

RESOLUTION NO. 2012-061

Adopted by the Sacramento City Council

March 13, 2012

APPROVING THE RECOMMENDATIONS OF THE 28TH STREET LANDFILL TREE REMOVAL MITIGATION COMMITTEE AND DETERMINING EXEMPTION UNDER THE CALIFORNIA ENVIRONMENTAL QUALITY ACT

BACKGROUND

- A. During the week of September 26, 2011, cottonwood trees and other vegetation were removed from a storm water detention basin located at the City's closed 28th Street landfill facility, in Sutter's Landing Park, to address the public health and safety concerns created by an illegal encampment in the basin where methane gas equipment is present.
- B. On November 8, 2011, City Council adopted Resolution 2011-609 directing staff to form a mitigation committee to develop a plan that accomplishes the following goals: 1) identification of the environmental impacts of the cottonwood tree removal including possible loss of habitat value and development of an implementation plan; 2) identification and evaluation of strategies to manage the closed landfill in ways that are compatible with potential future land uses at Sutter's Landing Park; and 3) providing an effective public communication and outreach strategies. Resolution 2011-609 also directed staff to report back to City Council with recommendations.
- C. Pursuant to Council Resolution 2011-609, staff formed the 28th Street Landfill Tree Removal Mitigation Committee comprised of community members from a variety of stakeholder groups that met regularly from November 2011 through February 2012.
- D. The attached *28th Street Landfill Tree Removal Mitigation Committee Report to City Council* provides recommendations to the City Council from the Committee on how to accomplish the goals established in Resolution 2011-609 while meeting the City's post-closure requirements for the Landfill and maintaining consistency with the *Sutter's Landing Park Master Plan*.
- E. The Environmental Services Manager has reviewed the 28th Street Landfill restoration project for compliance with the requirements of the California Environmental Quality Act (CEQA) and determined that the restoration activities that are recommended in the Committee report and supported by staff are exempt from CEQA Guidelines (Title 14 Cal. Code Reg. § 15000 et seq.) as follows: CEQA Guidelines Section 15333 provides

that projects of five acres or less in size to assure the maintenance, restoration, enhancement or protection of habitat for fish, plants or wildlife are exempt from CEQA as long as (a) there would be no significant adverse impact on protected species or habitat; (b) there are no hazardous materials around the project site that would be disturbed or removed; and, (c) the project would not result in significant impacts in light of past, existing and future projects. The proposed restoration work would qualify for the exemption, and would not have any significant effects on the environment. Standard project conditions, including protection against erosion, would apply, and all work would be subject to the ongoing requirements that apply to the landfill closure process.

BASED ON THE FACTS SET FORTH IN THE BACKGROUND, THE CITY COUNCIL RESOLVES AS FOLLOWS:

Section 1. The 28th Street Landfill Tree Removal Mitigation Committee Report to City Council, attached as Exhibit A, is approved with the following changes: a) City staff shall consult with Parks and Recreation Commission before implementing Enhance Recommendation Nos. 6, 7 and 8 (on page 27); b) Plant no new elderberry on the restoration site; and c) Design Review by Sacramento-Yolo Mosquito & Vector Control District to prevent public health problems.

Section 2. The 28th Street Landfill restoration project is exempt from review under CEQA pursuant to Section 15333 of the CEQA Guidelines.

Table of Contents:

Exhibit A--28th Street Landfill Tree Removal Mitigation Committee Sutter's Landing Park Report to City Council

Adopted by the City of Sacramento City Council on March 13, 2012 by the following vote:

Ayes: Councilmembers Ashby, Cohn, D Fong, R Fong, McCarty, Pannell, Schenirer, Sheedy.

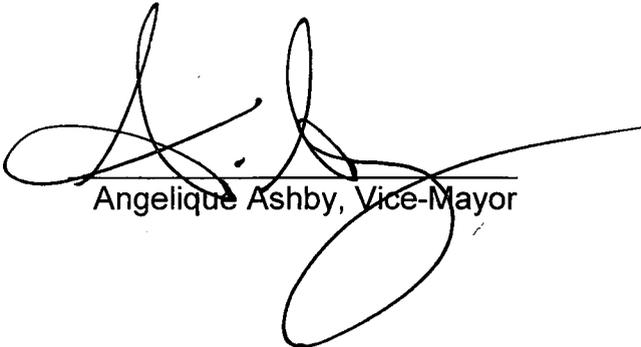
Noes: None.

Abstain: None.

Absent: Mayor Johnson.

Attest:


Shirley Concolino, City Clerk

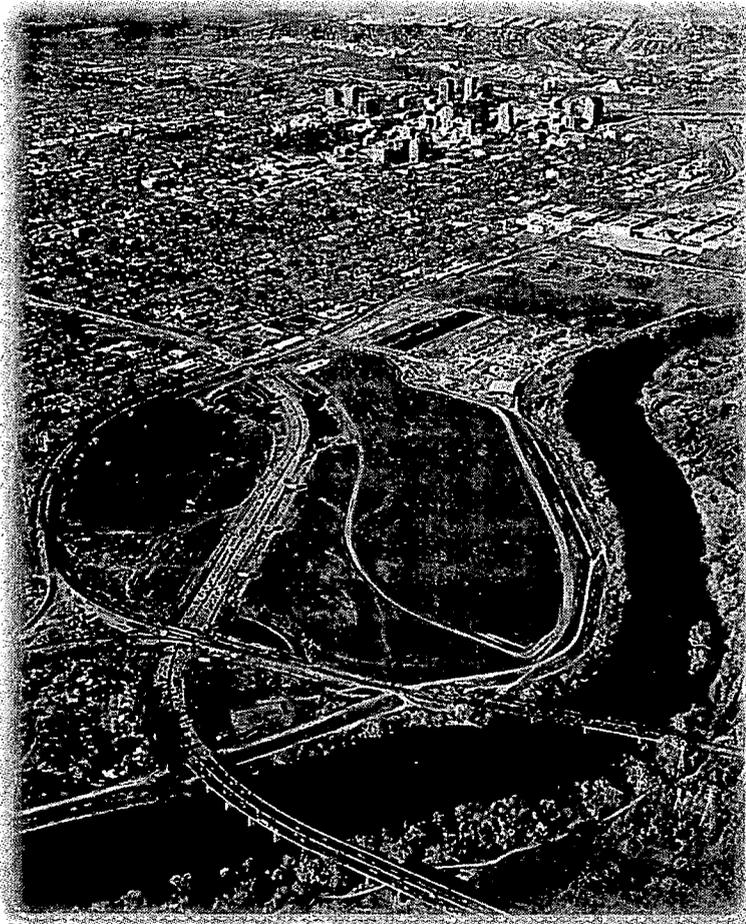

Angelique Ashby, Vice-Mayor

28TH STREET LANDFILL TREE REMOVAL MITIGATION COMMITTEE

Sutter's Landing Park

March 13, 2012

Report to the Sacramento City Council



City of Sacramento, date not available

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www.cityofsacramento.org/parksandrecreation/28th-st-sltrmc.htm

TABLE OF CONTENTS

EXECUTIVE SUMMARY1

INTRODUCTION4

BACKGROUND.....6

 Closed Landfill Becomes Park 6

 Gateway to the American River Parkway..... 7

 Park Facilities and Uses 8

 Habitat and Educational Values at Park..... 13

 Landfill Retention Basin 14

 Retention Basin Clearing..... 16

 Tree Removal Mitigation Committee 18

IMPACT..... 19

 Repair Recommendations..... 24

ENHANCE 27

 Enhance Recommendations 29

PREVENT 32

 Prevent Recommendations..... 32

PUBLIC COMMUNICATION AND OUTREACH..... 36

 Public Communication and Outreach Recommendations 36

IMPLEMENTATION..... 37

CONCLUSION 38

APPENDICES 39

 Appendix A. Sacramento City Council Resolution 2011-609 40

 Appendix B. “Landfill Tree Mitigation” Staff Report to City Council..... 42

 Appendix C. Sutter’s Landing Park Master Plan Adopted 2003..... 47

 Appendix D. Functions and Values Assessment for 28th Street Landfill Tree Removal Mitigation Project..... 49

 Appendix E. List of Plants and Birds at Sutter’s Landing Park..... 60

 Appendix F. Mitigation and Enhancement Approach..... 62

 Appendix G. Recommended Schedule for Implementing Restoration Actions..... 74

 Appendix H. Title 27 California Code of Regulations (CCR) Sections 21135, 21180, and 21190 75

 Appendix I. Funding Opportunities 78

 Appendix J. 28th Street Landfill Routine Maintenance Activities..... 80

 Appendix K. Additional Information Sources..... 84

EXECUTIVE SUMMARY

This report provides the recommendations of the 28th Street Landfill Tree Removal Mitigation Committee that was established pursuant to Sacramento City Council Resolution # 2011-609 to advise the City Council following the removal of approximately 100-200 trees from the former landfill which is now part of Sutter's Landing Park. The recommendations were unanimously adopted by the Committee and are supported by City staff.

Resolution 2011-609 directed staff to form the Committee to: (1) identify the environmental impacts of the tree removal; (2) develop a plan for full restoration of the lost habitat values; (3) identify strategies to manage the closed landfill in ways that are compatible with the habitat values and potential uses at Sutter's Landing Park and the American River Parkway; and (4) provide effective public communication and outreach strategies. The resolution also directed staff to establish policies to prevent similar situations from occurring in the future.

BACKGROUND

The City Council designated the former 28th Street Landfill as Sutter's Landing Park in 1995. The property is managed for park and recreation purposes by the Department of Parks and Recreation, while the landfill postclosure operations are managed by the Solid Waste Division, which is now part of the Department of General Services. The 172-acre property sits next to the American River Parkway immediately west of Interstate 80 (Business Loop).

As part of the landfill post-closure activities, the Solid Waste Division established a one-acre retention basin to capture runoff from the adjacent 111-acre "mound" that constitutes the majority of the former landfill property. Over the past thirteen years, approximately 100-200 trees grew on the site and may have provided habitat for raptors and other wildlife. In recent years, the retention basin was also used for illegal camping activities.

Sacramento County's Local Enforcement Agency (LEA), which inspects closed landfills within the county, asked the City to repair fences and increase security to prevent potential safety and public health problems resulting from the illegal camping activities. The LEA did not request removal of any trees. Concerned about the illegal camping situation, Solid Waste Division staff removed all of the trees, other vegetation, and the illegal camping site during the week of September 26, 2011. City environmental review procedures were not followed, and supervisors and other departments were only provided with vague descriptions of the project before the trees were removed. The City Council and the public first learned about the action from a local television news report.

The City's 2030 General Plan recognizes the important connection between Sutter's Landing Park and the American River Parkway. This is especially important since the American River Parkway receives more visitor days per year than Yosemite National Park.

IMPACT

The retention basin is located within Sutter's Landing Park and the American River riparian zone, and likely served as important wildlife habitat within the City of Sacramento. The basin is located in one of the richest areas for raptors along the American River Parkway, especially for the Swainson's hawk, which is a threatened species protected by the California Endangered Species Act, and other wildlife including the fully-protected White-tailed kite and the threatened Peregrine falcon. The retention basin included about 80-90% of the trees within Sutter's Landing Park. Young cottonwood trees provide an especially important resource for wildlife along the American River. Because of the postclosure landfill requirements, there are few sites in the park where trees can be planted.

The clearing project removed all of the trees and nearly all of the vegetation that was growing in and along the retention basin. The result was a near complete loss of the site's wildlife habitat values

REPAIR

To replace the lost habitat values, the Committee recommends : (1) restoring the City-owned portion of the "Triangle" area that sits immediately east of the retention basin and the Union Pacific Railroad property by planting native oak trees and other vegetation to recover the majority of lost habitat values; (2) planting twelve Fremont cottonwood trees within the retention basin and three oak trees next to the retention basin to provide habitat values next to the mound; and (3) maintaining and monitoring the sites consistent with sound habitat restoration practices. The Solid Waste Division indicates it can absorb the estimated \$217,000 cost of the project over seven years from existing resources.

ENHANCE

The Committee identified more than fourteen different state and federal funding sources that have the potential to provide the City with millions of dollars to enhance the Park's resources and its ability to serve as a gateway to the American River Parkway. The Committee encourages the City to establish partnerships with nonprofit groups and take additional actions to secure grant funding to advance park enhancement projects. The Committee further recommends that the City update the Sutter's Landing Park Master Plan, plant native trees and bushes to enhance habitat and recreation values, expand education programs, and increase interpretive signage.

PREVENT

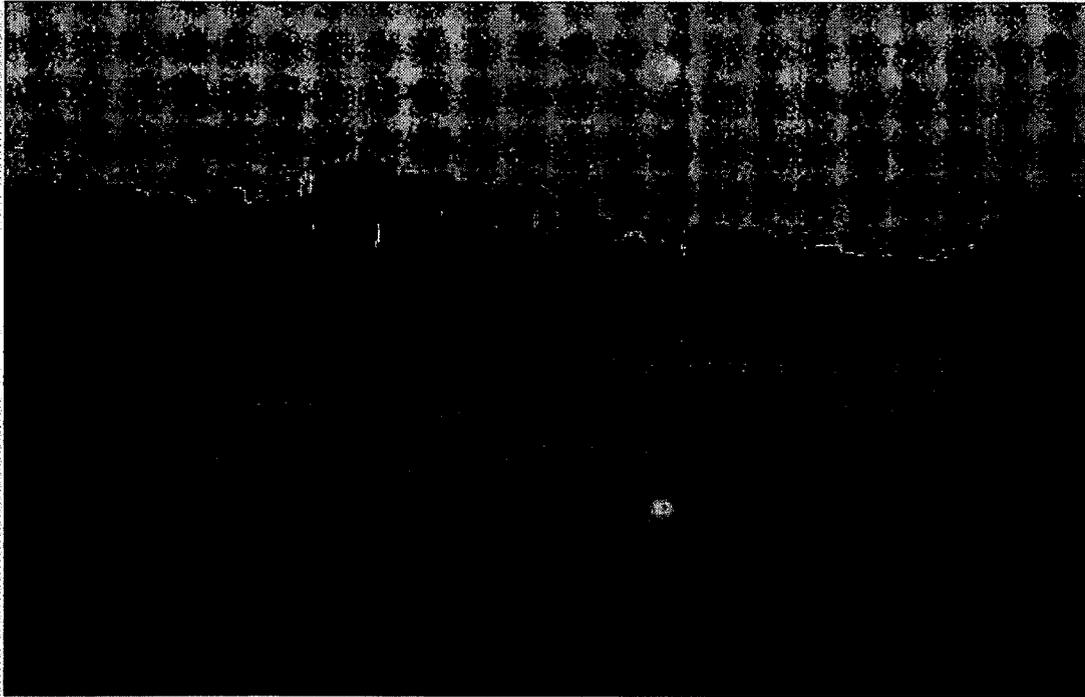
The Committee recommends the adoption of clearer policies and procedures that define routine maintenance activities and require additional review when Solid Waste Division staff proposes actions that go beyond routine maintenance. Staff and Committee members concur that the recommended procedures may have prevented the tree removal activities from moving forward had they been in place last fall. The Committee also recommends additional training for staff and the retention of sufficient expertise to review proposed projects ahead of implementation.

PUBLIC COMMUNICATION AND OUTREACH

The Committee recommends that the Departments of Parks and Recreation, General Services, and Community Development work together to implement public outreach and communication actions when park or landfill closure activities could adversely impact the environment, and maintain a list of stakeholders, community groups, and interested members of the public to contact. The Committee also recommends the establishment of a stakeholder group for Sutter's Landing Park and a role for the Parks and Recreation Commission.

CONCLUSION

The Committee recommendations provide a pathway for the City to continue to meet its landfill postclosure requirements, while also protecting and enhancing Sutter's Landing Park's natural, recreational and educational values for current and future generations.



INTRODUCTION

On November 8, 2011, the Sacramento City Council adopted Resolution Number 2011-609 directing staff to:

- Form a mitigation committee comprised of community representatives to develop a plan that accomplishes the following goals:
 1. “Identification of the environmental impacts of the cottonwood tree removal (at Sutter’s Landing Park) including possible loss of habitat value.”
 2. “Development of an implementation plan for full restoration of habitat values lost as a result of the project.”
 3. “Identification and evaluation of strategies to manage the closed landfill in ways that are compatible with the habitat values and potential uses at Sutter’s Landing Park and the American River Parkway.”
 4. “Providing effective public communication and outreach strategies.”
- “Establish policies to avoid a similar situation from occurring again.”
- “Report back to City Council with recommendations...”

(See Appendices A: Sacramento City Council Resolution 2011-609, and B: Staff Report to City Council of November 8, 2011.)

The Resolution was adopted following City Council discussion and public comment regarding the removal of approximately one acre of cottonwood trees and other vegetation during September 2011 from a storm water retention basin located at the City’s closed 28th Street landfill facility which is part of Sutter’s Landing Park. The vegetation was removed by City Department of Utilities’ staff to address an illegal camping problem that had developed on the site. At the November 8th Council meeting, City Councilmembers and members of the public raised concerns on the lack of prior notice to the City Council and the public about the actions that were taken, and the lack of adequate environmental review.

The Council Resolution, in essence, establishes and seeks recommendations from the Landfill Tree Removal Mitigation Committee and City staff on steps that can be taken to fully restore the habitat values lost as a result of the tree removal, ways to enhance habitat values and uses in the larger Sutter’s Landing Park area, and policies and procedures to prevent similar situations from occurring in the future.

This report provides recommendations to the City Council from the 28th Street Landfill Tree Removal Mitigation Committee on how to accomplish the goals established by the City Council in Resolution 2011-609, while also meeting the City's postclosure requirements for the Landfill and maintaining consistency with the *Sutter's Landing Park Master Plan*.



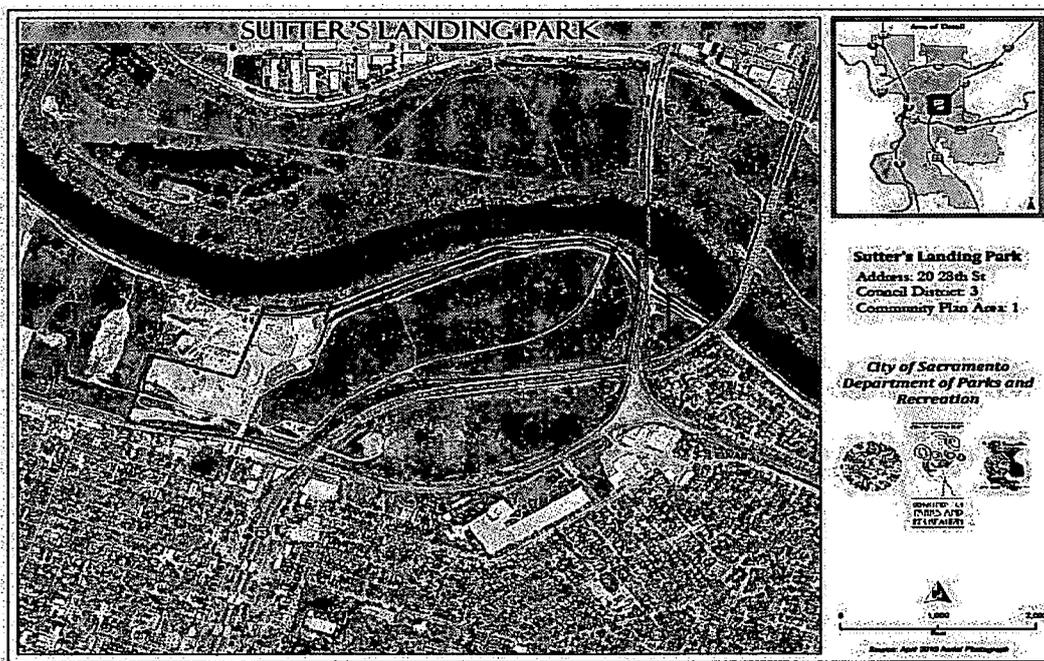
BACKGROUND

Closed Landfill Becomes Park

The City's former 28th Street Landfill was designated as Sutter's Landing Park by the City Council in 1995. The 172-acre site is located about one mile northeast of downtown Sacramento and sits adjacent to the southern edge of the American River Parkway immediately west of Interstate 80 (Business Loop). The property is zoned "Agriculture-Open Space-Parkway Corridor," reflecting the site's location within the American River Parkway Corridor, which is an overlay zone in the Sacramento City Code (Chapter 17.160).

The 28th Street Landfill accepted municipal waste until 1994 and was closed in 1997. The City's General Services Department continues to manage the property to meet various postclosure requirements established under state law (Title 27, Division 2, Chapter 3, Subchapter 5, Article 2 (27 CCR Sections 21090 et seq.) including methane gas collection, gas well monitoring, gas well maintenance, landfill cap maintenance, site security and other requirements. The postclosure period is expected to continue through at least 2027. The City's maintenance activities are inspected quarterly by the County of Sacramento Environmental Management Department serving as the Local Enforcement Agency (LEA) overseeing the landfill closure.

The City anticipated using the former landfill site as a park since at least the adoption of the 1984 *Master Plan for Park Facilities and Recreational Services*. The current *Sutter's Landing Park Master Plan* was adopted in 2003 (see Appendix C). The City intends to update this Park Master Plan when resources allow.



Gateway to the American River Parkway

Sutter's Landing Park serves as an increasingly popular "gateway" for Sacramento residents and workers to access the American River Parkway providing opportunities to enjoy the passive and active recreational activities and educational opportunities these resources provide. The American River Parkway receives more than five million user days each year – more than Yosemite National Park.



The City's 2030 *General Plan* recognizes the important connection between Sutter's Landing Park and the American River Parkway:

"The City shall develop the Sacramento River Parkway and Sutter's Landing Park facilities in conjunction with American River Parkway and trail linkages." (CC-ERC1.5, pages 3-CC-11)

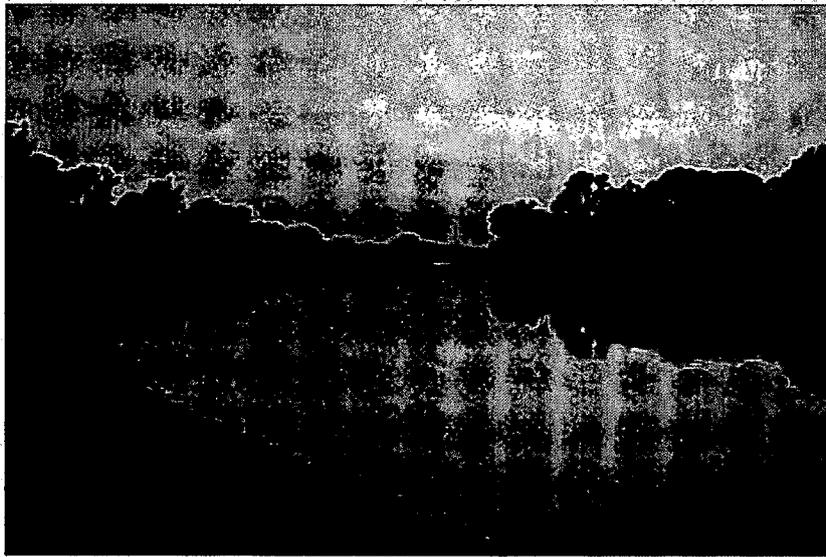
Existing maintenance roads provide walkers and bicyclists with a scenic pathway along the river that connect Sutter's Landing Park to Glenn Hall Park and California State University at Sacramento to the east. The City would like to eventually connect the Sutter's Landing area to the City's Two Rivers Trail, providing continuous trail connections along the southern edge of the American River Parkway from the Sacramento River, through Sutter's Landing Park, to CSU Sacramento and beyond.

Because of its location next to the American River Parkway, Sutter's Landing Park can play an important role in addressing the desire of Sacramento residents for increased access to the American River and to natural open space areas.

In 2006, the City commissioned the Strategy Research Institute to survey Sacramento residents about their park priorities. The survey found that:

- “Top priority was large habitat areas for walking and hiking, where interpretive and educational programs can take place: 71% of the community-at-large and 68% of registered voters selected this as their number one priority.”
- “Second priority is to be develop parkways and areas along the American Riverbank.”
- “... (b)y roughly a 2-to-1 ratio (47:23), Sacramento residents prefer PASSIVE parks over ACTIVE parks. Over one fourth of the respondents want a combination of the two types of park facilities. Even a greater ratio of Opinion Leaders (57%) prefer passive parks.”

(Sutter’s Landing Area Master Plan Background Report, City of Sacramento Planning Department New Growth Division, October 1, 2008, page 10.)

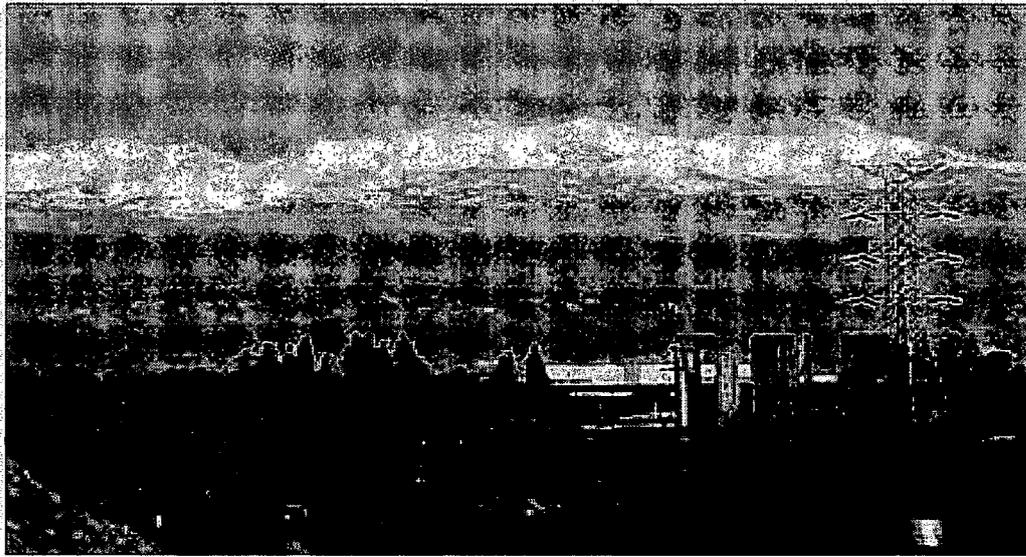


Park Facilities and Uses

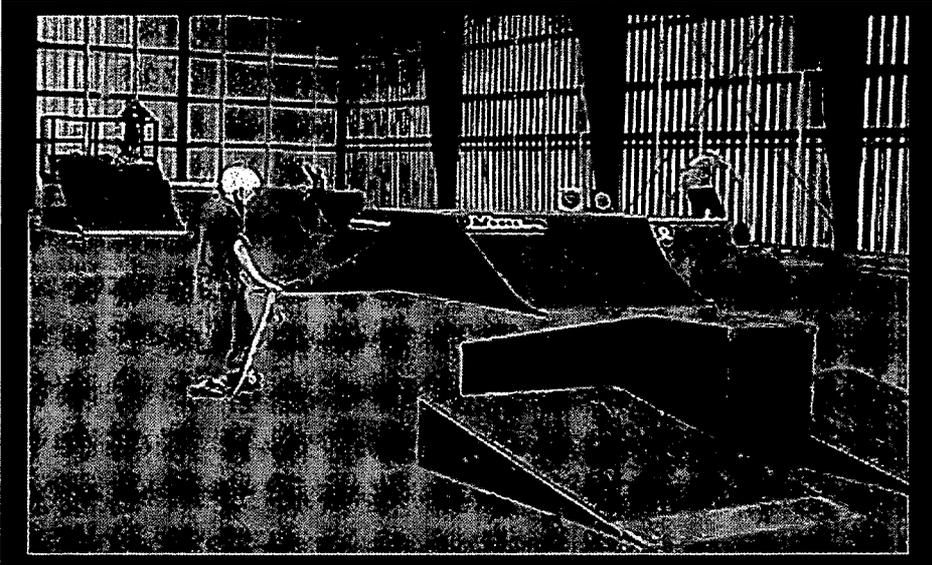
Sutter’s Landing Park’s public uses and facilities are managed by the Department of Parks & Recreation and include a variety of passive and active recreational opportunities, as discussed below.

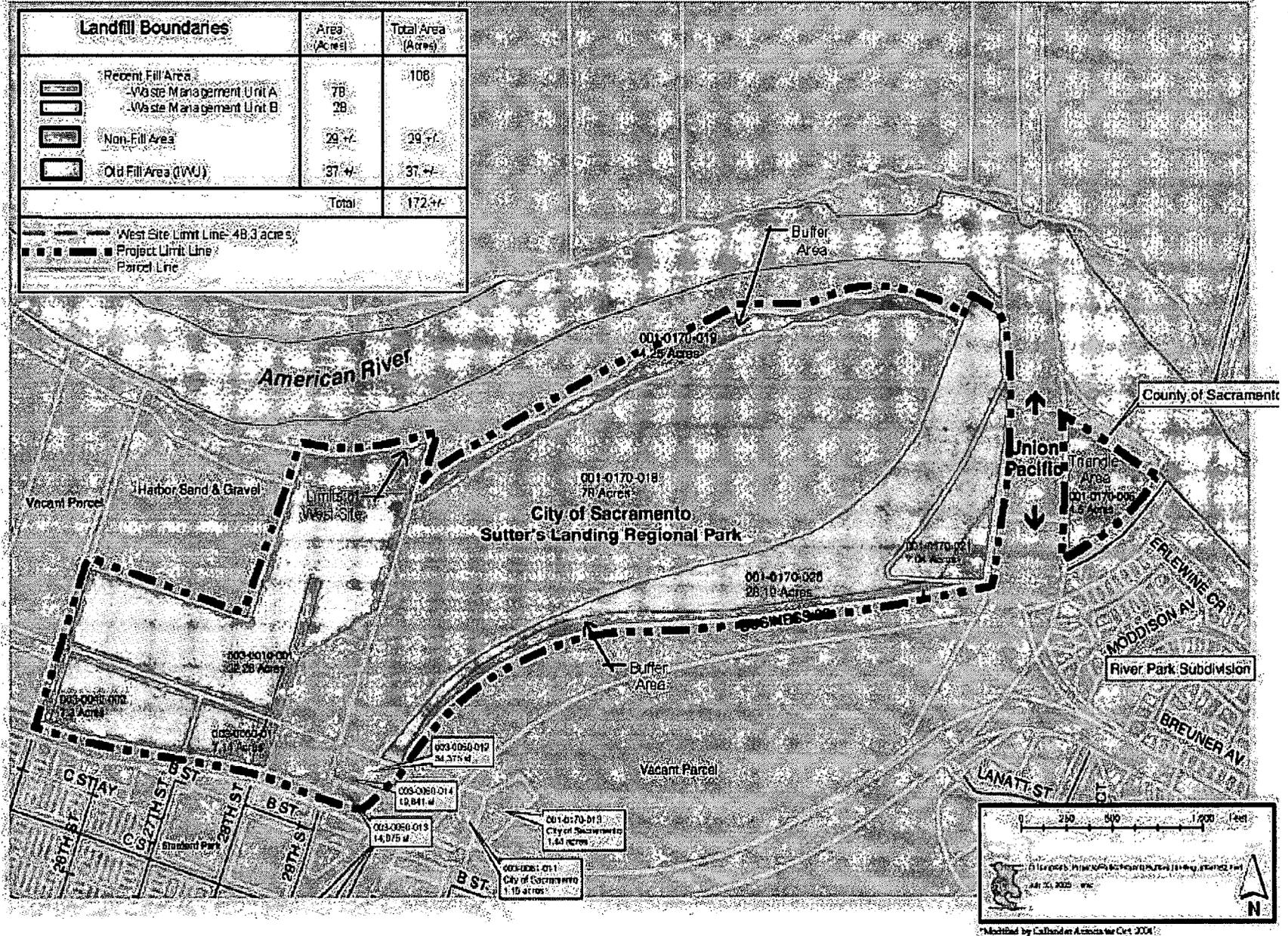
The 172-acre Sutter's Landing Park includes (see map below):

- 111-acre mound that includes closed Waste Management Units A & B. This site includes above ground landfill gas collection wells and pipes and is closed to public access due to postclosure maintenance. The site currently provides valuable habitat for wildlife including the threatened Swainson's hawk, fully protected White-tailed Kite, and other wildlife species, as described below. This part of the park includes the highest land elevations in the City of Sacramento.



- 4.5-acre "Triangle" area that borders the American River Parkway and sits to the east of the Union Pacific Railroad tracks and the 111-acre mound. The City owns approximately 2.6 acres and Union Pacific Railroad owns the remaining parcels of land within the Triangle. The area supports cottonwood trees, willows, elderberries, non-native plants, and other vegetation.
- 8.5-acre "Buffer Areas" including land adjacent to the American River Parkway and to Interstate 80 (Business Loop). The Buffer Areas include the one-acre retention basin where the cottonwood trees and other vegetation were removed in September 2011.
- 48-acre "West Site" that includes a city maintenance yard and current park facilities including a dog park, the region's only under roof skateboard park, bocce ball courts, basketball courts, paved parking lots, and several asphalt covered acres.





The City also identified approximately one hundred acres of additional land in the Sutter's Landing Area Master Plan Study Area that are primarily to the west of the Park (see map below). These properties include:

- 5.4 acres owned by Union Pacific Railroad including the active railroad properties and a portion of open space adjacent to the City's Triangle property (between H from Business 80 to the River)
- 25-acre Dellar Family Trust property which is undeveloped and includes former landfill operations (A)
- 16-acre Harbor Sand and Gravel operation (B)
- 2-acre vacant Cannon Family Trust property (C)
- 2-acre vacant Scollan Family Trust property (D)
- 38-acre vacant California Blue Diamond Growers Exchange property that includes a former co-generation site (E)
- 11-acre Sacramento Municipal Utilities District property including an electrical substation (F)



Since adoption of the Park Master Plan, the City has made land use decisions on the *Railyards Specific Plan*, Township 9 project and *River District Specific Plan* which indicate the Park may provide opportunities found at community parks in addition to acknowledging the Sutter's Landing Area as a unique regional asset.



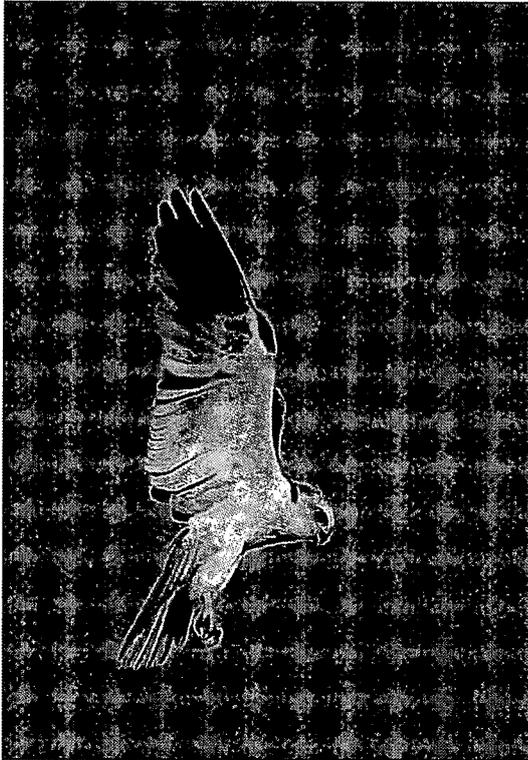
Habitat and Educational Values at Park

Sutter's Landing Park was described as "one of the richest areas for raptors on the American River Parkway, especially for Swainson's Hawk" according to an assessment commissioned by the City (see Appendix D). In addition to providing habitat for the threatened Swainson's Hawk, the Park also provides habitat for the White-tailed Kite (Fully Protected Bird), Northern Harrier (Species of Special Concern), Peregrine Falcon (Fully Protected Bird), red-tailed and red-shouldered hawks, owls, woodpeckers, meadowlarks, native songbirds, and mammals including coyotes and others. In addition, the adjacent American River Parkway provides habitat for river otters, great blue herons, egrets, salmon, and other wildlife. (See Appendix E for a more complete list of plants and birds that benefit from the habitat at Sutter's Landing Park and the adjacent sections of the American River Parkway.)

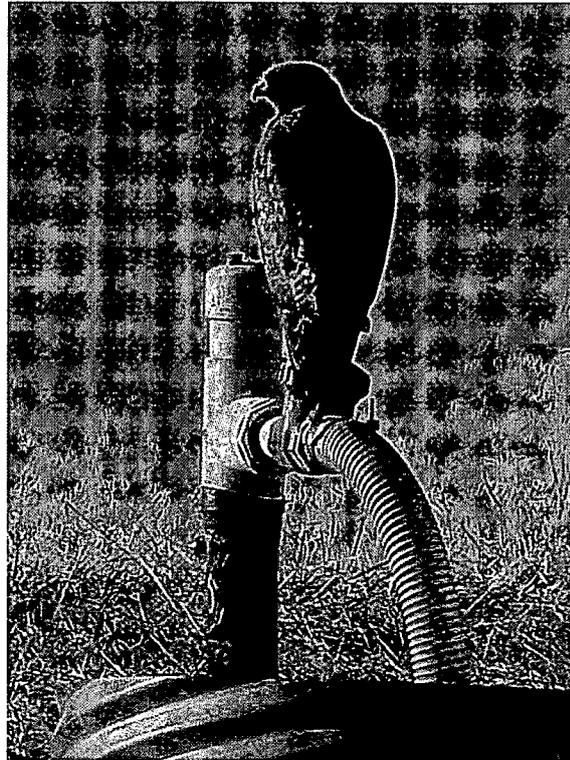
Sutter's Landing Park's location next to the American River Parkway increases the importance of the site as habitat for wildlife, providing important opportunities to connect urban residents to nature and children with hands-on science education experiences. Community groups, including Friends of the River Banks, conduct monthly educational programs on the site.

More than 5,700,000 Californians engage in wildlife viewing activities, according to a 2006 study by the U.S. Fish and Wildlife Service. These activities generated more than \$3.5 billion in economic

activity in 2006 alone. Sutter's Landing Park provides one of the best locations within the City of Sacramento for wildlife watching activities.



Fully Protected White-Tailed Kite



Threatened Swainson's Hawk

Landfill Retention Basin

As noted above, the City's Department of Utilities established a retention basin in 1997 to collect and hold run-off from portions of Waste Management Units A and B as part of its postclosure program. The retention basin includes an active groundwater monitoring well, active methane migration monitoring equipment, and inactive methane collection equipment that was disconnected in 1997 because it was no longer needed.

Over the past thirteen years, a small stand of approximately 100-200 trees grew in the retention basin. Fremont cottonwood was the dominant species, with some box elder, Oregon ash, interior live oak, valley oak, and black walnut. The site may also have included willow and other plants. Discovery of a small elderberry plant at the previously cleared retention basin site in January 2012 supports the conclusion that the landfill site can provide habitat for blue elderberry plants.



Location of Retention Basin: southeast corner of Park at intersection of Bus. 80 & UPRR

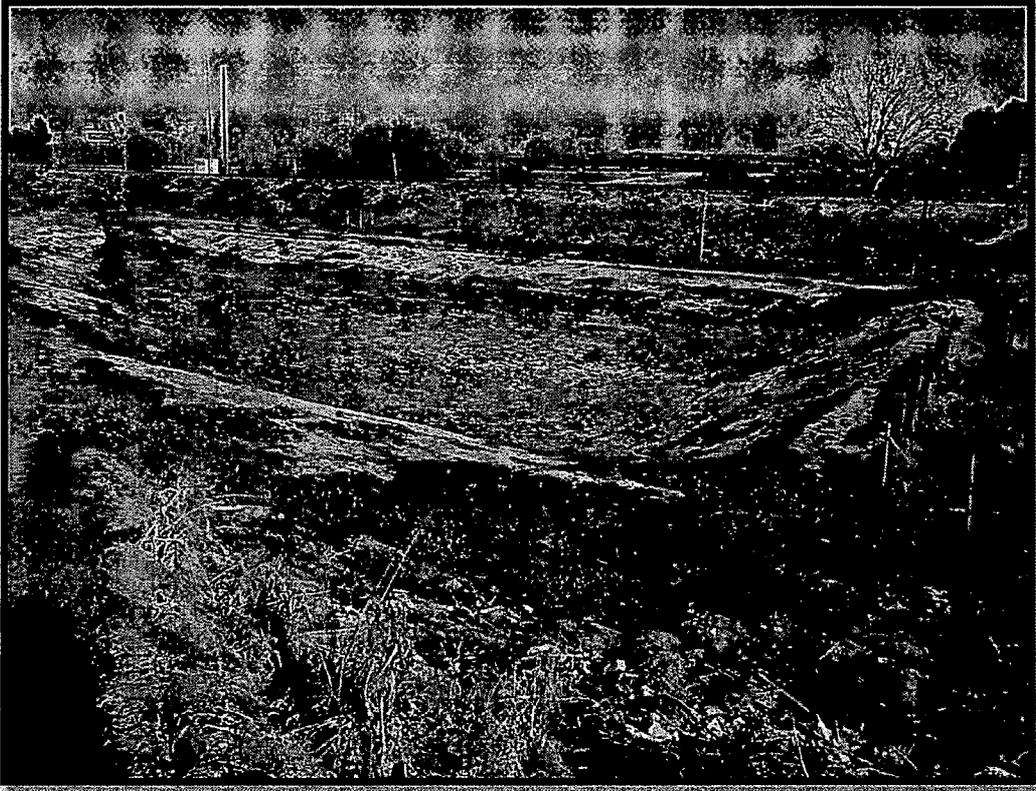


Over the past few years, the site was subject to illegal camping that resulted in significant disturbances including trampled vegetation, litter, waste, campfires, and other undesirable activities. City maintained fences around portions of the retention basin were often compromised by illegal campers to gain access to the site. City staff expressed concerns regarding the safety of illegal campers who unlawfully occupied the site and concerns about potential tampering with postclosure monitoring equipment. Recent LEA quarterly inspection reports called on the City to improve site security, including repairing fences and improving documentation of fence repairs. The inspection reports did not recommend that the City remove vegetation from the retention basin. In subsequent communications with City staff, the LEA indicated that trees and other vegetation may be allowed in the retention basin so long as the various postclosure requirements are met.

Retention Basin Clearing

During the week of September 26, 2011, Department of Utilities' staff cleared the retention basin removing all vegetation and the illegal camping site. The clearing action occurred after the Department staff posted signs at the site to inform illegal campers of the need to vacate prior to the clearing of the site. Prior notice was not provided to the City Council, the City Manager, or to the public, and only vague project descriptions were reportedly provided to other City managers and departments. The City Council and the public first learned about this action from a local television news report.

When the issue was raised at the City Council meeting on October 25, 2011, Councilmembers stated concerns regarding the lack of public notice, asked whether the trees needed to be removed, and questioned whether City policies and other requirements were followed. Councilmembers also indicated the need to take corrective action. Two weeks later, the City Council adopted Resolution 2011-609 calling for the formation of the "mitigation committee," the development of recommendations provided in this report, and the adoption of policies to prevent similar situations from occurring again.



H.T. Harvey & Associates, January 4, 2012

Tree Removal Mitigation Committee

Following adoption of the Resolution, the Department of Utilities and the Department of Parks & Recreation established the “28th Street Landfill Tree Removal Mitigation Committee.” The Committee includes representatives from organizations identified in the resolution, as well as public members. The Committee members include:

- Corey Brown, Friends of Sutter’s Landing Park (Committee Chair)
- Jeff Harris, City of Sacramento Parks & Recreation Commission
- Rick Rayburn, retired, former Chief of Natural Resources Division, California Department of Parks and Recreation
- David Self, California Native Plant Society
- Robert Sewell, Friends of the Swainson’s Hawk
- Dale Steele, Friends of the River Banks
- Betsy Weiland, Save the American River Association
- Jude Lamare, Alternate

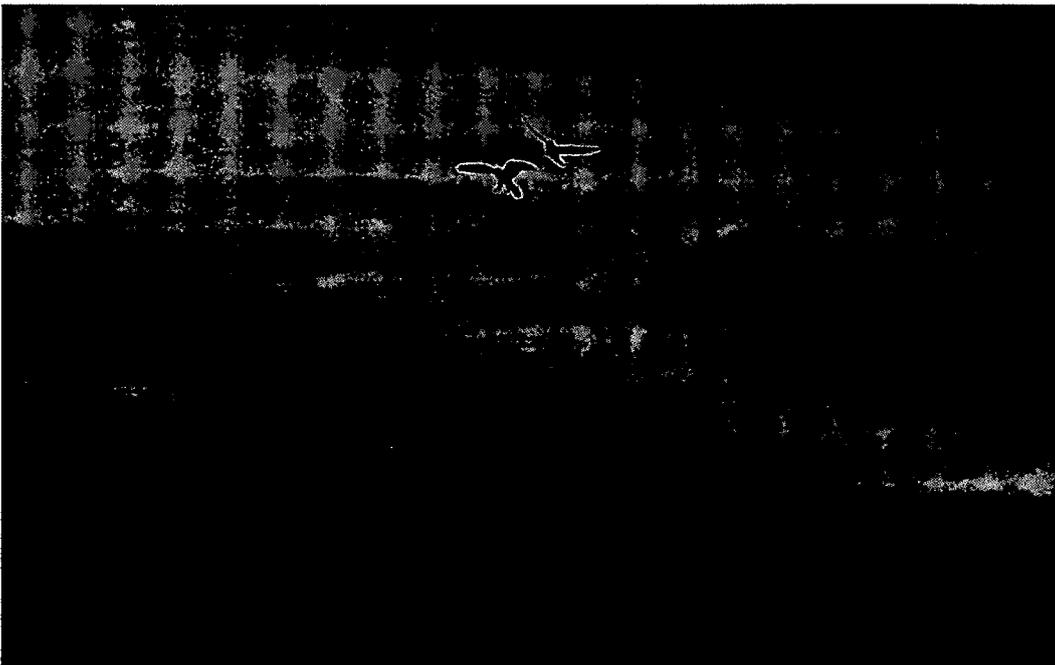
The City’s work on the project was directed by J.P. Tindell, Park Planning & Development Manager, with primary support from Steve Harriman, Integrated Waste General Manager, Reina Schwartz, Director of General Services; Tom Buford, Environmental Planning, Community Development Department; Joe Benassini, Urban Forest Services Manager, Department of Transportation; Janeth San Pedro, City Attorney’s Office; Melissa Mowry, Department of General Services, and Nell Hessel, Department of Parks & Recreation. (Note: Integrated Waste Management, including Solid Waste Services, was transferred from the Department of Utilities to the Department of General Services in December 2011.)

The City contracted with H.T. Harvey & Associates, Ecological Consultants, to provide additional technical expertise to assess the environmental impacts and possible loss of habitat from the retention basin clearing, and to assist the Committee in recommending an implementation plan for full restoration of the lost habitat values and actions to manage the closed landfill in ways that are compatible with the habitat values and potential uses at Sutter’s Landing Park and the American River Parkway.

IMPACT

Resolution 2011-609 directed the Committee to identify “the environmental impacts of the cottonwood tree removal including possible loss of habitat value.”

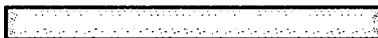
The retention basin is located within Sutter’s Landing Park and the American River riparian zone, and served as important wildlife habitat within the City of Sacramento. The basin is located in one of the richest areas for raptors along the American River Parkway, especially for the threatened Swainson’s Hawk, because of the mature trees, open grasslands, and proximity to the American River, Yolo Bypass and the agricultural fields north of Interstate 80.



Riparian (riverside) habitat supports a wide variety of plant and wildlife species. Because more than 95% of the Central Valley’s riparian habitat has been removed, state and federal agencies have invested hundreds of millions of dollars in recent decades to purchase and restore this important type of habitat that is essential for a wide variety of sensitive wildlife species including the threatened Swainson’s hawk, the fully-protected white-tailed kite, and many others.



Retention Basin 2011 (before vegetation removal)



Retention Basin 2012 (after vegetation removal)

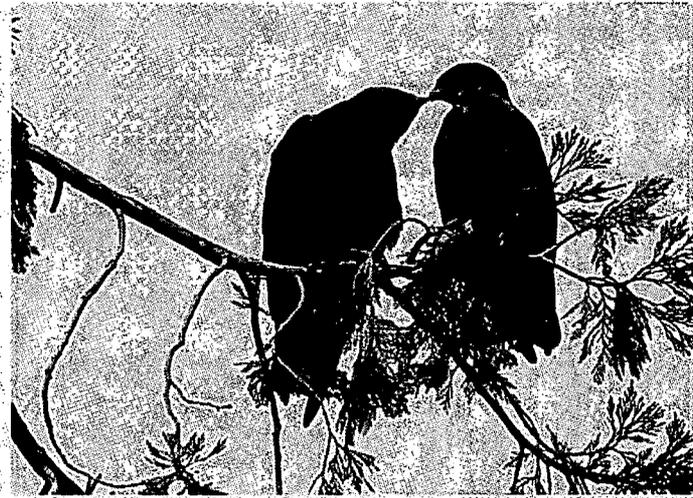
Prior to the clearing, the retention basin is estimated to have included 100-200 trees, comprising about 80-90% of the trees within the boundaries of Sutter's Landing Park. This area included a variety of trees with Fremont cottonwood being the most dominant. Other trees included box elder, Oregon ash, interior live oak, valley oak, and black walnut. The understory plants were primarily nonnative and most of the ground was trampled, bare or covered with tarps, belongings, and trash as a result of illegal camping activities, reducing the value of the site as habitat for mammals.

The cottonwoods were approximately 13 years old and may have established during the ninth wettest winter on record for Sacramento (1997-1998), according to a review of historical aerial photos. It is unlikely that a forest stand would reestablish on its own on the site due to generally dry conditions.

Young forest stands, such as the one that established on the project site, are of significant value because they provide excellent early successional habitat for a large variety of Central Valley riparian bird species and contribute to the overall connectivity and habitat diversity along the American River Parkway. The cottonwood trees were potential successor habitat to some of the older stands of cottonwoods whose numbers have been diminishing along adjacent sections of the American River Parkway.

The cottonwoods and other vegetation likely hosted a variety of mammals and riparian birds based on the size, age, and height of the vegetation, especially given its close proximity to the existing riparian habitat along the American River and the abundant food sources on the 111-acre mound. This proximity is important as the habitats together provide a larger area for birds to nest and forage for food. The trees probably also provided important wintering and migratory stopover habitat for a variety of riparian bird species.

During a one-day reconnaissance-level survey, City consultants documented the presence of thirty bird species at the park and the adjacent section of the American River Parkway including the fully-protected White-tailed kite, fully-protected peregrine falcon, red-tailed hawk, red-shouldered hawk, killdeer, Anna's hummingbird, western meadowlark, and many others. Nearly all of the species could be expected to have occurred in the cottonwood stand during winter seasons prior to its removal and many of these species are residents. Because the required environmental review was not carried out prior to the project approval, precise information about the cottonwood stand is not available. (See Appendix E for a list of more than 30 bird species and 26 plant species including the threatened Swainson's Hawk, Species of Special Concern Northern harrier, and others that have been observed at Sutter's Landing Park and the adjacent section of the American River Parkway.)



The September 2011 project cleared the retention basin of all of the trees and nearly all of the site's vegetation. In its current cleared state, the retention basin provides little value for wildlife other than killdeer and perhaps a few foraging savannah and white-crowned sparrows. Because of the landfill postclosure requirements and other constraints, few alternative sites exist within Sutter's Landing Park where trees can be planted to replace the wildlife habitat values that were lost when the basin was cleared. (See Appendix D for a more complete discussion of the impacts resulting from the clearing of the retention basin.)

REPAIR

Resolution 2011-609 directed the Committee to develop “an implementation plan for full restoration of habitat values lost as a result of the project.”

The clearing of the cottonwoods removed the most important stand of trees within the park that provide habitat for wildlife. Replacing the lost habitat values is challenging because the landfill postclosure requirements leave very few locations available where trees can be planted.



The retention basin is the best location in the park to grow Fremont cottonwood trees because it provides greater access to the larger amounts of water that these trees need. The retention basin is also proximate to the mound which provides abundant sources of food for raptors and other birds. However, the City’s Solid Waste Services has expressed concerns about fully replanting the retention basin with trees which could complicate the management of the basin. In deference to Solid Waste Services’ concerns, the Committee recommends replanting only a small number of cottonwood trees in the retention basin providing partial replacement for the lost habitat values.

To compensate for the majority of lost habitat values, the Committee also recommends restoring the City-owned portion of the Triangle area which is located to the immediate east of the retention basin and the Union Pacific Railroad property. The City’s Triangle property is currently dominated by non-native invasive plants and provides low habitat values. The Committee did not find other locations within the park that are as suitable for meeting the habitat replacement needs. The Triangle area is designated as a ‘Future Natural Area’ in the Sutter’s Landing Park Master Plan.

The Committee believes the combination of the planting of a limited number of Fremont cottonwoods in the retention basin, combined with restoration of the City's Triangle property, provides an appropriate level of habitat replacement, consistent with the landfill postclosure requirements. While it will take several years for the site to replace the habitat values that were lost when the trees were cleared, the Committee believes it is a reasonable approach given the significant site constraints.

Repair Recommendations

1. Establish a small number of Fremont cottonwood trees in the retention basin, consistent with postclosure requirements, to provide some nesting and perching habitat for raptors and other riparian wildlife species near the mound.

The planting should be designed to result in the establishment of at least six large cottonwood trees over time within the deeper portion of the retention basin. The plantings should be separated to avoid establishing a larger continuous tree canopy that could make it more difficult to manage the site. The design would allow Solid Waste Services to mow the grasses under and between the trees as part of their regular maintenance activities.

To help ensure success, the trees should be of local origin and established from cuttings and seeds collected from cottonwood trees growing in similar environments along the lower American River or the Sacramento riparian corridors. Because not all cottonwood trees planted are expected to survive, approximately twelve trees should be planted within the basin to help ensure that six grow to maturity. The plantings should occur between November 2012 and February 2013, following site preparation.

To increase site security, Solid Waste Services should consider additional fencing to prevent unlawful access and activities on the site. Additional security could be provided through increased coordination of patrols conducted by Solid Waste Services and the Parks and Recreation staff.

2. Restore the City's portion of the Triangle area by planting and seeding native trees, native shrubs and other native plants (vines, forbs, and grasses), following removal of the existing non-native plants and preparation of the site.

While the Triangle area may not be an effective place to establish cottonwood trees, it can be restored to provide high quality riparian habitat that helps compensate for the lost habitat values. The property's close proximity to the habitat along the American River Parkway makes this an attractive area to restore for both wildlife values as well as the scenic values enjoyed by park users.

Table 1, Appendix F, includes the recommended list of trees and plants to install in the Triangle area including valley oak, California buckeye, California wild rose, California blackberry, and others. The trees, oak acorns and container plants should be installed between October and

December 2012 when the soils are moist. The trees and plants should also be of local origin and established from cuttings and seeds collected from similar environments along the Lower American River and the Sacramento riparian corridor.

3. Re-establish live oak trees along the western slope of the retention basin, to the extent consistent with postclosure requirements.

This objective could be achieved by allowing the 2-3 live oak trees re-sprouting in this area to grow to maturity and potentially planting up to five strategically placed live oak trees in this area (windrow appearance should be avoided). In addition to providing some habitat value, these trees would help provide more natural appearing vegetation in the primary view shed as seen from Interstate 80 (Business Loop).



4. The sites should be maintained, including watering, for three years to help ensure the establishment of the trees and plants. Monitoring should occur over a seven year period, with potential cost savings by using volunteers to assist with the monitoring program. Vegetation should be re-planted to replace plants that do not survive during the monitoring period. Where appropriate, the planting should be protected with fences, cages, and other techniques to help protect them from animals and vandals until they are established. Signs could also help inform park users and City staff about the need to protect the restoration site, as well as provide opportunities to educate visitors about the habitat and the restoration project.

5. The City should retain qualified riparian restoration experts to prepare the specific restoration design and construction documents and a contractor with expertise and experience in riparian restoration to implement the program. Alternatively, the City might be able to reduce costs by contracting with an organization with extensive experience in riparian habitat restoration to design, construct, and maintain the restoration project.

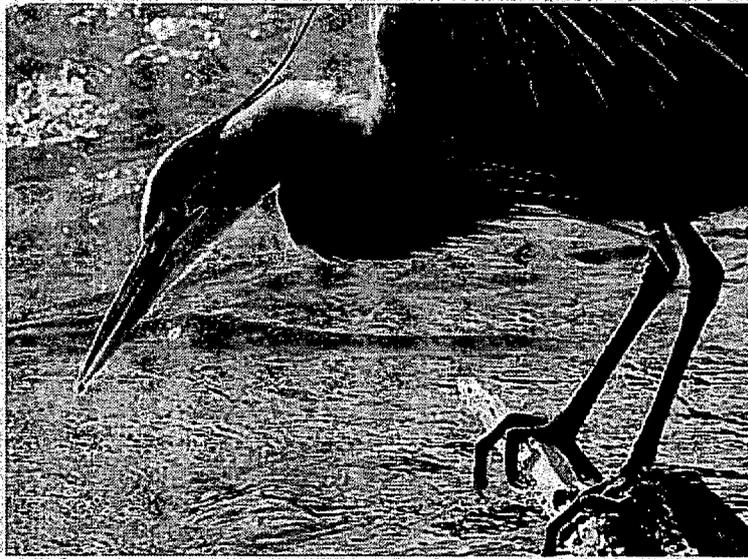
Appendix F includes a more specific description of the recommended restoration actions. Appendix G includes a recommended schedule for implementing the restoration actions.

ENHANCE

Resolution 2011-609 directed the Committee to identify and evaluate strategies to manage the closed landfill in ways that are compatible with the habitat values of and potential uses at Sutter's Landing Park and the American River Parkway.

As indicated above, the City's 2030 *General Plan* recognizes the important connection between Sutter's Landing Park and the American River Parkway. The *General Plan* also provides for the protection and restoration and improvement of the City's wildlife resources and riverfronts:

- "...Sacramento's riverfronts and natural open space areas will be linked to enhance opportunities for walking, bicycling, picnicking, participating in water sports, and appreciating natural open spaces and conservation areas." (ERC2, page 2-251)
- "The City shall promote the preservation and restoration of contiguous areas of natural habitat throughout the city and support their integration with existing and future regional preserves." (CC.ERC 1.5, page 3-CC-11)
- "The City shall retain plant and wildlife habitat areas where there are known sensitive resources (e.g. sensitive habitats, special status, threatened, endangered, candidate species, and species of concern). Particular attention shall be focused on retaining habitat areas that are contiguous with other existing natural areas and/or wildlife movement corridors." (ER2.1.4, page 2-307)



Through proper planning and implementation, the City can provide important leadership to further enhance Sutter's Landing's wildlife, recreational, and educational values, and facilitate even greater enjoyment of the resource by Sacramento's growing population.

There are important examples throughout America where communities have established and enhanced wildlife resources and improved park facilities on closed landfills. Examples include:

- Millennium Park, Boston, Massachusetts
- Cesar Chavez Park, Berkeley, California
- Smith and Bybee Wetlands Natural Area, Portland, Oregon
- Whilamut Natural Area, Eugene, Oregon
- Tiff Nature Preserve, Buffalo, New York

Furthermore, state regulations specifically provide that landfill postclosure sites may be developed "as open space, graded to harmonize with the setting and landscaping with native shrubbery or low maintenance ground cover" (see Appendix H: 27 CCR 21190). The California Department of Resource Recycling and Recovery, which regulates landfill postclosure activities, maintains the informative *Guide to Revegetation and Environmental Restoration of Closed Landfills* to show local agencies ways to meet postclosure requirements, while converting former landfill sites into valuable habitat areas and other open space uses (www.calrecycle.ca.gov/SWFacilities/Closure/revegetate/Part1.htm).

Fortunately, the City (Solid Waste Services) has managed the majority of the postclosure area in ways that enable the site to provide significant habitat values for a wide range of wildlife species. The Committee commends the City for these practices and recommends additional actions to further enhance the wildlife, recreational and educational values at Sutter's Landing Park.

The Committee recognizes that current budget pressures limit the financial contributions the City can make to support significant enhancement activities at this time. However, the Committee believes there are several opportunities for the City to raise significant funding from state, federal, regional and private programs and from other sources for park enhancement activities to supplement City investments. See Appendix I for a more complete discussion of funding opportunities for enhancement activities. For example, the State has provided more than \$750 million for river parkway and restoration projects over the past sixteen years.

Enhance Recommendations



1. Secure grant funding from state, regional, federal and private programs to support enhancement activities.
2. Establish partnerships with nonprofit organizations, academic institutions, and other entities to assist the City in identifying and securing grant funding for enhancement activities, recruiting volunteers, expanding education programs, and implementing enhancement recommendations.
3. Update the *Sutter's Landing Park Master Plan*, recognizing the important habitat, recreational, and educational interconnections between the Park and the American River Parkway, and opportunities to enhance the important habitat values and public uses at Sutter's Landing Park.
4. Prepare a baseline report with maps to document and explain the current habitat values at Sutter's Landing Park and the adjacent portions of the American River Parkway.
5. Continue working with the County of Sacramento to protect and enhance the riparian and other wildlife values along sections of the American River Parkway adjacent to Sutter's Landing Park.
6. Plant native shrubs, grasses, and wildflowers (native forbs) at appropriate locations along the base of the 111-acre mound to increase habitat and wildlife diversity, consistent with postclosure requirements and the Park Master Plan in effect.
7. Identify additional sites appropriate for planting cottonwoods, other native trees, and native understory vegetation to increase shade and enhance habitat for raptors and other wildlife species, consistent with postclosure requirements and the Park Master Plan in effect. (See Appendix F for a recommended palette of native trees, grasses and shrubs.)

8. Authorize limited pilot projects, including projects with academic institutions, to test the feasibility of establishing native grasses and wildflowers (native forbs) on the mound and in the retention basin, and evaluate whether the native plants increase habitat values and reduce long-term maintenance costs (e.g. reduced mowing requirements, reduced fire risk, others).
9. Evaluate and establish grass mowing schedules and methods to enhance habitat values and reduce losses of postclosure-compatible wildlife species. Consider placing signs identifying sensitive habitat areas to assist staff and the public in avoiding damage to these resources.
10. The Parks & Recreation Department should increase interpretive signage and expand the Sutter's Landing Park web pages to include additional interpretive information about the natural and cultural resources at Sutter's Landing Park and the American River Parkway. Interpretive signs could be added along the trails near the base of the mound and along the park's border with the American River Parkway. An interpretive sign could also be added to the Triangle Area facing Interstate 80 (Business Loop) welcoming the public to the City of Sacramento and Sutter's Landing Park, using wildlife images.
11. The Parks & Recreation Department should continue to support educational programs to provide children and other residents with opportunities to learn science and gain greater understanding of the natural and cultural resources at Sutter's Landing Park and the American River Parkway. The General Services Department should consider permitting the Parks & Recreation Department to conduct periodic docent-led interpretive walks to view wildlife resources and scenic views from the mound.
12. Consider long term plans to acquire, restore, and improve lands between existing Sutter's Landing Park west to the Sacramento Northern Parkway (20th Street) bicycle trail and non-City owned lands in the Triangle area when those lands may become available.
13. Improve trails in the Sutter's Landing area to provide safer access to the American River while reducing erosion and displacement of vegetation, improve pedestrian and bicycle trails west of the Union Pacific Railroad tracks, and plan future trail connections between Sutter's Landing Park and the Two Rivers Trail.
14. Continue dedicating billboard revenues to improving Sutter's Landing Park.



PREVENT

Resolution 2011-609 “directed staff to establish policies to avoid a similar situation from occurring again.”

Prevention is often the most cost effective way to avoid the expense of repairing damage after it occurs, as well as to help ensure City policies and state and federal requirements are followed.

Clearer written procedures will help the City meet the twin goals of complying with the landfill postclosure requirements and protecting Sutter’s Landing Park’s natural and recreational resources. Appropriate maintenance of landfill postclosure facilities is important to protect public health and safety, as well as the environment. The postclosure activities should be conducted in a manner that is sensitive to and avoids unnecessary degradation of the Park’s natural, recreational and educational resources.

The Committee notes that several aspects of the situation appear to have been contributors to the tree removal. The underlying objectives of removing the illegal camping site and responding to the LEA (although the LEA never requested the removal of the trees or underlying vegetation) were factors that supported action to improve site security. However, there was time for outreach to the City Council, interested organizations, and the public, as well as required environmental review. The process should have included the opportunity to identify the value of the trees as habitat in advance, identify less damaging project alternatives, and consider other factors as part of the equation. The presence of clear written procedures would not have been overly burdensome to staff, and should, if they were present, have prevented this occurrence.

Prevent Recommendations

1. Establish clearer written policies and procedures for staff to follow to help managers ensure that City policy and state and federal environmental laws are followed and that park resources are not avoidably degraded.

The City should develop written procedures to implement the flow chart developed by staff (see Figure below) to ensure that adequate notice is provided to the City Council, other City departments including Parks & Recreation and Community Development, and where applicable, the public, before actions are approved that go beyond routine postclosure maintenance (see Figure below). The procedures should apply to: (1) proposed removal of any trees or other alterations to a restoration or enhancement area; (2) removal of any of the few remaining trees in other sections of the postclosure area; and, (3) other actions that could result in degradation of the Park’s habitat, recreational, or educational values, or have the potential to cause other significant adverse environmental impacts. The procedures should be designed to ensure compliance with the *2030 General Plan*, *Sutter’s Landing Park Master Plan*, *American River Parkway Plan*, *California Environmental Quality Act*, *California Endangered Species Act*, *Federal Endangered Species Act*, *Federal Clean Water Act*, *Migratory Bird Treaty Act*, fully protected animal laws and other requirements.



The procedures would not apply to routine postclosure maintenance activities as provided in Appendix J. The procedures should also include the use of checklists or other tools to help ensure that the appropriate steps were taken and reviews provided before non-routine maintenance activities are approved.

These procedures will provide City staff with clearer guidance on the steps that must be taken to ensure adequate disclosure and review before non-routine activities are approved. Had these procedures been in place last September, it is unlikely that Solid Waste Services staff would have cleared all of the vegetation from the retention basin.

2. Prepare written procedures and guidelines that clearly delineate routine maintenance activities, as proposed in Appendix H.

Activities consistent with the adopted routine maintenance procedures and guidelines would generally be exempt from the procedures discussed in 1. above. However, some activities considered to be routine may require additional review and possible modifications to avoid significant environmental impacts.

The routine maintenance procedures and guidelines should comply with various requirements, consider ways to protect natural resources related to the Park and the American River Parkway, and avoid potential and unnecessary degradation of recreational, wildlife, or educational values.

3. Prepare a baseline report with maps to document and explain the current habitat values at Sutter's Landing Park and the adjacent portions of the American River Parkway, and identify sensitive wildlife and habitat resources. (Also see Enhancement Recommendation 4.).

The baseline report and maps will help staff identify, locate, and avoid unnecessary degradation of the park's sensitive natural resources. The report should involve cross-department coordination with in-house expertise, as well as participation by external technical experts and community groups.

4. Provide training for City staff.

The City should provide additional training for staff implementing and overseeing landfill maintenance activities regarding: City policies and procedures applicable to the site; state and federal safety and environmental requirements; and ways to avoid harm to the habitat, wildlife, recreational, and educational resources at the park and the adjacent sections of the American River Parkway. An important goal of staff training is to raise awareness on the effects of landfill maintenance on habitat and wildlife.

5. Secure adequate expertise to evaluate proposed actions that could adversely impact natural, educational, and recreational resources before actions are approved.

Access to qualified technical experts can help the City identify and avoid activities that unnecessarily damage the Park's natural and recreational resources. Due to budget limitations, the City currently does not have in-house expertise needed in ecology and other relevant disciplines.

The City should retain either staff or consultants to provide needed expertise to Solid Waste Services, the Department of Parks & Recreation, and Community Development Department to assist them in reviewing proposed actions that could adversely impact natural, recreational, or educational resources in the park or the adjacent American River Parkway.



PUBLIC COMMUNICATION AND OUTREACH

Resolution No. 2011-609 directed staff to form a mitigation committee to develop a plan that includes “providing effective public communication and outreach strategies.”

Public Communication and Outreach Recommendations

1. The Departments of Parks & Recreation, General Services and Community Development should continue to work jointly in implementing public outreach and communication when any anticipated action at the Park or Landfill requires CEQA compliance or significantly impacts Park activities. The Department of Parks & Recreation should maintain a list of stakeholders, community groups, and interested members of the public to contact as part of the public outreach and communication activities.
2. The citizens concerned with Sutter’s Landing Park should form a stakeholder group to present to the Parks & Recreation Commission at least once annually a discussion about Park concerns and ideas. This should be an agenda item so that all stakeholder members have a forum to discuss any concerns regarding the Park. The Commission can then make recommendations to City Council as to compliance with the recommendations of the Tree Removal Mitigation Committee approved by City Council. This stakeholder group should also be encouraged to support and assist the Departments in implementation of the recommendations in this report, and in public communication and outreach by the Departments on Sutter’s Landing Park issues and planning.

(Note: Issues or questions that any stakeholders may have on Sutter’s Landing Park can be directed to either the Department of Parks & Recreation staff and/or the Parks & Recreation Commission: www.cityofsacramento.org/parksandrecreation/prc/.)



IMPLEMENTATION

Implementation of the recommendations approved herein will be the responsibility of the Parks & Recreation and General Services Departments as co-leads. A City staff team will be assembled to develop a work program by no later than April 30, 2012. This initial proposed work program will be provided to the Committee and the Parks & Recreation Commission for its review and comment prior to finalization, and will be subsequently provided as information to the City Council.

Implementation of the Tree Removal Repair (Mitigation) program will take an estimated 12 months, starting in Summer 2012 through 2013, with appropriate maintenance and monitoring activities to continue thereafter. The timeframe for any Enhancement activities will be subject to securing new funding. Implementation timeframes will also be affected by design and construction schedules, volunteer support and seasonal considerations, among other factors. City staff will also partner with organizations including the County of Sacramento, Sacramento Tree Foundation, American River Parkway Foundation and Sacramento Regional Conservation Corps in project execution.

The Department of Parks & Recreation will post the implementation schedule on the Sutter's Landing Park website and provide periodic updates showing the progress in implementing the recommendations included in this report. The Department will also provide periodic updates to the City Council, the Parks & Recreation Commission, and members of the stakeholders group identified in the **PUBLIC COMMUNICATION AND OUTREACH** section of this report.

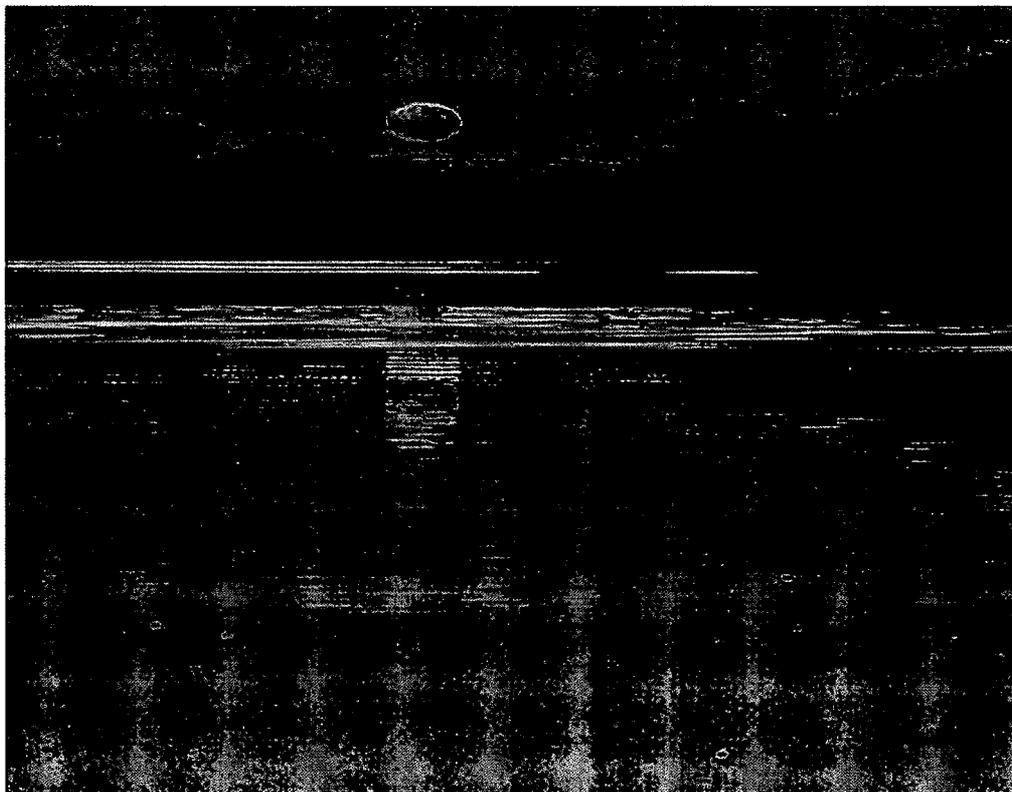


CONCLUSION

Sutter's Landing Park provides an important "gateway" to the American River Parkway for Sacramento area residents, as well as a variety of passive and active recreational opportunities. Additionally, the park provides important habitat for numerous wildlife species and provides opportunities to connect children and other residents with nature and outdoor educational experiences.

The removal of 28th Street Landfill retention basin trees has refocused attention on the important natural and recreational resources that are present at Sutter's Landing Park today, as well as the opportunity to significantly enhance those resources over time for the enjoyment of Sacramento's growing population.

The recommendations included in this report provide a pathway for the City to continue meeting its landfill postclosure requirements, while also protecting and enhancing the Park's natural, recreational, and education values for current and future generations.



APPENDICES

Appendix A.	Sacramento City Council Resolution 2011-609	40
Appendix B.	“Landfill Tree Mitigation” Staff Report to City Council.....	42
Appendix C.	Sutter’s Landing Park Master Plan Adopted 2003.....	47
Appendix D.	Functions and Values Assessment for 28th Street Landfill Tree Removal Mitigation Project.....	49
Appendix E.	List of Plants and Birds at Sutter’s Landing Park.....	60
Appendix F.	Mitigation and Enhancement Approach.....	62
Appendix G.	Recommended Schedule for Implementing Restoration Actions.....	74
Appendix H.	Title 27 California Code of Regulations (CCR) Sections 21135, 21180, and 21190	75
Appendix I.	Funding Opportunities	78
Appendix J.	28 th Street Landfill Routine Maintenance Activities.....	80
Appendix K.	Additional Information Sources.....	84

Randy Smith, June 2007



Appendix A. Sacramento City Council Resolution 2011-609

RESOLUTION NO. 2011-609

Adopted by the Sacramento City Council

November 8, 2011

28TH STREET LANDFILL TREE REMOVAL MITIGATION COMMITTEE

BACKGROUND

- A. During the week of September 26, 2011, cottonwood trees were removed from a storm water detention basin located at the City's closed 28th Street landfill facility to address the significant public health and safety concerns created by a large homeless camp in the basin where methane gas is present.
- B. The Department of Utilities is committed to investigating, developing, and implementing a plan to mitigate the environmental impacts, including full restoration of habitat values lost resulting from the cottonwood tree removal project.
- C. The most efficient and effective process to develop a plan is to convene a committee of community stakeholders and report back to the City Council within 90 days with recommendations.

BASED ON THE FACTS SET FORTH IN THE BACKGROUND, THE CITY COUNCIL RESOLVED AS FOLLOWS:

- Section 1. Staff is directed to form a mitigation committee comprised of community stakeholders including, but not limited to, Friends of Sutter's Landing Park, Friends of Swainson's Hawk, Save the American River Association, the Native Plant Society, and City staff to develop a plan that accomplishes the following goals: 1) identification of the environmental impacts of the cottonwood tree removal including possible loss of habitat value and development of an implementation plan for full restoration of habitat values lost as a result of the project; 2) identification and evaluation of strategies to manage the closed landfill in ways that are compatible with the habitat values of and potential uses at Sutter's Landing Park and the American River Parkway; and 3) providing effective public communication and outreach strategies.
- Section 2. Staff is directed to establish policies to avoid a similar situation from occurring again.
- Section 3. Staff is directed to report back to City Council with recommendations within 90 days.

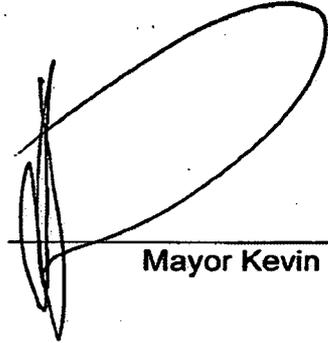
Adopted by the City of Sacramento City Council on November 8, 2011 by the following vote:

Ayes: Councilmembers Ashby, Cohn, D Fong, R Fong, McCarty, Pannell, Schenirer, Sheedy, and Mayor Johnson.

Noes: None.

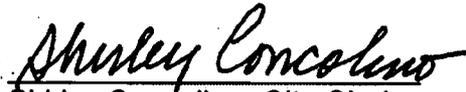
Abstain: None.

Absent: None.



Mayor Kevin Johnson

Attest:


Shirley Concolino, City Clerk

Appendix B. "Landfill Tree Mitigation" Staff Report to City Council



City of Sacramento
City Council
915 I Street, Sacramento, CA, 95814
www.CityofSacramento.org

5

Meeting Date: 11/8/2011

Report Type: Staff/Discussion

Title: Landfill Tree Mitigation

Report ID: 2011-00961

Location: District 3

Recommendation: Adopt a Resolution directing staff to form a mitigation committee to develop a plan that accomplishes the following goals: 1) identification of the environmental impacts of the cottonwood tree removal including possible loss of habitat value and development of an implementation plan; 2) identification and evaluation of strategies to manage the closed landfill in ways that are compatible with potential future land uses at Sutter's Landing Park; and 3) providing an effective public communication and outreach strategies.

Contact: Dave Brent, Interim Director, 808-1420; Dave Brent, Interim Director, (916) 808-1420; Steve Harriman, Integrated Waste General Manager, (916) 808-4949, Department of Utilities

Presenter: Dave Brent, Interim Director, (916) 808-1420; Steve Harriman, Integrated Waste General Manager, (916) 808-4949, Department of Utilities

Department: Department Of Utilities

Division: Solid Waste Administrative Service

Dept ID: 14001711

Attachments:

1-Description/Analysis
2-Resolution.

City Attorney Review

Approved as to Form
Janeth D. San Pedro
11/2/2011 4:15:49 PM

Approvals/Acknowledgements

Department Director or Designee: Dave Brent - 11/2/2011 2:40:01 PM

Eileen Teichert, City Attorney

Shirley Concolino, City Clerk
John F. Shirey, City Manager

Russell Fehr, City Treasurer ^{1 of 5}

Description/Analysis

Issue: During the week of September 26, 2011, approximately 50 cottonwood trees were removed from a one acre storm water detention basin at the 28th street landfill facility by the Department of Utilities (DOU), Solid Waste Division. The triangular detention basin is bordered by Interstate 80 on the south, a railroad levee on the east, and the closed City landfill on the west. The basin is not suitable for public access given the presence of methane gas equipment and groundwater monitoring wells related to the closed landfill facility, and fences have been constructed to maintain site security.

On October 25, 2011, the City Council heard public comment objecting to the tree removal, and the Council directed staff to report on the following four issues:

1. *Investigate how and why the trees were removed and make sure there are policies in place to avoid a similar situation from occurring again.*

Over the past several years, the fences surrounding the landfill have been repeatedly damaged allowing a large homeless camp to be established in the area. The basin was attractive as a homeless camp because of the shade and obscurity provided by the cottonwood trees. Several times, the County of Sacramento Environmental Management Department commented on the significant public health and safety concerns posed by the homeless camp in the area as part of its regulation of the City's post-closure management of the landfill facility. Specifically, Section 21190 of Title 27 of the Public Resources Code requires the City to: 1) protect public health and safety and prevent damage to structures, roads, utilities and gas monitoring and control systems; 2) prevent public contact with waste, landfill gas and leachate; and 3) prevent landfill gas explosions. The homeless camp presented a significant threat to these requirements due to people living in proximity to the closed landfill, repeated tampering with the landfill gas and groundwater equipment in the basin, open fires, propane tanks, etc. The homeless camp also created a dangerous situation for City employees responsible for maintaining the methane gas and groundwater equipment in the basin due to the continuous presence of aggressive dogs and people, human waste, and significant quantities of debris. The trees were removed in a misguided effort to protect and promote public health and safety by discouraging homeless campers from setting up living quarters adjacent to the methane gas equipment.

The City applies and follows the heritage tree process specified in City Code chapter 12.64 for removal of such trees on City property. In this case, however, DOU staff failed to consult with the Urban Forestry Services Division to determine if the cottonwood trees would be considered heritage trees. A cottonwood tree, as a species, is not identified per se as a heritage tree under the City's ordinance, but could qualify as one if the tree has a trunk circumference of 100 inches or more, is of good quality in terms of health, vigor of growth and conformity to generally accepted horticultural standards of shape and location for its species. Additionally, DOU staff mistakenly believed that the tree removal was exempt from the California Environmental Quality Act (CEQA). Upon further review, CEQA review should have been completed prior to the tree removal. To prevent a similar

situation from occurring again, the City will ensure that DOU staff understands and follows CEQA requirements by establishing a management level contact within the Community Development Department for review and consultation on all landfill projects.

2. *Direct the Department of Utilities to prepare, fund, and implement a plan to replace the habitat that was removed from the storm water detention basin.*

As the process above was not followed, no determination has been made to identify the environmental impact of the tree removal. The Department of Utilities, however, is committed to investigating what was in place in the area to determine the environmental impacts of the cottonwood tree removal including the possible loss of habitat, and taking appropriate corrective action including full restoration of any lost habitat resulting from the tree removal. To that extent, DOU will form a mitigation committee to investigate and prepare an implementation plan for consideration and adoption by the City Council within 180 days. The committee may include, but is not limited to, representatives from Friends of Sutter Landing, Friends of the Swainsons Hawk, the Native Plant Society, Save the American River Association, and City staff. The committee will be charged with identifying the environmental impacts of the cottonwood tree removal including possible loss of habitat value; creating an implementation plan including full replacement of any habitat loss; developing a cost estimate and funding source for the implementation plan; and oversight of plan implementation after Council adoption.

3. *Identify management strategies that promote compatibility between the post-closure requirements of the closed landfill facility and potential future land uses at Sutter's Landing Park.*

The proposed mitigation committee would also be tasked with identifying and evaluating management strategies which would be included in the report to the City Council within 180 days.

4. *Meet with the public to inform them of actions being planned.*

The mitigation committee meetings will be open to the public. In addition, public information and outreach strategies in the report to the City Council within 180 days.

Policy Considerations: The mitigation committee will be charged with the development of an action plan that is consistent with City policy and CEQA.

Environmental Considerations: Formation of a mitigation committee is considered an administrative activity by a governmental agency and therefore not subject to CEQA pursuant to Section 15378 of the CEQA Guidelines. However, the recommendations of the mitigation committee may be subject to CEQA review and will be addressed accordingly.

Sustainability: The Department of Utilities is committed to managing the closed landfill facility in ways that promote sustainability of riparian habitat on the American River Parkway and compatibility with future land uses at Sutter's Landing Park. The proposed mitigation committee will assist with the development and implementation of management principles and strategies to meet these objectives. ³ of 5

Commission/Committee Action: NA.

Rationale for Recommendation: The mitigation committee will include community stakeholders to develop a plan that accomplishes the following goals: 1) identification of the environmental impacts of the cottonwood tree removal including possible loss of value, and development of an implementation plan; 2) identification and evaluation of strategies to manage the closed landfill in ways that are compatible with potential future land uses at Sutter's Landing Park; and 3) providing an effective public communication and outreach strategies.

Financial Considerations: The cost to implement recommendations of the mitigation committee and funding source will be included in the report to the City Council.

Emerging Small Business Development (ESBD): NA

(NOTE: Resolution revised prior to adoption—see Appendix A)



RESOLUTION NO.

Adopted by the Sacramento City Council

28TH STREET LANDFILL TREE REMOVAL MITIGATION COMMITTEE

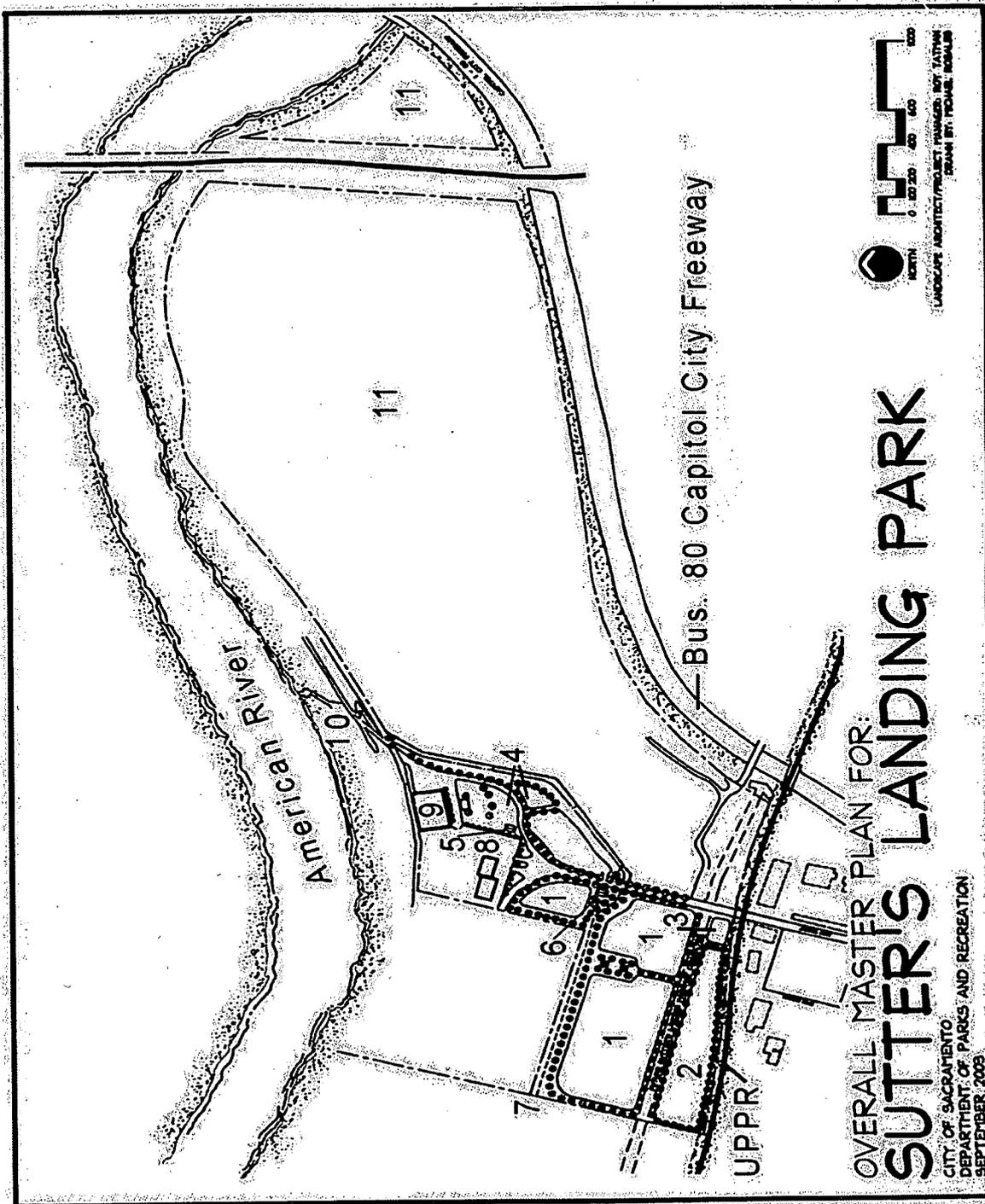
BACKGROUND

- A.** During the week of September 26, 2011, cottonwood trees were removed from a storm water detention basin located at the City's closed 28th street landfill facility to address the significant public health and safety concerns created by a large homeless camp in the basin where methane gas equipment is present.
- B.** The Department of Utilities is committed to investigating, developing, and implementing a plan to mitigate the environmental impacts; including possible loss of habitat value, resulting from the cottonwood tree removal.
- C.** The most efficient and effective process to develop a plan is to convene a committee of community stakeholders and report back to the City Council within 180 days with recommendations.

BASED ON THE FACTS SET FORTH IN THE BACKGROUND, THE CITY COUNCIL RESOLVES AS FOLLOWS:

- Section 1.** Staff is directed to form a mitigation committee comprised of community stakeholders including, but not limited to, Friends of Sutter's Landing Park, Friends of Swanson Hawk, Save the American River Association, the Native Plant Society, and City staff to develop a plan that accomplishes the following goals: 1) identification of the environmental impacts of the cottonwood tree removal including possible loss of habitat value and development of an implementation plan; 2) identification and evaluation of strategies to manage the closed landfill in ways that are compatible with potential future land uses at Sutter's Landing Park; and 3) providing an effective public communication and outreach strategies.
- Section 2.** Staff is directed to report back to the City Council with recommendations within 180 days.

Appendix C. Sutter's Landing Park Master Plan Adopted 2003



(see Master Plan Legend below)

2003 Adopted Park Master Plan Elements *(Legend to prior page)*

1. Active recreation court and field areas
2. Dog Park
3. Additional parking
4. Passive recreation and court areas
5. Restroom
6. Concession
7. Connection to Two Rivers Trail
8. Park Operations and Recreation Offices
9. Skatepark in existing baler building
10. River Access
11. Future Natural Areas

Appendix D. Functions and Values Assessment for 28th Street Landfill Tree Removal Mitigation Project



H. T. HARVEY & ASSOCIATES
ECOLOGICAL CONSULTANTS

MEMORANDUM

Project #: 3355-01

FROM: Debra Bishop, M.S.
Senior Associate Restoration Ecologist

TO: J. P. Tindell
Park Planning & Development Manager

CC: Steve Harriman, City of Sacramento, Integrated Waste General Manager; Corey Brown, City of Sacramento Tree Mitigation Committee

DATE: 20 January 2012

SUBJECT: Functions and Values Associated with the 28th Street Landfill Tree Removal Mitigation Project

On Wednesday, 4 January and Monday 16 January 2012, H. T. Harvey & Associates conducted reconnaissance-level field surveys of the 28th Street Landfill Tree Removal Mitigation Project (LTRMP) site to document present conditions, identify changes from baseline conditions and assess the affected biological resources. The following is a description of the project vicinity and site, pre-project (baseline) habitat functions and values, present conditions, impacts to biological resources, and preliminary recommendations for full replacement of habitat functions and values.

REGIONAL SETTING AND CONTEXT

The project site, located within Sutter's Landing Park (Park), is situated within the American River riparian zone and serves as important wildlife habitat within the City of Sacramento. It is in one of the richest areas for raptors on the American River Parkway, especially for Swainson's hawk, because of the mature trees, open grasslands, and proximity to the Yolo Bypass and the agricultural fields north of Interstate 80. The project site was impacted in September 2011 by the removal of a 1-acre (ac) cottonwood forest from a water retention basin at the eastern end of the Park.

FUNCTIONS AND VALUES

Natural riparian areas are dynamic systems characterized by complex interactions between hydrologic, geomorphologic, and biotic factors. Meandering rivers transport and deposit sediment to form point bars, cut banks, and floodplains. These geomorphic features support a mosaic of highly connected, early to late successional plant communities suited to specific soil and



hydrologic conditions. Plant communities within riparian zones are diverse, both in species composition and structure. The riparian forests of the Central Valley are composed of trees, shrubs, herbaceous plants, and vines that form a matrix of canopy layers. This compositional and structural diversity contributes to the overall ecological functions and values of riparian zones including energy flow, nutrient cycling, sediment transport, flood attenuation, groundwater recharge, and wildlife habitat, among others.

Riparian forest regeneration and other successional processes along the American River are limited by constraints imposed by levees and human development. The establishment of the LTRMP site cottonwood forest was unusual because cottonwood recruitment more commonly occurs on newly deposited coarse-textured soils on point bars with specific hydrologic conditions, not on old, deep, dry, fine-textured soils such as those found at the project site (Mahoney and Rood 1998). Historical aerial photographs indicate the stand was approximately 13 years old and may have established during the ninth wettest winter on record for Sacramento (1997-1998). It is unlikely that a cottonwood forest would reestablish on its own at the project site due to generally dry conditions. Young forest stands, such as the one that established on the project site, are of significant value because they provide excellent early seral habitat for a large subset of Central Valley riparian bird species and contribute to the overall connectivity and habitat diversity along the American River corridor.

Prior to the project impacts in September 2011, vegetation in the retention basin was identified in a Biological Resource Assessment for the 28th Street Landfill (Analytical Environmental Services 2011). Fremont cottonwood (*Populus fremontii*) was the dominant overstory species, and developed into a relatively dense grove together with other species, such as box elder (*Acer negundo*), Oregon ash (*Fraxinus latifolia*), interior live oak (*Quercus wislizeni*), valley oak (*Quercus lobata*), and black walnut (*Juglans hindsii*). Willow (*Salix* sp.) may have also been present (D. Self personal communication 2011). The estimated number of trees present prior to removal was somewhere between 100 and 200 individuals (D. Self pers. comm. 2011; J. Olesen pers. comm. 2012) within the 1-acre area. Understory vegetation was primarily non-native upland species including oat (*Avena* sp.), soft chess (*Bromus hordeaceus*), annual dogtail (*Cynosurus echinatus*), Italian thistle (*Carduus pycnocephalus*), riggut grass (*Bromus diandrus*), field hedge parsley (*Torilis arvensis*), and foxtail barley (*Hordeum* sp.) (Analytical Environmental Services 2011). Most of the ground was trampled, bare or covered with tarps, belongings and trash (D. Self pers. comm. 2011)

A blue elderberry (*Sambucus nigra* ssp. *caerulea*) shrub that appears to be resprouting within the water retention basin was observed by the HTH ecologists (Photos 1 and 2). Blue elderberry is the host plant for the federally listed valley elderberry longhorn beetle (VELB) (*Desmocerus californicus dimorphus*). VELB is found only in association with blue elderberry and requires the shrub for each stage of its life cycle (U.S. Fish and Wildlife Service 2006). In its current condition,

the habitat quality that the shrub may have represented for VELB and occupancy of the shrub by VELB can not be determined.

The cottonwood forest likely hosted mammals and riparian obligate birds based on the size, age and height of the cottonwood trees, and especially its close proximity to the existing riparian habitat along the American River. This proximity was important as the habitats together provide a larger area for foraging and nesting. The young cottonwood stand could have provided shade and refuge for a number of mammals associated with this habitat type including skunks, raccoons, beavers, coyote, and mule deer. But the habitat value to mammals was reduced due to illegal camping and related activities that were occurring within the site. It was probably also important wintering and migratory stopover habitat for a variety of riparian bird species.

During the January 2012 reconnaissance-level surveys of the project area, H. T. Harvey & Associates' ecologists identified, in the adjacent existing riparian habitat, many of the species expected to be found in good quality riparian and open habitats including: white-tailed kite, red-tailed hawk, red-shouldered hawk, peregrine falcon, killdeer, California gull, American kestrel, mourning dove, Anna's hummingbird, Nuttall's woodpecker, downy woodpecker, northern flicker, black phoebe, Say's phoebe, American crow, western scrub-jay, Bewick's wren, house wren, oak titmouse, ruby-crowned kinglet, American robin, hermit thrush, western bluebird, phainopepla, American pipit, yellow-rumped warbler, orange-crowned warbler, California towhee, spotted towhee, golden-crowned, white-crowned, savannah, song and Lincoln's sparrows, red-winged blackbird, Brewer's blackbird, western meadowlark, purple finch, house finch, lesser goldfinch and American goldfinch. With the exception of killdeer, California gull, Say's phoebe, American pipit and western meadowlark, all of these species could be expected to have occurred in the cottonwood stand during winter seasons prior to its removal and many of these species are resident and could have bred in the stand as well.

Large cottonwood trees often provide many natural cavities for wood ducks, western screech-owls, American kestrel, and mammals such as bats and raccoons, as well as provide good substrate for woodpecker cavities used by western bluebird, oak titmouse, wrens, and tree swallow in addition to three woodpecker species. The cottonwoods that were removed were likely to have been too small and young to have offered maximum value to cavity species, but they were likely sufficiently large to have had at least a few woodpecker cavities. In its current state, the site is dominated by ruderal upland vegetation, primarily annual grasses and forbs and holds very little value for birds other than killdeer and perhaps a few foraging savannah and white-crowned sparrows (Photo 3).

In summary, the 1-ac cottonwood forest provided medium quality native riparian habitat for a number of wildlife species. The young stand functioned as an early-successional forest in a riparian system whose dynamic processes are limited by levees and development, and it

contributed to the overall connectivity of riparian habitats along the American River. It was comprised of several native riparian tree species as well as a lower quality understory of annual grasses and forbs.

MITIGATION AND ENHANCEMENT APPROACH

The mitigation and enhancement approach proposed below was developed to achieve the following goals:

- Restore and establish sustainable native riparian plant diversity.
- Improve habitat for raptors, riparian obligate birds and other wildlife.
- Provide habitat for VELB by including blue elderberries in the planting plan.
- Improve riparian connectivity in the American River riparian corridor.
- Enhance visual aesthetics, and
- Discourage illegal camping at Sutter's Landing Park.

Habitat values lost as a result of the tree removal could be mitigated in part by actively restoring cottonwood forest to the water detention basin. Once established, cottonwoods and other species would likely be self-sustaining at this location. Additional mitigation would be needed to fully compensate for the temporal loss of habitat at the project site. This additional mitigation could be provided at a proposed mitigation site east of the project area, in what is known as the Triangle Area (Photo 4). The proposed mitigation area covers approximately 2.5 acres, and a program to establish high quality native habitat would provide substantial mitigation value.

The proposed mitigation area currently is vegetated with highly disturbed annual grassland habitat that may support small mammals (e.g., meadow vole, cottontail, and black-tailed hare), reptiles (western rattlesnake and lizards) and a number of birds such as sparrows, towhees and goldfinches (Photo 5). Revegetating this site with riparian habitat (additional native trees, shrubs, vines and herbaceous species) in high densities would increase the wildlife carrying capacity of the site and attract more riparian obligate birds and nesting raptors. Ideally more in-kind mitigation would be provided by establishing cottonwoods, however the hydrology of this site is likely marginal for cottonwoods, and some grading should be considered to concentrate rainfall in areas that could support cottonwoods. A series of swales or ditches could be constructed in undulating parallel lines that would provide a wetter growing medium for species such as cottonwoods and willows. Such topography might also dissuade illegal camping in the area due to the uneven ground surface. In the higher terrace area, upland riparian species [such as blue elderberry, box elder, California coffeeberry (*Frangula californica*), California rose (*Rosa californica*), coyote brush (*Baccharis pilularis*), and valley oak] could be established to provide a diverse mosaic of habitat within the triangle. Any planting associated with this project should be consistent and in accordance with the USFWS Conservation Guidelines for the VELB (USFWS, 1999).

If this mitigation and enhancement approach is considered acceptable then the next step would be to develop a conceptual plan for revegetating these areas with the target plant species. This concept plan could then be used as a basis for estimating potential cost of implementation and maintenance, discussion with the stakeholders, resource agencies, and other interested parties as appropriate.

REFERENCES

- Analytical Environmental Services. 2011. Biological Resources Assessment. City of Sacramento 28th Street Solar Photovoltaic Farm. August.
- Jones & Stokes. 2002. River Corridor Management Plan for the Lower American River. Vegetation and Wildlife Management Element. January.
- Mahoney, J. M. and S. B. Rood. 1998. Streamflow requirements for cottonwood seedling recruitment – an integrative model. *Wetlands* 18:634-645.
- Olesen, J. 2012. Personal communication. Sr. Landfill Engineering Technician. Public Works. City of Sacramento. 4 January.
- Self, D. 2011. Personal communication. California Native Plant Society. 17 December.
- U.S. Fish and Wildlife Service. 1999. U.S. Integration of Guidance from USFWS Conservation Guidelines for the Valley Elderberry Longhorn Beetle. July.
- U.S. Fish and Wildlife Service. 2006. Valley Elderberry Longhorn Beetle (*Desmocerus californicus dimorphus*). 5-Year- Review: Summary and Evaluation. Sacramento Fish and Wildlife Office. Sacramento, California. September.

REPRESENTATIVE PHOTOS



Photo 1: Blue elderberry observed in the bottom of the retention basin at the 28th Street Landfill Tree Removal Site on 16 January 2012.

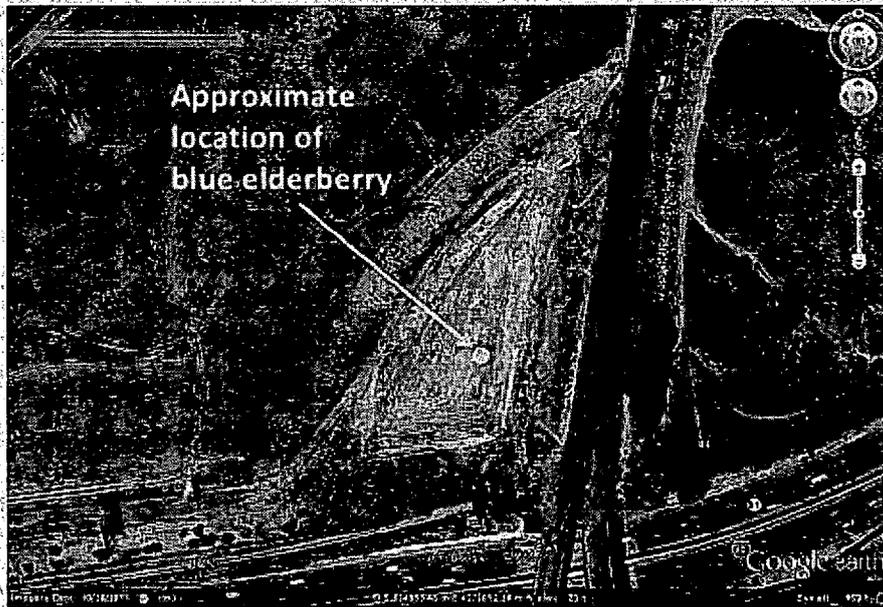


Photo 2: Approximate location of the blue elderberry observed in the bottom of the retention basin on 16 January 2012.

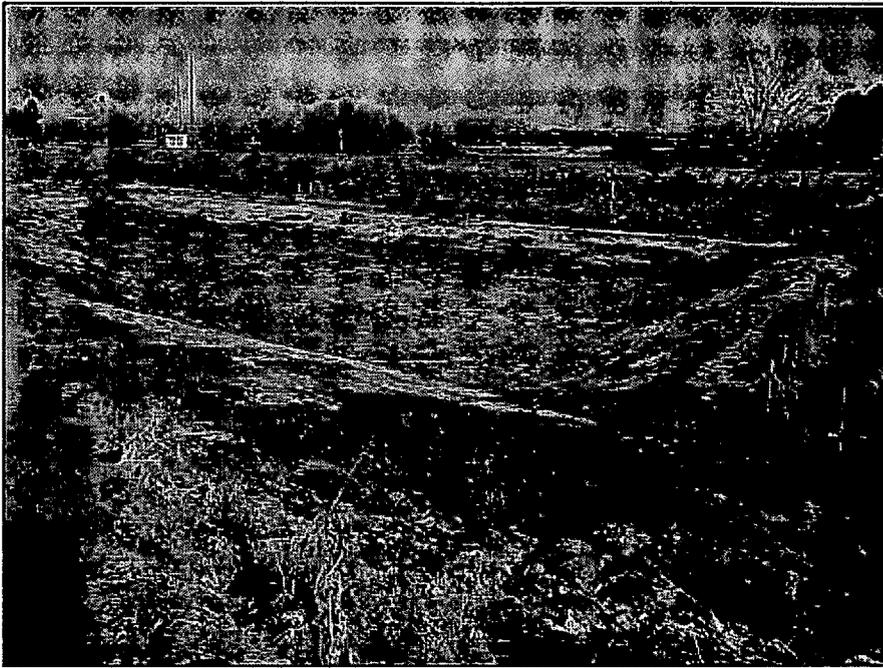


Photo 3: Tree removal site, 4 January 2012.

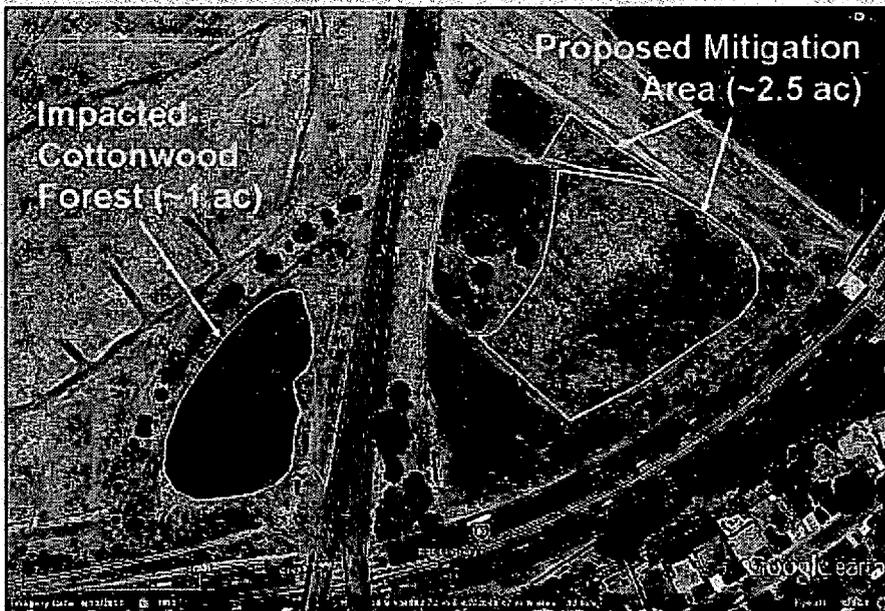


Photo 4: Impacted cottonwood forest (project site) and proposed mitigation site (Triangle Area). Aerial photo taken 13 June 2011.

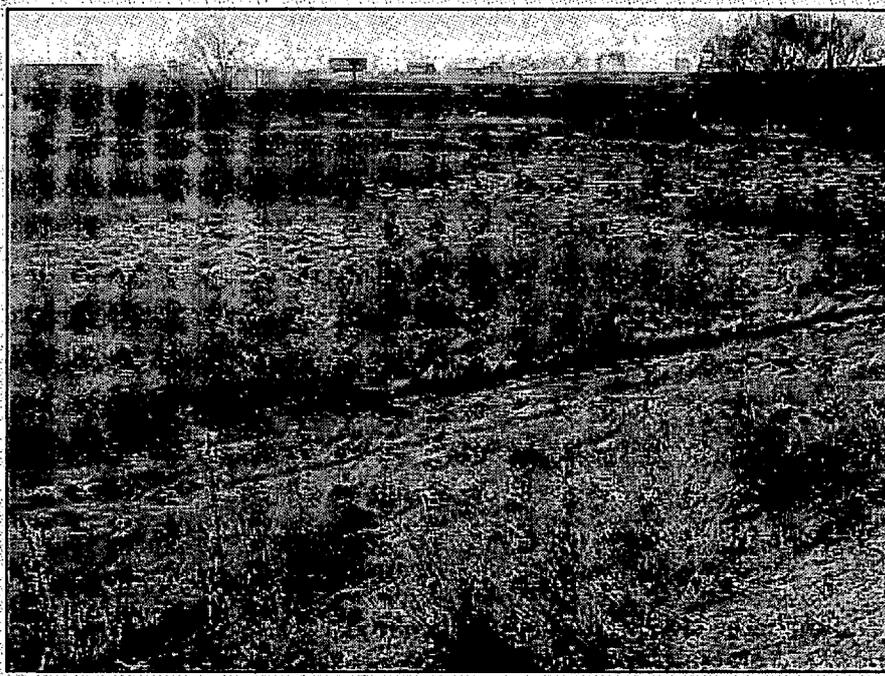


Photo 5: Annual grassland dominated by yellow star thistle at the proposed mitigation site in the Triangle Area, 4 January 2012.

Prepared by H.T. Harvey & Associates, January 24, 2102

(intended as addition to Functions & Values Memo dtd. 1/20/12)

Riparian Habitat Mitigation Ratios

The assessment of an appropriate mitigation ratio for impacts to the impacted riparian habitat was based first of all on an assessment of the ecological functions and values of the impact site by conducting a reconnaissance of the vegetation, wildlife use, hydrology, degree of habitat disturbance, connectivity with a riparian corridor, and other factors that could affect the ecosystem. Because the habitat had been removed prior to the assessment, aerial photos, past reports, discussions and correspondence with those familiar with the site, and observation of nearby habitats were used to inform the assessment.

The vegetation known to have occurred on the site was considered with respect to how it qualified for three broad categories: high, medium, and low quality habitat.

High quality - Native overstory with continuous understory or occurring in dense thickets; dense native overstory with sparse, non-native or no understory; and native willow thicket.

Medium quality - Sparse native overstory with sparse, non-native or no understory, non-native overstory with native understory, and dense non-native overstory with sparse, non-native or no understory.

Lower quality - Sparse non-native overstory with sparse, non-native or no understory. In addition, any areas *not* included in medium or high quality categories that are covered with riprap, gabions, etc. (e.g., ruderal habitat and bare ground).

These habitat quality categories are based on observed vegetation characteristics that correspond to the site's ability to support wildlife functions and values. The consideration of wildlife use of the impact site is further informed by the observations of a qualified wildlife biologist who examined information on the impact site and also conducted a reconnaissance of adjacent riparian habitats. The site was subject to extensive, sustained disturbance by long-term illegal campers causing a negative effect on the habitat values at the site. It is also separated from the American River riparian corridor by several hundred feet of open grasslands, railroad embankment, landfill infrastructure, and dirt roads, thus eliminating direct connectivity to the riparian corridor.

Based on that reconnaissance survey and additional research, it is our opinion that the vegetation of the impact site met the definition of medium to high quality habitat, as it had predominant cover by fairly mature high value native riparian trees but was subject to significant disturbance by the illegal campers and is not connected to the riparian corridor. The cottonwood forest is also an early seral habitat type a formerly common type of community within riparian corridors but occurrences are increasingly rare due to high floodplain elevations adjacent to the American River.

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The mitigation ratios generally associated with the habitat quality categories cited above are 3:1 for high quality, 2:1 for moderate quality, and 1:1 for lower quality. These ratios are also supported by the following factors, in addition to the quality of the habitat:

1. Temporal habitat loss (how long will it take to fully replace this lost habitat?)
2. Known risk that not all mitigation installed will be fully successful
3. Suitability of the proposed mitigation areas to support habitat that replaces the impacted habitat type in-kind

Moderate to high quality riparian habitat, as described briefly above, consists of large native trees therefore, the proposed mitigation area will need to establish a fairly mature riparian forest before it will have fully replaced the functions and values of the impacted habitat. Generally it takes more than 15-25 years for native riparian trees to develop into mature specimens, however in the case of the retention basin, we know the site was less than 14 years old. In determining ratios, it is also important to consider that as the installed vegetation establishes, some of it may fail due to natural (drought, insects and disease, etc.) and human (vandalism, poor maintenance, etc.) related factors.

The mitigation areas that appear available are the impact site retention basin and an adjacent area (triangle) across the railroad tracks. The impact site could likely be revegetated with the same mix of species originally impacted, thus providing 1:1 in-kind mitigation within approximately 15 years. The triangle site is not suitable for cottonwood, willow, etc. but could be revegetated with other native riparian tree and shrub species thus providing out-of-kind mitigation.

Given the considerations described above and based on our best professional judgment, a mitigation ratio between 2.5:1 to 3:1, on an acreage basis, would be appropriate due to temporal loss and other factors as described above. If the retention basin can be revegetated then the lower ratio would suffice, because in-kind mitigation would be provided at least partially. If all of the mitigation is out-of-kind at the triangle site, then 3:1 would be appropriate. These ratios would, within a period of approximately 15 years, result in an accumulation of habitat functions and values in the mitigation areas that will fully compensate for the impacts. It is also significant to note that these ratios and the success of the mitigation assumes that the sites will be kept relatively free of human disturbance, such as those using the site for illegal camping.

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Appendix E. List of Plants and Birds at Sutter's Landing Park

Table 1. Plants observed at the 28th Street Landfill Tree Removal Mitigation Project Site on 4 January 2012. This is not meant to be a comprehensive list and includes species observed on Union Pacific Railroad and City property. Some plants were not identifiable due to the timing of the survey, the level of effort, and the phenology of the plants. Nomenclature and status follow The Jepson Manual, Second Edition and the California Invasive Plant Council (Cal-IPC).

Family	Scientific Name	Common Name	Status ¹
Adoxaceae	<i>Sambucus nigra</i> ssp. <i>caerulea</i>	blue elderberry	N
Asteraceae	<i>Centaurea solstitialis</i>	yellow star thistle	I
	<i>Erigeron Canadensis</i>	horseweed	N
	<i>Senecio vulgaris</i>	common groundsel	E
	<i>Silybum marianum</i>	milk thistle	I
Brassicaceae	<i>Brassica nigra</i>	black mustard	I
	<i>Raphanus sativus</i>	wild radish	I
Cupressaceae	<i>Sequoia sempervirens</i>	coast redwood	N
Fabaceae	<i>Robinia pseudoacacia</i>	black locust	I
	<i>Trifolium</i> sp.	clover	E
	<i>Vicia</i> sp.	vetch	E
Geraniaceae	<i>Erodium botrys</i>	broad leaf filaree	E
	<i>Erodium cicutarium</i>	red stemmed filaree	I
	<i>Geranium</i> sp.	geranium	E
Plantaginaceae	<i>Plantago lanceolata</i>	English plantain	I
Poaceae	<i>Avena</i> sp.	wild oat	I
	<i>Bromus diandrus</i>	ripgut brome	I
	<i>Bromus hordeaceus</i>	soft brome	I
	<i>Festuca perennis</i>	Italian ryegrass	E
	<i>Hordeum</i> sp.	barley	E
Polygonaceae	<i>Rumex crispus</i>	curly dock	I
Rosaceae	<i>Rubus armeniacus</i>	Himalayan blackberry	I
Rubiaceae	<i>Galium</i> sp.	bedstraw	N
Salicaceae	<i>Populus fremontii</i>	Fremont cottonwood	N
Sapindaceae	<i>Acer negundo</i>	boxelder	N
Vitaceae	<i>Vitis californica</i>	California wild grape	N

¹ N = native; E = exotic or non-native; I = invasive and having limited, moderate, or high impacts statewide as rated by Cal-IPC.

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Table 2. Birds observed at the 28th Street Landfill Tree Removal Mitigation Project Site on 4 January 2012.

Common Name	Number Observed
Canada goose	10
common goldeneye	8
white-tailed kite	2
red-shouldered hawk	1
red-tailed hawk	1
peregrine falcon	1
killdeer	30
California gull	1
mourning dove	1
Anna's hummingbird	1
downy woodpecker	1
black phoebe	2
Say's phoebe	2
western scrub-jay	2
yellow-billed magpie	1
American crow	4
oak titmouse	2
bushtit	10
Bewick's wren	1
house wren	1
ruby-crowned kinglet	2
American robin	1
phainopepla	1
orange-crowned warbler	1
yellow-rumped warbler	14
spotted towhee	2
California towhee	2
Savannah sparrow	4
Lincoln's sparrow	2
white-crowned sparrow	4
golden-crowned sparrow	8
western meadowlark	2
house finch	1
American goldfinch	2

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Appendix F. Mitigation and Enhancement Approach

MITIGATION AND ENHANCEMENT APPROACH

The proposed habitat restoration at the 28th Street Landfill Tree Removal Mitigation Project site provides an opportunity to establish high quality riparian habitat comprised of locally-native species appropriate to the site. A variety of native trees and shrubs of local genetic origin that currently occur adjacent to the site within the lower American River Parkway would be established.

The Project site consists of two properties located east of the Landfill, north of the Capital City Freeway, and south of the American River (Figure 1). The approximately 1.0 acre (ac) property west of the Southern Pacific Railroad is the impacted site where approximately 1.0 ac of cottonwood forest was removed in September 2011. Fremont cottonwood (*Populus fremontii*) was the dominant overstory species in a relatively dense grove that included other riparian species, such as box elder (*Acer negundo*), Oregon ash (*Fraxinus latifolia*), interior live oak (*Quercus wislizeni*), valley oak (*Quercus lobata*), and black walnut (*Juglans hindsii*). Willow (*Salix* sp.) may have also been present (D. Self personal communication 2011). The estimated number of trees present prior to removal was somewhere between 100 and 200 individuals (D. Self pers. comm. 2011; J. Olesen pers. comm. 2012). Understory vegetation consisted of non-native upland species. However, most of the ground was trampled, bare or covered with tarps, belongings and trash (D. Self pers. comm. 2011). The approximately 2.3 ac property east of the Southern Pacific Railroad, in what is known as the Triangle Area, is vegetated with highly disturbed non-native annual-grassland habitat.

CONTROL OF INVASIVE EXOTIC PLANTS

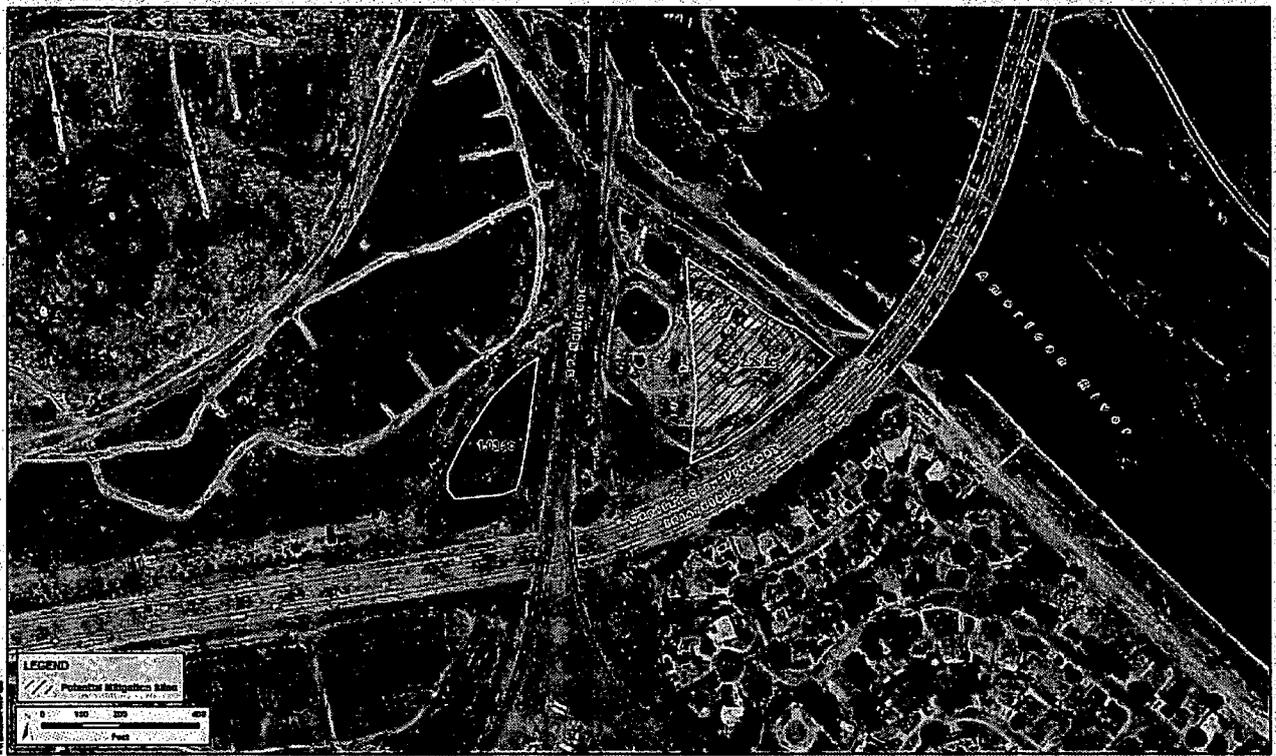
The Project site supports substantial stands of invasive non-native yellow star thistle (*Centaurea solstitialis*) in the Triangle Area. Because invasive plant species effectively compete with native species for space, nutrients, pollinators, sunlight, and water, control and eradication of the existing stands of invasive plant species would allow existing native vegetation to thrive, create space for native vegetation to be established and reduce the spread of invasive species in the future.

The control of invasive species at the Project site would primarily include physical and chemical methods or a combination of both. The technique used on any given species would vary based upon the known effectiveness of different techniques on each species and the cost associated with each method. In all cases, care would be taken in the planning for and application of herbicides to avoid inadvertent impacts to desirable native species and impacts to water quality, people, and wildlife. As a result, the use of herbicides on a habitat restoration site generally requires that a written recommendation be developed by a certified pest control advisor before herbicides are applied. This recommendation would be developed during the detailed design phase of the project.

PLANTING PLAN

At this stage of conceptual design, the predicted post construction soil texture, plant available soil moisture, and depth of seasonal groundwater levels are not fully understood. The specific

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Figure 1: Potential Mitigation Sites
Sacramento 28th Street Landfill (2322-01)
January 2012

locations where each plant species would be established are dependent upon a better understanding of these parameters. Thus, the planting approach for woody vegetation would be further developed as part of the detailed design effort that would include incorporation of information gathered on groundwater hydrology and soil conditions. Based on habitat compositions typical to this region and what is currently growing within the lower American River riparian corridor, species such as willow and Fremont cottonwood would be planted within the bottom of the retention basin. More drought tolerant species like valley oak and California buckeye (*Aesculus californica*) would be planted throughout the Triangle Area. California wild rose (*Rosa californica*), and California blackberry (*Rubus ursinus*) would be planted within each site and concentrated around their perimeters to discourage trespassing. Table 1 lists the woody species likely to be included in the cottonwood forest planting mix for the retention basin. Table 2 lists the woody species likely to be included in the riparian forest planting mix for the Triangle Area.

Table 1. Plant Species Mix for Retention Basin.

Scientific Name	Common Name
<i>Acer negundo</i>	boxelder
<i>Baccharis salicifolia</i>	mule fat
<i>Fraxinus latifolia</i>	Oregon ash
<i>Populus fremontii</i>	Fremont cottonwood
<i>Quercus lobata</i>	valley oak
<i>Quercus wislizeni</i>	interior live oak
<i>Rosa californica</i>	California wild rose
<i>Rubus ursinus</i>	California blackberry
<i>Salix gooddingii</i>	Goodding's black willow
<i>Salix laevigata</i>	red willow
<i>Salix lasiolepis</i>	arroyo willow
<i>Sambucus nigra ssp. caerulea</i>	blue elderberry

Table 2. Plant Species Mix for Triangle Area.

Scientific Name	Common Name
<i>Aesculus californica</i>	California buckeye
<i>Artemisia douglasiana</i>	mugwort
<i>Baccharis pilularis</i>	coyote brush
<i>Populus fremontii</i>	Fremont cottonwood
<i>Quercus lobata</i>	valley oak
<i>Quercus wislizeni</i>	interior live oak
<i>Rosa californica</i>	California wild rose
<i>Rubus ursinus</i>	California blackberry

PLANT PROCUREMENT

All propagules used for restoration at the Project site would be of local origin and would be established from cuttings and seeds collected from populations growing in similar environments within the lower American River or Sacramento River riparian corridors within 5 miles of the site. Container plants to be installed within the mitigation site would be contract grown by a plant nursery that specializes in propagating native plants. If not already available at a native plant nursery, this generally requires 8-12 months lead-time to collect propagules and contract grow the desired plants.

PLANT INSTALLATION

All recommended container plants would be installed in augured holes between September and December. Oak acorns would be installed between October and December when soils are moist but the acorn's radicals have not yet fully developed. The recommended cottonwood and willow cuttings would be harvested and installed between January and February. All container plants, acorns, and cuttings would be irrigated immediately following installation.

NATURAL RECRUITMENT

Native plant species naturally recruiting with the mitigation sites would be encouraged. Maintenance crews would be trained to recognize native woody plants species that may naturally recruit on site to avoid inadvertent removal of these plants.

IRRIGATION

All plantings at the Project site would be irrigated for 3 years with a temporary irrigation system that may consist of drip, bubbler, spray, and/or a combination of irrigation methods. The irrigation system would be charged by a water truck. Approximately 10 gallons of water would be applied per container planting per irrigation event. In Year-1, the woody riparian plantings would be irrigated with enough regularity (approximately 2-4 times per month), from March through October, to keep the soil within the plant-rooting zone moist. The irrigation schedule in Year-2 and beyond would be less frequent and would be based on the soil moisture requirements of the plant communities. Irrigation would be done to train rooting using deep watering techniques to the extent feasible. Irrigation of the mitigation plantings will be assessed to determine if they are being irrigated with sufficient regularity. The irrigation schedule may be modified based on climatic and/or edaphic (soil) conditions to ensure vigorous plant growth during the summer months and/or times of drought. The irrigation system may be damaged as a result of vandalism or rodent activity. Therefore, any component of the system deemed non-functioning during the plant establishment period would be repaired as part of regular site maintenance.

SIGNAGE

Educational signage would be placed along the fencing to discourage disturbance to the developing habitat.

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MAINTENANCE AND MONITORING

The Project site would be maintained and monitored for 3 years during the plant establishment period. A schedule of maintenance and monitoring activities is provided in Table 3.

Table 3. Maintenance and Monitoring Schedule.

Task		Month												
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Monitoring	Percent survival													
	Percent cover													
	Tree height													
	Plant health and vigor													
	Natural recruitment													
	Photo-documentation													
Maintenance	Irrigation application ¹													
	Weed control													
	Debris removal													
	Irrigation system repair and maintenance													
	Dead plant replacement													

¹Irrigation of the mitigation plantings will be assessed to determine if they are being irrigated with sufficient regularity. The irrigation schedule may be modified based on climatic and/or edaphic (soil) conditions to ensure vigorous plant growth during the summer months and/or times of drought.

An adaptive management strategy would be utilized to ensure the successful establishment of the riparian habitat. Those species that are well adapted to the site and have high health and vigor would generally be used to replace dead plants. Weeds within each planting basin and through the site as a whole would be controlled on a regular basis. The irrigation system would be maintained and repaired if damage to the system occurs through vandalism, rodent activity, or other disturbance. Measures would be taken to protect native plant species that establish through natural recruitment. At a minimum, these species would be identified and protected prior to and during weed control activities. Unnatural, inorganic debris and trash deposited on the site will be removed on a regular basis, as practical.

Annual monitoring of the site by a qualified biologist would determine if the project is fulfilling its mitigation obligations. Percent cover and plant survival would be used as primary indicators

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of successful establishment of riparian habitat. In addition, tree height, plant health and vigor, and natural recruitment will be used as indicators of mitigation success. Photo-documentation of the site would be conducted from a number of fixed locations. Photographs would also be taken to record any event that may significantly affect the success of the mitigation such as fire, vandalism, or other disturbance. Both performance criteria and trend characteristics would be used to monitor and evaluate the extent to which the site is incrementally developing high quality riparian habitat. Results of annual monitoring would be provided in annual reports. Based on data collected and observations made during the monitoring period, modifications to the management program may be included in each monitoring report. Monitoring would cease when the final monitoring goals have been met. If annual performance criteria or final success criteria are not met, the project proponent would prepare an analysis of the cause(s) of failure, and if determined necessary, proposed remedial action for approval.

REFERENCES

- Olesen, J. 2012. Personal communication. Sr. Landfill Engineering Technician. Public Works. City of Sacramento. 4 January.
- Self, D. 2011. Personal communication. California Native Plant Society. 17 December.

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Wildlife Species Observed at Sutter's Landing Park
Last Updated February 23, 2012
Friends of the River Banks
(81 Birds, 15 Mammals, 6 Reptiles, and 3 Amphibians)

Anseriformes - Screamers, Swans, Geese, and Ducks

Anatidae - Ducks, Geese, and Swans

Canada Goose *Branta canadensis*

Wood Duck *Aix sponsa*

Mallard *Anas platyrhynchos*

Bufflehead *Bucephala albeola*

Common Goldeneye *Bucephala clangula*

Barrow's Goldeneye *Bucephala islandica*

Common Merganser *Mergus merganser*

Galliformes - Gallinaceous Birds

Odontophoridae - New World Quail

California Quail *Callipepla californica*

Phasianidae - Partridges, Grouse, Turkeys, and Old World Quail

Wild Turkey *Meleagris gallopavo* - 1

Podicipediformes - Grebes

Podicipedidae - Grebes

Pied-billed Grebe *Podilymbus podiceps*

Phalacrocoracidae - Cormorants

Double-crested Cormorant *Phalacrocorax auritus*

Ardeidae - Herons, Bitterns, and Allies

Great Blue Heron *Ardea herodias*

Great Egret *Ardea alba*

Accipitriformes - Hawks, Kites, Eagles, and Allies

Cathartidae - New World Vultures

Turkey Vulture *Cathartes aura*

Pandionidae - Ospreys

Osprey *Pandion haliaetus*

Accipitridae - Hawks, Kites, Eagles, and Allies

White-tailed Kite *Elanus leucurus*

Northern Harrier *Circus cyaneus*

Cooper's Hawk *Accipiter cooperii*

Red-shouldered Hawk *Buteo lineatus*

Swainson's Hawk *Buteo swainsoni*

Falconiformes - Caracaras and Falcons

Falconidae - Caracaras and Falcons

American Kestrel *Falco sparverius*

Merlin *Falco columbarius*

Peregrine Falcon *Falco peregrinus*

Gruiformes - Rails, Cranes, and Allies

Rallidae - Rails, Gallinules, and Coots

American Coot *Fulica americana*

Charadriiformes - Shorebirds, Gulls, Auks, and Allies

Charadriidae - Lapwings and Plovers

Killdeer *Charadrius vociferus*

Scolopacidae - Sandpipers, Phalaropes, and Allies

Spotted Sandpiper *Actitis macularius*

Laridae - Gulls, Terns, and Skimmers

Ring-billed Gull *Larus delawarensis*

California Gull *Larus californicus*

Columbiformes - Pigeons, and Doves

Columbidae - Pigeons and Doves

Rock Pigeon *Columba livia* - I

Mourning Dove *Zenaida macroura*

Strigiformes - Owls

Tytonidae - Barn Owls

Barn Owl *Tyto alba*

Strigidae - Typical Owls

Great Horned Owl *Bubo virginianus*

Apodiformes - Swifts, and Hummingbirds

Apodidae - Swifts

White-throated Swift *Aeronautes saxatalis*

Trochilidae - Hummingbirds

Black-chinned Hummingbird *Archilochus alexandri*

Anna's Hummingbird *Calypte anna*

Coraciiformes - Rollers, Motmots, Kingfishers, and Allies

Alcedinidae - Kingfishers

Belted Kingfisher *Ceryle alcyon*

Piciformes - Puffbirds, Jacamars, Toucans, Woodpeckers, and Allies

Picidae - Woodpeckers and Allies

Nuttall's Woodpecker *Picoides nuttallii*

Downy Woodpecker *Picoides pubescens*

Northern Flicker *Colaptes auratus*

Passeriformes - Passerine Birds

Tyrannidae - Tyrant Flycatchers

Black Phoebe *Sayornis nigricans*

Say's Phoebe *Sayornis saya*

Ash-throated Flycatcher *Myiarchus cinerascens*

Western Kingbird *Tyrannus verticalis*

Laniidae - Shrikes

Loggerhead Shrike *Lanius ludovicianus*

Corvidae - Crows and Jays

Western Scrub-Jay *Aphelocoma californica*

Yellow-billed Magpie *Pica nuttalli*

American Crow *Corvus brachyrhynchos*

Hirundinidae - Swallows

Tree Swallow *Tachycineta bicolor*

Violet-green Swallow *Tachycineta thalassina*

Northern Rough-winged Swallow *Stelgidopteryx serripennis*

Cliff Swallow *Petrochelidon pyrrhonota*

Barn Swallow *Hirundo rustica*

Paridae - Chickadees and Titmice

Oak Titmouse *Baeolophus inornatus*

Aegithalidae - Long-tailed Tits and Bushtits

Bushtit *Psaltriparus minimus*

Sittidae - Nuthatches

White-breasted Nuthatch *Sitta carolinensis*

Troglodytidae - Wrens

Bewick's Wren *Thryomanes bewickii*

House Wren *Troglodytes aedon*

Regulidae - Kinglets

Ruby-crowned Kinglet *Regulus calendula*

Sylviidae - Sylviid Warblers

Wrentit *Chamaea fasciata*

Turdidae - Thrushes

Western Bluebird *Sialia mexicana*

American Robin *Turdus migratorius*

Mimidae - Mockingbirds and Thrashers

Northern Mockingbird *Mimus polyglottos*

Sturnidae - Starlings

European Starling *Sturnus vulgaris*

Motacillidae - Wagtails and Pipits

American Pipit *Anthus rubescens*

Bombycillidae - Waxwings

Cedar Waxwing *Bombycilla cedrorum*

Ptilonotidae - Silky-flycatchers

Phainopepla *Phainopepla nitens*

Parulidae - Wood-Warblers

Orange-crowned Warbler *Oreothlypis celata*

Yellow-rumped Warbler *Setophaga coronata*

Emberizidae - Emberizids

Spotted Towhee *Pipilo maculatus*

California Towhee *Melospiza crissalis*
Lincoln's Sparrow *Melospiza lincolnii*
White-crowned Sparrow *Zonotrichia leucophrys*
Golden-crowned Sparrow *Zonotrichia atricapilla*

Cardinalidae - Cardinals and Allies
Lazuli Bunting *Passerina amoena*

Icteridae - Blackbirds
Red-winged Blackbird *Agelaius phoeniceus*
Western Meadowlark *Sturnella neglecta*
Brewer's Blackbird *Euphagus cyanocephalus*

Fringillidae - Fringilline and Cardueline Finches and Allies
House Finch *Carpodacus mexicanus*
Lesser Goldfinch *Spinus psaltria*
American Goldfinch *Spinus tristis*

Passeridae - Old World Sparrows
House Sparrow *Passer domesticus* - I

The sequence of birds on this list is organized to follow the 7th edition of the A.O.U Check-List of North American Birds, and supplements.

**Mammals, Reptiles, and Amphibians Observed at Sutter's Landing Regional Park
Last Updated February 23, 2012
Friends of the River Banks**

River Otter
California Sea Lion
California Ground Squirrel
Coyote
Black-tailed Jackrabbit
Beaver
Pocket Gopher
Eastern Fox Squirrel
Cottontail Rabbit
Bat sps
Striped Skunk
Raccoon
Black-tailed Deer
Western Gray Squirrel
California Meadow Vole
Western Pond Turtle
Red-eared Slider
Gopher Snake
Alligator Lizard
Western Fence Lizard
Common King Snake
Slender Salamander
Bull Frog
Chorus Frog

Appendix G. Recommended Schedule for Implementing Restoration Actions



H. T. HARVEY & ASSOCIATES
ECOLOGICAL CONSULTANTS

OPINION OF PROBABLE COSTS: CONSTRUCTION, DESIGN, AND LONG-TERM MONITORING (Revised)
 Project: 28th Street Landfill Tree Removal Mitigation Project
 Location: Sacramento, CA
 Phase: Pre design - Planning estimate
 Client: City of Sacramento
 Date / prepared by: 13 Feb 2012 / L Kelly
 Updated: 27 Feb 2012

ANNUAL COST BREAKDOWN						
Item	Total Cost (2.26 ac)	Cost FY 2011-12	Cost FY 2012-13	Cost FY 2013-14	Cost FY 2014-15	Cost FY 2015-16
CONSTRUCTION COSTS						
Site Preparation: Non-Native Noxious Plant Control	\$6,250		\$6,250			
Irrigation System (Triangle Area Only)	\$37,500		\$37,500			
Planting						
Hydroseed	\$12,500		\$12,500			
Small Container Plants w/ Basin and Mulch	\$37,500	\$3,500	\$34,000			
Sub-total	\$50,000	\$3,500	\$46,500			
TOTAL CONSTRUCTION COSTS	\$93,750	\$3,500	\$90,250			
CONTINGENCY (15%)	\$14,063	\$525	\$13,538			
GRAND TOTAL CONSTRUCTION COSTS	\$107,813	\$4,025	\$103,788			
Design (Plans, Specifications, and Cost Estimate)	\$20,000	\$20,000				
Monitoring *	\$18,500		\$3,500	\$5,000	\$5,000	\$5,000
Maintenance (3 Years)	\$60,000		\$10,000	\$20,000	\$20,000	\$10,000
Sub-total	\$98,500	\$20,000	\$13,500	\$25,000	\$25,000	\$15,000
GRAND TOTAL PROJECT COSTS	\$206,313	\$24,025	\$117,288	\$25,000	\$25,000	\$15,000

This opinion reflects probable construction costs obtainable for the project location on the date of this estimate. Due to the fluctuation of labor, material and equipment costs and the nature of the competitive environment at the time of bid, prices may vary.

PLANS, SPECIFICATIONS, AND COST ESTIMATE: \$18,000-\$20,000
 standard format, technical specifications, and details. One (1) bid package will be prepared with review submittals at

MONITORING: FY 1 @ \$3,500. Next 4 years @ \$5,000 per year.
 Assumes survival counts and determination of percent cover of native trees and shrubs.
 * Actual number of years for monitoring to be determined.

Sacramento Valley Office
 711 4th Street
 Davis, CA 95616
 530-753-3733

Appendix H. Title 27 California Code of Regulations (CCR) Sections 21135, 21180, and 21190

21135. CIWMB - Site Security. (T14:Section 17767)

- (a) Sign(s) shall be posted at all points of access to a site sixty (60) days prior to the last receipt of waste at the site and for a period of not less than one hundred eighty (180) days after the facility has received the final shipment of waste stating the intended date of last receipt of waste at the site and the location of alternative permitted solid waste management facilities. A notice shall be placed in a local newspaper(s) thirty (30) days prior to the last receipt of waste which includes the intended date of the last receipt of waste at the site and the location of alternative solid waste management facilities.
- (b) Sites which do not allow public disposal and which have not allowed public access to the site for more than one year prior to cessation of acceptance of waste, or are undertaking partial final closure pursuant to section 21120, shall be exempt from the provisions of this section.
- (c) The EA may require more signs, signs written in additional languages, larger signs, or signs of clearer design, if necessary to protect public health and safety.
- (d) The EA may grant variances from the sign provisions of this section after receiving a written request by the operator.
- (e) Sedimentation and detention basins shall be secured and maintained during the closure and postclosure maintenance period to prevent unauthorized access.
- (f) The operator shall ensure that all points of access to the site are restricted to protect public health and safety as of the date the final shipment of waste is received. Components of any monitoring, control or recovery systems at the site shall be protected from access other than that allowed in accordance with the approved closure and postclosure maintenance plans.
- (g) Once closure activities are complete, site access by the public may be allowed in accordance with the postclosure maintenance plan, as approved by the EA.

Note:

Authority cited:

Sections 40502 and 43020, *Public Resources Code*; and Section 66796.22(d), *Government Code*.

Reference:

Section 66796.22(d), *Government Code*; and Section 44100 and 43103, *Public Resources Code*.

21180. CIWMB - Postclosure Maintenance. (T14:Section 17788)

[Water quality protection aspects for postclosure maintenance are addressed in Section 21090.]

(a) Postclosure maintenance for the purposes of reducing impacts to health and safety, shall be conducted to ensure the integrity of the final cover and environmental control systems. The landfill shall be maintained and monitored for a period of not less than thirty (30) years after the completion of closure of the entire solid waste landfill. Any areas in which final cover is placed prior to the closure of the entire landfill shall be maintained in accordance with an approved postclosure maintenance plan, but the thirty (30) year monitoring period shall not commence until closure of the entire landfill is complete. Maintenance and monitoring shall include, but not be limited to the following:

- (1) site security;
 - (2) gas monitoring and control system maintenance as specified in the final closure and postclosure maintenance plans.
- (b) If nonliquid waste is exposed during postclosure maintenance activities at a solid waste landfill, the waste may be returned to that landfill provided that the integrity of the final cover is maintained.

(c) The operator shall provide to the CIWMB and the EA copies of the maps and reports provided to the RWQCB pursuant to section 21090(e)(2) describing the amount of differential settlement.

Note:

Authority cited:

Sections 40502 and 43020, *Public Resources Code*; and Section 66796.22(d), *Government Code*.

Reference:

Sections 43021, 43103, *Public Resources Code*; and Section 66796.22(d), *Government Code*.

21190. CIWMB - Postclosure Land Use. (T14:Section 17796)

(a) Proposed postclosure land uses shall be designed and maintained to:

- (1) protect public health and safety and prevent damage to structures, roads, utilities and gas monitoring and control systems;
- (2) prevent public contact with waste, landfill gas and leachate; and
- (3) prevent landfill gas explosions.

(b) The site design shall consider one or more proposed uses of the site toward which the operator will direct its efforts, or shall show development as open space, graded to harmonize with the setting and landscaped with native shrubbery or low maintenance ground cover.

(c) All proposed postclosure land uses, other than non-irrigated open space, on sites implementing closure or on closed sites shall be submitted to the EA, RWQCB, local air district and local land use agency. The EA shall review and approve proposed postclosure land uses if the project involves structures within 1,000 feet of the disposal area, structures on top of waste, modification of the low permeability layer, or irrigation over waste.

(d) Construction on the site shall maintain the integrity of the final cover, drainage and erosion control systems, and gas monitoring and control systems. The owner or operator shall demonstrate to the satisfaction of the EA that the activities will not pose a threat to public health and safety and the environment. Any proposed modification or replacement of the low permeability layer of the final cover shall begin upon approval by the EA, and the RWQCB.

(e) Construction of structural improvements on top of landfilled areas during the postclosure period shall meet the following conditions:

- (1) automatic methane gas sensors, designed to trigger an audible alarm when methane concentrations are detected, shall be installed in all buildings;
- (2) enclosed basement construction is prohibited;
- (3) buildings shall be constructed to mitigate the effects of gas accumulation, which may include an active gas collection or passive vent systems;
- (4) buildings and utilities shall be constructed to mitigate the effects of differential settlement. All utility connections shall be designed with flexible connections and utility collars;
- (5) utilities shall not be installed in or below any low permeability layer of final cover;
- (6) pilings shall not be installed in or through any bottom liner unless approved by the RWQCB;
- (7) if pilings are installed in or through the low permeability layer of final cover, then the low permeability layer must be replaced or repaired; and
- (8) periodic methane gas monitoring shall be conducted inside all buildings and underground utilities in accordance with section 20933 of Article 6, of Subchapter 4 of this Chapter.

(f) The EA may require that an additional soil layer or building pad be placed on the final cover prior to construction to protect the integrity and function of the various layers of final cover.

(g) All on site construction within 1,000 feet of the boundary of any disposal area shall be designed and constructed in accordance with the following, or in accordance with an equivalent design which will prevent gas migration into the building, unless an exemption has been issued:

- (1) a geomembrane or equivalent system with low permeability to landfill gas shall be installed between the concrete floor slab of the building and subgrade;
- (2) a permeable layer of open graded material of clean aggregate with a minimum thickness of 12 inches shall be installed between the geomembrane and the subgrade or slab;
- (3) a geotextile filter shall be utilized to prevent the introduction of fines into the permeable layer;
- (4) perforated venting pipes shall be installed within the permeable layer, and shall be designed to operate without clogging;
- (5) the venting pipe shall be constructed with the ability to be connected to an induced draft exhaust system;
- (6) automatic methane gas sensors shall be installed within the permeable gas layer, and inside the building to trigger an audible alarm when methane gas concentrations are detected; and
- (7) periodic methane gas monitoring shall be conducted inside all buildings and underground utilities in accordance with Article 6, of Subchapter 4 of this chapter (section 20920 et seq.).

Note:

Authority cited:

Sections 40502 and 43020, Public Resources Code; and Section 66796.22(d), Government Code.

Reference:

Sections 43021, 43103 and 44105, Public Resources Code; and Section 66796.22(d), Government Code.

Appendix I. Funding Opportunities

State and regional agencies have allocated more than \$750 million since 1996 to purchase land, build trails, restore wildlife habitat, and improve facilities along California's rivers. The state allocated more than \$60 million for parkways along the Los Angeles River and tributaries in the year 2000 alone, and has provided more than \$85 million for the San Joaquin River Parkway in Fresno over the past sixteen years.

Although the American River Parkway serves more visitors than any other river parkway in California, it has received only a small fraction of the funding allocated to urban rivers. As noted earlier, the American River Parkway receives more visitor days than Yosemite National Park.

State, federal and regional grants provide an important potential funding source to buy property, improve public access facilities, and improve wildlife habitat at Sutter's Landing Park and along the adjacent American River Parkway. By increasing its focus on securing external funding, the City of Sacramento has the potential to raise several million dollars in grants to improve Sutter's Landing Park and other properties along the American River. Grant funds could assist the City in implementing many of the recommendations included in the **ENHANCE** section of this report.

Potential state and regional funding sources include:

- California River Parkways Grant Program, Administered by the Secretary of Natural Resources, State of California (*)
- Urban Greening for Sustainable Communities Grant Program, Administered by the Strategic Growth Council, State of California
- Wildlife Conservation Board (various funding sources), State of California
- Proposition 117 Local Grants, administered by the California Department of Parks and Recreation, State of California
- Environmental Enhancement and Mitigation Program (EEMP), administered by the Secretary of Natural Resources, State of California
- Transportation Enhancement Activity Grants, administered by the Sacramento Area Council of Governments and the California Transportation Commission
- Bicycle Facility Funding, administered by the Sacramento Area Council of Governments and the California Transportation Commission

(*) The City currently has a \$1.5 million grant request pending with the California Natural Resources Agency for California River Parkways Grant Funding for trail and wildlife habitat improvements at Sutter's Landing Park. Nonprofit groups assisted the City in developing the proposal.

- Solid Waste Disposal and Codisposal Site Cleanup Grants, Department of Recycling and Resource Recovery, State of California
- Nature Education Facilities Grant Program, administered by the California Department of Parks and Recreation

- Land and Water Conservation Fund, administered by the California Department of Parks and Recreation
- Recreational Trails Program, administered by the California Department of Parks and Recreation
- Integrated Regional Water Management Grants, administered by the California Department of Water Resources
- Natural Heritage Tax Credit, administered by the Wildlife Conservation Board
- Mitigation Funds related to Transportation, Flood Control, and other projects

The *City of Sacramento Parks & Recreation Master Plan* identifies a menu of potential local funding sources that can be used for park acquisition and improvements (**). While the City's current budget situation may limit the ability to access many of these funds in the short-term, these sources could be considered for Sutter's Landing Park enhancement projects over a longer timeframe. Some of the funding sources include:

- Park Development Impact Fees (PIF)
- Fees In Lieu of Park Land Dedication (Quimby)
- General Obligation Bonds
- Assessment Districts
- Sutter's Landing Park Billboard Revenues
- Other Municipal Revenue Sources

By expanding its efforts to raise additional funding for Sutter's Landing Park, and by partnering with other organizations including nonprofit groups, the City has the potential to raise significant funding to realize Sutter's Landing Park's potential to be a major contributor to the quality of life enjoyed by thousands of Sacramento area residents.

(**) Additional funding sources are identified in the *Sutter's Landing Area Master Plan Background Report* (October 1, 2008) and the *City of Sacramento Parks and Recreation Master Plan 2005-2010*.

Appendix J. 28th Street Landfill Routine Maintenance Activities

Routine defined as “done repeatedly over time at varying frequencies; typically annually or more frequently except under unusual circumstances.”

Task	Frequency	Notes
Check Flare Operation	Daily	Check that flare is operating at proper temperature and all other equipment is in good working condition.
Check perimeter fence	Daily	Perimeter fence is checked daily for holes and repaired as necessary.
Check gas collection system	Daily	Gas system is checked daily at flare station. If there is a problem (poor gas quality), we inspect the entire landfill gas collection system for air leaks.
Check site	Daily	Drive the haul roads and landfill looking for ANY potential issues. Check areas frequented by illegal campers for vandalism or other issues.
Change charts at flare station	Weekly	Change two circular charts that record temperature and gas flow to the flares.
Monitor gas quality and flow rate	Weekly	Monitor gas quality at flare station and record gas flow for the past week to comply with regulations per AB32.
Monitor gas level on the interior of buildings	Weekly	Measure methane (CH ₄) levels in interior structures at corporation yard.

Fence repair	As needed, but mostly weekly	Repair fences that have been cut or damaged around the site perimeter.
Monitor all gas extraction wells and probes	Monthly	Monitor all gas probes per post closure requirements (LEA). Monitor gas wells to comply with the Title V Permit (Air Board).
Flare station maintenance	Monthly	Change oil in compressors, and grease blower bearings in the blower motor. Check operation of equipment, etc.
Inspect landfill cover	Monthly	Landfill cover visually inspected by driving the landfill property. Look for large cracks and settlement or ponding areas in the landfill cap. (Title V requirement.)
Check condensate traps	Monthly	Condensate traps pump the condensate to the flare station, where it drains into the combined sewer system. There are appx. 20 around the landfill site.
Change strip charts	Monthly	Change the monthly chart that records flow and temperature of both flares, and calculates an actual amount of landfill gas sent to the flares.
Groundwater sampling	Semi-annually	Take samples of the 19 groundwater wells located around the landfill and surrounding area. Completed in June and December.
Mow landfill grass	Annually	The grass on the landfill is cut with a flail mower. This requires approximately 80 actual mowing hours and is usually done annually between May 1 and June 30, depending on rain and moisture content of the grasses.
Landfill cap maintenance	Annually	Landfill cap maintenance is normally done between July and October. We fill areas that have settled using heavy equipment including a scraper, motor grader, water truck and loader.

Repair ditch-lines	Annually	Clean and re-grade drainage lines using a motor grader and scraper. This includes removing or covering vegetation to ensure proper drainage.
Road Improvement	Annually	As necessary, place asphalt grindings on the roads using a scraper and graded with a motor grader.
Retention basin maintenance	Annually	Mowing, weeding and grading as needed using a flail mower, weed eaters and motor grader. (Note: Must be protective of trees planted pursuant to REPAIR section of this report.)
Concrete Detention basins	Annually	Remove sediment that washes into basin during the rainy season.
Slope weed abatement	Annually	Clear all landfill perimeter slopes of vegetation for fire prevention. (Note: Except as pursuant to ENHANCE section of this report.)
Spray pipelines for weed abatement.	Annually	Apply herbicide to control weeds growing around and against pipelines. This is a fire prevention strategy.
Flare source tests	Annually	Emissions from flares are measured to make sure are in compliance with our Title V Permit.
Storm water run-off samples	Twice- during rainy season	Samples taken from the river at two locations and from the landfill at two locations during precipitation event.
Pipe repair	As needed	Pipe repair can be necessary anytime, and ranges from a small patch to a large pipe replacement.

<p>Repair condensate traps</p>	<p>As needed</p>	<p>Repair pumps, cut air lines, etc. Some work in field, some in our shop.</p>
<p>Stockpile grindings and dirt</p>	<p>As needed</p>	<p>Accept asphalt grindings and dirt from various City Departments as they perform maintenance work around the City only at existing locations. The material is used on-site for road maintenance, cap repair, and various other projects.</p>
<p>Other repairs</p>	<p>As needed</p>	<p>All other misc. repairs. Mostly electronics at flare station, or new belts on compressors, or engine replacements.</p>

Appendix K. Additional Information Sources

1. 28th Street Landfill Tree Removal Mitigation Committee website:
www.cityofsacramento.org/parksandrecreation/28th-st-sltrmc.htm
2. *Sutter's Landing Area Master Plan*: www.cityofsacramento.org/dsd/planning/new-growth/SuttersLanding.cfm
3. *City of Sacramento 2030 General Plan*:
www.sacgp.org/documents/04_Part2.06_EducationRecreationandCulture.pdf
4. *Sacramento County American River Parkway Plan 2008*:
www.msa2.saccounty.net/parks/Documents/ARPP06-021909_sm.pdf including Woodlake Area Plan, pp. 156-158
5. *Guide to Revegetation and Environmental Restoration of Closed Landfills*, California Department of Resource Recovery and Recycling:
www.calrecycle.ca.gov/SWFacilities/Closure/revegetate/