

Draft

**Old Oakland Road Habitat Mitigation Project
Story Road Mitigation Site #2**

Year 6 (2010) Monitoring Report



Biotic Resources Group

Biotic Assessments ♦ Resource Management ♦ Permitting

Biotic Resources Group

Biotic Assessments ♦ Resource Management ♦ Permitting

Draft

Old Oakland Road Habitat Mitigation Project Story Road Mitigation Site #2

Year 6 (2010) Monitoring Report

Prepared for:

Ms. Elizabeth Lanham
City of San Jose Department of Transportation
Infrastructure Maintenance Division
1404 Mabury Road
San Jose, CA 95133

Prepared by:

Biotic Resources Group
Kathleen Lyons, Plant Ecologist

October 31, 2010

**OLD OAKLAND ROAD HABITAT MITIGATION PROJECT
STORY ROAD MITIGATION SITE No. 2**

HABITAT MITIGATION MONITORING REPORT

YEAR 6 (2010)

EXECUTIVE SUMMARY

The Old Oakland Road Habitat Mitigation Project at the Story Road Mitigation Site No. 2 encompasses 1.65 acres in central San Jose. The project area consists of a riparian revegetation area immediately southwest of Coyote Creek. The site is accessed from Story Road, approximately 0.75 mile west of State Highway 101. The project site provides riparian mitigation for the Oakland Road Bridge Widening project that was implemented by the City of San Jose.

The City of San Jose and State and Federal regulatory agencies approved off-site mitigation for this construction project through the replacement of 1.65 acres of upland riparian woodland habitat at the Story Road Mitigation Site No. 2 (*Oakland Road Bridge Widening Mitigation and Monitoring Program*, H.T. Harvey & Associates, November 12, 1997). Pursuant to project permits, the Old Oakland Road Habitat Mitigation Project site must be established and meet performance criteria during Years 1-10. Yearly monitoring reports (Years 1-6, Year 8 and Year 10) are required to be submitted to regulatory agencies following each monitoring year, beginning in 2006.

The mitigation site was planted in spring 2005; 1,965 riparian plants (container stock) were installed on the site. Following plant installation, the contractors installed mulch around each planting. Belowground browse protection cages were installed at all riparian plantings. Aboveground cages were installed around some trees and shrubs.

In 2010 the Biotic Resources Group monitored the mitigation site as per Year 6 protocols. The monitoring program consisted of reconnaissance inspections and a detailed monitoring session. The City of San Jose Department of Transportation's (DOT) landscape contractor performed maintenance of the mitigation site during this monitoring period (removal of invasive, non-native plant species and trash pick-up). City of San Jose Metro PD conducted an enforcement sweep of the area in August 2010.

Summary of Year 6 (2010) Monitoring Results

The reconnaissance inspections revealed that plant health and survival ranged from very good to excellent, as evidenced by observations of the plantings and plant growth. Invasive weeds were controlled within the mitigation area, which included the removal of saplings of tree-of-heaven (an invasive tree) and Italian thistles.

The monitoring documented plant cover, tree height, and plant health within fifteen permanent plots. Average Year 6 tree cover was found to be 24% (an increase from 17% in 2009) and shrub cover at 48% (an increase from 47% in 2009). According to the mitigation and monitoring plan, the City is responsible for at least 25% tree cover and 10% shrub cover at the end of Year 6. The tree cover value is just slightly below the Year 6 performance standard; however, tree growth is evident such that cover values are expected to increase to meet the Year 8 requirements, such that no remedial actions are needed at this time.

Site maintenance activities were limited to removal/control of invasive non-native plant species and trash pick-up, which was implemented in summer 2010. Monitoring inspections in 2010 found transient activity and illegal encampments within the mitigation area. These activities are also occurring off-site within the adjacent riparian corridor along Coyote Creek and within tree groves adjacent to Story Road. Observed activities within the mitigation area include deposition of trash and human waste, firewood collecting, and trampling of vegetation. The placement of tents and associated living area activities resulted in the direct loss of installed plantings. This was especially evident in the vicinity of plot #14 where 90% on the installed plants died from trampling. While the mitigation area has met its Year 6 performance standards, human activities within the mitigation area may affect future plant survival and the development of tree and shrub cover. Illegal human activities can also moderate the value of the mitigation area for native plant and animal species.

The City implemented surveillance and maintenance activities within the Coyote Creek corridor in 2010. City Park Ranger staff visually assesses the creek corridor from the north side of the creek and reports incidents to San Jose Police Department's Metro Unit. In August 2010, the Metro Unit conducted an enforcement sweep of the area.

Summary of Recommendations for Year 6 (2010)

Control of Invasive, Non-native Plant Species. The riparian mitigation area is located adjacent to stands of tree-of-heaven, an invasive plant species. Non-native thistles (such as Italian and bull thistle) also occur on and adjacent to the mitigation area. Maintenance actions are needed to remove and control occurrences of these species and other invasive, non-native plant species that establish within the mitigation area to ensure the continued survival of the riparian trees and shrubs and development of the riparian woodland, such that the site meets the Year 7-10 performance standards.

Although not required in the Habitat Mitigation and Monitoring Plan, it is recommended that trees/tree groves of tree-of-heaven that abut the mitigation area be removed. The removal of these invasive trees will provide long-term benefits to the mitigation area, as tree-of-heaven can aggressively invade the mitigation area once maintenance activities cease. The recommended tree removal plan is presented in Appendix A of the Year 5 (2009) Monitoring Report. This plan could be implemented in phases; the first priority for tree removal would be occurrences of tree-of-heaven located within 50 feet of the boundary of the mitigation area.

Surveillance for Vandalism and Illegal Encampments. The City should continue its surveillance efforts along the Coyote Creek corridor to minimize damage to the mitigation site from vandalism or other illegal activities. The City should include in its weekly ranger patrol a vehicular access/surveillance of the Old Oakland Road (Story Road #2) mitigation area.

As per the City's designated order of responsibilities and resources, the City's Metro PD should continue to remove illegal encampments that establish within the mitigation area. Following these removals the trash team of Environmental Services as well as DOT crews should continue to removal litter and trash associated with these encampments. These clean-ups should be in addition to clean-ups conducted for Coastal Clean-up Day and National River Clean-up. Quarterly site visits to remove trash and litter from the mitigation area are recommended.

Mitigation Monitoring. Monitoring the status of the mitigation area and riparian plantings is required in Years 8 (2012) and 10 (2014), following the requirements set forth in the mitigation and monitoring plan. Monitoring requires re-sampling the riparian plots to document plant cover and tree height and periodic

reconnaissance inspections to document the overall progress of the mitigation area. The Year 8 and 10 (2012 -2014) data should be compared to previous year data and the Year 8 and 10 performance standards. Monitoring is required in Years 8 and 10 for the following agencies:

- Army Corps of Engineers (ACOE): Monitoring and reporting in Years 8 and 10, with reports submitted to ACOE.
- Regional Water Quality Control Board (RWQCB): Monitoring and reporting in Years 8 and 10, with reports submitted to RWQCB.
- City of San Jose Planning Department: Monitoring and reporting in Years 8 and 10, with reports submitted to the department.

This page left blank.

**OLD OAKLAND ROAD HABITAT MITIGATION PROJECT
STORY ROAD MITIGATION SITE No. 2**

**HABITAT MITIGATION
MONITORING REPORT**

YEAR 6 (2010)

1.1 INTRODUCTION

The Old Oakland Road Habitat Mitigation Project is located at Story Road Mitigation Site No. 2 and encompasses 1.65 acres in central San Jose. The project area consists of a riparian revegetation area immediately southwest of Coyote Creek. The site is accessed from Story Road, approximately 0.75 mile west of State Highway 101. The project's location is depicted on Figure 1. The project site provides riparian mitigation for the Old Oakland Road Bridge Widening Project that was implemented by the City of San Jose.

The roadway-widening project was designed to minimize impacts to riparian resources; however, construction occurred in the riparian corridor and affected approximately 0.46 acre of riparian woodland and 0.27 acre of ruderal vegetation within the Coyote Creek corridor. These actions were outlined in the project's environmental documents and accompanying regulatory permits. The project was determined to have direct and indirect impacts on riparian resources. Due to impacts to these sensitive resources, the City developed specific environmental mitigation measures for the project. These measures include riparian habitat replacement and long-term maintenance and enhancement of a designated mitigation area; this area is depicted on Figure 2. Specific mitigation actions required for the site are addressed in the *Oakland Road Bridge Widening Mitigation and Monitoring Plan* (H.T. Harvey & Associates, November 12, 1997).

1.2 SUMMARY OF PROJECT PERMITS AND REQUIREMENTS

1.2.1 California Department of Fish and Game (CDFG) Agreement – RS-0167-98

The riparian habitats within the Old Oakland Road Bridge Widening project area are under the jurisdiction of the California Department of Fish and Game (CDFG) under 1602 of the California Fish and Game Code. As the project resulted in the removal of riparian woodland, the Fish and Game agreement specifies the revegetation of 1.65 acres of riparian woodland.

The riparian wetland mitigation area must be established and meet performance criteria by the end of Year 5. Yearly monitoring reports (to Year 5) are required to be submitted to CDFG following each monitoring year, beginning in 2006.

1.2.2 U.S. Army Corps of Engineers (ACOE) - NWP No. 23019S

The creek environs within the Old Oakland Road Bridge Widening project area are under the jurisdiction of the ACOE under Section 404 of the Clean Water Act. Although the widening project did not result in the permanent impacts to Waters of the U.S., including wetlands, the City secured a permit pursuant to the ACOE's Nationwide Permit requirements for demolition activities associated with the bridgework. To

mitigate these impacts, the Old Oakland Road Habitat Mitigation Project provides for the establishment of 1.65 acres of riparian woodland, consistent with NWP No. 23019S.

The mitigation must be established and meet performance criteria by the end of Year 10. Yearly monitoring reports (Years 1-6, Year 8 and Year 10) are required to be submitted to ACOE following each monitoring year, beginning in 2006.

1.2.3 Regional Water Quality Control Board Water Quality (RWQCB) Certification – No. 02-43-C0139

The creek environs within the Old Oakland Road Habitat Mitigation Project area is under the jurisdiction of the RWQCB under Clean Water Act Section 401 and the Porter-Cologne Water Quality Control Act. Demolition work had the potential to affect Waters of the State, so to mitigate these impacts and to be in compliance with RWQCB requirements the project includes mitigation for impacts to State waters through the establishment of 1.65 acres of riparian woodland at the Story Road Mitigation Site #2, consistent with waivers and consistency determinations for the project.

The mitigation must be established and meet performance criteria by the end of Year 10. Yearly monitoring reports (to Year 10) are required to be submitted to RWQCB following Years 1-6, Year 8, and Year 10, beginning in 2006.

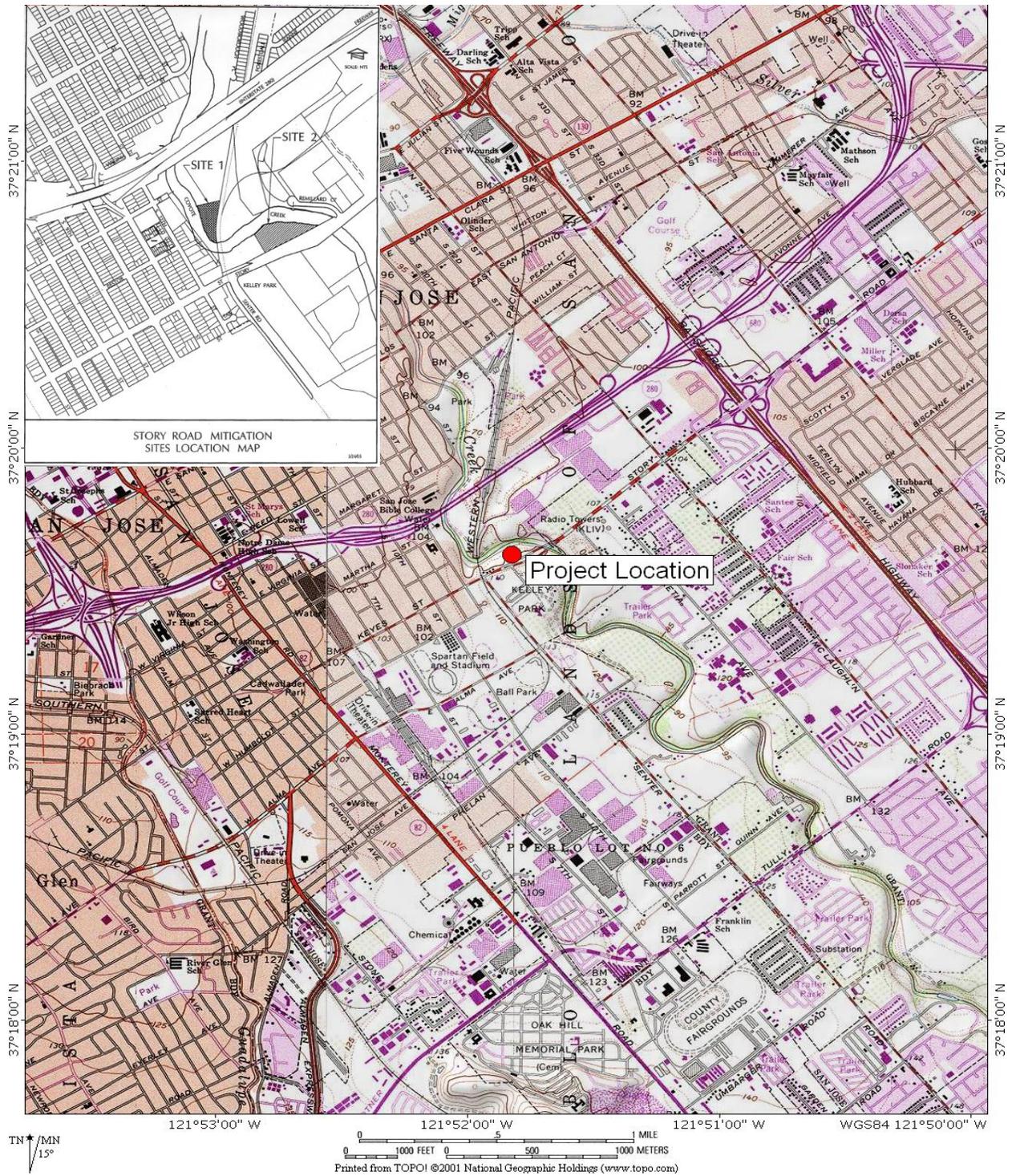
1.2.4 City of San Jose Planning Department - Environmental Review

The City of San Jose conducted environmental review of the project. The environmental document identified mitigation measures for biological resources, and consistent with other regulatory agency permit requirements identified the Story Road Mitigation Site No. 2 for the revegetation of 1.65 acres of riparian woodland. The mitigation area must be established and meet performance criteria by the end of Years 1-6, 8 and 10. Yearly monitoring reports (in Years 1-6, 8 and 10) are to be prepared and submitted to the City Planning Department following each monitoring year.

1.3 SUMMARY OF ENVIRONMENTAL MITIGATION REQUIREMENTS

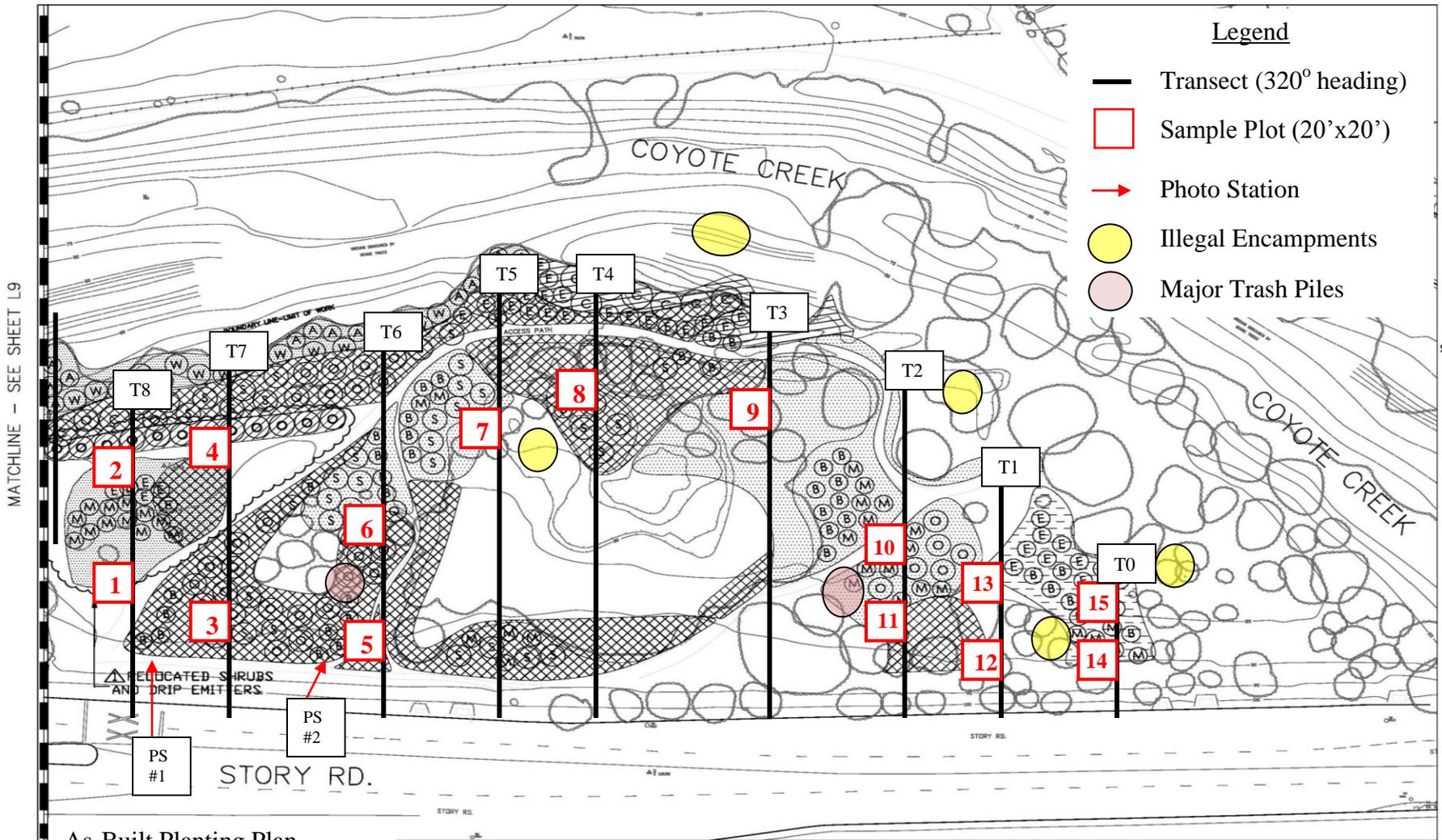
The mitigation requirements are derived from the City of San Jose's environmental documents and regulatory agencies permit conditions, the need to create a self-sustaining riparian mitigation area, and the need to maintain and manage the mitigation area within the projects 10-year reporting schedule. The mitigation requirements follow those outlined in the projects mitigation and monitoring plan (H.T. Harvey & Associates, 1997) and further specified in agency permits and conditions.

The implementation of the mitigation plan and subsequent maintenance and monitoring of the mitigation area is designed to ensure project compliance with applicable permits and conditions of approval. This is to be accomplished by implementing the 10-year maintenance and monitoring program, beginning in Year 1, such that plant survival rates are maximized and desired habitat features are achieved. The mitigation area will also be maintained to ensure compliance with restricted uses. The 10-year establishment period will maximize the potential for long-term plant survival within the mitigation area. The maintenance and monitoring program also includes the implementation of remedial actions on a yearly basis if plantings or habitats fail to meet performance standards or are not proceeding in a manner that will lead to the project meeting its 10-year requirements. The success of the maintenance and monitoring program will be documented monitoring on a yearly basis during Years 1-5, Year 6, Year 8, and Year 10.



Base Map: USGS Topographic Map, San Jose East

<p>Biotic Resources Group 2551 S. Rodeo Gulch Road #12 ♦ Soquel, CA 95073 (831) 476-4803 ♦ brg@cruzio.com</p>	<p>Old Oakland Road Habitat Mitigation Story Road Mitigation Site No. 2 Year 6 (2010) Monitoring Report</p>	<p>Figure 1 10/10</p>
--	---	------------------------------------



As-Built Planting Plan
 Source: Central Coast Wilds, 2005

<p>Biotic Resources Group 2551 S. Rodeo Gulch Road #12 ♦ Soquel, CA 95073 (831) 476-4803 ♦ brg@cruzio.com</p>	<p>Old Oakland Road Habitat Mitigation Project – Story Road Mitigation Site #2 Year 6 (2010) Monitoring Report</p>	<p>Figure 2 10/10</p>
--	---	----------------------------------

1.4 SUMMARY OF REPORTING REQUIREMENTS

Under the requirements of the project's regulatory permits, the status of the mitigation area and its compliance with these permits/agreements must be reported in monitoring reports. During Years 1-5, 6, 8 and 10, a report is to be submitted to CDFG (to Year 5), ACOE, RWQCB, and City of San Jose Planning Department following each year's monitoring.

Each monitoring report shall contain a brief description of the project, methods used to collect and analyze the data, results of the data analysis, conclusions regarding the present conditions of the site, and remedial actions to be implemented.

1.5 SUMMARY OF REVEGETATION ACTIVITIES IMPLEMENTED

Central Coast Wilds, Inc., a landscape contractor under contract to the City of San Jose, planted the site in spring 2005. A total of 1,965 container stock riparian plants were specified for installation, as listed on Table 1 (Central Coast Wilds, 2005). Following plant installation, the contractors installed mulch around each planting. Below and aboveground browse protection cages were installed at all plantings. CCW maintained the plantings throughout 2009.

Table 1. Plant Installation within Old Oakland Road Habitat Mitigation, Story Road Mitigation Site No. 2

Scientific Name	Common Name	Container Size	Number of Plants Installed in 2005
<i>Acer negundo</i>	Box elder	Tree pot	41
<i>Aesculus californica</i>	California buckeye	Tree pot	41
<i>Platanus racemosa</i>	California sycamore	Tree pot	41
<i>Quercus agrifolia</i>	Coast live oak	Tree pot	41
<i>Sambucus mexicana</i>	Blue elderberry	Tree pot	42
<i>Populus fremontii</i>	Fremont cottonwood	Tree pot	17
<i>Salix sp.</i>	Willow	Tree pot	34
Tree Subtotal			257
<i>Baccharis pilularis</i>	Coyote brush	Dee pot	497
<i>Rubus ursinus</i>	California blackberry	Dee pot	497
<i>Symphoricarpos albus</i>	Snowberry	Dee pot	497
<i>Artemisia douglasiana</i>	Mugwort	Dee pot	217
Shrub Subtotal			1,708
TOTAL			1,965

The Biotic Resources Group monitored the mitigation area in 2010 (Year 6). The monitoring program consisted of reconnaissance inspections and detailed monitoring sessions as per Year 6 protocols. The results of the Year 6 monitoring are presented in this report. The report also identifies whether the project has met the Year 6 performance standards identified for the project and if remedial actions are necessary to ensure the project meets the project's long-term habitat goals.

1.6 METHODOLOGY

The Old Oakland Road Habitat Mitigation Project at Story Road Mitigation Site No.2 was inspected between May and October 2010. Kathleen Lyons of the Biotic Resources Group conducted these

inspections. At the inspection sessions, general environmental features of the mitigation site were noted as well as general plant species performance and area maintenance.

On September 1, a detailed monitoring session was conducted to document the riparian plantings. At the monitoring session, permanent sampling plots that were established in Year 1 (2005) were re-sampled. Fifteen (15) sampling plots, each measuring 20 feet by 20 feet (400 square feet), located along nine transects, were sampled. The southeast corner of each plot is marked in the field with a red-painted metal post. The location and orientation of each sample plot is depicted on Figure 2. Within each plot, plant survival, plant health, vigor, and height, and vegetative cover was recorded. The rating system used for plant health and vigor is listed on Table 2.

Table 2. Plant Health and Vigor Rating System, Old Oakland Road Habitat Mitigation Project at Story Road Mitigation Site No. 2

Code	Rating	Health Characteristics	Vigor Characteristics
4	Excellent	75-100% healthy foliage	Vigorous new growth observed throughout plant
3	Good	50-74% healthy foliage	Vigorous new growth observed only at terminal bud
2	Fair	25-49% healthy foliage	No new growth evident
1	Poor	0-24% healthy foliage	Stem dieback observed

The mitigation area was also evaluated as to site maintenance and other disturbances. Photographs documenting each the permanent sampling plots and the overall condition of the mitigation plantings were taken. Two photo stations established in 2005 were re-photographed in 2010. The location of the photo stations is depicted on Figure 2.

1.7 MONITORING RESULTS

1.7.1 Reconnaissance Inspections

The reconnaissance inspections of the mitigation area documented the status of plant growth and maintenance activities, as well as the general progress of the revegetation efforts. Figures 3 and 4 depict the typical condition of the planting area and development of the riparian habitat between Year 1 (October 2005) and Year 6 (August 2010).

In Year 6 the mitigation plan invasive, non-native plant species within the mitigation area (i.e., areas outside of planting basins, yet within the overall mitigation area) be minimized to maximize plant survival and desired habitat features. The 2010 reconnaissance inspections documented adherence to these maintenance requirements, as occurrences of tree-of-heaven and Italian thistles had been controlled. Occurrences of poison hemlock were also controlled by weed-whipping.

Human disturbances were observed within the mitigation area in 2010; disturbances include trampling of shrubs (in northeastern area), deposition of debris (trash piles and human waste), and construction/occupation of illegal encampments. A dense growth of grasses and forbs between the plantings (created this year with the absence of weed-whipping between plantings) has deterred some human access through the area and has focused human access to a network of informal paths.



Figure 3. View of westernmost portion of riparian planting area, Year 1 - October 2005. (Photo station #1)



Figure 4. View of westernmost portion of riparian planting area, Year 5 - September 2010. (Photo station #1)

The reconnaissance inspections revealed that plant health and survival was good to very good, as evidenced by observations of the plantings and plant growth. Summer drought stress was observed on several snowberry plants in the central portion of the mitigation area (plot #7 area), yet these plants are expected to recover upon the start of winter rains, as evidenced in previous monitoring sessions.

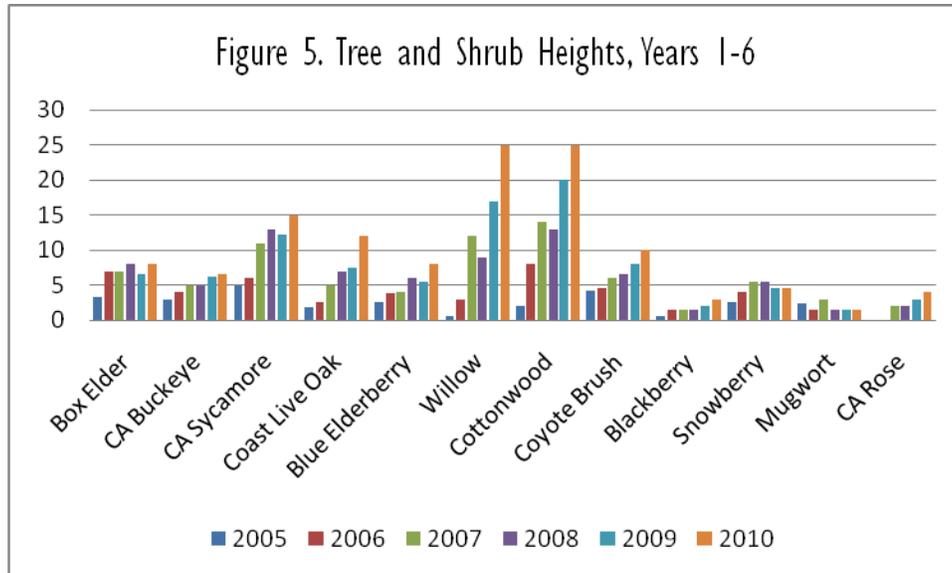
1.7.2 Permanent Sample Plot Monitoring

The progress of the riparian planting area must be documented through the permanent plots. The plan specifies a minimum of fifteen plots be established along a minimum of eight transects. In September data was collected on plant survival, plant cover (percent cover), and plant height at the fifteen plots. Site maintenance, plant health and vigor, and natural recruitment of native and non-native woody species were also noted.

Detailed monitoring of the riparian plantings was conducted in September 2010. Based on the data from the fifteen sample plots, the monitoring documented that most plants exhibited very good to excellent health and vigor, with most species displaying high vigor and health. Of the trees, California sycamores average 15 feet tall, yet some trees were over 20 feet in height. Fremont cottonwood and willow trees average 25 feet and 20 feet, respectively. Box elders average 8 feet tall while coast live oaks average 12

feet. Blue elderberries average 8 feet and buckeyes average 6.5 feet tall. For the shrubs, coyote brush averaged 10 feet tall, followed by snowberry (4.5 feet), California rose (4 feet), and California blackberry (3 feet).

All tree species, except California buckeye, recorded within the sample plots, meet or exceed their Year 6 (2010) height requirement/performance standard. The average height of buckeyes was 6.5 feet and the performance standard is seven feet; however, continued growth of these species is expected, such that height values are expected to be reached in Year 8. Figure 5 displays the trend in plant height between Year 1 (2005) and Year 6 (2010) for the installed trees and shrubs.



Within the planting area, bare and/or herbaceous plant cover averages 28%, which is a decrease from 36% in 2009. Shrub cover averages 48%, an increase from 47% in 2009. Tree cover averages 24%, an increase from 17% in 2009 (Table 4). These data continue to show a decrease in herbaceous cover and increases in both shrub and tree cover indicative of developing riparian woodland.

Table 4. Sample Plot Data on Plant Cover within Old Oakland Road Habitat Mitigation Project at Story Road Mitigation Site #2 – Year 6 (2010)

Plot Number	Percent Relative Cover (%)						
	Herbaceous /Bare	Shrub	Tree	Plot Number	Herbaceous /Bare	Shrub	Tree
1	20%	30%	50%	9	10%	60%	30%
2	10%	60%	30%	10	20%	60%	20%
3	10%	60%	30%	11	40%	40%	20%
4	30%	65%	5%	12	10%	60%	30%
5	10%	60%	30%	13	40%	40%	20%
6	30%	40%	30%	14	90%	10%	0%
7	40%	60%	0%	15	40%	40%	20%
8	20%	50%	30%	Average	28%	48%	24%

Figure 6 displays the trend in increasing shrub and tree cover since plant installation. Photographs of each sampling plot, with a comparison to the Year 1 (2005) condition, are depicted in Figures 7-21.

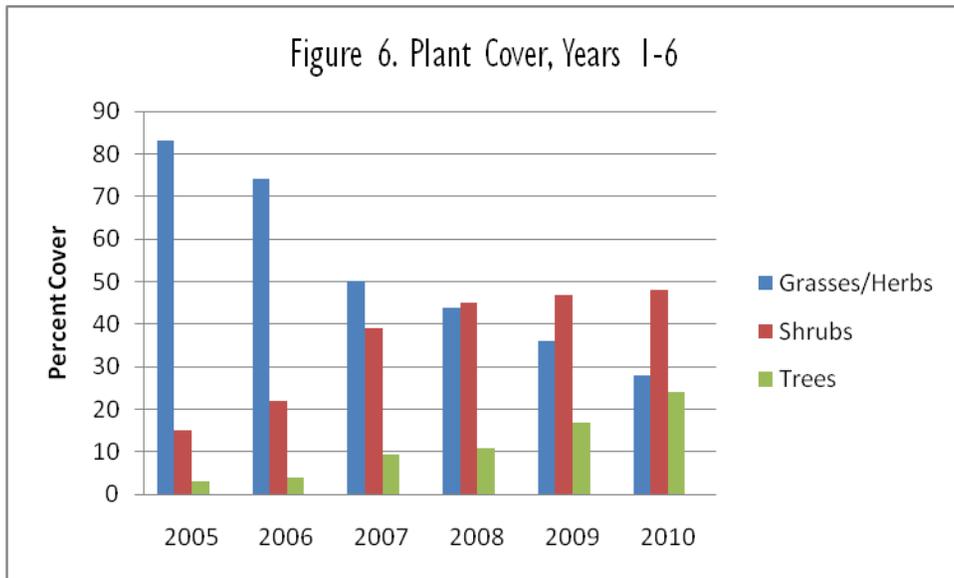


Figure 7A. View of Sample Plot 1, October 2005. Sample plot contains 7 plants; 3 coyote brush, 1 blackberry and 2 box elders. One empty planting area was noted. Herbaceous/bare cover is 80%; shrub cover is 10% and tree cover is 10%.



Figure 7B. View of Sample Plot 1, September 2010. Herbaceous/bare cover is 20%; shrub cover is 63% and tree cover is 50%. Natural recruitment by coyote brush and coast live oak.



Figure 8A. View of Sample Plot 2, October 2005. Sample plot contains 14 plants consisting of 7 blackberries and 7 coyote brush. Herbaceous/bare cover is 60%; shrub cover is 40% and tree cover is 0%.



Figure 8B. View of Sample Plot 2, September 2010. Herbaceous/bare cover is 10%; shrub cover is 60% and tree cover is 30%.



Figure 9A. View of Sample Plot 3, October 2005. Sample plot contains 10 plantings, consisting of 4 coyote brush, 2 coast live oaks, 3 blackberries and 1 sycamore. Herbaceous/bare cover is 79%; shrub cover is 20% and tree cover is 1%.



Figure 9B. View of Sample Plot 3, September 2010. Herbaceous/bare cover is 10%; shrub cover is 60% and tree cover is 30%. Natural recruitment of coast live oak.



Figure 10A. View of Sample Plot 4, October 2005. Sample plot contains 7 plantings, consisting of 7 coyote brush. Herbaceous/bare cover is 60%; shrub cover is 40% and tree cover is 0%.



Figure 10B. View of Sample Plot 4, August 2009. Herbaceous/bare cover is 30%; shrub cover is 65% and tree cover is 5%. Natural recruitment of coyote brush. A foot trail traverses this area.



Figure 11A. View of Sample Plot 5, October 2005. Sample plot contains 5 plantings, consisting of 1 coyote brush, 1 blackberry, 1 coast live oak, 1 willow and 1 sycamore. Herbaceous/bare cover is 94%; shrub cover is 5% and tree cover is 1%.



Figure 11B. View of Sample Plot 5, September 2010. Herbaceous/bare cover is 10%; shrub cover is 60%, tree cover is 30%. Natural recruitment by coyote brush and coast live oak.



Figure 12A. View of Sample Plot 6, October 2005. Sample plot contains 10 plantings, consisting of 1 blackberry, 3 sycamore, 4 snowberry and 2 empty sites. Herbaceous/bare cover is 98%; shrub cover is 1% and tree cover is 1%.



Figure 12B. View of Sample Plot 6, September 2010. Herbaceous/bare cover is 30%; shrub cover is 40% and tree cover is 30%. Natural recruitment by coast live and coyote brush.



Figure 13A. View of Sample Plot 7, October 2005. Sample plot contains 9 plantings, consisting of 9 snowberries. Herbaceous/bare cover is 80%; shrub cover is 20% and tree cover is 0%.



Figure 13B. View of Sample Plot 7, September 2010. Herbaceous/bare cover is 40%; shrub cover is 60% and tree cover is 0%. Snowberry affected by summer drought stress.



Figure 14A. View of Sample Plot 8, October 2005. Sample plot contains 5 plantings, consisting of 1 box elder, 3 snowberries and 1 sycamore. Herbaceous/bare cover is 94%; shrub cover is 1% and tree cover is 5%.



Figure 14B. View of Sample Plot 8, September 2010. Herbaceous/bare cover is 10%; shrub cover is 60% and tree cover is 30%. Natural recruitment by coyote brush.



Figure 15A. View of Sample Plot 9, October 2005. Sample plot contains 10 plantings, consisting of 2 buckeyes, 2 blackberries, 1 box elder, 4 coyote brush and 1 empty site. Herbaceous/bare cover is 79%; shrub cover is 20% and tree cover is 1%.



Figure 15B. View of Sample Plot 9, September 2010. Herbaceous/bare cover is 10%; shrub cover is 60% and tree cover is 30%. Grass growth has covered former pathways.



Figure 16A. View of Sample Plot 10, October 2005. Sample plot contains 11 plantings, consisting of 5 snowberry, 1 coyote brush, 1 blue elderberry, 1 buckeye and 3 empty sites. Herbaceous/bare cover is 90%; shrub cover is 5% and tree cover is 5%.



Figure 16B. View of Sample Plot 10, September 2010. Herbaceous/bare cover is 20%; shrub cover is 60% and tree cover is 20%. Natural recruitment by California blackberry and box elder.



Figure 17A. View of Sample Plot 11, October 2005. Sample plot contains 8 plantings, consisting of 1 box elder, 6 snowberries and 1 empty site. Herbaceous/bare cover is 90%; shrub cover is 5%, tree cover is 5%.



Figure 17B. View of Sample Plot 11, September 2010. Herbaceous/bare cover is 40%; shrub cover is 40%, tree cover is 20%. Natural recruitment by snowberry.



Figure 18A. View of Sample Plot 12, October 2005. Sample plot contains 12 plantings, consisting of 2 mugwort, 7 snowberries, 1 box elder, 1 buckeye and 1 empty site. Herbaceous/bare cover is 89%; shrub cover is 10%, tree cover is 1%.



Figure 18B. View of Sample Plot 12, September 2010. Herbaceous/bare cover is 10%; shrub cover is 60%, tree cover is 30%.



Figure 19A. View of Sample Plot 13, October 2005. Sample plot contains 10 plantings, consisting of 5 snowberries, 1 coast live oak, 1 blue elderberry, 1 box elder, 1 coyote brush and 1 empty site. Herbaceous/bare cover is 94%; shrub cover is 5%, tree cover is 1%.



Figure 19B. View of Sample Plot 13, September 2010. Herbaceous/bare cover is 40%; shrub cover is 40%, tree cover is 20%. Natural recruitment by coyote brush.



Figure 20A. View of Sample Plot 14, October 2005. Sample plot contains 10 plantings, consisting of 8 mugwort, 1 blue elderberry, and 1 empty site. Herbaceous/bare cover is 90%; shrub cover is 10%, tree cover is 0%.



Figure 20B. View of Sample Plot 14, September 2010. Herbaceous cover and bare is 90%; shrub cover is 10%, tree cover is 0%. Weeds include tree-of-heaven seedlings.



Figure 21A. View of Sample Plot 15, October 2005. Sample plot contains 8 plantings, consisting of 6 mugwort and 2 buckeyes. Herbaceous/bare cover is 60%; shrub cover is 39%, tree cover is 1%.



Figure 21B. View of Sample Plot 15, September 2010. Herbaceous/bare cover is 40%; shrub cover is 40%, tree cover is 20%.



Figure 22. View of Year 6 plantings in western portion of mitigation area. Plantings include snowberry, coyote brush, coast live oaks and sycamore, September 2010.



Figure 23. Six-year old sycamore trees averaging 25 feet tall, growing above coyote brush and California blackberry, September 2010.



Figure 24. Six-year old coast live oak, September 2010.

1.7.3 Unauthorized Uses within the Habitat Mitigation Area

The riparian mitigation area, as well as the adjoining riparian woodland along Coyote Creek, is affected by numerous illegal encampments, trash, and human waste. As depicted in Figure 25, trash has been deposited within many areas within the mitigation area. Some trash has been deposited in large piles (as depicted in Figure 25) while human waste is littered throughout the site. In addition to compromising the integrity of the mitigation area from the creation of foot trails and trampling of vegetation, these human activities degrade the value of the riparian mitigation area and the adjacent riparian woodland for native riparian-dependent wildlife. The abundance of exposed human waste may be a health hazard, which may become a water quality problem within nearby Coyote Creek during the rainy season.

Both domesticated and feral dogs and cats were observed amid the illegal encampments within the mitigation area; the presence of these animals reduces the value of the mitigation area for native wildlife. Other activities observed within the mitigation area during 2010 include: construction of campsites and use of propane stoves. Off-site illegal encampments and their associated human uses have also impacted the mitigation area. These impacts include deposition of trash and human waste, firewood collection, and vegetation trampling. The off-site encampments are situated within the riparian corridor along Coyote Creek and within woodland groves adjacent to Story Road, which are immediately adjacent to the Old Oakland Road (Story Road #2) mitigation area.



Figure 25. Trash pile deposited within mitigation area (near sample plot 11), September 2010.

1.8 CONCLUSIONS AND RECOMMENDATIONS

1.8.1 Plant Cover

According to the mitigation and monitoring plan, the City is responsible for achieving 25% cover by trees and shrub cover of 10% at the end of Year 6 (2010). Table 6 outlines the performance standards for this mitigation site, highlighting the Year 6 requirements.

Table 6. Performance Standards for Years 1-6, Year 8 and Final Success Criteria for Year 10

RIPARIAN WOODLAND								
	Yr1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 8	Yr 10
Tree Cover (%)	-	2	4	8	15	25	35	50
Shrub Cover (%)	-	1	3	5	7	10	15	20
Plant Survival (%)	80	80	80	70	70	-	-	-
Tree Height (feet)								
Arroyo Willow	-	3	5	7	9	11	13	15
Red Willow	-	3	5	8	11	14	17	20
Fremont Cottonwood	-	6	9	12	15	18	24	30
Blue Elderberry	-	3	4	5	6	7	9	10
Coast Live Oak	-	2	3	4	5	7	9	11
California Buckeye	-	3	4	5	6	7	9	10
California Sycamore	-	3	5	8	11	14	17	20

Source: Oakland Road Bridge Widening Mitigation and Monitoring Plan, 1997

The fifteen riparian woodland sample plots documented the Year 6 tree cover at 24% and shrub cover at 48%. The shrub cover value exceeds the Year 6 performance standard. The tree cover (24%) is slightly below the required 25% requirement. Due to recent growth observed on the trees in the mitigation area, tree cover values are expected to increase, such that the required cover value should be reached in Year 8. No remedial actions are needed at this time.

1.8.2 Control of Invasive, Non-native Plant Species

DOT’s landscape contractor controlled the occurrences of invasive, non-native plant species within the mitigation area in 2010. Maintenance work included removal of tree-of-heaven sprouts and weed-whipping occurrences of thistles.

1.8.3 Surveillance for Vandalism and Removal of Trash and Illegal Encampments

The City implemented surveillance and maintenance activities within the Coyote Creek corridor in 2010. City Park Ranger staff visually assess the creek corridor and report incidents to San Jose Police Department’s Metro Unit. In August 2010, the Metro Unit conducted a sweep of the area.

1.8.4 Recommendations for Years 7 (2011) through 10 (2014)

The following actions are recommended for Years 7 (2011) through Year 10 (2014) to ensure project compliance and riparian revegetation success:

- 1. Surveillance for Vandalism, Removal of Trash, and Illegal Encampments.** Periodic inspections are necessary to detect site vandalism and habitat disruption and degradation caused by transient activity and illegal encampments. As evidenced in 2010, the mitigation area supports illegal homeless encampments; these encampments are in addition to larger encampments located immediately adjacent to the mitigation site along the Coyote Creek corridor.

The SJPD Metro Unit should conduct periodic enforcement sweeps to remove illegal encampments from the mitigation area. City maintenance crews should implement periodic creek clean-ups for the area. The City should investigate methods to remove the large amount of human waste (and accompanying debris) that is littered throughout the mitigation area, such that its

presence does not further compromise human health and/or contribute to the impairment of the water quality within Coyote Creek.

Due to the high level of human use within the mitigation area, quarterly maintenance visits are recommended to monitor site activities and implement habitat protection measures, such that the mitigation area continues to meet the requirements of the permits issued by regulatory agencies for the Old Oakland Road Project.

2. **Remove Invasive, Non-native Plant Species from the Mitigation Area.** Occurrences of invasive, non-native plant species, such as tree-of-heaven seedlings, poison hemlock, and thistles, which establish within the mitigation area, should be removed. Removal can be accomplished through hand removal (tree-of-heaven) and hoeing or weed-whipping the thistles and hemlock. Site maintenance will be required in Years 7 through 10.
3. **Remove Tree-of-Heaven that Abuts Mitigation Area.** Tree of-heaven trees that occur in the woodland adjacent to the mitigation area will continue to produce seeds and tree suckers that can colonize the mitigation area. Due to the species rapid growth its potential to re-establish within the mitigation area poses a significant long-term threat to the areas habitat value and the integrity of the mitigation area. Although not required in the Habitat Mitigation and Monitoring Plan, the groves of tree-of-heaven that abut the mitigation area should be removed to keep them from spreading into the mitigation area. The removal of these invasive trees will provide long-term benefits to the mitigation area, as tree-of-heaven can aggressively invade the mitigation area once maintenance activities cease. Areas recommended for treatment are depicted in Appendix A of the Year 5 (2009) monitoring report. This plan could be implemented in phases; the first priority for tree removal would be occurrences of tree-of-heaven located within 50 feet of the boundary of the mitigation area.
4. **Year 8 and 10 Monitoring.** A qualified biologist is required to conduct reconnaissance and detailed monitoring surveys to document the condition of the mitigation area and to determine if any remedial actions are necessary. Monitoring shall follow the guidelines in the mitigation and monitoring plan for Years 8 (2012) and 10 (2014) (e.g., sample plot monitoring and photo-documentation of habitat development). The data from the riparian sample plots shall be compared to previous year data and the yearly performance standards. Annual reports shall be submitted to the applicable agencies (i.e., City of San Jose Planning Department, U.S. Army Corps of Engineers, and Regional Water Quality Control Board).