costs of long-term stewardship. While the sources are thought to be reliable, the Center makes no representations about the accuracy of cost estimates. The date of the cost information is 2007. The operation of the program is not guaranteed by the Center. Management requirements are determined by the user. Users should consult with their own financial advisors before relying on the results of their analysis.

Section 14 - Initial & Capital Tasks and Costs

Property Title: Warner Ranch

PAR ID: Warner

11/17/2015

Task List	Specific Description	Unit	Quantity	Cost / Unit	Annual Cost	Times Years	Cont %	Total Cost
BIOTIC SURVEYS								
Wildlife Biologist	GOEA survey	L. Hours	16.00	60.00	960.00	4.0	10.0	4,224.00
Sub-Total								4,224.00
FIELD EQUIPMENT								
Field Equipment	Allowance	Annual	1.00	500.00	500.00	3.0	10.0	1,650.00
Vehicle	Mileage (4x4)	Mile	750.00	0.84	630.00	3.0	10.0	2,079.00
Sub-Total								3,729.00
GENERAL MAINTENANCE								
Site Inspections	Monitoring/Patrolling	Hour	96.00	40.00	3,840.00	3.0	10.0	12,672.00
Sub-Total								12,672.00
HABITAT MAINTENANCE								
Exotic Plant Control	Backpack Spray	L. Hours	64.00	30.00	1,920.00	3.0	10.0	6,336.00
Other	CAWR Mgmt - Adaptive	L. Hours	16.00	30.00	480.00	3.0	10.0	1,584.00
Other	Rare Plant Mgmt - Adaptive	L. Hours	16.00	30.00	480.00	3.0	10.0	1,584.00
Sub-Total								9,504.00
HABITAT RESTORATION								
Erosion Control	Repair/Install BMPs	Annual	1.00	500.00	500.00	3.0	10.0	1,650.00
Sub-Total								1,650.00
OFFICE MAINTENANCE								
Office Supplies, Annually	Supplies	Annual	1.00	250.00	250.00	3.0	10.0	825.00
Sub-Total								825.00
OPERATIONS								
Budgeting	Budget & Reconcile	L. Hours	4.00	55.50	222.00	3.0	10.0	732.60
Insurance	Liability/conserv. Easement	Acre	359.00	0.19	68.21	3.0	10.0	225.09
Owner Contact	Meetings/Utility Coord.	L. Hours	8.00	55.50	444.00	3.0	10.0	1,465.20
Sub-Total								2,422.89
PUBLIC SERVICES								
Access Control	Enforcement	L. Hours	16.00	30.00	480.00	3.0	10.0	1,584.00
Community Outreach	Mtgs/info pamphlet	L. Hours	8.00	55.50	444.00	3.0	10.0	1,465.20
Volunteer Coordinator	Event coordination	L. Hours	8.00	55.50	444.00	3.0	10.0	1,465.20
Sub-Total								4,514.40
REPORTING								
Aerial Photo	Map data	Each	1.00	600.00	600.00	1.0	10.0	660.00
Annual Reports	County Review Fee	Each	1.00	250.00	250.00	3.0	10.0	825.00
Annual Reports	GOEA Survey Rpts	L. Hours	16.00	55.50	888.00	4.0	10.0	3,907.20
Annual Reports	Summary	L. Hours	24.00	55.50	1,332.00	3.0	10.0	4,395.60
Database Management	Data Input	L. Hours	8.00	54.00	432.00	3.0	10.0	1,425.60
Fire Management Plan	Coord/planning	L. Hours	2.00	55.50	111.00	3.0	10.0	366.30
Sub-Total								11,579.70
SITE CONSTRUCTION/MAINT.								
Fence	3-rail vinyl fence	Lin. Ft.	41.00	22.00	902.00	1.0	10.0	992.20

Section 14 - Initial & Capital Tasks and Costs

Property Title: Warner Ranch

PAR ID: Warner

11/17/2015

Task List	Specific Description	Unit	Quantity	Cost / Unit	Annual Cost	Times Years	Cont %	Total Cost
Non-Organic Debris	Remove trash/debris	L. Hours	32.00	30.00	960.00	1.0	10.0	1,056.00
Non-Organic Debris	Remove trash/debris -	L. Hours	32.00	30.00	960.00	1.0	10.0	1,056.00
Sub-Total								3,104.20
Subtotal								54,225.19
Administration								13,014.04
Total								67,239.23

Section 15 - Ongoing Tasks and Costs

Property Title: Warner Ranch

PAR ID: Warner

11/17/2015

Task List	Specific Description	Unit	Number of Units	Cost / Unit	Annual Cost	Years Divide	Cont %	Total Cost
BIOTIC SURVEYS								
Cultural Resource	As-Needed Archeologist	L. Hours	60.00	55.50	3,330.00	15.0	10.0	244.20
Cultural Resource	Field Survey & Monitor	L. Hours	16.00	55.50	888.00	5.0	10.0	195.36
Cultural Resource	Reporting	L. Hours	16.00	55.50	888.00	5.0	10.0	195.36
Landscape Ecologist	Update Veg Map	L. Hours	8.00	60.00	480.00	5.0	10.0	105.60
Plant Ecologist	Rare Plant Survey	L. Hours	32.00	60.00	1,920.00	5.0	10.0	422.40
Wildlife Biologist	ARTO survey	L. Hours	48.00	60.00	2,880.00	5.0	10.0	633.60
Wildlife Biologist	CAGN/CAWR survey	L. Hours	48.00	60.00	2,880.00	5.0	10.0	633.60
Wildlife Biologist	CAWR survey	L. Hours	24.00	60.00	1,440.00	5.0	10.0	316.80
Wildlife Biologist	GOEA survey	L. Hours	16.00	60.00	960.00	5.0	10.0	211.20
Wildlife Biologist	LBVI/WIFL survey	L. Hours	72.00	60.00	4,320.00	5.0	10.0	950.40
Sub-Total								3,908.52
FIELD EQUIPMENT								
Field Equipment	Allowance	Annual	1.00	500.00	500.00	1.0	10.0	550.00
Vehicle	Mileage (4x4)	Mile	750.00	0.84	630.00	1.0	10.0	693.00
Sub-Total								1,243.00
GENERAL MAINTENANCE								
Site Inspections	Monitoring Cultural Sites	Hour	8.00	55.50	444.00	5.0	10.0	97.68
Site Inspections	Monitoring/Patrolling	Hour	96.00	40.00	3,840.00	1.0	10.0	4,224.00
Sub-Total								4,321.68
HABITAT MAINTENANCE								
Erosion Control	Post-fire sediment mgmt	Each	1.00	5,000.00	5,000.00	15.0	10.0	366.66
Exotic Plant Control	Backpack Spray	L. Hours	64.00	30.00	1,920.00	1.0	10.0	2,112.00
Other	CAWR Mgmt - Adaptive	L. Hours	16.00	30.00	480.00	1.0	10.0	528.00
Other	Rare Plant Mgmt -	L. Hours	16.00	30.00	480.00	1.0	10.0	528.00
Sub-Total								3,534.66
HABITAT RESTORATION								
Erosion Control	Repair/Install BMPs	Annual	1.00	500.00	500.00	1.0	10.0	550.00
Revegetation	Re-seeding	Acre	1.00	2,500.00	2,500.00	15.0	10.0	183.33
Sub-Total								733.33
OFFICE MAINTENANCE								
Office Supplies,	Supplies	Annual	1.00	250.00	250.00	1.0	10.0	275.00
Sub-Total								275.00
OPERATIONS								
Budgeting	Budget & Reconcile	L. Hours	4.00	55.50	222.00	1.0	10.0	244.20
Insurance	Liability/conserv.	Acre	359.00	0.19	68.21	1.0	10.0	75.03
Legal & Emergency	Establish Fund 1%	1% endow.	1.00	1,000.00	1,000.00	1.0	10.0	1,100.00
Owner Contact	Meetings/Utility Coord.	L. Hours	8.00	55.50	444.00	1.0	10.0	488.40
Sub-Total								1,907.63
PUBLIC SERVICES								
Access Control	Enforcement	L. Hours	16.00	30.00	480.00	1.0	10.0	528.00
Community Outreach	Mtgs/info pamphlet	L. Hours	8.00	55.50	444.00	1.0	10.0	488.40

Section 15 - Ongoing Tasks and Costs

Property Title: Warner Ranch

PAR ID: Warner

11/17/2015

Task List	Specific Description	Unit	Number of Units	Cost / Unit	Annual Cost	Years Divide	Cont %	Total Cost
Sign, Aluminum	Aluminum 14" X 20"	Item	60.00	25.00	1,500.00	10.0	10.0	165.00
Volunteer Coordinator	Event coordination	L. Hours	8.00	55.50	444.00	1.0	10.0	488.40
Sub-Total								1,669.80
REPORTING								
Aerial Photo	Map data	Each	1.00	600.00	600.00	5.0	10.0	132.00
Annual Reports	County Review Fee	Each	1.00	250.00	250.00	1.0	10.0	275.00
Annual Reports	Focused Survey Rpts	L. Hours	50.00	55.50	2,775.00	5.0	10.0	610.50
Annual Reports	Summary	L. Hours	24.00	55.50	1,332.00	1.0	10.0	1,465.20
Database Management	Data Input	L. Hours	8.00	54.00	432.00	1.0	10.0	475.20
Fire Management Plan	Coord/planning	L. Hours	2.00	55.50	111.00	1.0	10.0	122.10
Management Plan	Update RMP	L. Hours	16.00	55.50	888.00	5.0	10.0	195.36
Sub-Total								3,275.36
SITE CONSTRUCTION/MAINT.								
Construction Monitoring	During Construction -	Not	40.00	55.50	2,220.00	5.0	10.0	488.40
Fence	3-rail vinyl fence	L. Hours	41.00	22.00	902.00	1.0	10.0	992.20
Fence - Installed	3-rail vinyl fence	Lin. Ft.	4,062.00	22.00	89,364.00	20.0	10.0	4,915.02
Gate	Vinyl Fence Gate	Item	2.00	1,000.00	2,000.00	20.0	10.0	110.00
Non-Organic Debris	Remove trash/debris	L. Hours	16.00	30.00	480.00	1.0	10.0	528.00
Non-Organic Debris	Remove trash/debris -	L. Hours	16.00	30.00	480.00	1.0	10.0	528.00
Sub-Total								7,561.62
Subtotal								28,430.61
Administration								6,823.34
Total								35,253.95

Section 16 - Financial Summary

Property Title: Warner Ranch

Date: 11/17/2015

1st Budget Year: 2013

State:

PAR Code: Warner

<i>Item Descriptions</i>	<i>Total</i>
<i>Initial & Capital Financial Requirements</i>	
Revenues	\$0
Management Costs	\$49,296
Contingency Expense	\$4,930
<i>Initial & Capital Management Total Costs</i>	\$54,225
Administrative Costs of Total Management Costs	\$13,014
<i>Initial & Capital Gross Costs</i>	\$67,239
<i>Initial & Capital Net Costs</i>	\$67,239
<i>Annual Ongoing Financial Requirements</i>	
Revenues	\$0
Ongoing Costs	\$25,846
Contingency Expense	\$2,585
<i>Ongoing Management Total Costs</i>	\$28,431
Administrative Costs of Total Management Costs	\$6,823
<i>Ongoing Gross Costs</i>	\$35,254
<i>Ongoing Net Costs</i>	\$35,254
<i>Endowment Requirements for Ongoing Stewardship</i>	
<i>Endowment to Produce Income of \$35,254</i>	\$881,349
<i>Endowment per acre \$2,455</i>	
<i>Stewardship costs are based on 4.00% of Endowment Earnings per Year</i>	
<i>Ongoing management funding per year is \$35,254</i>	
<i>Resulting in a per acre per year cost of \$98</i>	
<i>Total Funding Required</i>	\$948,588