

Attachment 3: Work Plan

1. INTRODUCTION

The Florin Creek Multi-Use Basin (project) is a multipurpose project proposed on Florin Creek in unincorporated Sacramento County near the City of Sacramento. It is a part of and consistent with the American River Basin (ARB) Integrated Regional Water Management (IRWM) Plan.

1.1. Goals and Objectives

The project's goal is to provide at least 100-year flood protection to structures within the City of Sacramento and County of Sacramento downstream of the project site by reducing flood risk and by facilitating the completion of the South Sacramento Streams Group (SSSG) project (Federal Project) being undertaken by the US Army Corps of Engineers (USACE) in conjunction with the Central Valley Flood Protection Board (CVFPB) and the Sacramento Area Flood Control Agency (SAFCA). Specific objectives are as follows:

1. Reduce flood risk affecting structures in the Florin Creek floodplain downstream of State Route 99.
2. Remove Florin Creek upstream of State Route 99 from the Federal Project, enabling USACE to complete Federal Project construction under existing authorized federal spending limits.
3. In conjunction with the Federal Project, provide at least 100-year flood protection to 181 structures within the SSSG floodplain and eliminate the affected property owners' obligation to purchase high cost flood insurance.
4. Allow the State Plan of Flood Control (SPFC) on Florin Creek to contain flows within the creek channel from Franklin Boulevard to State Route 99, thus protecting the State of California from liability that could be associated with extending the SPFC further upstream or relying on levee or floodwall improvements.
5. Enhance recreational opportunities at Florin Creek Park, the site of the project.
6. Enhance environmental values at the park site.

1.2. Purpose and Need

Florin Creek is a tributary to Morrison Creek that traverses the City of Sacramento and unincorporated Sacramento County. It floods out of bank in moderate floods (more frequent than the 100-year event), placing people and property at peril and requiring the owners of 181 structures to carry high cost flood insurance. Congress has authorized USACE, in partnership with the State and SAFCA, to complete the Federal Project to provide flood risk reduction for the entire SSSG area, including Florin Creek. The Sacramento District of the US Army Corps of Engineers (USACE) began constructing the Federal Project in the early 2000s. Improvements have been completed at Florin Creek and Elder Creek downstream of Franklin Boulevard, and along both banks of Morrison Creek between Beach Lake and Franklin Boulevard. The Sacramento Area Flood Control Agency (SAFCA) has completed additional projects at Beach Lake, Unionhouse Creek, and the Sacramento Regional County Sanitation District's Wastewater Treatment plant perimeter levee. At this time, only improvements to Florin Creek upstream of Franklin Boulevard remain to be completed by the USACE to close out its Federal Project.

Notwithstanding the progress to date, the Federal Project has been delayed because its currently projected costs exceed the congressional appropriations. Current congressional rules against earmarks make additional appropriations and speedy completion of the Federal Project exceedingly challenging.

The USACE is currently designing the Federal Project to improve the flow capacity of Florin Creek upstream of Franklin Boulevard (Florin Creek Section 2D1). The Federal Project is at a 65-percent level of design. Due to existing infrastructure located within and adjacent to the creek corridor (homes near both the left and right banks and bridges crossing over the creek), it is economically infeasible for the USACE to construct a project which fully contains the 100-year design flow. The primary objective of the Florin Creek Multi-Use Basin project is to provide off-stream flood control storage which, once constructed in conjunction with the Federal Project, will fully attenuate the 100-year flow event in Florin Creek downstream of the basin and reduce the damages associated with the 200-year event to a negligible amount. In collaborating on the Federal Project, the USACE and SAFCA have agreed that the USACE will design and construct the Florin Creek channel improvements in order to maximize the available real estate along both sides of the creek, and SAFCA will lead a follow-on project to construct the Florin Creek Multi-Use Basin to fully attenuate the 100-year storm event.

Grant funding for the Florin Creek Multi-Use Basin would enable DWR and SAFCA to address a portion of the flood risk in the basin and thus limit the size and scope of the remaining Federal Project. The project would provide immediate flood relief for the structures downstream of the basin, and by allowing the remainder of the Federal Project to be completed without further congressional appropriations, would expedite the provision of 100-year flood protection to a much larger downstream area. With DWR's Proposition 1E Stormwater Flood Management Round 1 grant assistance, SAFCA has successfully used this approach on Unionhouse Creek, also in the South Sacramento Streams Group, to pare the cost of the Federal Project and to provide 100-year flood protection to an estimated 250-300 structures in that floodplain.

The hydraulic modeling developed to preliminarily size and configure the flood control aspect of the Florin Creek Multi-Use Basin was originally developed by Wood Rodgers, Inc. (Wood Rodgers) on behalf of the City of Sacramento for use in determining residual floodplains existing after construction of the Federal Project and SAFCA's Unionhouse Creek improvements. The floodplain maps were then used to prepare Letter of Map Revisions (LOMRs), based upon the modeling, for submittal to the Federal Emergency Management Agency (FEMA). The LOMRs will eventually result in revisions to FEMA's Flood Insurance Rate Maps for the SSSG area. The model's development is documented in the Wood Rodgers report "City of Sacramento, Department of Utilities, Existing Conditions and Channel Improvements Modeling, South Sacramento Streams Group, Sacramento, CA."

Modeling of the USACE Florin Creek improvements indicates that, following construction, a residual flood storage volume of approximately 30 to 40 acre-feet will be required. For purposes of conceptual design and cost estimating, it has been assumed that a 35 acre-foot detention basin will be developed. Florin Creek Park, being located immediately adjacent to Florin Creek, presents an ideal location for incorporating flood storage detention. Working in conjunction with

the USACE's Florin Creek channel improvements, a weir will be constructed at the right bank of Florin Creek at Florin Creek Park to allow floodwaters to spill into the park at storm events exceeding about the 25-year event. The design will also allow lower flows of a more frequent event to enter the park for the purpose of providing water quality and environmental enhancement benefits. The basin would be up to eight feet deep and would be constructed with typical slopes of 5 horizontal to 1 vertical (5:1).

The Southgate Recreation and Park District, which owns and operates Florin Creek Park, is partnering with SAFCA on the project and will provide assistance in designing the recreational enhancements to be incorporated. The project will expand the overall size of Florin Creek Park, developing three additional parcels located north of the park's current northern boundary. The District owns one of the three parcels for expansion, and the other two will be acquired as part of the project. A flood easement will be created over the portions of parcels within the basin footprint. The flood control basins will be graded and landscaped to provide enhanced recreational benefits in the form of soccer fields conforming to conventional youth and adult soccer field sizes.

Environmental enhancements associated with the project will include the planting of native plant species, the introduction of storm water flows to the park interior, and the incorporation of additional native trees into the park creating about an acre of riparian habitat around the perimeter of a wetland/pond complex. These environmental enhancements will have ecological benefits and increase habitat connectivity of the Park with the Florin Creek corridor. Water quality will be improved by biological treatment of flood flows accepted into and discharged from Florin Creek Park. The flows will be routed through the park in a circuitous manner to ensure sufficient contact time with vegetation to obtain the water quality benefits. The acreage of the park's existing water features will be expanded. Educational opportunities for the general public and local elementary schools will be enhanced by providing a greater quantity and complexity of natural features within the park and interpretive panels to engage park users.

Lastly, the addition of a groundwater recharge component is being considered by the design. The majority of the park will be graded to drain southward toward Florin Creek following storm events. The drainage will be accepted by a drop inlet structure and conveyed by buried pipeline back to the Creek channel when the water surface elevation in the Creek subsides. A portion of the park, located in the northern area, can be graded to deliver its storm water volume to a groundwater recharge well. Design of the well, if pursued as a separate project, could incorporate the means to accept only runoff water which has been treated before delivering it to the underground aquifer.

1.2.1. Relationship to adopted IRWM Plan

The ARB IRWM Plan was adopted in 2006 and is currently being updated. The IRWM identifies regional priorities that include groundwater management, water quality protection, ecosystem restoration, environmental and habitat protection and improvement, stormwater management, flood management, recreation and public access, and nonpoint source pollution control. Water management activities that accomplish multiple priorities are favored by the IRWM Plan. The project would directly address flood management by detaining peak flows on Florin Creek and

reducing the frequency and severity of downstream flooding. The detention would also provide an opportunity for stormwater management and nonpoint source control. Because the Southgate Recreation and Park District will work with SAFCA as a project partner, the project would improve recreation and public access. Project features will include an expanded habitat area planted with native plants to provide ecosystem restoration.

The project's benefits would support the following specific benefits of the adopted ARB IRWMP:

Stormwater and Floodplain Management – Provide the highest practicable level of achieving flood control and stormwater quality in the region.

Groundwater Management – Protect and enhance groundwater resources and groundwater quality in accordance with adopted Groundwater Management Plans in the region.

Ecosystem Restoration – Coordinate with agencies developing plans that identify and implement ecosystem restoration projects along sensitive wildlife habitat areas in the region and Bay-Delta.

Other – Implement regional water management strategies that provide the highest level of understanding and financial support for regional programs and projects to meet the ARB IRWM Plan objectives.

SAFCA has participated with the Regional Water Authority and other stakeholders in the IRWM update process and is confident that the project will be consistent with and help achieve the goals of the update when it is adopted in 2013.

1.3. Project List

This application is for a single project, the Florin Creek Multi-Use Basin, listed in Table 1.

Table 1: Stormwater Project List for the Single-Project Florin Creek Multi-Use Basin

Descriptor	Project Characteristics
Project Name	Florin Creek Multi-Use Basin
Abstract	Florin Creek is a tributary to Morrison Creek that traverses the City of Sacramento and unincorporated Sacramento County. It floods out of bank in moderate floods (more frequent than the 100-year event), placing people at peril and requiring the owners of 181 structures to carry flood insurance. The Florin Creek Multi-Use Basin (project) is a multipurpose detention basin project that would provide approximately 35 acre-feet of storage at Florin Creek Park. Its design would provide environmental and recreational benefits.
Implementing Agency	Sacramento Area Flood Control Agency (SAFCA), in partnership with the City of Sacramento and the Southgate Recreation and Park District.
Percent Design Complete	Conceptual (10%)

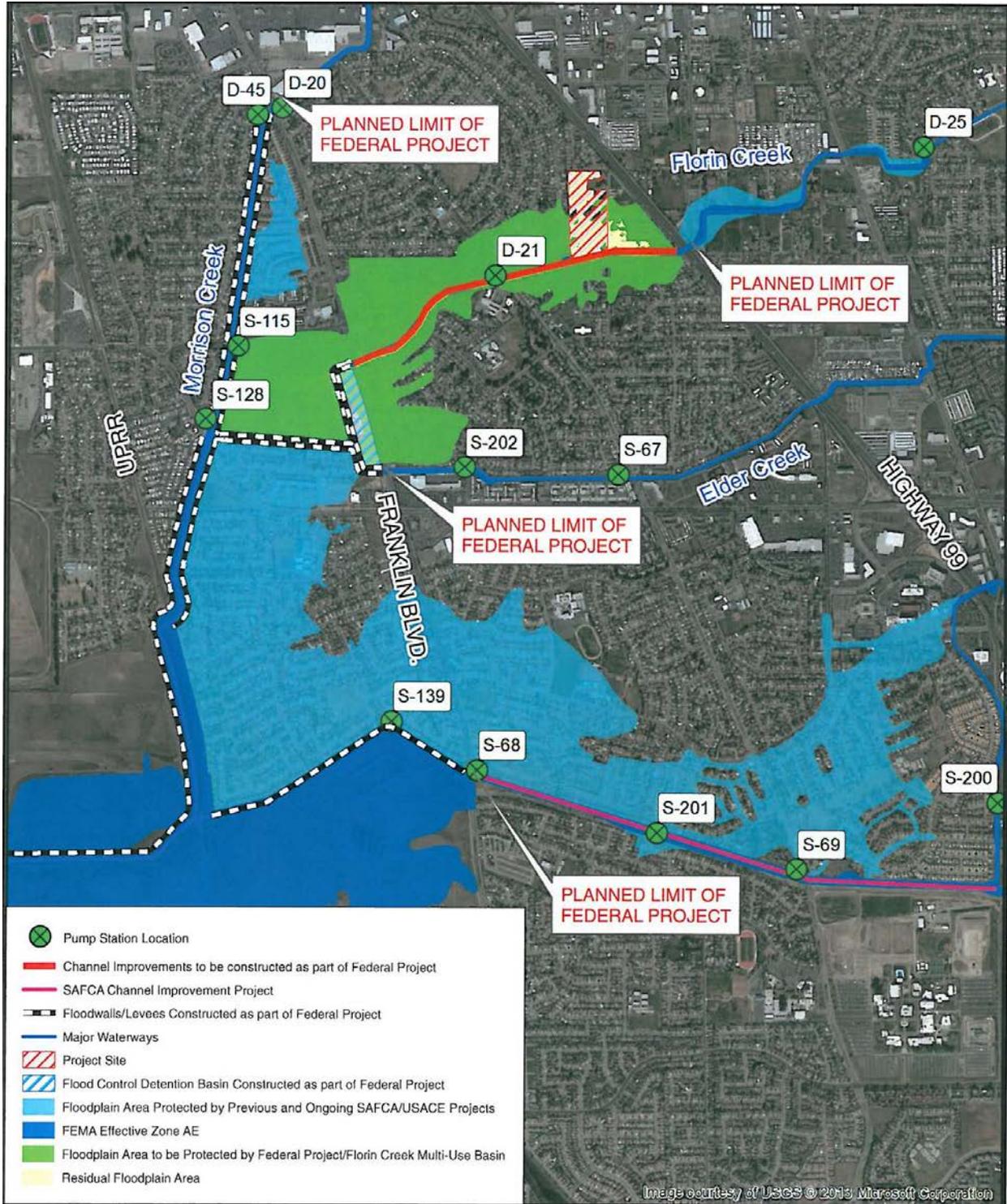
1.4. Integrated Elements of Projects

This application is for a single project. This single project integrates flood control, stormwater management, recreation, groundwater management, and ecosystem restoration at one site. In addition, the ARB IRWM Plan fosters individual projects that collectively integrate regional water benefits, so whereas water supply is not an objective of the project, the IRWM Plan provides a means for other regional agencies to provide water supply benefits in ways that are compatible with this project and in turn benefit from the other multiple benefits of this project.

SAFCA has accomplished inter-agency and regional integration by partnering with other agencies and by sharing the project description with the Regional Water Authority (RWA). RWA has in turn shared the description with its stakeholders, who have vetted the project and concurred with its incorporation into the ARB IRWM Plan.

1.5. Regional Map

Please see map on following page.



SAFCA
 FLORIN CREEK MULTI-USE BASIN
 SACRAMENTO, CALIFORNIA
 JANUARY 2013



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 DEVELOPING INNOVATIVE DESIGN SOLUTIONS
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1.6. Completed Work

Work completed to date includes the conceptual design and the Technical Justification prepared by Wood Rodgers and submitted as part of this grant application. In addition, SAFCA has been participating in the Federal Project and has been a party to studies and alternatives evaluations related to Florin Creek that have led to the development of the proposed conceptual design. USACE has retained a design contractor for the Florin Creek reach of the Federal Project. That design is underway with completion scheduled for October 2013. It will continue to inform the Florin Creek Multi-Use Basin as the design is developed.

1.7. Existing Data and Studies

Existing data and studies to date include the work described above, as follows:

- Conceptual Design – Wood Rodgers
- Technical Justification – Wood Rodgers
- Final Environmental Assessment - South Sacramento County Streams Project Design Refinements – USACE
- Final Finding of No Significant Impact - FONSI – USACE
- Existing Conditions and Channel Improvements Modeling, South Sacramento Streams Group, Sacramento, CA – City of Sacramento and Wood Rodgers (Attachment 7 Parts 2-4 of 5).
- 35% Design Documentation Report, South Sacramento Streams Project, Flood Damage Reduction Group, Florin Creek from Franklin Boulevard to Highway 99 (Section 2D1) – Wood Rodgers and MGE Engineering, Inc. (MGE) (Attachment 7 Part 5 of 5).

1.8. Project Map

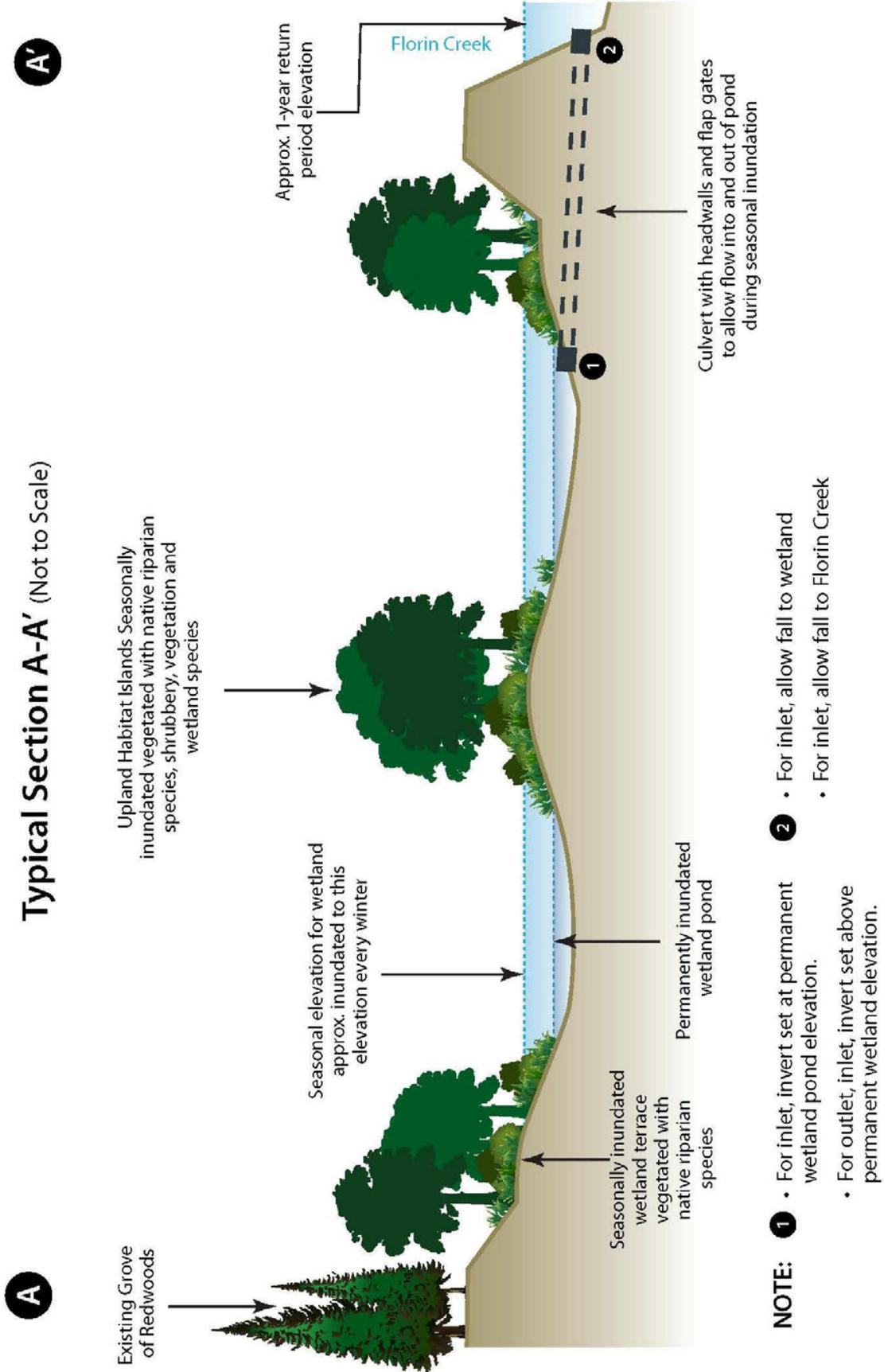
A project map and wetland cross-section appear on the following pages.

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Florin Creek Detention Basin Permanent and Seasonal Wetlands Pond Features



1.9. Project Specifics

The specifics for this single-project proposal are as follows:

Table 2: Florin Creek Multi-Use Basin Specifics	
Descriptor	Project Characteristics
Site Specific Geographic Location	The project site is located on the north (right) bank of Florin Creek immediately downstream of Persimmon Avenue. The site address is 7460 Persimmon Avenue.
Location with Relation to Other Stormwater Conveyance Systems	The project site is on the bank of and drains to Florin Creek. With the completion of project facilities, during high flow events water would be spilled from Florin Creek over a weir into the detention basin. It would then be discharged back into Florin Creek when peak flows have subsided. Although Florin Creek is within the State Plan of Flood Control (SPFC), the project site is not a part of the SPFC now and the project features would not be added to the SPFC.
O&M Liability for the Sacramento River and San Joaquin River Flood Control System	The project would be locally operated and maintained. The detention basin would be excavated below surrounding grade, and no elevated walls or levees would be constructed. As a result, there is no mechanism for failure in which the project would increase peak flows into the Creek. Instead, it would reduce the State's liability because it would reduce peak flows downstream, avoiding flooding that might otherwise occur and avoiding alternative projects which could result in higher levees or floodwalls on Florin Creek and increase liability.

1.10. Project Timing and Phasing

The project will work as part of the Federal Project to deliver 100-year and 200-year flood protection to the neighborhoods in the vicinity of the site and downstream, removing approximately 181 structures from the 100-year floodplain and 207 structures from the 200-year floodplain. Construction of the Florin Creek reach of the Federal Project is scheduled to begin in May 2014. If the Federal schedule is held, the Florin Creek Multi-Use Basin will never need to function on a stand-alone basis. The Federal Project will be designed with the assumption that the Florin Creek Multi-Use Basin goes forward, and it will not attain 100-year protection for all of the structures in this reach otherwise.

The Florin Creek Multi-Use Basin will also be completely functional on a stand-alone basis. Without the Federal Project, the number of structures removed from 100-year floodplain by the construction of the basin would be even greater, so the assumption that completion of the Federal Project occurs in conjunction with this project is not only more likely, it is more conservative in terms of valuing this project's benefits.

Because the Federal Project is at about the 65% design, the exact parameters of the design are not finalized. However, the design concept is to increase conveyance in Florin Creek between State Route 99 and Franklin Boulevard by a combination of channel widening and channel lining. The Florin Creek Multi-Use Basin will be designed to capture the volume of water that during peak flows would exceed the enhanced conveyance capacity and then release these flows after the flood peak has passed.

2. PROPOSED WORK

The principal feature of the Florin Creek Multi-Use Basin is the construction of an approximately 35 acre-foot detention basin with a maximum depth of about eight feet and 5:1 typical side slopes. The project footprint would occupy about 14 acres over several parcels identified in Table 3.

Table 3: Florin Creek Multi-Use Basin Parcel Information		
Assessor's Parcel Number (APN)	Size	Owner
050-0500-053-0000	0.535 acres	Sacramento County
050-0321-016-0000	11.9 acres	Southgate Recreation and Park District
050-0321-004-0000	2.34 acres	Southgate Recreation and Park District
050-0321-003-0001	1.21 acres	Privately owned
050-0321-012-0001	1.63 acres	Privately owned

SAFCA would acquire the two privately-owned parcels on the north side of Florin Creek Park on behalf of project partner Southgate Recreation and Park District. A flood easement would be created over these parcels and portions of the two existing Park District parcels that would allow the construction and operation of the project.

The project would not disturb the existing Community Center at the northeastern corner of the existing park site and would avoid major infrastructure. Project construction would entail grubbing the site, removing an existing small constructed pond, picnic tables, turf, landscaping, and miscellaneous site hardware. The detention basin would be excavated and then landscaped, including planting of field and installation of irrigation systems and site hardware to replace that removed. In the portions of the basin on previously undeveloped parcels, new landscaping and irrigation systems would be installed. The project would include creation of over an acre of wetland and pond to replace an existing one on the site with a larger feature with improved habitat values. Storm flows would be directed into the wetland and pond on approximately an annual basis to both improve water quality in these features and enhance the quality of the outflow. The habitat values would provide connectivity for urban-adapted wildlife using the Florin Creek corridor, which east of State Route 99 connects to open space and on the southwest ultimately connects to the Sacramento Regional County Sanitation District Bufferlands, the

Upper Beach Lake Wildlife Area, and the Stone Lakes National Wildlife Refuge. The natural features would also be expected to be used by migratory songbirds. Nature interpretive panels would be placed at the ecosystem enhancement site to help spark visitors' curiosity, observation, and understanding of wildlife relationships to creek and wetland ecosystems.

Groundwater recharge potential will be considered in the design of the project, with site grading designed to allow for future installation of an infiltration. Groundwater infiltration wells are being tested in a pilot project now underway in Elk Grove. Although groundwater infiltration wells pose potential water supply and even stormwater quality and flood management benefits, uncertainties related to groundwater quality could make it difficult to plan, permit, and construct them on the schedule desired for the multi-use basin. Therefore, the project proposes to allow future installation of infiltration wells as a separate project rather than incorporate wells into this project.

Partnerships with project partners and beneficiaries will be an important part of the project. The project is within unincorporated Sacramento County. It provides some flood protection benefits to the County, and the majority of its flood protection benefits accrue to the City of Sacramento downstream. Both the County and City are member agencies of SAFCA and have representatives on the SAFCA Board of Directors. The County will provide labor compliance under existing agreements, and additional agreements may be entered with these two agencies for cost-sharing the local match for the grant.

Project success depends on the close collaboration between SAFCA and the Southgate Recreation and Park District, owner of most of the land on which the project will be built and the beneficiary of the enlarged and enhanced park site. SAFCA and Park District staffs have worked closely together in developing this application and will continue to do so. A Memorandum of Understanding or other agreement will be entered upon grant award to formalize the partnership.

2.1. Budget Category (a) Direct Project Administration

Direct Project Administration includes Task 1, Grant Administration; Task 2, Labor Compliance Program; and Task 3, Reporting.

2.1.1. Task 1: Grant Administration

Grant administration includes SAFCA preparation of staff reports to the SAFCA Board, execution of the grant agreement, preparation of invoices for grant reimbursement, attendance at project status meetings, and communications and agreements with DWR, contractors, and project partners.

Task Deliverables:

- SAFCA Board and staff authorization of the grant project and associated documents.
- An executed grant agreement.
- Invoices for reimbursement of qualifying grant project expenditures.

2.1.2. Task 2: Labor Compliance Program

SAFCA will use the services of the County of Sacramento for labor compliance. The County received final approval from the Director of the California Department of Industrial Relations as a Labor Compliance Program (LCP ID 011) effective March 15, 1994. The LCP is exempt from recent requirements to use the state Compliance Monitoring Unit. The labor compliance services will include, at a minimum, monitoring and preparation of summary and status reports, receiving, reviewing and processing certified payroll reports, conducting interviews, as well as collecting, reviewing, and processing other data. Reports will be prepared and submitted to the Department of Industrial Relations (DIR) as appropriate.

Task Deliverables:

- SAFCA will provide DWR with assurance that construction work is subject to the County's LCP.

2.1.3. Task 3: Reporting

Following execution of the grant agreement, quarterly reports assessing the progress and accomplishments of the project will be prepared on a schedule and in a format acceptable to DWR. A project completion report will be prepared at the end of the project. SAFCA will keep all records and documents pertaining to the project for three years after the project completion.

Task Deliverables:

- Quarterly reports as specified in the Grant Agreement.
- Completion report as specified in the Grant Agreement.
- Upload of construction status to ARB IRWM website pursuant to ARB IRWM Plan Data Management policies.

2.2. Budget Category (b) Land Purchase/Easement

2.2.1. Task 4: Land Purchase/Easement

This task includes the fee title acquisition of two parcels to the north of Florin Creek Park for the Southgate Recreation and Park District and the conveyance of a flood easement over portions of those parcels and the two parcels that currently comprise Florin Creek Park to SAFCA and/or DWR for the construction and operation of the project.

Task Deliverables:

- Appraisals for land and easements to be acquired.
- Copies of deeds or executed easements.

2.3. Budget Category (c) Plan/Design/Engineer/Environmental

2.3.1. Task 5: Assessment and Evaluation

Assessment and evaluation has been completed through USACE design and alternatives evaluation, which SAFCA has participated in. No other assessment and evaluation is proposed except as it relates to other tasks.

Task Deliverables

- There will be no deliverables for this task.

2.3.2. Task 6: Project Design

This task consists of designing the project. It includes preparation of plans and specifications necessary to prepare the final construction documents, to release the project for bid, and to contract with the construction contractor(s).

During design, ASTM Construction Standards and Occupational Safety and Health Administration (OSHA) regulations and industry standard practice will be used as construction standards and health and safety standards. Park facilities for public use will be designed to comply with Americans with Disabilities Act (ADA) standards.

Task Deliverables

- Final plans and specifications.

2.3.3. Task 7 Environmental Document

This task consists of completion of documents necessary to meet requirements of the California Environmental Quality Act (CEQA). The required CEQA document is expected to be an Initial Study/Mitigated Negative Declaration, and this task includes filing all mandatory notices, conducting all required hearings, and adopting the document by the SAFCA Board of Directors.

Task Deliverables

- Approved and adopted CEQA document.

2.3.4. Task 8: Permitting

SAFCA will acquire environmental permits as required to implement the project. These are expected to include a Clean Water Act Section 404 permit from the US Army Corps of Engineers (USACE) including National Environmental Policy Act (NEPA) and cultural resources compliance, a Section 401 Water Quality Certification from the California Central Valley Regional Water Quality Control Board (CVRWQCB), a California Fish and Game Code Section 1602 Streambed Alteration Agreement from the California Department of Fish and Wildlife (CDFW), and possibly an encroachment permit from the Central Valley Flood Protection Board (CVFPB). The project is expected to be exempt from the Surface Mining and Reclamation Act (SMARA) as a construction project, but SMARA will be complied with if applicable.

Task Deliverables:

- Copies of all required permits

2.4. Budget Category (d) Construct/Implement

2.4.1. Task 9: Construction Contracting

Pre-construction work to be completed under Task 9 includes bid advertisement, Notice of Award (NOA), and a Notice to Proceed (NTP). The bid package to be used for bid solicitation will include the final plans and specifications that are prepared as part of the project design task.

Task Deliverables:

- Notice of Award
- Notice to Proceed

2.4.2. Task 10: Construction

This task comprises all of the steps necessary to physically construct the project pursuant to the plans and specifications once the contract has been awarded. It includes mobilization activities such as moving equipment to the site, site security, and bonding and contractor compliance with contract documents and requirements. It includes all necessary site improvements such as excavation and final grading of the specified multi-use basin, installation of landscaping and site amenities, and planting of environmental features. It includes all demobilization activities including removal of equipment, fencing, and temporary construction materials and facilities from the site.

Task Deliverables:

- As-built drawings

2.5. Budget Category (e) Environmental Compliance/Mitigation

2.5.1. Task 11: Environmental Compliance

Environmental compliance measures and project mitigation imposed via the CEQA document and permits will be incorporated into construction plans and specifications and will be complied with during project construction.

Task Deliverables:

- Plans and specifications (also a Task 6 deliverable) will show environmental compliance requirements, and as-built drawings (also a Task 10 deliverable) will show completion of physical environmental improvements.

2.6. Budget Category (f) Construction Administration

2.6.1. Task 12: Construction Administration

Construction administration includes construction management services and other administrative activities relating to project implementation. Contract administration will be performed by

SAFCA staff, and construction management including managing contractor correspondence, field inspections, and management of change order requests and project records will be performed by a consultant.

Task Deliverables:

- As-built drawings (also a Task 10 deliverable) will show successful construction administration.

2.7. Budget Category (g) Other

2.7.1. Task 13 Project Performance/Management Plans

SAFCA will complete a Project Performance Monitoring Plan (PPMP) and/or a Project Management Plan (PMP) as required by DWR.

Task Deliverables:

- PPMP/PMP as required.