

TABLE OF CONTENTS

Summary	1
Introduction, Project Description, Location, Setting	1
Habitats/Vegetation Communities	3
Special Status Species	3
Jursdictional Wetlands and Waterways	4
Other Unique Features and Resources	4
Significance of Project Impacts and Proposed Mitigation	5
Indirect Impacts	6
Cumulative Impacts	6
References	9
List of Preparers	10

TABLES

Table 1. Biological Survey Conducted on the White Site.	2
Table 2. White Mitigation Acreages.	6
Table 3. Cumulative Study Findings For The Borrego Springs Area.	8

FIGURES

Figure 1 - Regional Map
Figure 2 - Vicinity Map
Figure 3 - Biological Resources Map
Figure 4 - Project Impacts Map

APPENDICES

Appendix A - Plants Observed on the White Property
Appendix B - Animals Observed on the White Property
Appendix C - Sensitive Plants with Potential to Occur on the White Property
Appendix D - Sensitive Animals with Potential to Occur on the White Property

SUMMARY

The proposed White project will subdivide 172.80 acres into four residential lots with an 88.64 acre remainder parcel. The site was surveyed by REC biologists on September 27, 2006. Habitat onsite consisted of Sonoran creosote bush scrub, non-native grassland, pasture and tamarisk scrub. Impacts to 8.50 acres of Sonoran creosote bush scrub would be mitigated at a 1:1 ratio, or 8.50 acres. Impacts to 10.92 acres of non-native grassland would be mitigated at a 0.5:1 ratio, or 5.46 acres. Impacts to 2.51 acres of pasture would be mitigated at a 0.5:1 ratio, or 1.26 acres. Impacts to 2.95 acres of tamarisk scrub will not require mitigation. A total of 147.92 acres will remain impact neutral. No sensitive plant or animal species were observed onsite.

INTRODUCTION, PROJECT DESCRIPTION, LOCATION, SETTING

The following report discusses the results of the biological survey conducted on the 172.80 acre White property in Borrego Springs, California.

The proposed White project site (APN 141-030-40) is located south of Big Horn Road between Borrego Springs Road and Di Giorgio Road in the community of Borrego Springs, San Diego County, California (Figure 2). The site is bordered to the north and south by disturbed land and a single house to the south. Borrego Springs is a community surrounded by Anza-Borrego State Park with the Salton Sea to the northeast (Figure 1). This site is located on the Clark Lake USGS 7.5' quadrangle map, Range 6 east and Township 10 south. The project site is approximately 600 feet above mean sea level and flat. Soil onsite consists of Mecca fine sandy loam, 0-2 percent slopes eroded (MpA2) and Rositas fine sand, 0-2 percent slopes (RoA).

The project proposes dividing the property into four estate parcels of approximately 21 acres containing single family homes and associated infrastructure with an 88.64 acre remainder estate parcel. Each estate lot will assume a 5 acre impact (Figure 4). The remainder parcel will contain a barn and associated infrastructure and will assume 5 acres of habitat impact. A total of 147.92 acres will remain impact neutral.

The site was surveyed on foot on September 27, 2006 by REC biologists Catherine MacGregor, Victor Novik and Carina Weber. Plant species were identified onsite or collected for later identification. Wildlife species were identified directly by sight and indirectly by scat, tracks or burrows. This survey is summarized in Table 1.

Table 1. Biological Survey Conducted on the White Site.

Date	Survey Type	Start Time	End Time	Temp (°F)	Sky	Wind (mph)	Biologists
9/27/06	General	0755	0937	Warm	Clear	Begin: 0 – 1 End: 0 - 1	Catherine MacGregor, Victor Novik, Carina Weber

Due to time and seasonal variations, not all species on the site would be detected. Various wildflowers are expected to occur onsite but would not be detected during the season the site was surveyed.

In total, 15 plant taxa (including 8 non-native taxa) were observed onsite. Appendix A lists all plants observed onsite.

In total, 19 animal taxa were observed onsite. Wildlife documented included 10 invertebrate taxa, 5 bird taxa, and 4 mammal taxa. Appendix B lists all wildlife observed onsite.

Invertebrates

Ten taxa of invertebrates were observed onsite including stink beetles (*Chlorochroa* sp.), a funnel web spider (Family Agelenidae), antlions (Family Myrmeleontidae), ants (Family Formicidae), a striated queen butterfly (*Danaus gilippus strigosus*), dragonflies (Suborder Anisoptera), spider (Order Araneae), beetle (Order Coleoptera), California harvester ant (*Pogonomyrmex californicus*) and domestic flies (Family Muscidae).

Reptiles and Amphibians

No reptiles or amphibians were observed during the site survey. Common desert reptiles are likely to occur onsite. Amphibian species are unlikely to occur due to lack of water.

Birds

Five bird species were observed onsite: red-shouldered hawk (*Buteo lineatus*), house finch (*Carpodacus mexicanus*), American crow (*Corvus brachyrhynchos*), kingbird (*Tyrannus* sp.) and mourning dove (*Zenaida macroura*).

Mammals

Four mammal taxa were documented onsite: coyote (*Canis latrans*), kangaroo rat (*Dipodomys* sp.), black-tailed jackrabbit (*Lepus californicus deserticola*), and rodent (Order Rodentia).

HABITATS/VEGETATION COMMUNITIES

Four habitats were observed onsite: Sonoran creosote bush scrub, non-native grassland, pasture and tamarisk scrub.

Sonoran Creosote Bush Scrub (Holland Code 33100), 21.44 acres

Sonoran creosote bush scrub is a low, widely spaced plant community characterized by shrubs spaced by bare ground. Ephemeral herbs may flower in the spring if winter rains are sufficient. This habitat is dominated by creosote bush (*Larrea tridentata*), burro-weed (*Ambrosia dumosa*), and ocotillo (*Fouquieria splendens*). The White property contains disturbed Sonoran creosote bush scrub with burro-weed as its dominant species. This habitat type occurs in the western portion of the property and is bordered to the north and south by tamarisk windbreaks.

Non-Native Grassland (Holland Code 42200), 123.68 acres

Non-native grassland is a mixture of annual grasses and broad-leafed, herbaceous species forming a dense to sparse cover. It is often associated with numerous species of native wildflowers in years of favorable rainfall. Germination occurs with the onset of the late fall rains, while growth and flowering occur from winter through spring. The plants are usually dead through the summer dry season, persisting as seeds. Dominant species onsite include non-native grasses (Family Poaceae), filaree (*Erodium sp.*), mustard (*Brassica sp.*), and peppergrass (*Lepidium sp.*).

Pasture (Holland Code 18310), 10.37 acres

Pasture occurs on the southwest part of the property. Pasture onsite contains non-native vegetation such as non-native grasses (Poaceae) and filaree (*Erodium sp.*).

Tamarisk Scrub (Holland Code 63810), 17.31 acres

The tamarisk scrub onsite consists of a mono-culture of tamarisk trees. The tamarisk occurs in long strips across the property and appears to have been cultivated as wind breaks.

SPECIAL STATUS SPECIES

No sensitive plant species were observed onsite. Appendix C lists sensitive plant species with the potential to occur onsite.

The red-shouldered hawk, a County Group I sensitive species, was observed onsite. Appendix D lists sensitive animal species with the potential to occur onsite.

Species with moderate, potential to occur include raptors, northern red rattlesnake and rodents such as mice. Snakes and raptors use habitat such as non-native grassland and

pasture to hunt for prey because the vegetative cover is minimal and visibility good. These habitats also offer suitable habitat for rodents such as mice.

Historically, bats such as the western yellow bat and the western red bat occurred in this area. Potential is low for them to occur onsite currently because the property has been historically grazed and the majority of the site is now non-native grassland or pasture. There is very little suitable habitat left onsite and no roosting sites were found during surveys.

Red-Shouldered Hawk

The red-shouldered hawk is a territorial bird of prey. Its diet consists primarily of small mammals, as well as reptiles, amphibians, small birds, and large insects. Raptors are opportunistic in their foraging strategies but prefer open shrub-land, grassland, and pastures because prey is more conspicuous and accessible in these areas. The non-native grassland onsite may serve as foraging habitat for raptor species. The red-shouldered hawk is a County Group I sensitive species and is protected under the U.S. Migratory Bird Act and CDFG Code 3503. One individual of this species was observed flying overhead.

JURISDICTIONAL WETLANDS AND WATERWAYS

No wetlands or jurisdictional waters were observed onsite.

OTHER UNIQUE FEATURES/RESOURCES

Wildlife corridors and linkages between significant wildlife areas are important because of their role in preserving species diversity and viability. Without some connection or corridor to other areas, wildlife areas become virtual islands surrounded by development. Carlquist's principals of island biogeography predict that species diversity of an island is a function of the size of the island, the distance from the mainland, and the length of time it has been isolated. These principles have been shown to apply to wildlife areas within the urban fabric (Soule et al. 1988). As shown by Soule, small fragmented areas of habitat ultimately support lower numbers of species than similarly situated larger blocks of habitat.

Three main elements are needed for a parcel to be considered a viable wildlife corridor: connectivity, cover and topography. Large mammals will use corridors that have a viable connection between larger habitats. Large mammals will favor corridors that offer some cover so that they can travel without fear of being seen. Cover can be in the form of vegetation such as trees or shrubs that will help mask wildlife from view. Cover can also be in the form of topography such as drainages or ridges to allow the mammal to pass through an area undetected.

The White project site would not likely be a wildlife corridor as it has previously been used for grazing. The parcel is therefore primarily non-native grassland and would not offer proper vegetative cover for large mammals. The project site is also topographically flat and does not offer the preferred ridgeline or drainage for large mammals to use as a corridor. The site is bordered to the north and south by disturbed land and a single house to the south and the connections to native vegetation are relatively small. The native vegetation consists of disjointed parcels. The area surrounding the site is dissected by roads.

Due to the large areas of non-native grassland and pasture, the White property has the potential to be foraging habitat for raptor species. The low growing plants offer visibility for raptors to view and catch prey.

SIGNIFICANCE OF PROJECT IMPACTS AND PROPOSED MITIGATION

Impacts to biological resources can be categorized as direct, indirect, or cumulative. Direct impacts are a result of project implementation, and generally include loss of vegetation, sensitive habitats, and plant and animal populations; introduction of non-native species which may out-compete and displace native vegetation; activity-related wildlife mortality; loss of foraging, nesting, breeding, or burrowing habitat; and fragmentation of wildlife corridors. Indirect impacts occur as a result of the increase in human encroachment in the natural environment and include off-road vehicle use, which impacts sensitive plant and animal species; harassment and/or collection of wildlife species; wildlife predation by domestic animals that intrude into open space areas; and increased wildlife mortality along roads. Cumulative impacts occur as a result of ongoing direct and indirect impacts for unrelated projects within a geographic area. Cumulative impacts are assessed on a regional basis and determine the overall effect of numerous activities on a sensitive resource over a larger area.

No sensitive plant species are expected to be impacted by the project. Because the project will result in no significant sensitive plant impacts, no mitigation is required.

The red-shouldered hawk will be directly impacted by project implementation. While the impacts to 10.92 acres of non-native grassland and 2.51 acres of pasture would reduce the foraging area of the red-shouldered hawk and other raptors on the site, the project proposes approximately 120 acres of these habitats to remain impact neutral. This in conjunction with the relative abundance of raptor foraging habitat in the region and the non-native grassland and pasture habitat mitigation will offset this impact to below a level of significance.

Habitat impacts and required mitigation resulting from implementation of the White project are summarized in Table 2.

Table 2. White Mitigation Acreages.					
Habitat Type	Total Acreage	Impacted Acres	Mitigation Ratio	Required Mitigation Acres	Impact Neutral Acres
Sonoran creosote bush scrub	21.44	8.50	1:1	8.50	12.94
Non-native grassland	123.68	10.92	0.5:1	5.46	112.76
Pasture	10.37	2.51	0.5:1	1.26	7.86
Tamarisk scrub	17.31	2.95	0:1	0	14.36
TOTAL	172.80	24.88	-	15.22	147.92

Impacts to 8.50 acres of Sonoran creosote bush scrub would require mitigation at a 1:1 ratio, or 8.50 acres. Impacts to 10.92 acres of non-native grassland would require mitigation at a 0.5:1 ratio, or 5.46 acres. Impacts to 2.51 acres of pasture would require mitigation at a 0.5:1 ratio, or 1.26 acres. Mitigation is not required for the impacts to 2.95 acres of tamarisk scrub. A total of 147.92 acres will remain impact neutral.

Mitigation for this project will be accomplished by purchasing a minimum of 16 acres of habitat through the Anza Borrego Foundation. Habitat purchased will be of like functioning or higher quality than the impacted habitat. The impact neutral acreage will not require mitigation at this time. However, should it be impacted in the future, the acreage will require appropriate permits and a full environmental review.

INDIRECT IMPACTS

Indirect impacts result from changes in land use adjacent to natural habitat and primarily result from adverse “edge effects” either short-term, indirect impacts related to construction or long-term, chronic indirect impacts associated with urban development. During construction of the project, short-term indirect impacts include dust and noise, which could temporarily disrupt habitat and species vitality or construction related soil erosion and run-off. Long-term indirect impacts may include intrusions by humans and domestic pets, noise, lighting, invasion by exotic plant and wildlife species, use of toxic chemicals (fertilizers, pesticides, herbicides, and other hazardous materials), soil erosion, litter, fire, and hydrological changes (e.g., groundwater level and quality).

CUMULATIVE IMPACTS

When considered together, the impacts of past and present projects, along with foreseeable future projects, may significantly impact the region’s resources. In order to further understand the cumulative impacts of this project, a cumulative study of all

discretionary permits within two mile of the project was performed. During the week of November 5, 2007, an REC biologist reviewed each of the project files at the County of San Diego and recorded environmental impacts. The study area was chosen because it was the area that the projects were densely clustered around the proposed project area. Two miles was thought to be a significant study area. The study was performed by reviewing all County files for permits pulled dating back to the 1970's within the two mile study area.

The sum of environmental impacts within the two mile radius includes nearly 500 acres of Sonoran creosote bush scrub, 105 acres of desert saltbush scrub, 10 acres of Mesquite bosque, 2158 acres of combined Sonoran creosote bush scrub, mesquite woodland and 155 acres of disturbed land. There were also impacts to raptor foraging area, black tailed gnatcatcher, crissalis thatcher, Swainson's hawk and *Lycocarpa coulteri* var. *palmeri*. All significant impacts were mitigated. The projects found to have environmental impacts are listed in Table 3.

The proposed project will directly impact Sonoran creosote bush scrub, non-native grasslands and pasture. The White project will equal less than one half of one percent (0.006%) of the total impacts from the two mile cumulative study area. Although the impacts are relatively minor compared with the results of the cumulative analysis, they will cumulatively impact the habitat within the region. However, because the impacts will be mitigated with purchase of offsite mitigation land within the region and the project is in compliance with all applicable local, state and federal regulations, the impacts will be less than significant.

Table 3. Cumulative Study Findings For The Borrego Springs Area.

Permit Type	Permit Number	Permit Name	APN	Address	Status or Impacts	Mitigation Measures
TENTATIVE MAP	5011	BORREGO SPRINGS COUNTRY CLUB	198-021-08-00	NO ADDRESS	95 ACRE SCBS; 104.8 ACRE DSS; 154.5 ACRE DIS; INDIRECT IMPACTS TO RAPTOR FORAGING LANDS	NO DIRECT MITIGATION-RECOMMENDATION TO LEAVE "LARGE AREAS OF NATIVE PLANTS"
TENTATIVE MAP	5135	RAM'S HILL	200-274-01-00	NO ADDRESS	IMPACTS TO 70% (2158/3124 ACRES) OF MW AND SCBS. IMPACTS TO ANIMALS: CRISSALIS THRASHER, SWAINSON'S HAWK, IMPACTS TO PLANTS: LYCOCARPA COULTERI VAR. PALMERI	MITIGATED WITH OPEN SPACE ONSITE (1/2 OF THE PROPERTY DESIGNATED AS OPEN SPACE)
TENTATIVE MAP	5373	MESQUITE TRAILS RANCH	199-090-05-00	NO ADDRESS	IMPACT 109.8 ACRES SCBS; 10.2 ACRE MB	MITIGATE WITH 190 ACRES OPEN SPACE ONSITE
TENTATIVE MAP	5487	BORREGO COUNTRY CLUB ESTATES	198-320-01-00	NO ADDRESS	171.73 ACRES SCBS ONSITE; 38.89 ACRES SCBS OFFSITE	211 ARCES OF OFFSITE MITIGATION
TENTATIVE PARCEL MAP	20730	ROAD RUNNER MOBILE HOME PARK	141-210-57-00	2101 DI GIORGIO RD	BLACK-TAILED GNATCATCHER ONSITE	NO MITIGATION DEEMED NECESSARY
TENTATIVE PARCEL MAP	21027	BOWEN/JONAS PARCEL	198-320-03-00	NO ADDRESS	39.62 SCBS ACRES IMPACTED	OFFSITE MITIGATION PURCHASED FROM ABF

Definitions (In order of Appearance):
 SCBS- Southern Creosote Brush Scrub
 DSS- Desert Saltbush Scrub
 DIS- Disturbed
 MW- Mesquite Woodland
 MB- Mesquite Bosque
 NNG- Non-Native Grassland

ABF- Anza Borrego Foundation

REFERENCES

- AOU. 2000. American Ornithologists' Union. *42nd Supplement to the to the American Ornithologists' Union Check-list of North American Birds*, as published in *The Auk* 117: 847-858.
- CDFG. 2002 California's Plants and Animals: Species of Special Concern. California Department of Fish Habitat Conservation Planning Branch: online publication, 2002
- CDFG. 2003. State and Federally Listed Endangered and Threatened Animals of California. California Natural Diversity Database, Wildlife and Habitat Data Analysis Brach: online publication, January 2003.
- CDFG. 2006. State and Federally Listed Endangered, Threatened and Rare Plants of California. California Natural Diversity Database, Wildlife and Habitat Data Analysis Branch: online publication, July 2006
- CNDDDB. 2004. California Natural Diversity Data Base RareFind 2 searchable database, California Department of Fish and Game.
- County of San Diego. 1991. *Guidelines for the Implementation of the California Environmental Quality Act*. Department of Planning and Land Use, County of San Diego.
- County of San Diego. 1991. Resource Protection Ordinance. Board of Supervisors, County of San Diego.
- County of San Diego, 2006. Biological Resources Report Format and Content Requirements. Department of Planning and Land Use, County of San Diego, September 26, 2006.
- CNPS. 2001. *Inventory of Rare and Endangered Plants of California* (sixth edition). Rare Plant Scientific Advisory Committee, David P. Tibor, Convening Editor. California Native Plant Society. Sacramento, CA.
- CNPS. 2006. CNPS Online Inventory, Seventh Edition. California Native Plant Society: www.cnps.org
- Hickman, J.C., ed. 1996. *The Jepson Manual of Higher Plants of California*. University of California Press, Berkeley.
- Holland, R.F. 1986. *Preliminary Descriptions of the Terrestrial Natural Communities of California*. Non-game Heritage Program, State of California Department of Fish and Game, Sacramento.
- Jameson, E.W. and H.J. Peeters. 2004. *California Mammals*. Revised Edition. University of California Press, Berkeley and Los Angeles.
- National Geographic. 2001. TOPO! (www.topo.com)
- North American Butterfly Association. 2001. Checklist of North American Butterflies Occurring North of Mexico: www.naba.org/pubs/checklst.html
- Oberbauer, T. 1996. *Terrestrial Communities in San Diego County Based on Holland's Descriptions*. San Diego Association of Governments, San Diego, CA.
- Powell, J.A. and C.L. Hogue. 1979. *California Insects*. University of California Press, Berkeley.

Soule, M.E. et al. 1988. Reconstructed Dynamics of Rapid Extinctions of Chaparral-Requiring Birds in Urban Habitat Islands. *Conservation Biology* 2(1) pp 75-92.

USFWS. 2006. Threatened and Endangered Species System Listings by State and Territory. U.S. Fish and Wildlife Service: online publication, October 2006.

USFWS. 2006. Threatened and Endangered Species System Listings, Proposed and Candidate Species. U.S. Fish and Wildlife Service: online publication, October 2006.

LIST OF PREPARERS

Elyssa Robertson, Principal
Carina Weber, Associate Biologist
Mandy Meng, Biologist