FINAL REPORT
2014 Supplemental Monitoring Report
Village Creek Restoration Project
(University Village Albany Step 2, #12810A)
University of California, Berkeley

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1.0 EXECUTIVE SUMMARY

This report documents supplemental performance monitoring conducted in 2014 for the University of California, Berkeley's Village Creek restoration project located in Albany, California. The initial performance monitoring was conducted from 2008 to 2012, at which time original plantings efforts were reported to have met success criteria. An additional 5 years of monitoring was initiated in 2010 and continued until 2014. Supplemental monitoring reports on the remedial plantings that were installed at the site in 2010 and 2011 of the project, which include 67 willow stakes and 151 rooted plants were installed in April and May 2010, and another 91 supplemental plants installed in October 2011 for a total of 309 supplemental plantings. This report presents the fifth and final year of supplemental vegetation monitoring.

The project is located near the University of California, Berkeley's University Village student housing complex located at 1125 Jackson Street in Albany California, bounded on the east by San Pablo Avenue, on the north by Buchanan Street, on the south by Harrison Street, and on the west by the Union Pacific Railroad tracks (Figure 1). The Creek Day-lighting project area encompasses 22,500 square feet of restored creek channel (approximately 0.52 acres).

The project is subject to the following environmental permits and agreements:

- California Regional Water Quality Control Board, Water Quality Certification (File No. 01-02-C0829);
- U.S. Army Corps of Engineers Section 404 Clean Water Act, Nationwide Permit 7 (File No. 29071S); and
- Department of Fish and Game, Lake and Streambed Alteration Agreement (Notification No. 1600-2004-0664-3).

The following performance criteria were established for the project:

> "All plantings shall have a minimum of 80% survival at the end of 5 years and shrubs shall attain 70% cover after 3 years and 75% cover after 5 years. If the… (*Sic* project is not attaining) …the stated percentage survival and/or cover requirements, the Applicant is responsible for replacement plantings, additional watering, weeding, invasive exotic eradication, or any other practice, to achieve these performance goals. Replacement plantings shall be monitored with the same percent survival and growth requirements for five years after planting as the original plantings."

Loran May, Senior Biologist with May & Associates, Inc. performed all necessary performance monitoring to date. Supplemental montoring was performed on September 30, 2010, October 19, 2011, October 10, 2012, October 3, 2013, and November 14, 2014.

The following summarizes the results of the 2014 Final Supplemental Monitoring.

Plant Survivorship: Of the total 309 supplemental plantings, total of 85 trees and 184 shrubs were live as of the November 2014 (Table 2), a survivorship rate of 88%. This result meets success criteria for the supplemental plantings for the project.

Vegetation Cover: Although difficult to the overall assess vegetation cover of supplemental plantings separate from the vegetation cover of the original plantings, in November 2014, the majority of supplemental plants assessed had increased in size (as determined by assessing the aerial extent of new growth of branches and leaves outward from the original planting). The overall vegetative cover of supplemental plantings is estimated to have increased 75% from baseline conditions. This is within the acceptable range for the project.

Plant Height: The observed plant height of supplemental plantings has increased every year as compared with the 2011 (installation) plant height, and is within the acceptable range at this time for the project.

The project has met all Year 5 (final) performance criteria, as described below in Section 5.0.

The project is considered complete. No additional remedial actions or additional monitor is required.

2.0 INTRODUCTION

This report documents supplemental performance monitoring conducted in 2014 for the University of California, Berkeley's Village Creek restoration project located in Albany, California. The Creek Day-lighting project area encompasses approximately 750 linear feet of Village Creek that used to run through a culvert. The initial performance monitoring was conducted from 2008 to 2012, at which time original plantings efforts were reported to have met success criteria. An additional 5 years of monitoring was initiated in 2010 and continued until this final year, 2014.

2.1 Project Location

The project is located near the University of California, Berkeley's University Village student housing complex located at 1125 Jackson Street in Albany California, bounded on the east by San Pablo Avenue, on the north by Buchanan Street, on the south by Harrison Street, and on the west by the Union Pacific Railroad tracks (Figure 1).

2.2 Project Background

The creek restoration project is part of a larger housing construction project. The project goal is to replace student housing that has surpassed its design lifetime. The project has been designed to provide treatment of stormwater runoff and to improve the habitat value and flood conveyance capacity of Codornices and Village Creeks.

Step 1 of the University Village student housing project was completed in 1999 included restoration of the section of Village Creek between Jackson Street and 6th Street to an open channel. At the downstream end of the restored channel, a box culvert was installed to provide conveyance for Village Creek, and access for emergency equipment.

The Step 2 University Village student housing project encompassed about 19 acres and includes demolition of old housing units, and construction of apartments, streets and parking areas. Step 2 of the project also included day-lighting, and restoring approximately 750 linear feet of Village Creek that used to run through a culvert. The creek was constructed by removing the concrete culvert, and excavating a new channel consisting of a stepped floodplain (i.e. low flow and high flow creek channels sized for a 100-year flood event). Several outfall structures including rock energy dissipater structures were constructed in the restored creek channel. The low and high flow creek channels were revegetated with riparian vegetation, and biodegradable erosion control matting was placed in the steep banks to prevent erosion while plants are establishing, The restored creek channel, when completely restored, will create approximately 0.52 acre of riparian habitat.

The project is subject to the following environmental permits and agreements:

- California Regional Water Quality Control Board, Water Quality Certification (File No. 01-02-C0829);
- U.S. Army Corps of Engineers Section 404 Clean Water Act, Nationwide Permit 7 (File No. 29071S); and
- Department of Fish and Game, Lake and Streambed Alteration Agreement (Notification No. 1600-2004-0664-3).

These permits and agreements require UC Berkeley to conduct creek restoration activities, in conformance with Village Creek Planting Sheet L7.02, included in the construction design drawings prepared by J.R. Roberts Corporation dated September 9, 2004 (J.R. Roberts Corporation, 2004) (Figure 2). Approved creek restoration activities included tree and shrub planting and hydroseeding both the upper and lower creek banks. Plantings that were installed in the restored creek channel are presented in Table 1. The upper creek banks were required to be hydroseeded with 50 lbs per acre of an approved mixture of upland grasses and forbs, as shown in Table 1. The lower creek banks were to be hydroseeded with 49 lbs of a mixture of floodplain grass and forb species (Table 1). (J.R. Roberts Corporation. 2007).

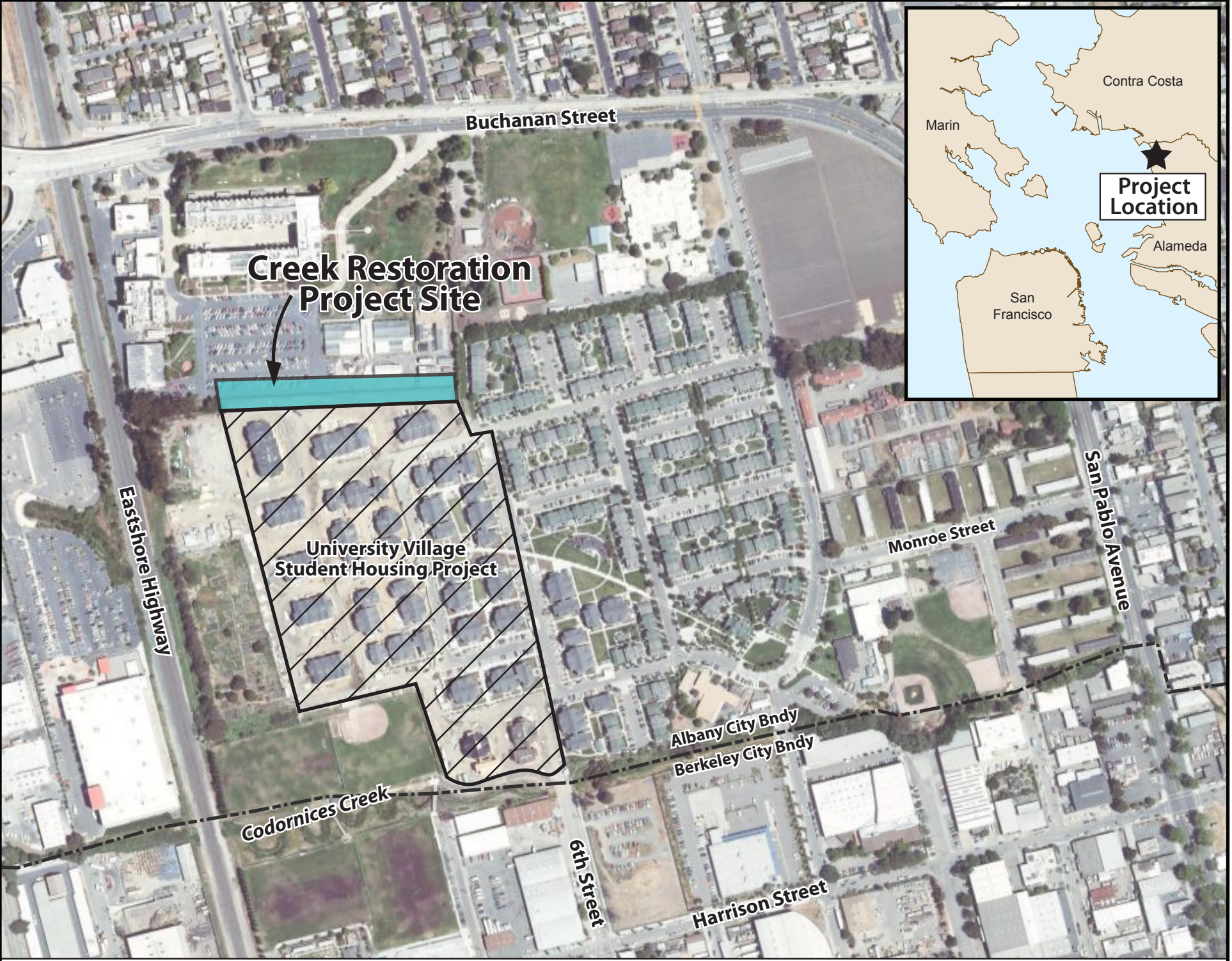
The creek restoration site was constructed in 2007 according to specifications (J.R. Roberts Corporation, 2004) (Figure 2). The site was prepared for planting in late September and early October 2007, and plant installation was completed by October 10, 2007 (T. Nowack, pers. comm.). The site was also hydroseeded in October 2007. In early 2008 following completion of baseline site assessment, replacement plantings were installed to replace diseased or damaged plants. A total of 51 replacement plantings were installed in early 2008. An additional 67 willow stakes and 151 rooted plants were installed in April and May 2010; and 91 replacement shrubs were installed in October 2011 to offset ongoing plant mortality (Table 1).

The University of California, Berkeley Capital Project's Unit retained the service of May & Associates, Inc. to conduct an independent assessment of baseline site conditions and to perform 5 years of performance monitoring for the project, and the supplemental monitoring for the replacement plantings. This report documents the results of the 2013 supplemental planting performance monitoring that was conducted by May & Associates, Inc. on October 3, 2013

Table 1. Supplemental Planting List

Plant Species		Container Size	Quantity
Scientific Name	**Common Name**		
TREES			
Populus fremontii	Fremont's cottonwood	5 gal.	3
Quercus agrifolia	Coast live oak	1 gal	9
Salix sp.	Willlow	cuttings	67
SHRUBS			
Artemesia californica	Mugwort	1 gal	65
Diplacus aurantiacus	Sticky monkey flower	1 gal	40
Heteromeles arbutifolia	Toyon	1 gal, 5 gal quart	10
Rosa californica	California wild rose	1 gal	28
Rubus ursinus	California blackberry	1 quart	36
Scrophula californica	California bee plant	1 gal	50
Total Shrub And Tree Plantings			**309**

Figure 1. Project Location



May & Associates, Inc.
182 Seal Rock Drive ~ San Francisco, CA 94121
(415) 391-1000 ~ www.mayandassociatesinc.com
January 2008 ss_villcrk_fig01_01-08

0 250 500 ft
0 100 200 m

North

Figure 1. Project Site

Figure 2. Planting Plan and Permanent Photo-monitoring Locations

Figure 2. Planting Plan & Photo Monitoring Locations

SHRUBS Number Scientific Name / *Common Name*

- B DOU 51 (Baccharis douglasii / *Marsh Bacc.)*
- B PIL 23 (Baccharis pilularis / *Coyote Bush)*
- B PIL PIL 26 (Baccharis pilularis ssp. pilularis / *Dwarf Coyote Bush)*
- D AUR 69 (DiplacusI aurantiacus / *Sticky Monkey Flower)*
- M GUT 50 (Mimulus guttatus / *Monkey Flower*)
- P KEL 46 (Perideridea kelloggii / *Keollogg's yampah*)
- R CAL 23 (Rosa californica / *California Wild Rose*)
- S COE 59 (Sambucus caerulea / *Elderberry*)

TREES Number Scientific Name / *Common Name*

- AM 7 (Acer Macrophyllum / *Big Leaf Maple)*
- AC 4 (Aesculus Californica / *California Buckeye*)
- PF 9 (Populus Fremontii / *Fremont's Cottonwood*)
- QA 12 (Quercus Agrifolia / *Coast Live Oak)*

STUDY AREA BOUNDARY

CREEK

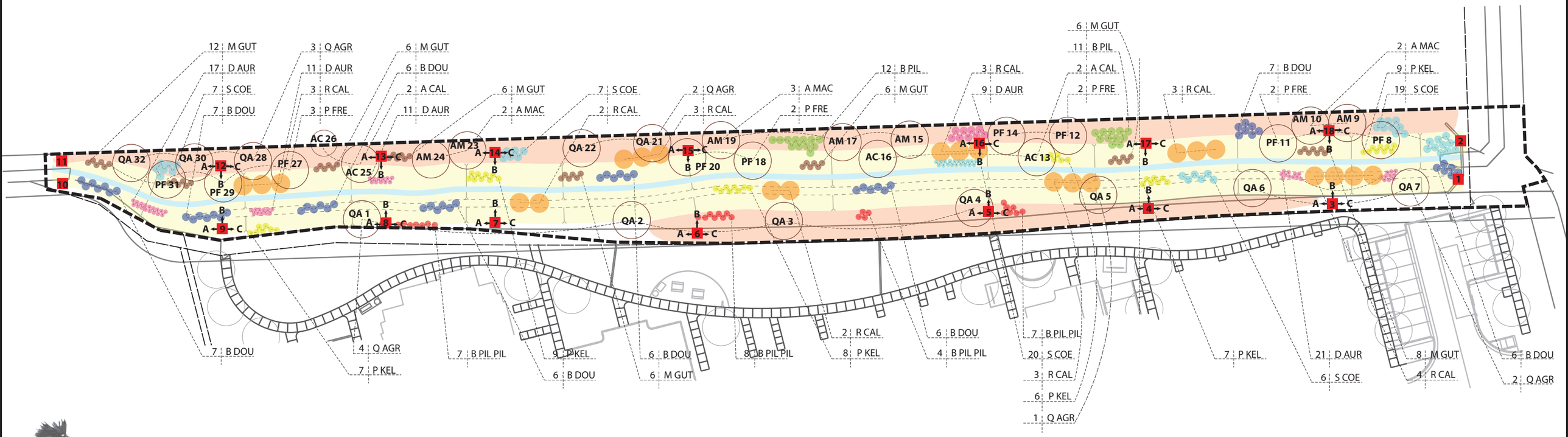
LOW CREEK CHANNEL

HIGH CREEK CHANNEL

(Point Number) A←13→C

(Direction of Shot) B

PHOTO POINT



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January 2008 ss_villcrk_fig02_01-08

0 50 100 ft
0 15 30 m

North

3.0 MONITORING METHODS

Vegetation monitoring requirements are stated in the following project permits:

- California Regional Water Quality Control Board, Water Quality Certification (File No. 01-02-C0829);
- U.S. Army Corps of Engineers Section 404 Clean Water Act, Nationwide Permit 7 (File No. 29071S); and
- Department of Fish and Game, Lake and Streambed Alteration Agreement (Notification No. 1600-2004-0664-3).

Specifically, vegetation monitoring includes plant survivorship, vegetative cover, and plant height as three measures of success.

2014 Supplemental Monitoring was performed by Loran May, President and Senior Botanist with May & Associates on November 14, 2014. The entire site was investigated on foot, and a plant count of the entire planting area was conducted. Each supplemental plant that was installed in April and May 2010; and October 2011 were assessed for health and vigor, height, and its species recorded for use in assessing progress towards performance criteria (described below).

3.1. Plant Survival

The permit performance criteria for plant survival are as follows: **80% survival of all supplemental plantings at the end of five years.** Plant survival counts entail conducting a complete inventory of all plantings at the site. Each tree and shrub planting was identified by species, recorded as alive or dead. Survival and mortality of hydroseeded areas was visually estimated as a percentage of overall vegetative cover.

3.2 Vegetative Cover

Project permits include performance criteria for vegetative cover as follows: **70% cover at Year 3, and 75% at the end of 5 years**. Vegetative cover was visually estimated for the supplemental plantings.

3.3 Plant Height

The U.S. Army Corps of Engineers Nationwide Permit 7 and the California Department of Fish and Game Streambed Alteration Agreement also include a requirement to monitor plant height for trees and shrubs. No parameters were given for standards of performance; however, an increase in height in line with other planting sites in the region is the anticipated outcome of the project. Average height of living trees and shrubs were recorded to the nearest half of a foot using visual estimates and recorded on field data sheets.

3.4 General Site Observations

Prior to conducting plant survival counts, the site was thoroughly investigated on foot to record possible maintenance problems, trespass issues, weed problems, irrigation issues, or other factors that may have bearing on the site's overall habitat function or value.

4.0 MONITORING RESULTS

Refer to Table 2 for 2014 survivorship data (presented by species) and to Photos 1-6 for an illustration of 2014 site conditions.

4.1 Plant Survival

Refer to Table 2 below for an overview of 2014 supplemental survivorship monitoring results presented by species. Of the 80 supplemental trees that were installed as per the original restoration plan, 85 trees were still alive in 2013 (over 100% survivorship). This plant estimate includes 10 alders that have voluntarily established onsite. A total of 229 supplemental shrubs were planted onsite. As of 2014, 184 (81% survivorship) of planted shrubs were observed.

The overall survivorship for supplemental plantings was 88% (i.e. a total of 269 plants live of the total 309 supplemental plantings). The project has met Year 5 survival monitoring performance criteria and is considered successful.

4.2 Vegetation Cover

In November 2014, the majority of supplemental plants had increased in size (as determined by assessing the aerial extent of new growth of branches and leaves outward from the original planting). The overall vegetative cover of individual replacement plants was estimated to have increased between 65% and 85% from baseline conditions. When averaged over the site, this results in an estimated site-wide vegetative cover increase of approximately 75%. The project has met Year 5 vegetation cover performance criteria and is considered successful.

4.3 Plant Height

Baseline results were visually compared against each year's result to determine if there is an overall increase in plant height of supplemental plantings over time. The observed plant height of supplemental plantings has increased every year as compared with baseline plant height, and is within the acceptable range at this time for the project.

Baseline shrub height averaged 6 to 8 inches. By November 2014, these original shrub plantings were considerably taller, estimated at an average height of 1.5-4.5 feet. This represents a yearly increase in plant height for all monitoring years. Baseline height varied greatly for planted trees, ranging from 6 to 18 inches (0.5 to 1.25 feet) for planted stock and 30-48 inches (2 to 4 feet) for willow cuttings. By November 2014, overall tree height had substantially increased to 10-25 feet for planted trees, and up to 33 feet for willow cuttings.

Table 2. Replacement Plantings Survivorship (2014)

Plant Species		Remedial Plantings (Installed April-May 2010)	Remedial Plantings (Installed October 2011)	Subtotal Remedial Plantings	TOTAL Plants Live in 2011**	Percent Survivorship 2011	TOTAL Plants Live in 2012**	Percent Survivorship 2012	TOTAL Plants Live in 2013**	Percent Survivorship 2013	TOTAL Plants Live in 2014**	Percent Survivorship 2014
Scientific Name	**Common Name**											
TREES												
Populus fremontii	Fremont's cottonwood	3	0	3	3	100%	3	100%	3	100%	3	100%
Quercus agrifolia	Coast live oak	9	0	9	9	100%	9	100%	9	100%	9	100%
Alnus rhombifolia	White alder	1	0	1	1	100%	1	100%	8**	800%**	10	1100%**
Salix sp.	Willow	67	0	67	64	95%	62	92%	62	92%	63	94%
Subtotal Trees		**80**	**0**	**80**	**77**	**96%**	**75**	**93%**	**82****	**100+%****	**85****	**100+%**
SHRUBS												
Diplacus aurantiacus	Sticky monkey flower	10	30	40	32	80%	28	70%	26	65%	25	63%
Rosa californica	California wild rose	8	20	28	20	71%	21	75%	21	75%	20	71%
Scrophularia californica	California bee plant	50	0	50	45	90%	42	84%	42	84%	40	80%
Artemisia douglasiana	Mugwort	35	30	65	48	74%	50	77%	48	74%	60	95%
Heteromeles arbutifolia	Toyon	10	0	10	9	90%	9	90%	9	90%	9	90%
Rubus ursinus	California blackberry	25	11	36	28	78%	27	75%	26	72%	30	83%
Subtotal Shrubs		**138**	**91**	**229**	**182**	**79%**	**177****	**77%**	**172**	**75%**	**184**	**81%**
Total Shrub And Tree Plantings		**218**	**91**	**309**	**259**	**83%**	**252****	**81%**	**254**	**82%**	**272**	**88%**

** Indicates an increase in overall plants onsite due to natural regeneration/new plants that were noted as spreading via seedlings or rhizomes from original plantings.

Photo 1a. (2014) Typical vegetation cover, upper and lower creek bank. Note abundant willow growth in creek channel

Photo 1b. Comparison, Typical vegetation (2011) upper and lower creek banks immediately after supplemental willow plantings

Photo 2a. Typical Tree height – Fremont's cottonwood (November 2014) site conditions. Note height increase, robust growth and excellent condition of cottonwood trees.

Photo 2b. Comparison photo-Typical tree height- Fremont's cottonwood (2011)

Photo 3a. Typical coast live oak planting (November 2014)

Photo 3b. Comparison Photo, typical coast live oak (2009) site conditions.

Photo 4. Replacement planting (marsh baccharis) showing natural regeneration (outward spread) from original planting site (2014)

Photo 5.
Photo depicting increase in height of shrubs (coyote bush) (2013)

Photo 6a. Substantial increase in number and size of alders in 2014 (compare with Photo 6b below).

Photo 6b. Comparison Photos- alders in 2011.

Photo 7a. 2014 . Creek channel after treatment (removal) of some cattails in 2012. Note regrowth of cattails may warrant future channel maintenance to improve flood flow capacity.
(Compare with Photo 7b below)

Photo 8. Typical channel conditions in 2011-excessive growth of cattails covering most of creek channel bottom (requiring maintenance to allow for creek channel flow.

4.4 General Site Observations

In November 2014, there was no evidence of unusual erosion, trespass, litter, or other site problems or issues that would require attention.

4.4.1 Invasive Plants. UC Berkeley has conducted invasive plant control in 2010, 2011, and again in 2012, resulting in a substantial reduction of several invasive species that were identified as problematic in the Year 2 (2009) report, including French broom, fennel, sweet clover, cattails, and Himalayan blackberry. The site had been mowed prior to the 2014 survey, resulting in some additional invasive plant suppression. Some of these species were still detected as present in 2014 (French broom, fennel, Himalayan blackberry), but in very small numbers.

Several invasive plant species still remain at the site, including the following that were recorded as present in 2014:

- Acacia *(Acacia melanoxylon);*
- Blue gum eucalyptus *(Eucalyptus globulus);*
- Cattails (*Typha* spp.);
- Duckweed *(Lemna* sp.*);*
- English plantain *(Plantago lanceolata);*
- Fennel *(Foeniculum vulgare);*
- French broom *(Genista monspessulana);*
- Himalayan blackberry *(Rubus discolor= Rubus armeniacus)*;
- Prickly ox tongue *(Picris echioides);* and
- Umbrella sedge *(Cyperus* sp.).

5.0 CONCLUSIONS AND RECOMMENDATIONS

In conclusion, the Village Creek site was planted in accordance with approved permits and planting specifications. Refer to Tables 3 and 4 for a summary of 2014 performance as compared to overall project performance standards. The following summarizes the results of the 2014 Supplemental Monitoring.

Plant Survivorship: Of supplemental plantings, total of 85 trees and 184 shrubs were live as of the November 2014 (Table 2), a survivorship rate of 88%. This result meets success criteria for the supplemental plantings for the project.

Vegetation Cover: Although difficult to assess the overall vegetation cover of supplemental plantings separate from the vegetation cover of the original plantings, in November 2014, the majority of supplemental plants assessed had increased in size (as determined by assessing the aerial extent of new growth of branches and leaves outward from the original planting). The overall vegetative cover of individual replacement plants was estimated to have increased between 65% and 85% from baseline conditions. When averaged over the site, this results in an estimated site-wide vegetative cover increase of approximately 75%. This is within the acceptable range for the project.

Plant Height: The observed plant height of supplemental plantings has increased every year as compared with the 2011 (installation) plant height, and is within the acceptable range for the project.

The project has met Year 5 (final) performance criteria and is considered complete. No additional remedial actions or additional monitor is required.

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Table 3. Summary of 2014 Supplemental Planting Performance

Monitoring Parameter	Project Performance Standard	Observed Baseline Remedial Planting Conditions	Observed 2011 Site Conditions	Observed 2012 Site Conditions	Observed 2013 Site Conditions	Observed 2014 Site Conditions	Performance Standard Met? Y/N
Plant Survivorship	80% survival of all plantings by Year 5	100% Survivorship Trees, 49% Survivorship Shrubs	75% Survivorship Trees, 39% Survivorship Shrubs	110% Survivorship Trees (include replacement plantings), 96% Survivorship Shrubs (including replacement plantings and excluding volunteer plants)	82% Combined Survivorship (125% Survivorship Trees, 75% Survivorship Shrubs)	88% Combined Survivorship (100+% Survivorship Trees, 81% Survivorship Shrubs)	**Y**
Vegetative Cover	70% vegetative cover by Year 3 75% vegetative cover by Year 5	90% Upper Creek Bank, 95% lower creek bank	90-95% Upper Creek Bank, 95% lower creek bank	90-95% Upper Creek Bank, 95% lower creek bank	Estimated 10-50% increase over baseline conditions 90-95% Upper Creek Bank, 95% lower creek bank	Estimated 75% increase over baseline conditions in planting areas. For hydro-seeded areas, 90-95% Upper Creek Bank, 95% lower creek bank	**Y**
Plant Height	Overall Increase by Year 5	Baseline: Tall Trees, 6-18 inches Willow cuttings, 30-48 inches. Shrubs 6-8 inches	Increase over baseline. Tall Trees, 2-3.5 feet, Willow cuttings 3-8 feet, Shrubs 8-12 inches	Increase over baseline. Tall trees 5-12 feet, Willow cuttings 5-18 feet, Shrubs 10-13 inches	Increase over baseline. Tall Trees 8-17 feet, Willow cuttings 12-24 feet, Shrubs 12-18 inches	Increase over baseline. Tall Trees 10-25 feet, Willow cuttings 18-33 feet, Shrubs 1.5-4.5 ft	**Y**

6.0 REFERENCES

6.1 Printed References

J.R. Roberts Corporation. 2004. Village Creek Planting Sheet L7.02 dated September 9, 2004.

J.R. Roberts Corporation. 2007. Village Creek Seed Mix for Village Creek (Submittal Package No 122-02920-01-006).

California Department of Fish and Game Streambed Alteration Agreement, Notification No. 1600-2004-0664-3 dated December 13, 2004.

California Regional Water Quality Control Board, Water Quality Certification No. 2198.11, Site No 01-02-C0829 Dated December 14, 2004.

U.S. Army Corps of Engineers, Section 404.Natonwide Permit No. 7 File # 29071S Dated December 11, 2004.

6.2 Personal Communications

Nowak, Tom. Project Coordinator, University Village, Albany, Step 2. Personal communication via email on 1-07-2008. tnowak@cp.berkeley.edu (510) 643-3303.

Pree, Stephen. University Village, Albany, Step 2. Personal communication regarding cessation of irrigation in 2009 during field meeting on September 24, 2009. stephenp@berkeley.edu

APPENDIX A. SITE PHOTOGRAPHS

Photo Point 5A- Supplemental Planting Site 2010 (Baseline)

Photo Point 5A - Supplemental Planting Site 2011

Photo Point 5A - Supplemental Planting Site 2012

Photo Point 5A - Supplemental Planting Site 2013

Photo Point 5A - Supplemental Planting Site 2014

Photo Point 5B - Supplemental Planting Site 2010 (Baseline)

Photo Point 5B - Supplemental Planting Site 2011

Photo Point 5B - Supplemental Planting Site 2012

Photo Point 5B - Supplemental Planting Site 2013

Photo Point 5B - Supplemental Planting Site 2014

Photo Point 5C - Supplemental Planting Site 2010 (Baseline)

Photo Point 5C - Supplemental Planting Site 2011

MISSING

Photo Point 5C - Supplemental Planting Site 2012

Photo Point 5C - Supplemental Planting Site 2013

Photo Point 5C - Supplemental Planting Site 2014

Photo Point 6A - Supplemental Planting Site 2010 (Baseline)

Photo Point 6A - Supplemental Planting Site 2011

Photo Point 6A - Supplemental Planting Site 2012

Photo Point 6A - Supplemental Planting Site 2013 (Note additional alder trees

Photo Point 6A - Supplemental Planting Site 2014 (Note additional alder trees

Photo Point 6B -- Supplemental Planting Site 2010 (Baseline)

Photo Point 6B - Supplemental Planting Site 2011

Photo Point 6B -- Supplemental Planting Site 2012

Photo Point 6B -- Supplemental Planting Site 2013

Photo Point 6B -- Supplemental Planting Site 2014

Photo Point 6C - Supplemental Planting Site 2010 (Baseline)

Photo Point 6C - Supplemental Planting Site 2011

Photo Point 6C - Supplemental Planting Site 2012

Photo Point 6C - Supplemental Planting Site 2013

Photo Point 6C - Supplemental Planting Site 2014

Photo Point 9A - Supplemental Planting Site 2010 (Baseline)

Photo Point 9A - Supplemental Planting Site 2011

Photo Point 9A - Supplemental Planting Site 2012

Photo Point 9A - Supplemental Planting Site 2013

Photo Point 9A - Supplemental Planting Site 2014

Photo Point 9B - Supplemental Planting Site 2010 (Baseline)

Photo Point 9B - Supplemental Planting Site 2011

Photo Point 9B - Supplemental Planting Site 2012

Photo Point 9B - Supplemental Planting Site 2013

Photo Point 9B - Supplemental Planting Site 2014

Photo Point 9C- Supplemental Planting Site 2010 (Baseline)

Photo Point 9C - Supplemental Planting Site 2011

Photo Point 9C - Supplemental Planting Site 2012

Photo Point 9C- Supplemental Planting Site 2013

Photo Point 9C- Supplemental Planting Site 2014