



## City Council Report

915 I Street, 1<sup>st</sup> Floor

Sacramento, CA 95814

[www.cityofsacramento.org](http://www.cityofsacramento.org)

---

**File ID:** 2021-00283

**April 6, 2021**

**Consent Item 23**

---

**Title: Memorandum of Understanding: Apportionment of Cost Share for the Natomas Basin, Federal Emergency Management Agency (FEMA) Letter of Map Revision Internal Drainage**

**Location:** Districts 1, 3 and 4

**Recommendation:** Pass a Motion authorizing the City Manager or the City Manager's designee to execute a Memorandum of Understanding (MOU) with Reclamation District 1000 (RD 1000) and the County of Sacramento (County) for the development of a hydrologic model for the Natomas Basin internal floodplain in support of a proposed Letter of Map Revision (LOMR) for the Flood Control Planning Program (I14010100), for an amount not-to-exceed \$388,566, including the City's share of the agreement of \$129,522.

**Contact:** Rosa Millino, Senior Engineer (916) 808-1451; Neal Joyce, Supervising Engineer (916) 808-1419; Tony Bertrand, Engineering & Water Resources Division Manager, (916) 808-1461; Department of Utilities

**Presenter:** None

**Attachments:**

- 1-Description/Analysis
- 2-Memorandum of Understanding (MOU)
- 3-Annual Adequate Progress Report

## Description/Analysis

**Issue Detail:** Staff recommends Council approve an MOU, apportioning costs for the Natomas Basin, FEMA LOMR for internal drainage with RD1000 and the County.

RD1000, the County, and the City of Sacramento (the Parties) wish to prepare a LOMR for the Natomas Basin internal floodplain as part of an exterior levee certification project. The Parties have determined that the existing model of the Natomas Basin internal floodplain requires an update in order to meet their current needs. RD 1000 solicited Statements of Qualifications from qualified water resources consultants to prepare the technical analysis, floodplain mapping, and supporting documentation for a LOMR submittal to FEMA, and RD 1000 holds the expertise necessary to supervise and provide direction to a consultant in this effort.

**Policy Considerations:** City Council approval is required for agreements in excess of \$250,000 relating to contribution or receipt of funding or services between the city and another public agency per City Code 3.04.020.

**Economic Impacts:** None.

**Environmental Considerations:** This report concerns administrative activities that will not have a significant effect on the environment and does not constitute a “project” as defined by CEQA [CEQA Guidelines Sections 15378(b)(2 and 5).

**Sustainability:** The proposed project is consistent with the 2035 General Plan, Environmental Considerations (EC) 2.1.1-Interagency Flood Management, EC 2.1.4- 200-year flood protection, EC 2.1.5 Funding for 200-year flood Protection and EC 2.1.13- Levee Certification, which support the Sacramento Area Flood Control Agency (SAFCA) in implementing projects that will ultimately provide a 200-year level of flood protection or greater.

**Commission/Committee Action:** Not applicable.

**Rationale for Recommendation:** On July 31, 2020, a Request for Qualifications (RFQ) was advertised by RD 1000 for the Natomas Basin Hydraulic Model.

Staff from the City of Sacramento (City), the County and RD 1000 reviewed the proposals and based on their knowledge, expertise, and experience, Civil Engineering Solutions, Inc. (CESI) was selected to provide the requested services.

**Financial Considerations:** The City's portion of the cost share is for an amount not-to-exceed \$129,522. Sufficient funding exists in the Flood Control Planning Program (I14010100, Fund 6011) to fund the agreement.

There are no General Funds allocated or planned for this project.

**Local Business Enterprise (LBE):** Not Applicable

**Background:** In 2008, FEMA issued updated Flood Insurance Rate Maps (FIRMs) for Natomas to reflect the de-certification of the perimeter levees. The updated FIRMs established base flood elevations that effectively prohibited urban development in the basin. In preparation of the levee de-certification, the Sacramento Area Flood Control Agency (SAFCA) applied for California (CA) Department of Water Resources - Early Implementation Project (EIP) grant funding to improve the levees to a 200-year standard. In 2006, SAFCA was awarded the EIP grant, which has led to approximately 18 miles of levee improvements. The remaining 24 miles of levee improvements are under construction by the United States Army Corps of Engineers (USACE) and scheduled for completion in 2025.

As required by CA Senate Bill 5 (2007), flood control facilities must meet the Central Valley 200-year urban flood control standard by 2025. The local jurisdictions must annually demonstrate that adequate progress is being made to meet the 200-year urban level of flood protection (ULOP). SAFCA provides the City with a summary of levee work completed and an updated schedule each year. The annual adequate progress report (Attachment 3) provides the County with information needed to make "SB 5 findings", thus allowing continued development and building permits at ground level in Natomas.

FEMA has designated Natomas as a Zone A99 floodplain. This flood zone type recognizes the planned levee improvements and also relies upon annual adequate progress. Flood insurance is required in Natomas at a Preferred Risk Policy rate which is a low-cost Standard Flood Insurance Policy.

Once the Natomas Levee Improvement Project (NLIP) is complete, the obligation to continue purchasing flood insurance will remain until FEMA has published updated FIRMs for Natomas. Federal Code of Regulations Title 44, Section 65.10 (44CFR65.10, ref. <https://www.law.cornell.edu/cfr/text/44/65.10>) requires an internal drainage study and floodplain maps be prepared for areas behind levees.

**Code of Federal Regulations 44CFR65.10(b)(6) - *Interior drainage.*** An analysis must be submitted that identifies the source(s) of such flooding, the extent of the flooded area, and, if the average depth is greater than one foot, the water-surface elevation(s) of the base flood. This analysis must be based on the joint probability of interior and exterior flooding and the capacity of facilities (such as drainage lines and pumps) for evacuating interior floodwaters.

Natomas is unique in that there are levees within the basin which also require levee certification; therefore, an internal drainage study must be prepared for internal levee certification. If sections of the internal levees are found to be deficient, it may take several years to construct the levee improvements to meet certification criteria. The County, City, and RD 1000 are working together to prepare the support documentation for the FEMA LOMR, such that the timing of the internal drainage and levee certification coincides with the completion of the NLIP.

RD 1000 was selected to act as the lead agency, prepared the project documents and solicited a Request for Qualifications on July 31, 2020. A consultant team has been selected at a total cost of \$388,566. The cost of this project will be shared between the Parties. The City's one-third portion of the project is \$129,522.

The consultant team selected for the project will purchase the technical data developed by the Grand Park (formally North Natomas Precinct) project as the basis of the submittal. This shall provide continuity between the FEMA LOMR and planned development projects.

**MEMORANDUM OF UNDERSTANDING  
APPORTIONMENT OF COST SHARE FOR THE NATOMAS BASIN FEMA LETTER  
OF MAP REVISION INTERNAL DRAINAGE**

This Memorandum of Understanding (“**MOU**”) is entered into and effective this \_\_\_ day of \_\_\_\_\_, 2021 by and among the COUNTY OF SACRAMENTO, a political subdivision of the State of California; the CITY OF SACRAMENTO, a municipal corporation; and RECLAMATION DISTRICT NO. 1000, a California Reclamation District (each a “**Party**” and collectively, the “**Parties**”)

**Recitals**

WHEREAS, the Parties wish to prepare a Letter of Map Revision (LOMR) for the Natomas Basin internal floodplain as part of an exterior levee certification project; and

WHEREAS, the Parties have determined that the existing model of the Natomas Basin internal floodplain requires an update in order to meet their current needs; and

WHEREAS, consistent with that goal, the Parties have solicited Statements of Qualifications from qualified water resources consultants to prepare the technical analysis, floodplain mapping, and supporting documentation for a LOMR submittal to FEMA; and

WHEREAS, RD 1000 holds the expertise necessary to supervise and provide direction to a consultant in this effort; and

WHEREAS, the Parties have selected CIVIL ENGINEERING SOLUTIONS, INC. (CESI) to perform the tasks related to the Project, and RD 1000 has entered into a contract with CESI to complete the Project.

**Agreement**

1. Description of Project. The term “**Project**” as used in this Agreement shall include the development of a hydrologic model for the Natomas Basin internal floodplain in support of a proposed Letter of Map Revision. The Project includes those tasks identified on Exhibit A (“Scope of Work”), and any supporting work jointly approved by the Parties.
2. Establishment of the Natomas Basin Working Group. Upon execution of this MOU, the Parties will convene the Natomas Basin Working Group (“Working Group”). The Working Group shall be comprised of one member, whether staff or a consultant, designated by each Party as its representative. Members of the Working Group serve at the pleasure of the Party they represent.
  - (a) The Working Group shall be responsible for sharing feedback from the Parties to the consultant related to the Project; to review consultant’s progress and work products for making recommendations to the Parties regarding the adoption and implementation for the Project; and to take such other action as the Working Group deems appropriate to further the interest of the Parties related to preparation of the modeling, mapping, and

supporting documentation.

- (a) (b) The Working Group will seek to make decisions through consensus. In the absence of a consensus, participants of the Working Group may be called upon to cast votes and a simple majority decision shall provide the consultants with recommendations to proceed with the Project. Recommendations of the Working Group provided to the Parties shall include a report of the votes cast.
3. Administering Agency: RD 1000 shall be initially designated as the Administering Agency for the Project; this designation may be altered by the unanimous written consent of the Parties. General oversight and management of the Project shall be the responsibility of the Administering Agency. In particular, the Administrative Agency shall be responsible for engaging consultants for the Project, and for providing direction to the consultants in consultation with the Working Group; for billing Project Costs to the appropriate agency partners; for supervising and providing direction to consultants; and for reviewing and paying consultant bills consistent with the provisions of this MOU. As needed, significant Project decisions shall be returned to the Working Group for additional input and action.
4. Cost Sharing. “**Project Costs**” as used in this Agreement shall include, but not be limited to, consultant fees related to the Project and any other costs approved jointly by the Parties. A consultant team has been selected at a Project Cost of \$388,566. Project Costs shall be shared equally among the Parties as follows:
  - (a) The County’s allocated portion of the Project Costs is \$129,522 and will be paid over 3 fiscal years. Funding for the County’s share will be allocated as follows for each fiscal year; \$75,000 in FY 2021/2022, \$35,000 in FY 2022/2023, and \$19,522 in FY 2023/2024.
  - (b) The City’s allocated portion of the Project Costs is \$129,522, to be paid in full to RD 1000 within 30 days of execution of this MOU.
  - (c) RD 1000’s allocated portion of the Project Costs is \$129,522 and will be paid as invoices are received from CESI.

When any additional Party becomes a signatory to this MOU, the cost share proportions identified herein shall be modified to appropriately distribute Project Costs between the new and existing Parties, according to a formula mutually agreed upon by the existing Parties and memorialized by an amendment to this MOU. Nothing in this MOU shall prevent a Party from voluntarily incurring its own costs related to basin model development, or from developing its own supporting materials at that Party’s expense.

5. Accounting: The Administering Agency shall receive all bills relating to the Project and shall be responsible for paying those bills in a timely fashion, using the amounts contributed by each Party. RD 1000 shall perform an accounting on a quarterly basis and prepare a statement to the Parties describing the bills received, payments made, and any amounts due to date from

the Parties.

6. Continuing Obligation. The cost sharing obligations contained in this Agreement shall remain a continuing obligation of the Parties, until paid in full.

7. General Provisions

- a. *Authority*. Each signatory of this MOU represents that s/he is authorized to execute this MOU on behalf of the Party for which s/he signs. Each Party represents that it has legal authority to enter into this MOU and to perform all obligations under this MOU.
- b. *Amendment*. This MOU may be amended or modified only by a written instrument executed by each of the Parties.
- c. *Jurisdiction and Venue*. This MOU shall be governed by and construed in accordance with the laws of the State of California, except for its conflicts of law rules. Any suit, action, or proceeding brought under the scope of this MOU shall be brought and maintained to the extent allowed by law in the County of Sacramento, California.
- d. *Headings*. The paragraph headings used in this MOU are intended for convenience only and shall not be used in interpreting this MOU or in determining any of the rights or obligations of the Parties.
- e. *Construction and Interpretation*. This MOU has been arrived at through negotiations and each Party has had a full and fair opportunity to revise the terms of this MOU. As a result, the normal rule of construction that any ambiguities are to be resolved against the drafting Party shall not apply in the construction or interpretation of this MOU.
- f. *Entire Agreement*. This MOU constitutes the entire agreement of the Parties with respect to the subject matter of this MOU and supersedes any prior oral or written agreement, understanding, or representation relating to the subject matter of this MOU.
- g. *Partial Invalidity*. If, after the date of execution of this MOU, any provision of this MOU is held to be illegal, invalid, or unenforceable under present or future laws effective during the term of this MOU, such provision shall be fully severable. However, in lieu thereof, there shall be added a provision as similar in terms to such illegal, invalid or unenforceable provision as may be possible and be legal, valid and enforceable.
- h. *Successors and Assigns*. This MOU shall be binding on and inure to the benefit of the successors and assigns of the respective Parties. No Party may assign its interests in or obligations under this MOU without the written consent of the other Parties, which consent shall not be unreasonably withheld or delayed.

- i. *Notices.* All notices, requests, demands or other communications required or permitted under this MOU shall be in writing unless provided otherwise in this MOU and shall be deemed to have been duly given and received on: (i) the date of service if served personally or served by electronic mail or facsimile transmission on the Party to whom notice is to be given at the address(es) provided below, (ii) on the first day after mailing, if mailed by Federal Express, U.S. Express Mail, or other similar overnight courier service, postage prepaid, and addressed as provided below, or (iii) on the third day after mailing if mailed to the Party to whom notice is to be given by first class mail, registered or certified, postage prepaid, addressed as follows:

RD 1000  
Kevin L. King  
General Manager  
1633 Garden Highway  
Sacramento, CA 95833  
[kking@rd1000.org](mailto:kking@rd1000.org)

County of Sacramento  
Michael Peterson, Director  
827 Seventh Street, Room, 301  
Sacramento, CA 95814

City of Sacramento  
William Busath, Director  
1395 35<sup>th</sup> Ave  
Sacramento, CA 95822

- j. *Waivers.* Waiver of any breach or default hereunder shall not constitute a continuing waiver or a waiver of any subsequent breach either of the same or of another provision of this MOU and forbearance to enforce one or more of the remedies provided in this MOU shall not be deemed to be a waiver of that remedy.
- k. *Attorneys' Fees and Costs.* In the event of a dispute between the Parties, each Party will pay their own attorneys' fees, expert witnesses' fees, costs of suit, and any other costs associated with the dispute.
- l. *Necessary Actions.* Each Party agrees to execute and deliver additional documents and instruments and to take any additional actions as may be reasonably required to carry out the purposes of this MOU.



- m. *Compliance with Law.* In performing their respective obligations under this MOU, the Parties shall comply with and conform to all applicable laws, rules, regulations and ordinances.
- n. *Third Party Beneficiaries.* This MOU shall not create any right or interest in any non-Party or in any member of the public as a third party beneficiary.
- o. *Counterparts.* This MOU may be executed in one or more counterparts, each of which shall be deemed to be an original, but all of which together shall constitute but one and the same instrument.

**CITY OF SACRAMENTO**  
**a municipal corporation:**

By: \_\_\_\_\_  
Hector Barron,  
Assistant City Manger  
For Howard Chan, City Manager

Approved as to Form:

By: \_\_\_\_\_  
Senior Deputy City Attorney

Attest: \_\_\_\_\_  
City Clerk

**RD1000**

By: \_\_\_\_\_  
Kevin L. King  
General Manager

Approved as to Form:

By: \_\_\_\_\_  
Rebecca Smith  
Downey Brand

**COUNTY OF SACRAMENTO**

By: \_\_\_\_\_  
Michael L. Peterson, Director

Approved as to Form:

By: \_\_\_\_\_  
Deputy County Counsel

2020

# Urban Level of Flood Protection

## Annual Report

FINAL

August, 2020



1007 7<sup>th</sup> St, 7<sup>th</sup> Floor  
Sacramento, CA 95814

(916) 874-7606

## **Table of Contents**

1. Introduction .....	2
2. Planned Scope, Schedule, and Cost.....	2
2.1 Project Scope .....	2
2.2 Schedule .....	6
2.3 Costs, Revenues, and Appropriations.....	6
3. Construction of Critical Features .....	8
4. Delays .....	10
5. References for Data Used.....	10

## **Figures**

Figure 1: SAFCA Projects .....	5
--------------------------------	---

## **Tables**

Table 1: Timeline for Projects .....	6
Table 2: Planned Expenditures (\$millions, all sources).....	7
Table 3: Cumulative Planned Expenditures, Actual Appropriations and Actual Expenditures Through 2019-2020 (\$millions, all sources) .....	8

## **1. INTRODUCTION**

California Government Code (CGC) Section 65007(a)(5) requires local agencies to “annually report to the Central Valley Flood Protection Board on the efforts in working toward completion of the flood protection system.” State requirements are further described in the Urban Level of Flood Protection Criteria (ULOP Criteria; DWR, 2013).

This report describes SAFCA’s efforts in improving the regional flood protection system over the fiscal year ending on June 30, 2020. Section 5 of the Sacramento Area Flood Control Agency Final Urban Level of Flood Protection Plan and Adequate Progress Baseline Report (ULOP Plan) noted that the majority of funding for SAFCA’s projects comes from State and Federal agencies over which SAFCA has no control (SAFCA, 2016).

This annual report only addresses State Plan of Flood Control (SPFC) facilities. The local land use agencies, acting as floodplain managers, must consider this plan with their own data to determine whether interior drainage and flood sources not managed by SPFC facilities affect development projects to such a degree that the projects would be subject to flood protection findings under state law. This report is not intended to be a substitute for the independent judgment of the local agencies in adopting their findings.

## **2. PLANNED SCOPE, SCHEDULE, AND COST**

CGC Section 65007(a)(1) requires the local flood management agency to report “the total project scope, schedule, and cost” of meeting ULOP with the agency’s flood protection system. This information was detailed in the ULOP Plan and is summarized here.

### **2.1 Project Scope**

The following projects, illustrated in Figure 1, will help attain the Urban Level of Flood Protection in SAFCA’s protected areas.

*Folsom Dam Modifications* – Folsom Dam Modifications include three related projects: the Folsom Joint Federal Project (JFP), the Folsom Dam Raise, and the Folsom Dam Water Control Manual Update.

The JFP is a joint project of the US Bureau of Reclamation (BOR), US Army Corps of Engineers (USACE), DWR, and SAFCA. The JFP created a new, gated auxiliary spillway on the east abutment of the dam, enabling the dam to be operated to accommodate a 200-year flood with discharges no greater than 160,000 cubic feet per second (cfs).

The Folsom Dam Raise will raise the height of the structures comprising Folsom Dam, including the main dam, wing dams, and dikes that contain Folsom Reservoir. Congress has authorized raising the height of the wing dams and dikes by 3.5 feet. This will allow flood operators to store more flood water when forecasted inflows are decreasing (resulting in no imminent threat to the dam) and the additional storage is required to maintain releases from the dam at a level that can

be safely contained by the downstream levee system. The project includes improving the flood gates on the main dam (USACE, 2017).

The Folsom Dam Water Control Manual Update optimizes operations at the dam with the JFP improvements. Once the raise is completed, the manual will be adjusted again to reflect the increased reservoir storage capacity created by that project. With the raise, studies indicate that in a 200-year flood, discharges into the American River will not exceed 115,000 cfs.

*American River Common Features (ARCF) Natomas Basin (formerly called the Natomas Basin USACE Project)* – The Natomas levees are being improved in two phases. Physical construction of the Natomas Levee Improvement Program (NLIP) Local Project, led by SAFCA, is complete and comprised eighteen miles of improvements to the Natomas Cross Canal and the Sacramento River East Levee. The ARCF Natomas Basin Project consists of levee improvements around the remainder of the 42-mile Natomas Basin perimeter. The USACE is planning and implementing the remaining elements (USACE, 2015):

- American River adjacent to Natomas Basin – widen 2 miles of levee in place and install a seepage cutoff wall through the levee and foundation.
- Sacramento River adjacent to Natomas Basin – construct 5 miles of adjacent levee, 3.3 miles of deep seepage cutoff walls, and 4.3 miles of seepage berms
- Pleasant Grove Creek Canal adjacent to Natomas Basin - Widen 3.3 miles of levee in place and install a soil bentonite cutoff wall on the Pleasant Grove Creek Canal.
- NEMDC/Steelhead Creek West Levee – widen 12.8 miles of existing levee and install 10.7 miles of cutoff wall.
- Natomas Cross Canal (NCC) – complete construction at gaps not remediated as part of NLIP at Bennett and Northern pumping plants and at the State Route 99 closure structure.

*ARCF 2016 (formerly called American River Common Features General Reevaluation Report (GRR))* – The ARCF Natomas Project described above was authorized prior to the ARCF GRR. Water Resources Development Act (WRDA) 2016 features include more bank protection along the American and Sacramento rivers, levee height and seepage improvements along Arcade Creek, levee improvements on the Magpie Creek Diversion Channel, and changes to the Sacramento Weir and Bypass. On the Sacramento River east levee downstream of the American River, ARCF 2016 would improve deficient sites with features like the following:

- Slurry cutoff walls to address levee seepage and stability problems
- Rock bank protection to address erosion problems
- Geotextile slope stabilization to address levee stability
- Slope flattening to address levee stability
- Levee raise to address freeboard

Bank protection along the American River would consist of rock revetment with planting berms where feasible. In some cases “launchable rock” trenches, when undermined by erosion, would release rocks onto the erosion surface.

*Sacramento River Bank Protection Project (SRBPP)* – The SRBPP is an ongoing project to provide bank protection along critically eroding reaches of the Sacramento River flood control

system, including tributaries like the American River. The SRBPP could accomplish a portion of the bank protection that otherwise would be done through ARCF 2016.

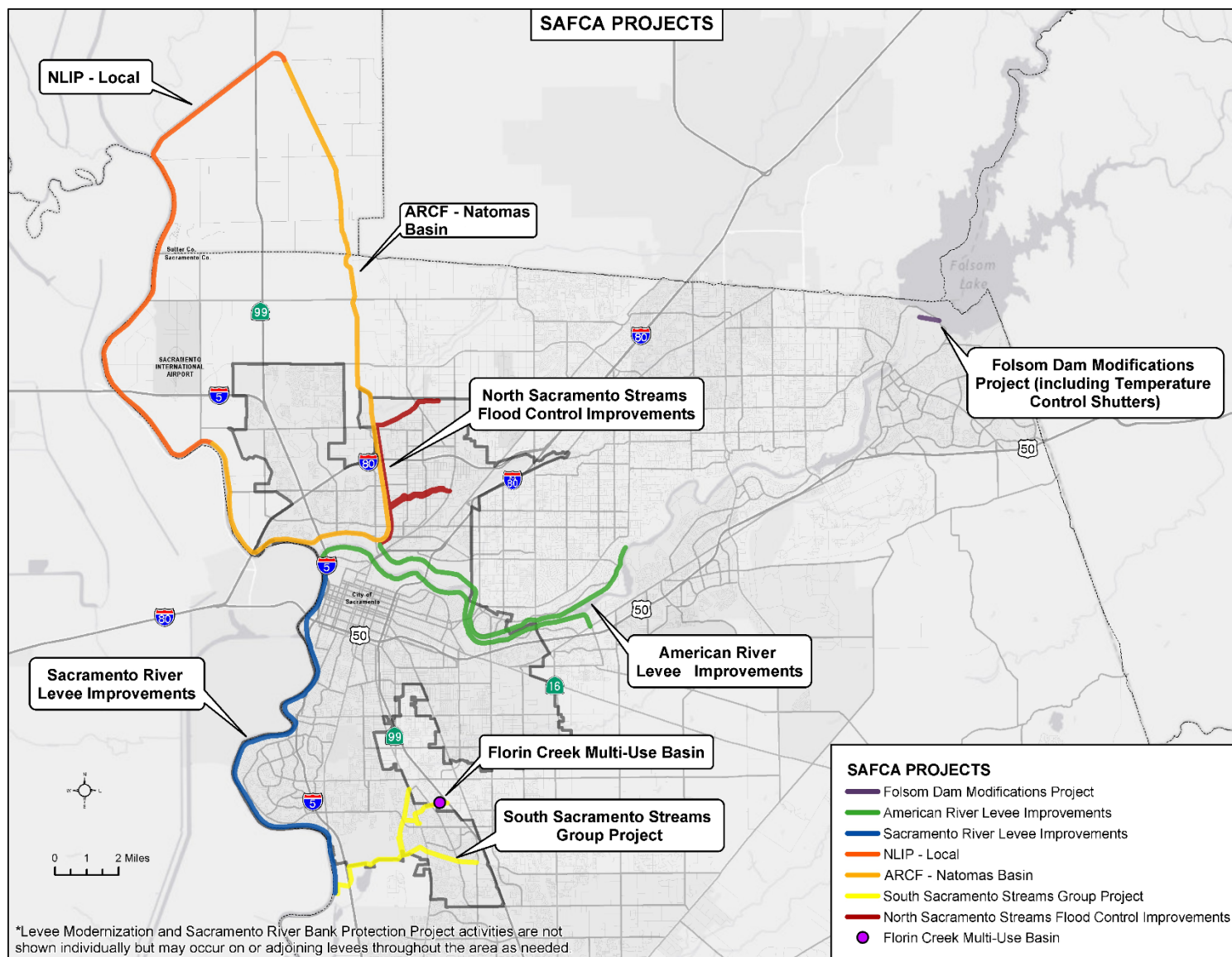
*Levee Accreditation Project (LAP)* – The LAP is a locally-led construction project that advanced portions of the ARCF 2016 prior to congressional authorization and funding. The LAP includes slurry cutoff walls along the Arcade Creek North Levee, the NEMDC East Levee, and the Arcade Creek South Levee (AECOM, 2015). SAFCA also began design along the Sacramento River East Levee (SREL). SAFCA’s design project included stability berms, relief wells, relief well improvements, cutoff walls, and toe drains. The project also includes erosion repairs. The USACE took over design efforts along the Sacramento River in 2018 and will lead construction. Structures and vegetation encroaching on the levees will be removed if necessary to meet NFIP standards and the State’s ULDC.

The southernmost reach of the SREL at its junction with the Beach Lake Levee was evaluated in 2018 (MBK, 2018). MBK recommended improving the Beach Lake Levee and the Sacramento River East Levee downstream of the Beach Lake Levee. The recommendations included raising the Beach Lake Levee to meet ULDC requirements, possibly in conjunction with a riparian wind-wave buffer and DWR improvements to the levees of the McCormack-Williamson Tract. These improvements can provide ULOP by 2025. SAFCA has proceeded with the wind-wave buffer and is evaluating potential levee improvements.

*South Sacramento County Streams Group (SSSG) Project* – USACE was the lead agency on this completed project, which consisted of improvements to levees and channels along Morrison Creek and its tributaries in South Sacramento, including Florin Creek, Elder Creek, and Unionhouse Creek. Physical work is now complete, with reports, an Operations and Maintenance Manual, and fiscal closeout remaining.

*Florin Creek Multi-Use Basin Project* – In moderate and larger flood events, the completed Florin Creek Multi-Use Basin Project stores up to 30 acre-feet of Florin Creek flows at Florin Creek Park on the north bank of Florin Creek (ESA, 2014). It provides at least 100-year flood protection within its floodplain in conjunction with the Florin Creek capacity improvements constructed by USACE as part of the South Sacramento County Streams Group Project.

*Non-Structural Actions* – The state’s Urban Levee Design Criteria (ULDC) (DWR, 2012) are incorporated by reference in the ULOP Criteria and require many actions that are good practices for the effective operation and maintenance of levee systems to sustain system performance. These actions include such measures as engineering evaluation and documentation, development of security and safety plans, and other items. The non-structural actions and their necessity are described in greater detail in the Adequate Progress Engineer’s Report (MBK, 2016). Ongoing operation, maintenance, repair, and rehabilitation may be considered ongoing non-structural actions that to the extent required are funded by SAFCA and its land use agency and local maintaining agency partners. Progress on these actions is not reported here unless they are “critical features” under the meaning of CGC Section 65007(a)(3).



**Figure 1: SAFCA Projects**



## 2.2 Schedule

The Urban Level of Flood Protection must be achieved by the year 2025 in order for land use agencies, in approving new development, to make a finding that adequate progress is being made on the construction of a flood protection system (CGC §65865.5, §65962, and §66474.5). Table 1, below, from the ULOP Plan, lists the schedule for SAFCA projects.

**Table 1: Timeline for Projects**

Project	Levee System						Construct- ion Complete by
	Natomas	Dry Creek	Robla Creek – Arcade Creek	American River North Levee	American River South and Sacramento River East Levee	South Sacramento Streams	
Folsom Dam Modifications	Required for ULOP	Not required	Required for ULOP	Required for ULOP	Required for ULOP	Required for ULOP	2025
ARCF Natomas Basin Project	Required for ULOP	Not required	Not required	Not required	Not required	Not required	2025
NLIP Local Project	Required for ULOP	Not required	Not required	Not required	Not required	Not required	2016
ARCF 2016 (elements required for 200-year protection)	Provides resiliency (lowers water surface)	Not required	Provides resiliency	Required for ULOP	Required for ULOP	Provides resiliency	2025
SRBPP	As needed	As needed	As needed	As needed	As needed	As needed	As needed
LAP	Not required	Not required	Required for ULOP	Required for ULOP	Not required	Not required	2023
SSSG	Not required	Not required	Not required	Not required	Not required	Site specific*	Complete
Florin Basin	Not required	Not required	Not required	Not required	Not required	Site specific*	Complete
Additional South Sacramento SPFC Project(s)	Not required	Not required	Not required	Not required	Required for ULOP	Not Required	2025
*This plan provides 200-year design flood risk reduction in the South Sacramento Streams area downstream of the Union Pacific Railroad (UPRR), subject to the evaluation of additional south Sacramento SPFC projects. Upstream of UPRR, the land use agency's determination of whether ULOP is attained will depend on the specific site and development proposal. At some sites, the listed projects will help attain ULOP.							

## 2.3 Costs, Revenues, and Appropriations

System improvement costs, or planned expenditures, were shown in the ULOP Plan as required by CGC Section 65007(a)(1). Revenues to fund those expenditures were also identified pursuant

to CGC 65007(a)(2)(A). Table 2 shows combined planned expenditures for all agencies along with actual expenditures. Table 2 shows expenditures are keeping pace with the planned level.

**Table 2: Planned Expenditures (\$millions, all sources)**

Fiscal Year	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025
Original ULOP Plan Costs[1]	\$171.6	\$141.0	\$111.3	\$149.9	\$125.5	\$125.5	\$163.6	\$126.6	\$126.6	\$108.8
Actual Spent[2]	\$167.8	\$114.3	\$123.1	\$171.3	\$428.3	N/A	N/A	N/A	N/A	N/A
<p>[1] Original ULOP Plan Costs include capital projects and levee modernization. Values in the 2016 ULOP Plan included system operations and maintenance (O&amp;M) which are no longer shown.</p> <p>[2] Actual expenditures are SAFCA actuals plus estimates of other agency expenditures based on funding agreements and/or the progress of the projects.</p>										

SAFCA, State, and federal appropriations also remain consistent with the plan, as shown in Table 3. CGC Section 65007(a)(2)(A) specifies that adequate progress means that 90 percent of the revenues scheduled to be received by that year have been appropriated and are currently being expended. Table 3 shows this requirement has been met with over 100% of scheduled revenues appropriated to date. The Federal and State appropriations reflect Congressional authorizations and executed funding agreements. SAFCA appropriations reflect past spending and current year appropriations. Section 3 of this report will describe how these appropriations are being expended.

**Table 3: Cumulative Planned Expenditures, Actual Appropriations and Actual Expenditures Through 2019-2020 (\$millions, all sources)**

<b>Agency</b>	<b>Planned Expenditures*</b>	<b>Actual Appropriations**</b>	<b>Actual Expenditures</b>	<b>Percent Appropriated Versus Planned Expenditures***</b>
Federal	\$1,135.7	\$2,736.8	\$1,486.6	>100%
State	\$743.6	\$1,049.4	\$627.9	>100%
Local****	\$47.5	\$47.4	\$47.5	100%
SAFCA	\$333.9	\$436.4	\$408.0	>100%
Total	\$2,260.7	\$4,270.0	\$2,570.0	>100%
<b>Notes:</b> *Planned expenses are the planned cumulative capital project expenses from Fiscal Year 2006-2007 through Fiscal Year 2019-20 as shown the 2016 ULOP report. ** For purposes of this report, State appropriations represent the amount of executed State funding agreements with SAFCA. SAFCA amounts include past spending plus current year appropriations to avoid double-counting unspent appropriations. *** The federal and total percent appropriated exceed 100% because the federal Bipartisan Budget Act of 2018 (Public Law 115-123) included full funding for the American River Common Features and Folsom Dam Raise. ****The majority of the local share was from the City of Folsom for the bridge to relocate private vehicle traffic away from the Folsom Dam, which was a required flood project feature.				

### **3. CONSTRUCTION OF CRITICAL FEATURES**

Pursuant to Government Code Section 65007(a)(3), adequate progress on construction of a flood protection system means that critical features of the system are under construction and progress is indicated by the expenditure of the budgeted construction funds. The preceding section documented that SAFCA expenditures are on track. This section provides a brief summary of the construction progress in each of the SAFCA protected areas. This report does not distinguish between expenditures for physical construction and those for pre-construction permitting, engineering, and design because the cash flow and planned expenditures in the ULOP Plan do not provide line items for construction alone; and the pre-construction work is a planned and necessary component of ULOP Plan implementation.

*All Protected Areas* – All of the SAFCA protected basins benefit from the Folsom Dam Modifications. The first element of the modifications, the JFP, was largely completed in 2016. In 2017 the completed project was turned over to the US Bureau of Reclamation (USBR). On June 12, 2019 the Water Control Manual was formally executed. The Folsom Dam Raise construction contract for Dike 8 was awarded in 2019 and construction is nearly complete. Design work for Dikes 1-6 is underway. The draft final Emergency Spillway Release Diagram has been reviewed and will be used to develop hydrologic loading curves for use in the dam safety risk analysis and final designs.

The Sacramento Weir widening is in the 65% design stage and is being integrated with the State of California Lower Elkhorn Basin Levee Setback project. SAFCA has nearly completed relocation of the Bryte Landfill to make way for the levee setback, and is seeking Surface Transportation Board approvals necessary to clear the way for acquiring railroad property necessary for the weir widening.

*Natomas* – SAFCA has largely completed its Natomas Levee Improvement Program (NLIP), which improved levees on the north and part of the west perimeter of the basin. The ARCF Natomas Basin Project is improving the basin’s remaining west, east and south levees. Construction in Reach D is nearly complete pending installation of monitoring wells. Reach I included a blanket drain constructed under the I-5 overpass that is now complete, with the remainder of the cutoff wall in the reach along the Garden Highway expected to be complete by the end of 2020. USACE Reach B and Reach H construction is also underway. USACE has completed 65% design of Reach A with 95% design due in August. USACE design work continues on the “Interstate 5 window” and Reach E. Natomas benefits from the Folsom Dam Modifications, which were discussed above.

*Dry Creek North Levee System* – No construction projects are required for the Dry Creek north levee.

*Robla Creek to Arcade Creek* – In 2017, 14 relief wells were constructed along the north levee of Arcade Creek. Construction of cutoff walls under SAFCA construction contract 4355 is now substantially complete.

*American River North Levee* – Cutoff walls were constructed along the Arcade Creek south levee and NEMDC east levee as a part of contract 4355. Construction of cutoff walls was completed by USACE in 2015. Erosion protection is being implemented by USACE and should be complete by 2025.

*American River South and Sacramento River East Levee* – Structural improvements to the Sacramento River east levees have been designed and USACE has retained a construction contractor. Work has begun work in the Pocket area and a seepage berm is being constructed near Front Street and Miller Park. Encroachments in the construction footprint were removed by SAFCA. Under its “levee modernization project, SAFCA has acquired a property adjoining the levee and removed encroachments on it preparatory to splitting the property under the flood easement and conveying fee title to the State or City. A voluntary encroachment removal program has been initiated for other affected properties. Additional structural improvements recommended as a result of evaluations in 2018 included improvements to the Beach Lake Levee and the Sacramento River East Levee downstream of the Beach Lake Levee (MBK, 2018), and a feasibility study is underway. In 2019 SAFCA also retained a contractor who constructed an oak woodland mitigation project to provide a wind-wave buffer for the levee.

Erosion repair projects along the American and Sacramento rivers are being designed, with construction on two sites planned for award this year. Erosion evaluation is an ongoing activity on both rivers. Erosion protection is being implemented by USACE under their WRDA 2016 authorization and should be complete by 2025.

*South Sacramento Streams Group* –Upstream of the UPRR, construction is complete on the Florin Creek channel improvements and the Florin Creek Multi-Use Basin project. The Federal Emergency Management Agency (FEMA) issued a LOMR for that work that became effective on March 25, 2019. The City or County may choose to investigate whether some areas where 200-year flood depths are below 3 feet may be newly eligible for a ULOP finding based on 100-year protection.

#### **4. DELAYS**

Adequate progress towards achieving an Urban Level of Flood Protection means, according to Government Code section 65007(a)(4), that “the city or county has not been responsible for a significant delay,” among other things. In SAFCA’s flood protected areas, this standard has been achieved. As Table 4 demonstrated, to date local agencies have exceeded 100% of their planned expenditures for flood protection.

The ULOP Criteria recommend that annual progress reports address “any delay in State funding appropriation consistent with an agreement between a State agency and a local flood management agency.” As demonstrated earlier, State appropriations to date exceed their planned level. No other substantial reason for delay occurred during the year.

#### **5. REFERENCES FOR DATA USED**

AECOM. 2015. Draft Environmental Impact Report. North Sacramento Streams, Sacramento River East Levee, Lower American River, and Related Flood Improvements Project. State Clearinghouse No. 2008072060. Prepared for Sacramento Area Flood Control Agency. March. Available at: [http://safca.org/2015\\_MARCH\\_DEIR.htm](http://safca.org/2015_MARCH_DEIR.htm). Accessed May 28, 2015.

DOF (California Department of Finance). 2019. State budget detail. Department of Water Resources. May Revise. Available at: <http://www.ebudget.ca.gov/2019-20/pdf/GovernorsBudget/3000/3860.pdf>. Accessed 5/31/2019.

DWR (California Department of Water Resources). 2012. Urban Levee Design Criteria. May. Available at: [http://water.ca.gov/floodsafe/leveedesign/ULDC\\_May2012.pdf](http://water.ca.gov/floodsafe/leveedesign/ULDC_May2012.pdf). Accessed May 28, 2015.

DWR. 2013. Urban Level of Flood Protection Criteria. November. Available at: [http://water.ca.gov/floodsafe/urbancriteria/ULOP\\_Criteria\\_Nov2013.pdf](http://water.ca.gov/floodsafe/urbancriteria/ULOP_Criteria_Nov2013.pdf). Accessed May 28, 2015.

DWR. 2017. Central Valley Flood Protection Plan 2017 Update. August. Available at: <https://www.water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Flood-Management/Flood-Planning-and-Studies/Central-Valley-Flood-Protection-Plan/Files/2017-Central-Valley-Flood-Protection-Plan->

[Update.pdf?la=en&hash=BF1CD290BFC70B64C2016BE167D175D73B06CCB9](#). Accessed June 25, 2017.

EPS (Economic & Planning Systems, Inc.). 2016. Sacramento Area Flood Control Agency Development Impact Fee Program 2016 Update. Prepared for Sacramento Area Flood Control Agency (SAFCA). October.

ESA, 2014. Florin Creek Multi-Use Basin Project. Initial Study with Intent to Adopt a Mitigated Negative Declaration. State Clearinghouse No. 2014032030. Prepared for Sacramento Area Flood Control Agency. March.

MBK (MBK Engineers). 2016. Sacramento Area Flood Control Agency Adequate Progress Towards an Urban Level of Flood Protection Engineer's Report. Prepared for SAFCA.

MBK. 2018. Status of ULDC Evaluation of the Beach Lake Levee. Memo to Pete Ghelfi, SAFCA, from Ric Reinhardt, P.E., MBK Engineers.

SAFCA. 2016. Sacramento Area Flood Control Agency Final Urban Level of Flood Protection Plan and Adequate Progress Baseline Report. Prepared for the City of Sacramento and parts of Sacramento and Sutter counties. June 10.

SAFCA. 2017. 2017 Urban Level of Flood Protection Adequate Progress Annual Report. Prepared for the City of Sacramento and parts of Sacramento and Sutter counties. August 9.

USACE (United States Army Corps of Engineers). 2015. American River Common Features General Reevaluation Report. Final Report. Sacramento District. December. Available at: [http://www.spk.usace.army.mil/Portals/12/documents/civil\\_works/CommonFeatures/Final\\_ARC\\_F\\_GRR\\_Jan2016.pdf](http://www.spk.usace.army.mil/Portals/12/documents/civil_works/CommonFeatures/Final_ARC_F_GRR_Jan2016.pdf). Accessed June 3, 2016.

USACE. 2017. Record of Decision. Folsom Dam Raise Project. Placer, Sacramento, and El Dorado Counties, California. December 18. Available at: [https://www.spk.usace.army.mil/Portals/12/documents/civil\\_works/JFP/Raise/ROD\\_FolsomDam\\_Raise\\_Signed\\_18Dec2017.pdf?ver=2018-03-09-124144-317](https://www.spk.usace.army.mil/Portals/12/documents/civil_works/JFP/Raise/ROD_FolsomDam_Raise_Signed_18Dec2017.pdf?ver=2018-03-09-124144-317). Accessed 7/31/2019.

WSP Parsons Brinckerhoff (PB). 2016. Engineer's Report. Sacramento Area Flood Control Agency. Consolidated Capital Assessment District No. 2. June 13.