

**2005 MITIGATION MONITORING
REPORT**

**CISCO SITE 6
ALVISO, CALIFORNIA**

Prepared by:

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Prepared for:

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1.0 INTRODUCTION

Zander Associates has prepared this fifth year monitoring report for the Cisco Systems, Inc. Site 6 mitigation area in Alviso, California, to document the progress of the mitigation effort as required by the *Biological Resources Mitigation and Monitoring Plan* (Mitigation and Monitoring Plan) prepared for Cisco Systems, Inc. (Zander Associates 2000). The Mitigation and Monitoring Plan was prepared to satisfy the City of San Jose's conditions of approval for the Cisco Site 6 project to offset losses of jurisdictional wetlands, Congdon's tarplant (*Hemizonia parryi* ssp. *congdonii*), and burrowing owl (*Athene cunicularia*) habitat resulting from development of all phases of the project. The Mitigation and Monitoring Plan calls for the creation of 0.77 acre of jurisdictional wetland, maintenance of a population of Congdon's tarplant comparable to documented baseline levels, and creation of suitable breeding habitat for at least one pair of burrowing owls within a 21.4-acre area referred to as the Natural Habitat Preserve (Preserve) (Figure 1).

Construction and site preparations within the Preserve began in the fall of 2000. Mowing of the grass and installation of twelve artificial burrows for burrowing owl occurred on September 28, 2000. Grading of the wetlands and swales was completed in November of 2000, and that same month, the wetlands and swales were seeded with Congdon's tarplant and a mixture of wetland herbaceous species. After construction was completed, a six-foot-high chain link fence was constructed around the perimeter of the Preserve.

An as-built conditions report was prepared and submitted to the City of San Jose in January of 2001. The report established the baseline conditions for the created wetland and described in detail the installation of artificial burrows for burrowing owl and the collection and distribution of Congdon's tarplant seeds within the created wetland area.

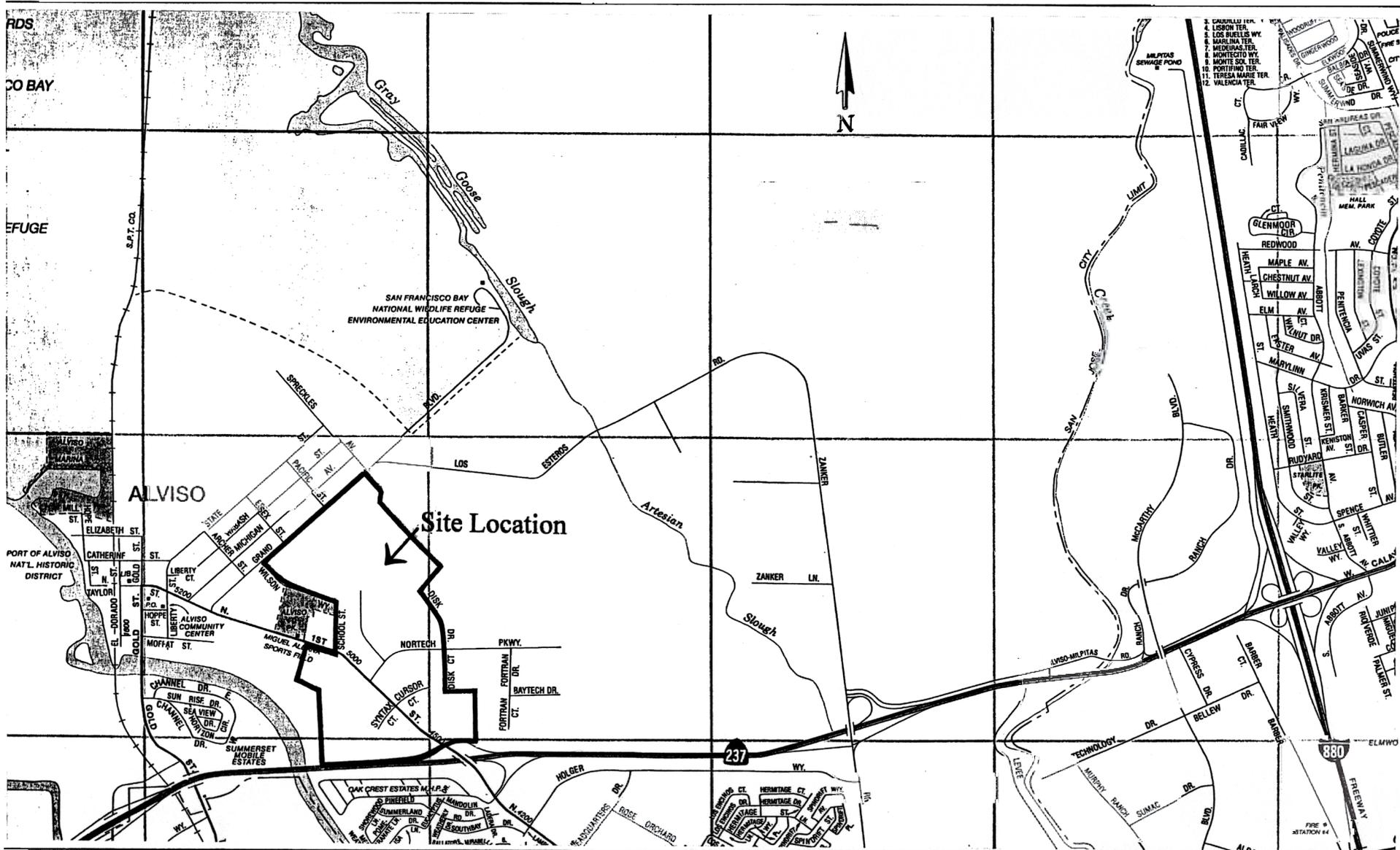
This is the fifth in a series of five annual monitoring reports that document the progress of the mitigation efforts within the Preserve. This report discusses the results of the 2005 monitoring visits and evaluates the success of the mitigation against established criteria.

1.1 Maintenance Activities in 2005

No mowing or flailing of vegetation throughout the Preserve was conducted in 2005. Firebreaks were mowed along the fencelines as observed during the July site visit and the berm along the eastern boundary was mowed. No grazing or other vegetation management appeared to have occurred during 2005.

2.0 SUCCESS CRITERIA

According to the Mitigation and Monitoring Plan, mitigation efforts within the Preserve will be considered successful if at the end of the five year monitoring program, the following success criteria are met:



ZANDER ASSOCIATES

Environmental Consultants

Site Location
 Cisco Systems, Inc. Site 6 Project
 Alviso, California

Figure
 1

JOB NUMBER
 BPH1

REVIEWED BY
 MZ

DATE
 8/00

REVISED DATE

Wetlands

- Approximately 0.77 acre of the seasonal wetland meet the wetland criteria for soils, vegetation, and hydrology and the existing seasonal wetlands are preserved.

Congdon's Tarplant

- The area occupied by Congdon's tarplant and the number of individuals are greater than or equal to the population identified in the 2001 Monitoring Report. The establishment and colonization of the plant into the graded swales and wetlands will also be considered in evaluating success.

Burrowing Owl

- At least one pair of burrowing owls have successfully nested and produced young using burrows in the preserve area. In addition, consistent observations of owls using foraging habitat in the preserve area shall be documented over the course of the monitoring program.

MONITORING METHODOLOGY

As specified in the Mitigation and Monitoring Plan, monitoring was conducted throughout the year for wetlands, Congdon's tarplant, and burrowing owl. Photographs were taken at the permanent photo points indicated on Figure 2 and are included in Appendix A. Additional photos were taken in 2005 to document extensive ponding. These photos were assigned additional photo points on Figure 2 and are included in Appendix A. Following are descriptions of the specific methodology used for each subject area.

3.1 Wetlands

Zander Associates visited the Preserve four times in 2005 (January 17, March 4, April 20, and July 21, 2005) to monitor the wetlands. During the winter and spring monitoring visits, we observed and recorded the extent of surface ponding and/or soil saturation and looked for evidence of how water was moving into and through the swales and wetland. An inventory of the vegetation present in the wetland areas was conducted on April 20, 2005 to maximize the number of species that would be identifiable. All species encountered were recorded and assigned a wetland indicator status using the *Revised National List of Plant Species That Occur in Wetlands* (U.S. Fish and Wildlife Service 1997).

3.2 Congdon's Tarplant

Congdon's tarplant data were collected on July 21, 2005. The entire Preserve was surveyed and the number of Congdon's tarplant observed were estimated and occurrences were mapped using a 1" = 50' scale topographic map of the site. Each of the areas mapped was assigned a density estimate for tarplant based on the following criteria: low = 1 to 25% coverage; medium = 26-50% coverage; and high = greater than 50% coverage.

Burrowing Owl

Focused surveys for burrowing owls were conducted on January 17, April 20, and July 21, 2005

to document the presence/absence of owls in the Preserve and in the immediate vicinity. The surveys consisted of initially scanning the Preserve from its perimeter with binoculars and/or a spotting scope to search for individual owls on the ground or fence line. The Preserve was then systematically walked to search for owls and examine each burrow (natural and artificial) for signs (e.g., molted feathers, cast pellets, prey remains, eggshell fragments or excrement at or near a burrow entrance, etc.) of owl use. Surveys were conducted in the late morning or early afternoon hours and observations were made over about a two hour period. Passive observations of owl activity on and adjacent to the Preserve were made in March of 2005.

4.0 RESULTS

4.1 Wetlands

Ponding was evident in all wetland areas and throughout the entire Preserve during the winter and early spring months of 2005. Water was observed at the surface during the January and March site visits. Algal matting was evident in the wetland areas in April and July. It appears that the swales constructed in 2004 were directing runoff into the created wetland as well as holding water themselves. Both existing and created wetland areas in the Preserve had extensive ponding for a long duration in 2005.

An inventory of the plant species in the created wetland area was taken on April 20, 2005 and again in July. In April, many of the annual plants had germinated and were at a stage where they were easily identified but due to the extended duration of ponding, many bare areas were also evident. In July, additional species were observed in previously recorded bare areas. The wetland area is comprised of a combination of the native grass species that were applied as seed and volunteers from adjacent habitats. The plant species observed during the field visits are listed in Table 1 along with their wetland indicator status. Approximately 93% of the vegetative cover in the created wetland consists of wetland species with an indicator status of facultative (FAC), facultative wetland (FACW) or obligate (OBL).

4.2 Congdon's Tarplant

Congdon's tarplant was much more abundant in 2005, possibly due to the extended ponding and possibly because vegetation management was not as aggressive as in past years. The species was found in high densities in portions of the created wetland and in the central portion of the Preserve (Figure 3). A large area of the Preserve contained low densities of Congdon's tarplant, which increased almost twofold over the 2004 data. As reported in the past, since Congdon's tarplant is an annual plant, fluctuations in the population are expected as environmental conditions change. In 2004 we anticipated that a wetter winter/spring, could result in an increase in the Congdon's tarplant in 2005 and that is exactly what was observed.

Congdon's tarplant was observed on approximately 15 acres of the Preserve in 2005. This is the same amount of area that was occupied by Congdon's tarplant as mapped in 2001. The area of high density was greater in 2005 (2.1 acres) than in 2001 (1.0 acre), but the extent of medium and low density occurrences was slightly reduced. However, the overall objective of equaling or exceeding the area and number of individuals of Congdon's tarplant over the established baseline

was met in 2005.

Table 1: Plant Species Observed within Created Wetlands During 4/20/05 and 7/21/05 Monitoring Visits

Scientific Name	Common Name	Wetland Indicator Status ¹	Percent Cover
Grasses, Sedges, Rushes			
<i>Lolium perenne</i>	Italian ryegrass	FAC	20%
* <i>Elymus triticoides</i>	wild rye	FAC+	5%
* <i>Vulpia microstachys</i>	Nuttal's fescue	---	5%
* <i>Hordeum brachyantherum</i>	meadow barley	FACW	25%
<i>Hordeum marinum</i>	mediterranean barley	FAC+	5%
Flowering Herbs			
<i>Lasthenia glabrata</i>	yellow-rayed lasthenia	FACW	3%
<i>Malvella leprosa</i>	alkali mallow	FAC	5%
<i>Centromadia parryi</i> ssp. <i>congdonii</i>	Congdon's tarplant	FAC	5%
* <i>Lotus purshianus</i>	Spanish clover	UPL	1%
<i>Atriplex sp</i>		FAC	5%
<i>Chamomilla suaveolens</i>	pineapple weed	---	1%
<i>Cressa truxillensis</i>	alkali weed	FACW	5%
<i>Lactuca serriola</i>	prickly lettuce	FAC	1%
<i>Picris echioides</i>	bristly ox-tongue	FAC	2%
<i>Rumex crispus</i>	curly dock	FACW	10%
<i>Xanthium strumarium</i>	cocklebur	FAC+	2%
TOTAL			100%
		% cover wetland species	93%

* Species that were included in the seed mix applied to the wetland area after construction.

1. **OBL**= Obligate Wetland. Occurs almost always under natural conditions in wetlands; **FACW**= Facultative Wetlands. Usually occurs in wetlands, but occasionally found in non-wetlands; **FAC**= Facultative. Equally occurs in wetlands or non-wetlands; **FACU**= Facultative Upland. Usually occurs in non-wetlands, but occasionally found in wetlands.

4.3 Burrowing Owl

Based on the results of the focused surveys and passive observations on the Preserve in 2005, we have determined that burrowing owls are using the mitigation area for foraging. Owls were observed using the Preserve and areas just outside of the Preserve in January, April and July. No evidence of nesting activity was observed in the Preserve in 2005, probably because the entire field was flooded for an extended period of time and was not suitable for burrowing animals. Owl activity was also less evident on surrounding properties during our surveys.

5.0 SUMMARY/DISCUSSION

The above normal rainfall in the 2004/2005 season had a positive effect on the created wetland and the population of Congdon's tarplant in the Preserve. However, it may have reduced habitat suitability for burrowing owl due to the extent and duration of ponding. The percentage of wetland species observed in the created wetland met the established success criteria in 2005 and the extent of area exhibiting seasonal wetland characteristics was approximately 1.2 acres, greater than the 0.77 acre required. The area occupied by Congdon's tarplant was the same as recorded in 2001, the established baseline year. The number of individual plants may have also increased as larger areas of high density occurrences were recorded. No burrowing owls were observed nesting in the Preserve in 2005 but nesting activity was recorded in 2003 and 2004.

The observations made and data collected over the past five years suggest that the success of the mitigation components varies from year to year. For the first four years, the created wetlands and Congdon's tarplant were affected by what was perceived to be a reduction in the amount of runoff reaching the mitigation area. During these years, burrowing owl were observed nesting in the Preserve, although never at very high numbers. The wet winter of 2004/2005 appears to have increased the extent of area meeting wetland criteria and improved habitat quality for Congdon's tarplant. However, these conditions may have reduced available habitat for burrowing owls during the nesting season.

The conclusion is that the Preserve contains functional seasonal wetlands and suitable habitat for Congdon's tarplant and burrowing owl, but the quality of the habitat varies depending primarily on the amount of rainfall and/or surface water that is directed into the area. As long as there is sufficient rainfall, the wetland areas and Congdon's tarplant are likely to continue to thrive. During periods of less rain, these habitats may be reduced but will probably not disappear. Increased rainfall leads to increased and extended ponding/soil saturation reducing habitat for burrowing animals, particularly during the start of the breeding season for burrowing owl. Increased rainfall also increases vegetation growth, another factor in discouraging burrowing owls.

Despite the fluctuations in habitat quality over the monitoring period, we believe that the mitigation efforts have met the established success criteria. There are approximately 1.2 acres of new seasonal wetlands, the area of occupied Congdon's tarplant is equal to the population as established in the 2001 baseline, and at least one pair of burrowing owls has been observed nesting in the Preserve and owls have been consistently observed foraging in the area. In order to maintain nesting habitat for burrowing owl, some regular vegetation management will be necessary, primarily along the berms in the eastern and southern portions of the site. These areas should be mowed or otherwise cleared as soon as vegetation reaches about one-foot-tall and then regularly maintained after that to keep vegetation growth down. We continue to recommend grazing as an alternative to mowing.

APPENDIX A

**PHOTOGRAPHS FROM PERMANENT PHOTO POINTS
AND OF EXTENSIVE PONDING IN 2005**