

December 9, 2010

Jason Condit
City of San José
Department of Parks, Recreation and Neighborhood Services
200 East Santa Clara Street
Tower-9th Floor
San José, CA 95113

Subject: Coyote Creek Trail Master Plan Project (Los Lagos Golf Course to Tully Road) Mitigation Monitoring

Dear Mr. Condit:

On August 31, 2010, ESA assessed the survival of planted trees at the Coyote Creek/Los Lagos to Tully mitigation site. The site was recently monitored in July 2010 by Denise Duffy & Associates, who produced the First Year Annual Monitoring Report at that time. ESA conducted an additional assessment to determine if any changes had occurred since July 2010 and to provide further maintenance recommendations. Monitoring was conducted pursuant to the following documents to ensure the methods were consistent with the requirements as well as previously implemented monitoring methods:

Coyote Creek Trail Master Plan Project: Los Lagos Golf Course to Tully Road (Reaches 1 & 2) Mitigation and Monitoring Plan prepared for the City of San Jose by CH2M HILL, April, 2008.

Coyote Creek Trail Master Plan Project: Los Lagos Golf Course to Tully Road (Reaches 1 & 2) Restoration Monitoring Report prepared for the City of San Jose Department of Public Works by Denise Duffy & Associates, July, 2010.

Monitoring Results Summary

The Coyote Creek/Los Lagos to Tully site must meet the following performance standards by the fifth year of monitoring: 80 percent survival of all planted species and all surviving individuals must have a rating of “good” or better.

Table 1 below details the health rating for each planted tree. Twelve of the 16 trees (or 75 percent) have a rating of “good” or better, which is below the final performance standard.

TABLE 1
COYOTE CREEK/LOS LAGOS TO TULLY: TREE SURVIVAL AND RECOMMENDATIONS

Tree Number	Scientific Name	Common Name	Health July 2010	Health August 2010	Recommended Actions
1	<i>Platanus racemosa</i>	California sycamore	Good	Good	Remove stakes
2	<i>Quercus agrifolia</i>	coast live oak	Good	Poor/nearly dead	Replace
3	<i>Quercus agrifolia</i>	coast live oak	Good	Good	--
4	<i>Platanus racemosa</i>	California sycamore	Good	Good	Remove stakes
5	<i>Sambucus mexicana</i>	blue elderberry	Poor	Poor	Check irrigation
6	<i>Platanus racemosa</i>	California sycamore	Good	Good	Remove stakes
7	<i>Aesculus californica</i>	California buckeye	Fair	Good	--
8	<i>Quercus agrifolia</i>	coast live oak	Good	Good	--
9	<i>Aesculus californica</i>	California buckeye	Fair	Good	--
10	<i>Aesculus californica</i>	California buckeye	Poor	Good	--
11	<i>Quercus agrifolia</i>	coast live oak	Good	Good	--
12	<i>Populus fremontii</i>	cottonwood	Poor	Poor/likely dead	Replace with oak or sycamore
13	<i>Platanus racemosa</i>	California sycamore	Good	Good	Remove cage
14	<i>Populus fremontii</i>	cottonwood	Good	Poor	Replace
15	<i>Populus fremontii</i>	cottonwood	Good	Good	Remove stakes
16	<i>Populus fremontii</i>	cottonwood	Good	Good	--

Recommendations

To ensure that the site will meet its survival performance standard by the fifth year of monitoring, the following replacement and maintenance activities should be implemented:

- Replace Tree #2 with a new coast live oak, replace Tree # 12 with a coast live oak, and replace Tree # 14 with a new cottonwood.
- Add four additional trees (two coast live oaks and two sycamores) to increase the potential for the site to meet its final 80% survival performance standard at the end of five years.
- Provide new irrigation to the newly planted trees and check the irrigation on Tree # 5 to ensure it is receiving enough water.
- Continue to irrigate the surviving trees.

Jason Condit
December 9, 2010
Page 3

- Control weeds throughout the restoration area. Mow, weed whip, or hand-remove non-native species such as mustard, thistles, radish and yellow star thistle on a monthly basis during the active growing season and as needed the rest of the year. Planting basins around each tree should be hand weeded to avoid damaging the trees.
- Remove cages or stakes on Tree #1, 4, 6, 13, 15, and any other trees that have outgrown their cage/stakes.
- As discussed in our team meeting of 12/02/10, consider adding the maintenance for this site to ESA's next Task Order or, at a minimum, engage Central Coast Wilds to train maintenance staff for the site. Regular maintenance is critical during the establishment period for any mitigation site.

In July 2010, Denise Duffy & Associates recommended that trees in poor health should be replaced and/or irrigation should be adjusted to ensure their survival through the dry season and that non-native invasive weed eradication/removal should be continued at the restoration site. ESA's recommendations provided above are consistent with the recommendations provided in the July 2010 report, which is attached for your submittal to the agencies.

Sincerely,



Martha Lowe
Project Biologist and Deputy Project Manager

**COYOTE CREEK TRAIL MASTER PLAN
PROJECT:
LOS LAGOS GOLF COURSE TO TULLY
ROAD
(REACHES 1 & 2)**

Restoration Monitoring Report

Prepared For:

City of San Jose, Department of Public Works
200 E. Santa Clara Street, 6th Floor
San José, CA, 95113

Prepared By:



Denise Duffy & Associates, Inc.

947 Cass St., Suite 5
Monterey, CA 93940
Contact: Matt Johnson
Phone: 831-373-4341

July, 2010

Denise Duffy & Associates, Inc (DD&A) was contracted by the City of San Jose, Public Works Department (City) to monitor the Coyote Creek Trail Master Plan Project: Los Lagos Golf Course to Tully Road (Reaches 1 & 2) Riparian Mitigation on the Coyote Creek Trail south of Tully Road (Figure 1). This document reports on the monitoring events for the initial monitoring year of the mitigation plan (2009-10).

Project Description

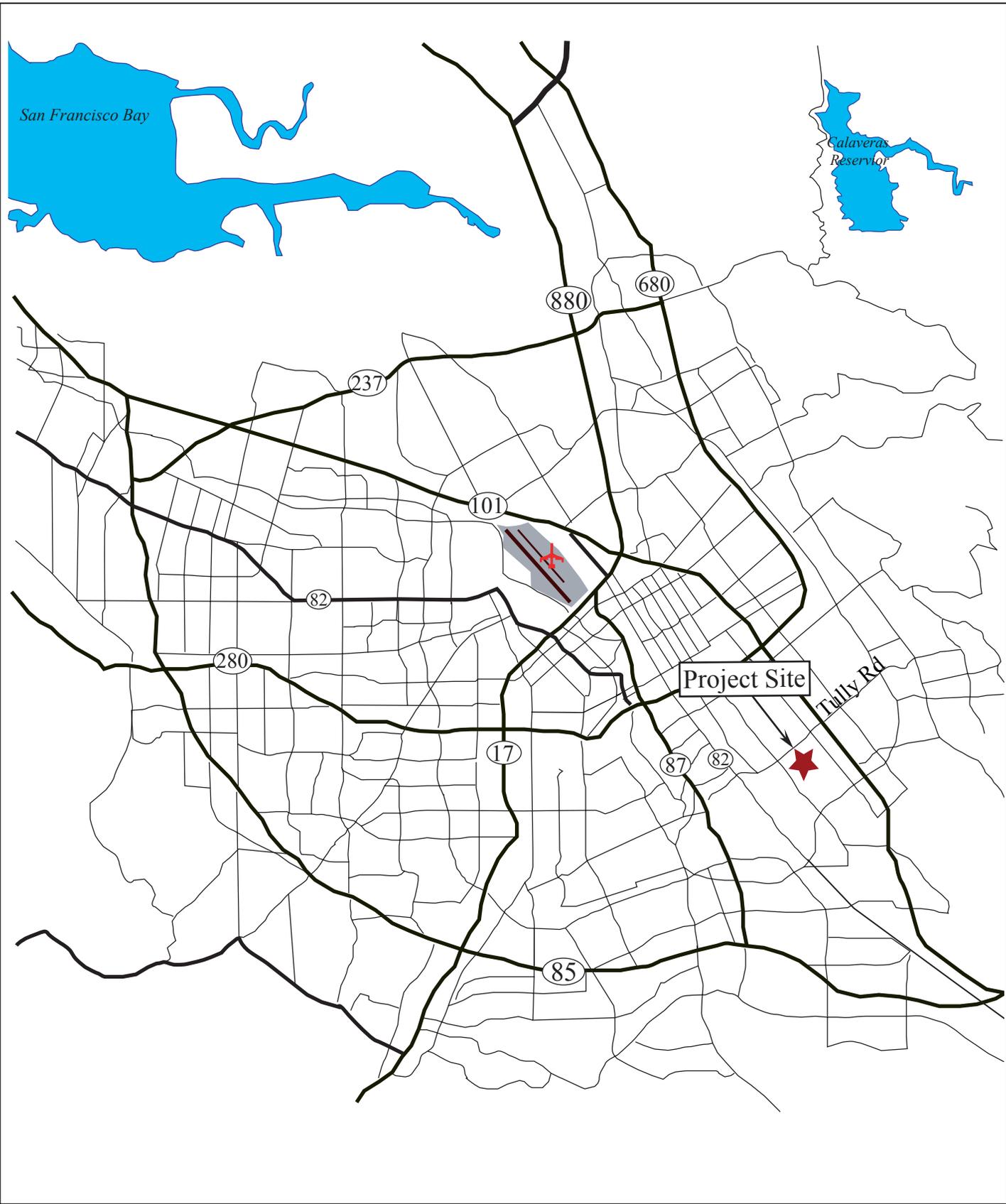
The Coyote Creek Master Plan provides a connection between the existing trail at the Los Lagos Golf Course and surface streets at Tully Road. The multi-use trail consists of a 12-foot wide paved path, with two-foot wide gravel shoulders on each side. A two-foot wide vegetated drainage swale exists along the east side of the path to treat and direct runoff away from the riparian habitat. The trail is designed to accommodate pedestrian, bicycle, and limited equestrian uses.

Restoration and Replanting Plan

The goal of the mitigation for Reaches 1 and 2 of the Coyote Creek Trail Master Plan is to fully compensate for biotic impacts that resulted from construction of the project to riparian woodland, remnant oak riparian woodland, and ornamental trees within the project area. To compensate, the mitigation plan replaced riparian woodland, remnant oak riparian woodland, and ornamental vegetation affected by trail construction with higher quality native riparian plantings from the local watershed.

The mitigation measures for this project include:

- Create 0.41 acre of self-sustaining functional riparian habitat adjacent to the riparian canopy of Coyote Creek. The proposed mitigation will add native riparian plantings to the existing riparian corridor as well as contribute to the overall enhancement of the natural environment in the project area. Because the mitigation area will be located in between the trail improvements and the Coyote Creek riparian canopy, there will be a buffer of at least 10 feet between the proposed trail alignment and the mitigation area. When completed, this mitigation area will add foraging habitat, nesting sites, cover, and perches for wildlife. Self sustaining riparian plantings are expected to attain full canopy development within 10 to 15 years.
- Mitigate for the loss of 15 urban trees by planting 15 non-hybridizing non-invasive tree species in compliance with the San José Tree Removal Ordinance (Chapter 13.32 of Title 13 of the San José Municipal Code).
- Compensate for indirect impacts to riparian vegetation and wildlife due to trail users by including a fence along portions of the trail where it nears the top of bank. All areas where the trail comes in close proximity to the riparian canopy will have a post trail fence at least 3-foot high, as stated in the IS/MND approved for the Coyote Creek Trails Master Plan (City of San José, 2005).



Regional Map

Figure
1

Success Criteria

The success criterion for the restoration is as follows:

All self-sustaining planted trees must have either 80 percent survival each year for five years or the mitigation site must have an absolute woody vegetation canopy cover of 30 percent or greater.

Restoration and Replanting Methods

Plant Procurement and Plant Installation

The container stock originated from the Coyote Creek watershed and was contract grown or otherwise provided by a nursery that specializes in growing native plants. Planting stock was inspected by qualified restoration biologists prior to installation to ensure that healthy and vigorous plants were installed. The plantings included treepots (4 X 14 inch), deepots (2.5 X 6 inch) and/or treeband (2.25 X 5 inch) container stock. Final planting plans, details, specifications, cost estimates, and detailed mitigation maintenance and operation plans were prepared as part of the mitigation site construction drawing package.

Irrigation

Planting holes were irrigated before and after planting. A 3-foot diameter irrigation basin with a 4-inch high lip was constructed around each plant. Plants were irrigated with a sub-surface system to avoid potential damage by rodents and vandals. The irrigation schedule will be adjusted to promote self-sufficiency within 2 to 3 years by gradually decreasing the use of irrigation.

Construction Inspection

The City administered the mitigation contract. An inspector monitored the contractor to insure full compliance with the project plans and specifications.

Implementation Schedule

The habitat mitigation was installed within 12-18 months of the completion of the construction of the trail contract. Irrigation systems were installed prior to planting, while container plants were installed during spring planting periods.

Monitoring

The Mitigation and Monitoring Plan states that the City will monitor the mitigation site for five years following completion of the project. All revegetation monitoring activities will be conducted by or under the supervision of a qualified biologist. Monitoring procedures will be followed to determine overall success of the created jurisdictional riparian habitat and of the upland plantings. Permanent photographic stations will be established within and overlooking sections of the project area. Photos will be taken at the same time period in years 1, 2, 3, and 5. Photos will also be taken to document events that could significantly affect the development of the revegetation success such as floods, fire, or vandalism.

Results

DD&A biological monitors visited the site on August 20, 2009, November 11, 2009, April 8, 2010 and July 6, 2010, following the installation of plant materials. Permanent photo stations were established and mapped using DD&A's Trimble Pro-XH GPS Unit (Appendix A). The health of each tree was evaluated and the location of each tree was mapped using DD&A's Trimble Pro-XH GPS Unit (Figure 2). The health status of each tree during the four monitoring events is presented in Tables 1 through 4.

Table 1. Plant Health During First Site Visit (August 2009)

Tree Number	Common Name	Scientific Name	Health	Date
1	California Sycamore	<i>Platanus racemosa</i>	Good	8/20/2009
2	Coast Live Oak	<i>Quercus agrifolia</i>	Good	8/20/2009
3	Coast Live Oak	<i>Quercus agrifolia</i>	Good	8/20/2009
4	California Sycamore	<i>Platanus racemosa</i>	Good	8/20/2009
5	California Buckeye	<i>Aesculus californica</i>	Good	8/20/2009
6	California Sycamore	<i>Platanus racemosa</i>	Good	8/20/2009
7	California Buckeye	<i>Aesculus californica</i>	Fair	8/20/2009
8	Coast Live Oak	<i>Quercus agrifolia</i>	Poor	8/20/2009
9	California Buckeye	<i>Aesculus californica</i>	Fair	8/20/2009
10	California Buckeye	<i>Aesculus californica</i>	Good	8/20/2009
11	Coast Live Oak	<i>Quercus agrifolia</i>	Poor	8/20/2009
12	California Sycamore	<i>Platanus racemosa</i>	Good	8/20/2009
13	California Sycamore	<i>Platanus racemosa</i>	Good	8/20/2009
14	Cottonwood	<i>Populus fremontii</i>	Good	8/20/2009
15	Cottonwood	<i>Populus fremontii</i>	Good	8/20/2009
16	Cottonwood	<i>Populus fremontii</i>	Good	8/20/2009

Table 2. Plant Health During Second Site Visit (November 2009)

Tree Number	Common Name	Scientific Name	Health	Date
1	California Sycamore	<i>Platanus racemosa</i>	Good	11/3/2009
2	Coast Live Oak	<i>Quercus agrifolia</i>	Good	11/3/2009
3	Coast Live Oak	<i>Quercus agrifolia</i>	Good	11/3/2009
4	California Sycamore	<i>Platanus racemosa</i>	Good	11/3/2009
5	Blue Elderberry	<i>Sambucus mexicana</i>	Good	11/3/2009
6	California Sycamore	<i>Platanus racemosa</i>	Good	11/3/2009
7	California Buckeye	<i>Aesculus californica</i>	Good	11/3/2009
8	Coast Live Oak	<i>Quercus agrifolia</i>	Good	11/3/2009
9	California Buckeye	<i>Aesculus californica</i>	Good	11/3/2009
10	California Buckeye	<i>Aesculus californica</i>	Good	11/3/2009
11	Coast Live Oak	<i>Quercus agrifolia</i>	Good	11/3/2009
12	California Sycamore	<i>Platanus racemosa</i>	Poor	11/3/2009
13	California Sycamore	<i>Platanus racemosa</i>	Good	11/3/2009
14	Cottonwood	<i>Populus fremontii</i>	Good	11/3/2009
15	Cottonwood	<i>Populus fremontii</i>	Good	11/3/2009
16	Cottonwood	<i>Populus fremontii</i>	Good	11/3/2009

Table 3. Plant Health During Third Site Visit (April 2010)

Tree Number	Species	Scientific Name	Health	Date
1	California Sycamore	<i>Platanus racemosa</i>	Good	4/8/2010
2	Coast Live Oak	<i>Quercus agrifolia</i>	Good	4/8/2010
3	Coast Live Oak	<i>Quercus agrifolia</i>	Good	4/8/2010
4	California Sycamore	<i>Platanus racemosa</i>	Good	4/8/2010
5	Blue Elderberry	<i>Sambucus mexicana</i>	Fair	4/8/2010
6	California Sycamore	<i>Platanus racemosa</i>	Fair	4/8/2010
7	California Buckeye	<i>Aesculus californica</i>	Good	4/8/2010
8	Coast Live Oak	<i>Quercus agrifolia</i>	Good	4/8/2010
9	California Buckeye	<i>Aesculus californica</i>	Good	4/8/2010
10	California Buckeye	<i>Aesculus californica</i>	Good	4/8/2010
11	Coast Live Oak	<i>Quercus agrifolia</i>	Good	4/8/2010
12	Unknown		Good	4/8/2010
13	California Sycamore	<i>Platanus racemosa</i>	Good	4/8/2010
14	Cottonwood	<i>Populus fremontii</i>	Good	4/8/2010
15	Cottonwood	<i>Populus fremontii</i>	Good	4/8/2010
16	Cottonwood	<i>Populus fremontii</i>	Good	4/8/2010

Table 4. Plant Health During Fourth Site Visit (July 2010)

Tree Number	Common Name	Scientific Name	Health	Date
1	California Sycamore	<i>Platanus racemosa</i>	Good	7/6/2010
2	Coast Live Oak	<i>Quercus agrifolia</i>	Good	7/6/2010
3	Coast Live Oak	<i>Quercus agrifolia</i>	Good	7/6/2010
4	California Sycamore	<i>Platanus racemosa</i>	Good	7/6/2010
5	Blue Elderberry	<i>Sambucus mexicana</i>	Poor	7/6/2010
6	California Sycamore	<i>Platanus racemosa</i>	Good	7/6/2010
7	California Buckeye	<i>Aesculus californica</i>	Fair	7/6/2010
8	Coast Live Oak	<i>Quercus agrifolia</i>	Good	7/6/2010
9	California Buckeye	<i>Aesculus californica</i>	Fair	7/6/2010
10	California Buckeye	<i>Aesculus californica</i>	Poor	7/6/2010
11	Coast Live Oak	<i>Quercus agrifolia</i>	Good	7/6/2010
12	Unknown		Poor	7/6/2010
13	California Sycamore	<i>Platanus racemosa</i>	Good	7/6/2010
14	Cottonwood	<i>Populus fremontii</i>	Good	7/6/2010
15	Cottonwood	<i>Populus fremontii</i>	Good	7/6/2010
16	Cottonwood	<i>Populus fremontii</i>	Good	7/6/2010



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Tree Survey Map

Figure

2

On the August 2009 monitoring visit 12 of the planted trees were in good health, two trees were in fair health and two trees were in poor health. During the November 2009 monitoring visit 15 of the planted trees were observed in good health and one tree (Tree 12, California sycamore) was observed in poor health. On April 8, 2010, 14 of the 16 trees were in good condition and two of the trees were in fair condition. Additionally, tree 12, which was reported in poor condition in the initial monitoring report, was replaced. During this monitoring event the biological monitor was not able to identify the species of tree that had been replanted. On July 6, 2010, 11 of the 16 trees were observed in good condition, two were observed in fair condition and three were observed in poor condition. Tree number 12, which had been replanted before the third monitoring event, was observed in poor condition. Irrigation to this tree may not be functioning and may need maintenance to ensure survival. With the survival rate at 81.25% after the final monitoring event, the mitigation is successful through year one of the monitoring period. Non-native invasive plant species were observed in large numbers and may become dominant on the south end of the restoration area. No vandalism was observed during the last two monitoring events.

Recommended Actions

1. Trees in poor health should either be replanted and/or the irrigation should be adjusted to ensure their survival through the dry season.
2. Non-native invasive weed eradication/removal should be continued at the restoration site to reduce competitiveness for native riparian plants.
3. Monitoring and reporting should continue through the year five as stated in the restoration plan.

With the implementation of the above measures and continued maintenance of this restoration area, the restoration effort will continue to succeed through the entire monitoring period.



Permanent Photo Stations Map

Appendix

A



Photo 1. Photo Station 1 Facing Southeast (August 2009)



Photo 2. Photo Station 1 Facing Southeast (November 2009)



Photo 3. Photo Station 1 Facing Southeast (April 2010)



Photo 4. Photo Station 1 Facing Southeast (July 2010)

Photo Station Comparisons

Appendix
A



Photo 5. Photo Station 2 Facing Southeast (August 2009)



Photo 6. Photo Station 2 Facing Southeast (November 2009)



Photo 7. Photo Station 2 Facing Southeast (April 2010)



Photo 8. Photo Station 2 Facing Southeast (July 2010)

Photo Station Comparisons

Appendix
A



Photo 9. Photo Station 3 Facing West (August 2009)



Photo 10. Photo Station 3 Facing West (November 2009)



Photo 11. Photo Station 3 Facing West (April 2010)



Photo 12. Photo Station 3 Facing West (July 2010)

Photo Station Comparisons

Appendix

A



Photo 13. Photo Station 4 Facing Northwest
(August 2009)



Photo 14. Photo Station 4 Facing Northwest
(November 2009)



Photo 15. Photo Station 4 Facing Northwest (April
2010)



Photo 16. Photo Station 4 Facing Northwest (July
2010)

Photo Station Comparisons

Appendix

A



Photo 17. Photo Station 5 Facing Northeast (August 2009)



Photo 18. Photo Station 5 Facing Northeast (November 2009)



Photo 19. Photo Station 5 Facing Northeast (April 2010)



Photo 20. Photo Station 5 Facing Northeast (July 2010)

Photo Station Comparisons

Appendix

A



Photo 21. Photo Station 6 Facing East (August 2009)



Photo 22. Photo Station 5 Facing Northeast (November 2009)



Photo 23. Photo Station 6 Facing East (April 2010)



Photo 24. Photo Station 6 Facing East (July 2010)

Photo Station Comparisons

Appendix
A



Photo 25. Photo Station 6 Facing West (August 2009)



Photo 26. Photo Station 6 Facing West (November 2009)



Photo 27. Photo Station 6 Facing West (April 2010)



Photo 28. Photo Station 6 Facing West (July 2010)

Photo Station Comparisons

Appendix
A