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**LETTER OF TRANSMITTAL**

TO: Scott Wilson	FROM: Rhiannon Klingonsmith
COMPANY: CDFG	
ADDRESS: P. O. Box 47 Yountville, CA 94599	PROJECT NUMBER:
RE: Brushy Creek Conservation Bank 2008 Monitoring Report	DATE: December 16, 2008

URGENT     FOR REVIEW     PLEASE COMMENT     PLEASE REPLY     PLEASE RECYCLE

Dear Scott:

Please find enclosed the 2008 monitoring report for the Brushy Creek Conservation Bank. Should you have any questions or require additional information, please contact me at (916) 435-3555.

Sincerely,

Rhiannon Klingonsmith

SENT BY: \_\_\_\_\_ COPIES: \_\_\_\_\_



WILDLANDS, INC.

# **Brushy Creek Conservation Bank 2008 Monitoring Report**

Prepared by:

Wildlands, Inc.  
3855 Atherton Road  
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December 2008

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## INTRODUCTION

The Brushy Creek Conservation Bank (BCCB) is located in southeastern Contra Costa County, near the Byron Hot Springs, and the Byron Airport (**Figures 1 - 3**). The 120 acre BCCB was established in 2000 to preserve breeding and wintering habitat for the western Burrowing Owl (*Athene cunicularia*). Preservation of the site also protects a mixture of annual grassland, vernal pool, and seasonal wetland habitats that are utilized by wintering and breeding Burrowing Owls (BUOW).

### Habitats

Existing habitats on the BCCB include alkaline grassland with vernal pools and swales, alkaline wetlands, and an intermittent drainage (Brushy Creek). These are described below.

### Soil Types

There are five NRCS (Natural Resource Conservation Service) soil types mapped on the BCCB: San Ysidro loam, Solano loam, Solano loam (strongly alkali), Pescadero clay loam, and Linne clay loam (USDA 1977). The San Ysidro loam and Linne clay loam are moderately well-drained soils. The San Ysidro soil occurs on the west half of the site, while the Linne clay loam occurs on the two hills located near the center of the property. The Pescadero clay and Solano soils are relatively poorly drained soils. The Pescadero clay occurs in the extreme northwest corner of the site; the Solano loam (strongly alkali) soil occurs in the center-east portion of the site, north of the hills and encompasses the southern portion of an alkali sink. The Solano loam soil occurs on the eastern half of the property, and exhibits a slightly hummocky relief.

### Grassland/Vernal Pool

The dominant vegetation in the annual grassland includes soft chess (*Bromus hordeaceus*), Mediterranean barley (*Hordeum marinum* ssp. *gussoneanum*), Italian ryegrass (*Lolium* sp.), salt grass (*Distichlis spicata*), alkali heath (*Frankenia salina*), gum plant (*Grindelia* sp.) and dove weed (*Eremocarpus setigerus*). The grassland supports California ground squirrels (*Spermophilus beecheyi*) and provides nesting and/or foraging habitat for a number of special-status birds, including Burrowing Owl, Loggerhead Shrike (*Lanius ludovicianus*) and Horned Lark (*Eremophila alpestris*). The ground squirrel population also provides a prey base for raptors such as Golden Eagles (*Aquila chrysaetos*), Ferruginous Hawks (*Buteo regalis*), White-tailed Kites (*Elanus leucurus*), Northern Harriers (*Circus cyaneus*) and Prairie Falcons (*Falco mexicanus*).

The BCCB site has been grazed for many years. Nuisance weed species such as yellow star thistle (*Centaurea solstitialis*) and milk thistle (*Silybum marianum*) have not become widely established on the property. Nuisance weed species do occur in localized patches, particularly on the southern portion of the property with topographical relief, which is an area that was disturbed during expansion of the Byron Airport. Weedy species also occur on disturbed ground along the road edges and near rodent burrows.

### **Alkaline Wetlands**

Seasonal alkaline wetlands occur throughout the site; vegetation in these areas includes salt grass, alkali heath, alkali mallow (*Malvella leprosa*), sand spurrey (*Spergularia rubra*), and annual species of Atriplex, including heartscale (*Atriplex cordulata*) and brittlescale (*Atriplex depressa*). Iodine bush (*Allenrolfea occidentalis*) occurs near the center of the site, around a large playa-type pool and drainages.

### **Seasonal Drainage**

Brushy Creek, an intermittent drainage, crosses the southeastern portion of the site (Figure 2). An unnamed tributary to Brushy Creek also crosses the southeastern portion of the site and merges with Brushy Creek on the eastern edge of the site. Throughout most of their reaches within the site, the two channels are sparsely vegetated but include pockets of rabbits foot grass, salt grass, Baltic rush (*Juncus balticus*), and ryegrass. The drainages carry watershed runoff sporadically during the winter and early spring.

### **Monitoring Requirements**

Burrowing Owl (BUOW) monitoring is conducted annually to determine the level of BUOW utilization of the site. Monitoring surveys are conducted during the winter and breeding seasons.

Range monitoring is conducted three times per year (once in the fall before grazing, once in the spring during the rapid growth state and once in the summer after the grazing season) to assess herbaceous cover and determine whether target plant heights are being met.

### **Site Management**

The site has a long history of grazing, which continues with current management practices. Long-term management goals of the BCCB focus on preserving Burrowing Owl habitat; the main tool used in this regard is seasonal livestock grazing.

## **METHODS**

### **Burrowing Owl Surveys**

The first survey will be conducted in winter prior to January 31<sup>st</sup>. Three or more surveys are to be conducted during the breeding season between May 15<sup>th</sup> and July 15<sup>th</sup>. The surveys will be conducted by walking transects throughout the site, and will be supplemented by viewing the site from the prominent hillocks located in the center of the site. The distance between transects will be spaced approximately 100-200 feet apart to allow complete visual coverage of the site. When viewing the site from the hillocks, a spotting scope will be used so that good visual coverage of the site can be accomplished with minimal disturbance to owls at burrows. All burrows that are determined to be active or that show sign of potential owl use will be mapped on an aerial photo and/or data will be collected using a GPS. Once active burrows have been determined in the

spring, up to two follow up visits will be conducted to survey of BUOW activity at each active burrow. Burrows thought to potentially show sign of BUOW use are mapped (pellets, whitewash or prey remains) are observed.

At least one follow-up survey is conducted two to four weeks after the initial breeding season survey. As with the first survey, all potential burrows, BUOW sightings and activities are mapped on an aerial photo.

Incidental observations that are also recorded include a list of bird species present during surveys, and the presence or absence of ground squirrels.

### **Range Assessment**

Visual assessments of herbaceous cover are made annually, once before the grazing season begins, and once after the grazing season has ended. Vegetation height measurements and landscape photographs are taken at five established points on the BCCB (**Figure 4**).

Invasive plant species, such as yellow star thistle or milk thistle are recorded to indicate any presence and determine if populations need management maintenance.

## **RESULTS**

### **Burrowing Owl Surveys**

Surveys were conducted April 8, 2008 and May 6-8, 2008. During this time four active burrows were located (**Figure 5**). Each burrow had the presence of fresh white wash, pellets, and feathers. Each burrow contained at least one BUOW and one burrow had two BUOW.

A follow-up visit was conducted on July 10, 2008. Two BUOW were flushed from active burrows. Many potential burrows were present on site but there was no current evidence indicating they were active at that time.

### **Range Assessment**

The average vegetation height measurement at BCCB was 3.1 inches on the March 19, 2008 survey (**Table 1**).

The winter and spring comparison photos are shown in **Figure 6a-6e**.

## DISCUSSION

### Burrowing Owl Surveys

Burrowing Owls were observed at four separate burrow locations. Burrow #1 had one BUOW flush on three out of the four visits. Burrow #2 had a BUOW present on every visit. Burrow #3 had two BUOW present. This was considered an active nesting site due to the fact that burrowing owls are mostly solitary. Burrow #4 had one owl flush three out of the four visits. All four burrows demonstrated signs of use and were occupied a majority of the time when sites were visited. Many burrows and active ground squirrel communities were present, creating suitable habitat and prey availability for burrowing owls and their potential young. Although no young were observed on any of the surveys, the burrows remained intact throughout the surveys, and no signs of predation were observed.

### Range Assessment

The vegetation measurements for 2008 were within the target range of 3 to 12 inches. Keeping vegetation at lower heights allows for burrowing owls to easily spot prey. Cattle grazing will continue in accordance with the Brushy Creek Conservation Bank Habitat Management Plan, August 2008.

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