

**Appendix: Biological Inventory  
of the Coachella Canal Area  
April and September 2004**

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## Introduction

While fairly extensive wildlife and vegetation data exists for much of the Coachella Valley through the *Draft Coachella Valley Multiple Species Habitat Conservation Plan/Natural Community Conservation Plan (CVMSHCP/NCCP)* effort and Bureau of Land Management's *Proposed California Desert Conservation Area Plan Amendment for the Coachella Valley and Final Environmental Impact Statement*, that data does not extend to the Bureau of Reclamation (Reclamation) parcels in the Coachella Valley. cursory field reconnaissance was conducted for the 1993 resource management planning effort, but no indepth field surveys have been conducted on Reclamation land. Wildlife and habitat surveys were designed to provide up-to-date and comprehensive wildlife, vegetation, and habitat suitability information essential to the resource management planning process.

The purpose of the wildlife and vegetation data collection is to identify species present and relative abundance, including threatened and endangered species; determine the presence and condition of habitats, including high value habitats; identify potential and existing threats to habitats; identify potential management options; and prepare geographic information system (GIS) map layers.

## Study Area

The study area encompasses parcels A through T, which lie adjacent to or near the Coachella Canal ([map 1.2](#)).

## Methods

Reclamation obtained the most recent property boundaries for Reclamation lands within the Coachella Valley, and a GIS specialist prepared land ownership maps and global positioning system (GPS) coordinates. For survey purposes, Reclamation divided the properties into 38 biological inventory parcels on the basis of geographical area rather than by the patchwork of fee title, withdrawn, or easement boundaries ([map 5.4](#)).

Biological surveys of all of the Reclamation properties were conducted April 19–23, 2004. Three biologists, a wildlife technician, and a botanist technician composed the crew. Morning bird surveys, using timed area searches, were conducted from dawn until 11 a.m. Units that were surveyed were selected to be representative of the habitats present. A total of 21 units were surveyed. Species diversity and relative abundance were calculated for each unit surveyed. The remaining 17 units were visited by a combination of walking and roadside observations.

Data collected for all units consisted of the following:

- Bird species (heard or observed).
- Wildlife species (sightings, tracks, scat, burrows).
- Vegetation (listing of abundant, common and uncommon species).
- Categorization of each unit into vegetation series using *A Manual of California Vegetation* (Sawyer and Keeler-Wolf, 1995) and into habitat types as defined by the CVMSHCP/NCCP.
- Categorization of any sand habitats present into active dunes; stabilized and partially stabilized desert dunes; stabilized and partially stabilized desert sand fields; stabilized shielded desert sand fields; active desert sand fields; ephemeral desert sand fields; or mesquite hummocks as defined by the CVMSHCP/NCCP.
- Identification of habitat linkages, degree of fragmentation.
- Identification of habitat condition, including off highway vehicle (OHV) trails, dumps, domestic pets, human activities.
- Identification of threats and damage to wildlife habitat.
- Recommendations from a resource management perspective were prepared for each parcel concerning overall wildlife value, potential for restoration, need for protection of unique or high value habitats, habitat potential for special status species, and need for subsequent threatened and endangered species surveys.

## Results

Bird detections from each parcel are listed in table 1. Reclamation usually conducted morning bird surveys, consisting of an area search with three biologists for 4 days. As time and conditions allowed, Reclamation surveyed additional sites. During the heat of the day, Reclamation conducted roadside surveys, stopping to walk and inspect areas with the best habitat. Most of habitat was

creosote bursage with patches of saltcedar and some areas of dense forbs usually invasive species. However, these areas were heavily used by migrating birds. In many cases, Reclamation observed species such as lazuli bunting, MacGillivray's warbler, yellow warbler, Wilson's warbler, warbling vireo, and Pacific-slope flycatcher actively foraging in the weedy cover, saltcedar and paloverde. They used these as rest stops/foraging areas along their migrations. These areas, while small, appear to take on a very important role for migrants, and Reclamation needs to identify these and protect them as much as possible. It could also provide a good template for habitat enhancement as well.

The more common birds observed throughout the sites included northern mockingbird, phainopepla (in mistletoe-infested mesquite), verdin (usually in paloverde), black-tailed gnatcatcher, mourning dove, ash-throated flycatcher, greater roadrunner, house finche, Gambel's quail, black-throated sparrow, and Say's phoebe. Black-throated sparrows (a common resident of desert shrub) included recently fledged young. Reclamation also observed Gambel's quail broods about a week old.

The best habitat for birds appeared to have more vegetative structure and included stands of paloverde, smoke trees, and other native species and usually had relatively high bird densities. These included parcels 1, 4, 5, 6, 7, 8, 9. Sites on the east side of the Coachella Valley were pretty heavily impacted by canal construction, illegal dumping, OHV use, and borrow areas adjacent to levee. Reclamation found the most extensive dunes and mesquite hummocks on parcel 27 on the south end—this is a relatively well-protected site as the dump road is fenced—especially compared to the other side of the dump road that is hugely impacted by massive OHV use. Reclamation found sign of abundant phainopepla use in honey mesquites and observed round-tailed ground squirrels in adjacent sand deposits of mesquite hummocks. Other sand formations were observed in parcel 37 but have been especially impacted by dumping. A small mesquite hummock area exists on the north end of parcel 26 immediately adjacent to Interstate 10. Round-tailed ground squirrels were present at this site. Another potentially high-quality mesquite hummock exists immediately adjacent to Dillon Road to the north on parcel 26 but has been heavily impacted by OHVs, squatter camps, and dumping. Round-tailed ground squirrels were present here as well. Parcel 30 included a nice dune formation and was a continuation of the clay hills but also was heavily impacted by OHVs. The only surviving plant appeared to be creosote bush. This site appeared to have minimal bird, reptile, or small mammal activity.

### **Acoustic Bat Surveys**

Acoustic bat surveys were conducted using an Anabat II bat detector coupled to a zero-crossing analysis interface module (ZCAIM). Bat calls were recorded directly onto a compact flash card. Two units were deployed in nearby habitats

and ran continuously from dusk to dawn, recording all bat calls during a 10-hour period. The units were retrieved and downloaded the following day and relocated to the next study area. Samples were obtained during April and again during September 2004.

### **Call Analysis**

The minimum frequency, duration, and shape of each call sequence (bat pass) was compared with reference calls from libraries of positively identified bats from throughout the Western United States, following the method outlined in Thomas et al. (1987). A bat pass is defined as a call sequence of duration greater than 0.5 millisecond (ms) and consisting of more than two individual calls (Thomas, 1998; O'Farrell and Gannon, 1999).

There were 15 bat species recorded in the study area (figure 1). Several characteristic calls of both the California *myotis* and western *pipistrelle* are nearly identical. Overlapping calls were placed in the *myocal/piphes* species group as done by Betts (1998) and Rainey et al. (2003). The western small-footed *myotis* and cave *myotis* also have overlapping call characteristics which, when encountered, were placed in the 40-kilohertz *myotis* species group.

### **Bat Activity**

Parcel 1 (at the Lake Cahuilla County Park) had the highest total number of bat passes (258) and the highest measure of bat activity as measured by bat passes per hour (23.5). The majority of calls were western pipistrelles (237). This parcel also had the largest number of mastiff bat passes (9). This site also had the largest number of feeding buzzes of all the parcels surveyed (21). Parcel 7 had the second highest number of bat passes (155), the majority of which were the calls of western pipistrelles.

The Toro Canyon area (parcel 8 and parcel 9) had the highest number of species present (10). This area is one of the most pristine of all the parcels in Reclamation ownership, consisting of a diverse alluvial fan habitat. It is likely that bats commute from the rocky cliffs of the nearby canyon and mountains to agricultural areas to the east.

The only western yellow bat recorded on Reclamation parcels was one pass on parcel 9 near Toro Canyon. This is a specialist of palm trees, often roosting in the dry fronds that hang down from the canopy. It faces threats from habitat modification, especially as fronds are often trimmed in urban areas. An acoustic survey was also conducted in September in the Coachella Valley Preserve to determine the relative abundance of bat species in pristine undamaged habitats. Western yellow bats, as expected, were abundant, with 51 bat passes recorded.

The Coachella Valley Preserve also had the second highest number of bat passes of any of the surveyed sites (174) and the second highest bat passes per hour (14.5).

Acoustic bat surveys of several of the Reclamation parcels indicated a diverse bat community present at least as diverse, if not more so, than that found on the pristine Coachella Valley Preserve. In addition to other wildlife species, the Reclamation parcels provide valuable habitat for at least 15 species of bats in the Coachella Valley. As this valley continues to experience accelerated human population growth, the habitat present in the Reclamation parcels will become increasingly important refugia for bats as well as other wildlife species.

## Literature Cited

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Coachella Canal Area  
Resource Management Plan/  
Environmental Assessment

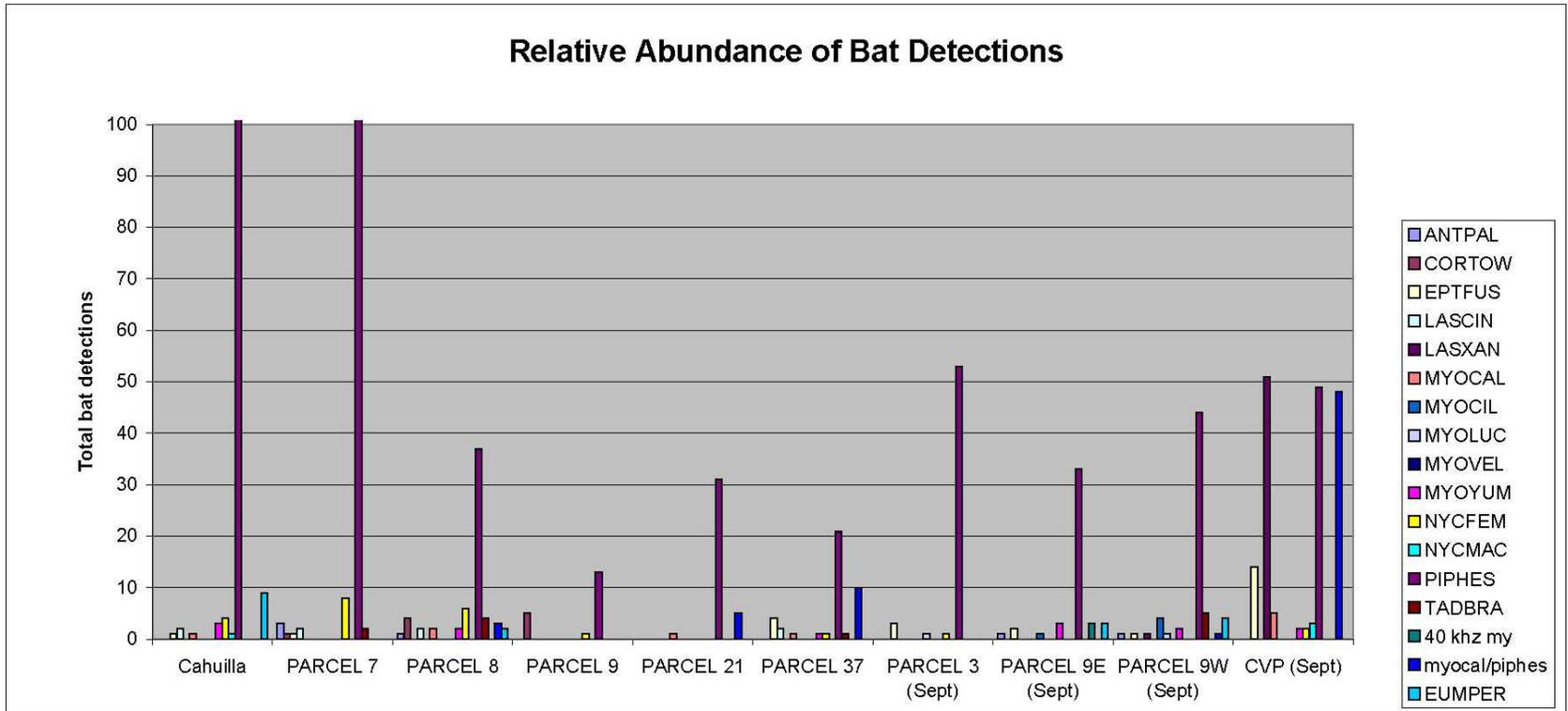
Table 1  
BIRD SPECIES OBSERVED DURING BIOLOGICAL INVENTORY OF RECLAMATION PARCELS  
Count in Biological Inventory Parcels - April 2004

SPECIES	STATUS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	17	20	21	22	24	25	26	27	29	30	37
American kestrel <sup>+</sup>	R			1	1										1					2							
Anna's hummingbird	R	1																									
Ash-throated flycatcher <sup>+</sup>	NM	1	1		1				1		3	1	1		1	1	1		2					1			
Barn swallow <sup>+</sup>	NM								5			2							1								
Black phoebe <sup>+</sup>	R							1				2	1														
Brewer's blackbird	R											1															
Brewer's sparrow	NM								3	1		26	4														
Black-chinned hummingbird <sup>+</sup>	NM	1															1								1		
Black-headed grosbeak	NM																		1								
Black-tailed gnatcatcher <sup>+</sup>	R	1		1	1					6						1							1				
Black-throated gray warbler	NM																									7	
Blue grosbeak <sup>+</sup>	NM																									1	
Black-throated sparrow <sup>+</sup>	R					5				4																	
Blue-gray gnatcatcher	NM											2															
Bullock's oriole <sup>+</sup>	NM																		1						1		
Cactus wren <sup>+</sup>	R				1																						
Cassin's kingbird <sup>+</sup>	NM						1																				
Cedar waxwing	W																			1							
Chipping sparrow	NM																									1	
Cliff swallow <sup>+</sup>	NM											20			1											1	
Cooper's hawk <sup>+</sup>	R																		2								
Common ground dove <sup>+</sup>	R											1															
Common raven <sup>+</sup>	R		1			1			1			1															
Costa's hummingbird <sup>+</sup>	NM								2																		
Double-crested cormorant	R							1																			
European starling <sup>+</sup>	R				1																						
Gamble's quail <sup>+</sup>	R	2							1		6	3					1		3			1	2		1		1
Great-blue heron	R								2																		
Great-horned owl <sup>+</sup>	R								1																		
Great-tailed grackle <sup>+</sup>	R			1																							
Greater roadrunner <sup>+</sup>	R				1														1		1			1	2		1
House finch <sup>+</sup>	R		5	2		3			2	4		14		1	2	2	4	20	2	10					7		
House wren	NM																									2	
Killdeer <sup>+</sup>	R	2						2				1													1		
Lazuli bunting	NM																		1	3							
Lesser goldfinch <sup>+</sup>	NM											1															
Lark sparrow	NM								6			1						1									
Loggerhead shrike <sup>+</sup>	R	2								1		1															
MacGillivray's warbler	NM		1	2								5	1													1	
Mourning dove <sup>+</sup>	R	9	1	1	7	1			13	4	3	24	6		1		1	20	20	12				1	4	5	
Northern mockingbird <sup>+</sup>	R	3	2		2				3	9		10	1		3	1	4				1			1	2	2	3
Olive-sided flycatcher	NM									1																	
Phainopepla <sup>+</sup>	R				2				11	7																12	
Pacific-slope flycatcher	NM																									3	
Red-tailed hawk <sup>+</sup>	R										1				1												
Rock wren <sup>+</sup>	R	1	1		2																						
Say's phoebe <sup>+</sup>	NM	1			1			1		1	1	1					1										
Verdin <sup>+</sup>	R	1	1	4	9				1	3					2				1					2	8		
Warbling vireo	NM									1																	
White-crowned sparrow	W											2							1		1						
White-throated swift	NM																										1
White-winged dove <sup>+</sup>	R									2																	
Western kingbird <sup>+</sup>	NM				2					2		7							1		5			2			
Wilson's warbler	NM			1														2								3	
Yellow warbler <sup>+</sup>	NM																									5	
Yellow-rumped warbler	NM																									1	

(R - Year-long resident; W - winter resident; NM - neotropical migrant landbird)

(\* breeds in habitat associations of Reclamation's parcels)

Figure 1



# Attachment

## Parcel 1



### Plant Community Classifications

Dominant species include blue paloverde, *Cercidium floridum*; cheesebush, *Hymenoclea salsola*; brittle bush, *Encelia farnosa*; creosote, *Larrea tridentata*; and white bursage, *Ambrosia dumosa*.

**Series<sup>1</sup> dominated by trees:** Blue paloverde-ironwood-smoke tree series

**Series dominated by shrubs:** Creosote bush-white bursage series

This series (the creosote bush series) is often considered part of the creosote bush scrub, which can be thought of as a collection of series. In the creosote bush series, creosote bush dominates; white bursage may be present but not as important shrub. (See Creosote bush-white bursage series.)

### Special Habitats

Small pockets of stabilized and partially stabilized sand fields present and Peninsular bighorn sheep buffer.

### General Habitat Condition

Approximately one-half of the parcel has been heavily disturbed, appearing to have been scraped. Also piles of soil have been dumped. Some revegetation is occurring on this disturbed area. The eastern portion is mostly undisturbed.

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<sup>1</sup> Series classification based on *A Manual of California Vegetation*, J.O. Sawyer and Tod Keeler-Wolf.

**Disturbance Factors**

Excavation for flood control, light equestrian use, illegal dumping, borrow pits, light OHV use.

**Linkages/Fragmentation**

Connected to continuous habitat to the west and the Santa Rosa Mountains.

**Wildlife Notes**

See table 1 for bird species detected and figure 1 for bat species. Wildlife typical of desert habitat observed in relatively high abundance, which included lizards and active small mammal burrows. Relatively high bat densities included western pipistelles and mastiff bats.

**Recommendations**

Continue passive light recreation use and low-impact trails; restore borrow pits and illegal dumps; control OHV use; use as a Peninsular bighorn sheep buffer area.

## Parcel 2



### Plant Community Classifications

Creosote bush predominates on rock hillside, while cheesebush and white bursage predominates on the bajada with some paloverde. Interspersion of desert washes and rock outcrops.

*Series dominated by trees:* Blue paloverde-ironwood-smoke tree series.

*Series dominated by shrubs:* Creosote bush series on hillside  
Four-wing saltbush series on the bajada

### Special Habitats

Peninsular bighorn sheep buffer.

### General Habitat Condition

Relatively light disturbance

### Disturbance Factors

Recreational use; adjacent residential subdivision. Hydrology altered by flood control structures.

### Linkages/Fragmentation

The desert wash is connected with extensive upstream washes but represents downstream end. The slopes are connected with the entire mountain range and associated Peninsular bighorn sheep habitat.

**Wildlife Notes**

See table 1 for bird species detected and figure 1 for bat species.

**Recommendations**

Maintain for passive recreation use and nature study. Wildlife water source development could be an enhancement if placed at base of rocky slopes.

### Parcel 3



#### **Plant Community Classifications**

Unit has been scraped, probably used as a borrow area for the levee. There is a stand of paloverde mixed with tamarisk and honey mesquite adjoining a dense stand of saltbush and cheesebush. There is some saltbush colonizing the scraped area.

*Series dominated by trees:* Tamarisk series

*Series dominated by shrubs:* Four-wing saltbush series

#### **Special Habitats**

None observed.

#### **General Habitat Condition**

Area mostly disturbed for excavation of levee. A small desert riparian area dominated by paloverde and salt cedar is in fairly good shape and is probably supported by irrigation at adjacent subdivision.

#### **Disturbance Factors**

Levee borrow pit, dumping, OHV use.

#### **Linkages/Fragmentation**

Isolated from adjacent habitat by subdivision.

#### **Wildlife Notes**

See table 1 for bird species detected and figure 1 for bat species. Migrating and resident birds were using the desert riparian strip.

#### **Recommendations**

Maintain riparian strip as bird habitat and visual buffer.

## Parcel 4



### Plant Community Classifications

Creosote bush, saltbush, and some ocotillo with a patch of honey mesquite. There is a well developed stand of paloverde on the north end of the unit. There are also patches of mature Tamarisk. On the west side of the levee in the northwest portion of the parcel is a stand of paloverde with atriplex. There is an area with stabilized sand fields.

*Series dominated by trees:* Tamarisk series  
Blue paloverde-ironwood-smoke tree series

*Series dominated by shrubs:* Creosote bush series  
Creosote bush-white bursage series (includes ocotillo)

### Special Habitats

Pockets of stabilized and partially stabilized sand fields. Peninsular bighorn sheep buffer.

### General Habitat Condition

A relatively undamaged bajada exists in the middle of the parcel.

### Disturbance Factors

Heavily impacted areas on the south half of the parcel (formerly the Ranch of the Seventh Mountain) with concrete slabs, building materials, bare areas, dumps, and OHV use. Some development has occurred on the northern portion including a water or sewer treatment plant, a Bureau of Land Management trail (Boo Hollow), and a levee.

### Linkages/Fragmentation

Connected to continuous habitat to the west and the Santa Rosa Mountains.

**Wildlife Notes**

See table 1 for bird species detected and figure 1 for bat species.

**Recommendations**

Revegetate and remove dumps; limit development to serve as Peninsular bighorn sheep buffer; inventory and protect sand habitat.

## Parcel 5



### **Plant Community Classifications**

Dominant plants include cheesebush, bursage, brittle bush, catclaw, and bebbia.

*Series dominated by shrubs:* Catclaw acacia series

### **Special Habitats**

Peninsular bighorn sheep buffer.

### **General Habitat Condition**

Relatively undisturbed.

### **Disturbance Factors**

Areas is between flood control dikes, which may alter hydrology. Some dead trees. OHV trailing.

### **Linkages/Fragmentation**

Connected to continuous habitat to the west and the Santa Rosa Mountains.

### **Wildlife Notes**

See table 1 for bird species detected and figure 1 for bat species.

### **Recommendations**

Maintain as Peninsular bighorn sheep buffer.

## Parcel 6



### **Plant Community Classifications**

A rocky hill consisting of mostly bare rocks and soil with scattered creosote-bursage with a few ocotillo.

*Series dominated by shrubs:* Creosote-white bursage series

### **Special Habitats**

Peninsular bighorn sheep buffer and rocky outcrops with small caves for critter cover.

### **General Habitat Condition**

Relatively undisturbed.

### **Disturbance Factors**

Old mines, flood control dikes.

### **Linkages/Fragmentation**

Connected to continuous habitat to the west and the Santa Rosa Mountains.

### **Wildlife Notes**

See table 1 for bird species detected and figure 1 for bat species.

### **Recommendations**

Maintain as Peninsular bighorn sheep buffer; protect rock outcrops and cave habitat for wildlife cover and raptor perch.

## Parcel 7



### Plant Community Classifications

In the relatively undamaged upland area outside of the borrow area is creosote bush/bursage. Old tamarisk trees in a scraped area at the base of the levee.

*Series dominated by trees:* Tamarisk series

*Series dominated by shrubs:* Creosote bush-white bursage series

### Special Habitats

Pockets of stabilized and partially stabilized sand fields. Adjacent treatment ponds provide aquatic habitat and water source. Peninsular bighorn sheep buffer area.

### General Habitat Condition

Relatively undisturbed.

### Disturbance Factors

OHV trails, levee construction, sedimentation, dumping.

### Linkages/Fragmentation

Connected to continuous habitat to the west and the Santa Rosa Mountains.

### Wildlife Notes

See table 1 for bird species detected and figure 1 for bat species.

### Recommendations

Maintain as Peninsular bighorn sheep buffer; clean up dump.

## Parcels 8 and 9



### Plant Community Classifications

This is a low bajada interspersed with desert wash. It consists of paloverde and smoke trees interspersed with creosote/white bursage. Along the western edge of the parcel, it grades to large boulders interspersed with barrel cactus. Mature tamarisk occurs in the scraped borrow area at the base of the levee.

*Series dominated by trees:* Blue paloverde-ironwood-smoke tree series  
Tamarisk series

*Series dominated by shrubs:* Creosote bush-white bursage series

### Special Habitats

Peninsular bighorn sheep buffer.

### General Habitat Condition

Relatively undisturbed and fairly isolated, especially on the western side.

### Disturbance Factors

A few OHV trails and minor illegal dumps.

### Linkages/Fragmentation

Connected to continuous habitat to the west and the Santa Rosa Mountains.

### Wildlife Notes

See table 1 for bird species detected and figure 1 for bat species. Relatively abundant and diverse wildlife observed during survey

### Recommendations

Maintain as Peninsular bighorn sheep buffer.

## Parcels 12-17



### Plant Community Classifications

*Series dominated by trees:* Tamarisk series  
Blue paloverde-ironwood-smoke tree series

*Series dominated by shrubs:* Creosote-white bursage series  
Mixed saltbush series

### Special Habitats

Some small, isolated pockets of sand.

### General Habitat Condition

Mostly disturbed.

### Disturbance Factors

Parcels on the east side of Coachella Valley adjacent to the canal are generally heavily disturbed by flood control dikes, canal construction, powerlines, OHV use, and illegal dumping. Habitat immediately east of levee toes is disturbed by ponding, sedimentation, and invasive plants. There are some undisturbed sites to the east of the canal.

### Linkages/Fragmentation

Fragmented by canal right-of-way and adjacent agriculture to west; connected to vast desert areas to east.

### Wildlife Notes

See table 1 for bird species detected and figure 1 for bat species.

### Recommendations

Clean up dumps; control OHV use; restore vegetation; and control noxious weeds.

## Parcels 18 and 19



### **Plant Community Classifications**

Parcel east of canal is mostly scraped and barren of vegetation. Parcel west of canal is very low in plant cover. Such low plant abundance exists that it is not placed into a vegetation series. Potential is probably creosote-white bursage series and mixed saltbush series.

### **Special Habitats**

Not observed.

### **General Habitat Condition**

Severely degraded.

### **Disturbance Factors**

Scraped for borrow material and/or flood control? OHV use and dumping. Habitat immediately east of levee toes is disturbed by ponding, sedimentation, and invasive plants.

### **Linkages/Fragmentation**

Fragmented by canal and agriculture to the west; connected to desert areas to east.

### **Wildlife Notes**

See table 1 for bird species detected and figure 1 for bat species.

### **Recommendations**

Revegetate; control weeds; and manage OHV use.

## Parcel 20



### Plant Community Classifications

Area consists of some mature salt cedar near the levee with some paloverde, with some invasive grasses and forbs. Intact desert shrub on eastern edge of unit.

*Series dominated by trees:* Tamarisk series  
Blue paloverde-ironwood-smoke tree series

*Series dominated by shrubs:* Creosote bush-white bursage series

### Special Habitats

Pockets of stabilized and partially stabilized sand fields.

### General Habitat Condition

Partially disturbed.

### Disturbance Factors

Flood control dikes, canal construction, powerlines, OHV use, and illegal dumping. Habitat immediately east of levee toes is disturbed by ponding, sedimentation, and invasive plants.

### Linkages/Fragmentation

Fragmented by canal and agriculture to the west; connected to desert areas to east.

### Wildlife Notes

See table 1 for bird species detected and figure 1 for bat species. An area with abundant green-up for forbs appeared to be attracting migrating birds.

### Recommendations

Revegetate; control weeds; and manage OHV use.

## Parcel 21



### Plant Community Classifications

Severely altered desert scrub with about a 1-acre stand of paloverde and saltcedar with an understory of grasses and other annuals, including weeds.

*Series dominated by trees:* Blue paloverde-ironwood-smoke tree series

### Special Habitats

A unique 1-acre stand of highly structured paloverde.

### General Habitat Condition

Severely degraded.

### Disturbance Factors

Flood control dikes, canal construction, powerlines, OHV use, and illegal dumping. Habitat immediately east of levee toes is disturbed by ponding, sedimentation, and invasive plants.

### Linkages/Fragmentation

Fragmented by canal and agriculture to the west; connected to desert areas to east.

### Wildlife Notes

See table 1 for bird species detected and figure 1 for bat species.

### Recommendations

Revegetate; control weeds; and manage OHV use.

## Parcel 22



### Plant Community Classifications

Salt cedar along edge of levee grading into more paloverdes to the east of parcel.  
Scattered creosote.

*Series dominated by trees:*

Tamarisk series  
Blue paloverde-ironwood-smoke tree series

*Series dominated by shrubs:*

Mixed saltbush series  
Creosote bush-white bursage series

### Special Habitats

None observed.

### General Habitat Condition

Disturbed.

### Disturbance Factors

Flood control dikes, canal construction, powerlines, OHV use, and illegal dumping. Habitat immediately east of levee toes is disturbed by ponding, sedimentation and invasive plants. Some abandoned crop fields now colonized by invasive weeds. Model aircraft facility.

### Linkages/Fragmentation

**Wildlife Notes**

See table 1 for bird species detected and figure 1 for bat species. Abundant mourning doves in weedy fields.

**Recommendations**

Revegetate, control weeds, and manage OHV use.

## Parcel 23



### **Plant Community Classifications**

Parcel east of canal is mostly scraped and barren of vegetation. Parcel west of canal is very low in plant cover. Such low plant abundance exists that it is not placed into a vegetation series. Potential is probably creosote-white bursage series and mixed saltbush series.

### **Special Habitats**

Not observed.

### **General Habitat Condition**

Severely degraded.

### **Disturbance Factors**

Scraped for borrow material and/or flood control? OHV use and dumping. Habitat immediately east of levee toes is disturbed by ponding, sedimentation and invasive plants.

### **Linkages/Fragmentation**

Fragmented by canal and agriculture to the west; connected to desert areas to east.

### **Wildlife Notes**

See table 1 for bird species detected and figure 1 for bat species.

### **Recommendations**

Revegetate; control weeds; and manage OHV use.

## Parcel 24



### Plant Community Classifications

Some saltbush with scattered smoke trees and paloverde.

*Series dominated by trees:* Blue paloverde-ironwood-smoke tree series

*Series dominated by shrubs:* Mixed saltbush series

### Special Habitats

None observed.

### General Habitat Condition

Mostly degraded.

### Disturbance Factors

Heavily impacted by borrow activities.

### Linkages/Fragmentation

Fragmented by canal and agriculture to the west; connected to desert areas to east.

### Wildlife Notes

See table 1 for bird species detected and figure 1 for bat species.

### Recommendations

Revegetate; control weeds; and manage OHV use.

## Parcel 25



### Plant Community Classifications

Parcel east of canal is mostly scraped and barren of vegetation. Parcel west of canal is very low in plant cover. Potential is probably creosote-white bursage series and mixed saltbush series. There are scattered stands of saltcedar and paloverde trees.

*Series dominated by trees:* Tamarisk series  
Blue paloverde-ironwood-smoke tree series

### Special Habitats

Not observed.

### General Habitat Condition

Severely degraded.

### Disturbance Factors

Scraped for borrow material and/or flood control? OHV use and dumping. Habitat immediately east of levee toes is disturbed by ponding, sedimentation, and invasive plants.

### Linkages/Fragmentation

Fragmented by canal and agriculture to the west; connected to desert areas to east.

### Wildlife Notes

See table 1 for bird species detected and figure 1 for bat species.

### Recommendations

Revegetate; control weeds; and manage OHV use.

## Parcel 26



### Plant Community Classifications

South end of parcel consisted of salt cedar and paloverde but very little shrub or herb layer present. An oasis existed adjacent to the water tank consisting of saltcedar and a fan palm. Middle of parcel had a well developed stand of paloverde, acacia, and bursage. On the north end of parcel is a ~50-acre stabilized dune area with honey mesquite, smoke tree, and saltbush.

*Series dominated by trees:* Blue paloverde-ironwood-smoke tree series

*Series dominated by shrubs:* Mesquite series  
Mixed saltbush series

### Special Habitats

Areas with stabilized and partially stabilized sand fields.

### General Habitat Condition

Relatively undisturbed compared to adjacent eastern parcels.

### Disturbance Factors

Some light OHV use.

### Linkages/Fragmentation

Fragmented by canal and agriculture to the west; connected to desert areas to east.

### Wildlife Notes

See table 1 for bird species detected and figure 1 for bat species. Possible round-tailed ground squirrel sighting.

### Recommendations

Restore and protect sand dune features.

## Parcel 27



### Plant Community Classifications

Desert scrub with a cottonwood-salt cedar oasis, paloverde-smoke tree stand, and a mesquite hummock area. The area east of the landfill access road is creosote bush stand. The parcel north of Dillon Road consists of a heavily mesquite hummock, mature salt cedar stand, pure creosote bush areas, creosote bush-white bursage, and mixed saltbush communities.

#### *Series dominated by trees:*

Fan palm series  
Tamarisk series  
Blue paloverde-ironwood-smoke tree series  
Cottonwood willow oasis

#### *Series dominated by shrubs:*

Mesquite series  
Mixed saltbush series  
Creosote bush series  
Creosote bush-white bursage series

### Special Habitats

This parcel has an extensive area of mesquite hummocks, pockets of stabilized and partially stabilized sand fields, and a riparian oasis.

### General Habitat Condition

The south half of parcel is fenced off and semi-protected.

### Disturbance Factors

Dumping, homeless camp in oasis, OHV use, invasive plants.

### Linkages/Fragmentation

Connected with extensive desert to the east. Fragmented from habitat corridors to the west by canal and agricultural areas.

**Wildlife Notes**

See table 1 for bird species detected and figure 1 for bat species. Abundant migrating and resident birds observed in the cottonwood oasis and mesquite habitat. Abundant small mammal and reptile burrows in the mesquite hummock area.

**Recommendations**

Should be a high-priority area. Protect and restore mesquite hummocks, other sand habitats, and cottonwood oasis; clean up garbage; control weeds; and manage OHV use.

## Parcel 28



### **Plant Community Classifications**

This unit is fenced off. About one-fourth consists of mostly dead saltcedar. The other three-fourths consists mostly of mixed saltbush.

*Series dominated by shrubs:*      Mixed saltbush series

### **Special Habitats**

Pockets of stabilized and partially stabilized sand fields.

### **General Habitat Condition**

Mostly disturbed.

### **Disturbance Factors**

Illegal dumping and fencing.

### **Linkages/Fragmentation**

Isolated and mostly fragments with limited habitat corridors to the north and south.

### **Wildlife Notes**

See table 1 for bird species detected and figure 1 for bat species.

### **Recommendations**

Clean up dumps.

## Parcel 29



### Plant Community Classifications

Creosote bush-white bursage, mixed saltbush series, small area of Athel tamarisk.

*Series dominated by trees:* Tamarisk series

*Series dominated by shrubs:* Mixed saltbush series  
Creosote bush series  
Creosote bush-white bursage series

### Special Habitats

None observed.

### General Habitat Condition

Moderately disturbed.

### Disturbance Factors

OHV use, dumping, powerline right-of-way.

### Linkages/Fragmentation

Connected with extensive desert to the east. Fragmented from habitat corridors to the west by agricultural areas and subdivisions

### Wildlife Notes

See table 1 for bird species detected and figure 1 for bat species.

### Recommendations

Clean up dumps and manage OHV use.

## Parcel 30



### **Plant Community Classifications**

Isolated outcrop of clay hills surrounded on the west by a housing development and golf course. Very sparse vegetation, consisting predominately of creosote bush.

*Series dominated by shrubs:* Creosote bush series

### **Special Habitats**

Stablized sand dunes.

### **General Habitat Condition**

Severely disturbed.

### **Disturbance Factors**

Heavy OHV use and invasive plants.

### **Linkages/Fragmentation**

Isolated and fragemented from habitat on east and west sides.

### **Wildlife Notes**

See table 1 for bird species detected and figure 1 for bat species.

### **Recommendations**

May be best left as an OHV area; otherwise, restore, and revegetate.

## Parcel 31



### Plant Community Classifications

Creosote bush-white bursage, mixed saltbush series

*Series dominated by shrubs:*

- Mixed saltbush series
- Creosote bush series
- Creosote bush-white bursage series
- Mesquite series

### Special Habitats

A small mesquite hummock and one isolated fan palm.

### General Habitat Condition

Moderately disturbed.

### Disturbance Factors

OHV use.

### Linkages/Fragmentation

Connected with extensive desert to the east. Fragmented from habitat corridors to the west by agricultural areas and subdivisions

### Wildlife Notes

See table 1 for bird species detected and figure 1 for bat species.

### Recommendations

Manage OHV use.



## Parcel 33



### Plant Community Classifications

Creosote bush-white bursage, mixed saltbush series, small area of tamarisk where runoff accumulates.

*Series dominated by trees:* Tamarisk series

*Series dominated by shrubs:* Mixed saltbush series  
Creosote bush series  
Creosote bush-white bursage series

### Special Habitats

Pockets of stabilized and partially stabilized sand fields.

### General Habitat Condition

Moderately disturbed.

### Disturbance Factors

OHV use, dumping, power line right-of-way, sedimentation, invasive weeds.

### Linkages/Fragmentation

Connected with extensive desert to the east. Fragmented from habitat corridors to the west by agricultural areas and subdivisions.

### Wildlife Notes

See table 1 for bird species detected and figure 1 for bat species.

### Recommendations

Clean up dumps and manage OHV use.



## Parcel 36



### **Plant Community Classifications**

Entire parcel is scraped and fenced.

### **Special Habitats**

N/A.

### **General Habitat Condition**

No habitat value except narrow strips around outside edge of fence area.

### **Disturbance Factors**

Excavation for borrow material?

### **Linkages/Fragmentation**

N/A.

### **Wildlife Notes**

See table 1 for bird species detected and figure 1 for bat species.

### **Recommendations**

Control noxious weeds.

## Parcel 37



### Plant Community Classifications

<i>Series dominated by trees:</i>	Tamarisk series
<i>Series dominated by shrubs:</i>	Mixed saltbush series Creosote bush series Creosote bush-white bursage series

### Special Habitats

Small areas with mesquite hummocks and stabilized and partially stabilized sand fields.

### General Habitat Condition

Moderately disturbed.

### Disturbance Factors

OHV use, dumping, invasive weeds, domestic dogs from adjacent homes.

### Linkages/Fragmentation

Connected with extensive desert to the east. Fragmented from habitat corridors to the west by agricultural areas and subdivisions.

### Wildlife Notes

See table 1 for bird species detected and figure 1 for bat species. Round-tailed ground squirrel observed in sand habitat.

### Recommendations

Protect and restore mesquite hummocks and other sand habitats; clean up garbage; control weeds; and manage OHV use.

## Parcel 38



### **Plant Community Classifications**

Large isolated strip of mature Athel tamarisk.

*Series dominated by trees:* Tamarisk series

### **Special Habitats**

N/A.

### **General Habitat Condition**

Disturbed.

### **Disturbance Factors**

Trash dumping and fragmentation.

### **Linkages/Fragmentation**

Isolated.

### **Wildlife Notes**

See table 1 for bird species detected and figure 1 for bat species. Used as stopover habitat by migrating birds

### **Recommendations**

Pick up trash.