



## Sutter Butte Flood Control Agency Strategic Plan January 2016

### 1.0 Introduction

The Sutter-Butte Basin (Basin) covers 300 square miles bordered by the Cherokee Canal to the north, the Sutter Buttes to the west, the Sutter Bypass to the southwest and the 44-mile long Feather River to the east—see Figure 1. The Basin is home to 95,000 residents and encompasses \$7 billion of damageable assets (as estimated by the U.S. Army Corps of Engineers, or USACE). The region has sustained numerous floods, including the 1955 levee failure on the Feather River, which resulted in the deaths of at least 38 people. The personal safety and economic stability of large segments of the population are reliant on flood management systems that, until recent efforts, did not begin to meet modern engineering standards. Numerous projects and programs have been implemented in the Basin over the years to reduce flood risk, including the SBFCA-led Feather River West Levee Project currently under construction.

The Sutter Butte Flood Control Agency (SBFCA) leads the planning and implementation efforts in the Basin to reduce the risk of catastrophic, riverine flooding. In this role, SBFCA collaborates with local, regional, state, tribal and federal agencies and organizations. On January 13, 2016 the SBFCA Board of Directors adopted this Strategic Plan to guide these efforts.

### 2.0 Purpose of the Strategic Plan

The purpose of the Strategic Plan is to help formulate and articulate a vision for flood management within the Basin and to describe an approach to achieve this vision. This Strategic Plan will be implemented and referenced by the SBFCA Board of Directors, SBFCA staff and consultants, SBFCA member agencies, and partner agencies. It will inform and promote alignment among the interested public, the State of California (Executive and Legislative branches), and involved flood managers at federal, State and local levels. The Strategic Plan will be updated at least every five years, or more often if warranted.

The **Strategic Plan** describes:

- a common **vision** for desired future flood management conditions
- **what** will be accomplished within the next 10 years to begin realizing the vision (Goals and Objectives); and
- **who** will be involved to accomplish the goals and objectives (Partners)

A separate, supporting document entitled **SBFCA Implementation Plan** will describe:

- **how** SBFCA will accomplish the objectives established in the Strategic Plan; and
- **projects and programs** that may be implemented in the future by SBFCA and/or third parties to accomplish those objectives.

The Implementation Plan will be much more dynamic and tactical than the Strategic Plan and will be treated as a living document that will be regularly updated. The Implementation Plan describes specific actions, schedules, resources, partnerships, coordination, funding and financing that may be required to accomplish the objectives established in this Strategic Plan. Neither the Strategic Plan nor the Implementation Plan commits SBFCA to any particular project or course of action. Any projects proposed by SBFCA or a third party in order to achieve the vision, goals, and objectives of this Strategic Plan, including those projects specifically identified in the Implementation Plan, will be considered by SBFCA at a later date, and environmental review of all such projects will comply with the California Environmental Quality Act and/or other applicable laws.

### **3.0 Background**

#### **3.1 SBFCA Joint Powers Authority**

The Sutter Butte Flood Control Agency (SBFCA) was formed in 2007 for the purpose of consolidating efforts of several agencies and communities with flood management responsibilities, and implementing locally led flood protection projects. SBFCA is a joint powers authority (JPA) agency composed of the cities of Biggs, Gridley, Live Oak, and Yuba City, the counties of Sutter and Butte, and Levee Districts 1 and 9. Among member agencies, the cities and counties bear the responsibility for making key land use decisions and managing the floodplain. The member levee districts are responsible for the operation and maintenance of flood control facilities within their jurisdiction, including levees and appurtenant structures.

The SBFCA Board of Directors (SBFCA Board) is the sole authorizing body for all SBFCA operations and actions. All SBFCA programs, projects, funding, financing and policy decisions are approved by the SBFCA Board. The SBFCA Board is composed of 13 regular members, each of whom is an elected representative of a SBFCA member agency.

As provided for in the SBFCA JPA, SBFCA may exercise a broad suite of powers within its jurisdictional boundaries, including, but not limited to:

1. Plan and implement the ways and means to control flood waters within SBFCA boundaries.
2. Enter into contracts.
3. Evaluate, rehabilitate, reconstruct, repair, replace, improve, or add to the facilities of the State Plan of Flood Control in the Central Valley.
4. Acquire, develop, control, construct, manage, maintain, improve, operate, repair, and replace flood control facilities within the SBFCA boundaries.
5. Enter into agreements with any agency/department of the United States of America, the State of California, or any other governmental agency to provide funding necessary for SBFCA projects and programs.

6. Acquire property, by eminent domain or otherwise, and to hold and dispose of property necessary for SBFCA projects and programs.
7. Incur debts, liabilities or obligations.
8. Levy and collect special benefits assessments, special capital assessments, and issue revenue bonds.
9. Impose and collect property-related fees, special taxes and general taxes.
10. Prescribe, revise and collect fees as a condition of land development.
11. Apply for, accept and receive State, federal or local licenses, permits, grants, loans or other aid from any agency of the United States of America or the State of California.

A Benefit Assessment District, compliant with California Proposition 218, was created in 2010 to fund specific SBFCA operations, projects and programs. Thus, while SBFCA has certain operational authority under the JPA, SBFCA must also exercise fiscal management of Assessment District funds, limiting their use to only certain allowed purposes. For example, capital funds can only be spent on specific, defined projects and initiatives.

In addition to funding from the Assessment District, SBFCA has sought and received grant funding through a variety of sources (primarily from State of California grant programs). SBFCA must comply with the additional fiscal requirements of these grants and associated funding agreements executed with the State and federal government. These funding agreements were executed following the formation of the JPA and Assessment District.

### **3.2 Flood Risk**

In this Strategic Plan, flood risk is defined by the probability of flooding combined with the damages that result when flooding occurs. Thus, flood risk reduction requires actions to reduce the frequency and severity of floods, as well as to reduce or mitigate the damages caused when flooding occurs. No matter how much is done to reduce the likelihood of floods, there will always be some probability of flooding, resulting in ongoing flood risk or “residual risk.” The two elements of flood risk for the Basin (flood probability and flood damages) are defined by geography, geomorphology, flood protection infrastructure (waterways, levees, dams and reservoirs, drainage canals), and the decisions of early and present-day inhabitants.

### **3.3 Physical Setting**

The Basin slopes gently to the south and west, with the deepest floodplain bounded by the lower Feather River and the Sutter Bypass—this area is referred to as the southern sub-basin. Gold Rush era settlers founded their communities in the shallower, less hazardous floodplain in the northern two-thirds of the Basin, referred to as the northern sub-basin. Correspondingly, the deepest and most dangerous southern floodplain has historically been reserved for farming with little residential development to date. Native

American populations were concentrated on the natural high ground bordering the Feather River before manmade levees were located along many of those same alignments.

As shown on Figure 1., the Feather River levees are set back from the incised channel—a distinction from many Sacramento River system levees that were set close to the channel. Much of these areas between the levees have been formally set aside for wildlife reserves. On the west side of the basin, the Sutter Bypass is home to a National Wildlife Refuge and a number of privately-held conservation areas.

### **3.4 Institutional Setting**

Flood management in the Central Valley has historically involved multiple, and often overlapping, authorities and interests including public agencies, regulators, public and private investment, tribal governments, and non-governmental organizations, many of whom are outside the direct control or influence of SBFCA. In addition, over the past decade there have been significant and generally positive developments in State and federal policies, laws and funding for flood management that are only now being fully realized as tangible projects and programs—a relatively brief period for the complex institutional and legal framework that comprises California flood management. Local agencies (like SBFCA), State agencies and the federal government typically implement flood management projects and programs using various cost-share formulas and collaborative roles, and with requirements that are unique to each funding entity. In addition, Native American tribes, property owners, private parties, NGO's, and other entities play a role in the implementation of flood management projects. Against this complex backdrop, SBFCA must navigate, adapt and fit multiple elements into an actionable plan that targets defined objectives. At the same time, the Strategic Plan must accommodate frequent course corrections and operational flexibility, thus the plan does not commit the agency to any particular project or course of action.

Three planning documents frame much of the SBFCA Strategic Plan. The first of these is the 2014 California Water Action Plan, which lays out the challenges, goals and actions needed to put California's water resources on a safer, more sustainable path. The second document is the Central Valley Flood Protection Plan, first released in 2012 and updated on a 5-year cycle--this is the State's blueprint for flood management in the Central Valley; all State flood management policy, legislation and funding decisions flow from this high-level document. The third key document is the Feather River Regional Flood Management Plan (FRRFMP), completed as a final draft in 2014 and currently being updated. One of six regional plans that comprise the Central Valley, the FRRFMP outlines the long-term vision and priorities for flood risk reduction from the perspective of the Feather River region.

#### **4.0 Vision**

##### ***Vibrant communities and rural areas that are protected from the consequences of catastrophic, riverine flooding.***

SBFCA and/or an alternate agency(s) will provide leadership and work with other local, regional, State, tribal and federal entities to achieve this vision. SBFCA will invest the funds provided by the Assessment District, State Propositions 13, 1E, 84, 1, and other sources to reduce flood risk in the Basin within the next 10 years in a manner that is consistent with the vision. In order to fully achieve the SBFCA vision, additional funds beyond those currently available must be secured.

#### **5.0 Goals**

To attain the SBFCA vision, goals must take into account not just the hazards but also the consequences of flooding; the Strategic Plan therefore addresses both flood control infrastructure and floodplain management. Moreover, recent State laws and policies such as Assembly Bill 1147 (2000), Senate Bill 5 (2008), the California Water Action Plan (2014), and the Central Valley Flood Protection Plan (2012) compel flood management agencies to take an integrated, multi-benefit approach to planning and implementing flood risk reduction projects. Evolving federal policy and guidance also encourage this approach that includes: enhancement of wildlife and fisheries habitats, recreation, water quality, protection of cultural resources, and enhancement of other resource values where compatible with project purposes.

Agency Goals are as follows:

##### **1. 200-year level of flood protection for the northern sub-basin**

Construct robust and resilient flood control features to protect at-risk communities in compliance with State law.

##### **2. FEMA accreditation for the northern sub-basin**

Facilitate the availability of affordable flood insurance and reduce the regulatory burden imposed in the FEMA floodplain.

##### **3. 100-year level of flood protection for the southern sub-basin**

Increase public safety and reduce regulatory burdens in the FEMA floodplain through coordination with partners.

##### **4. Progressive flood protection for the southern sub-basin**

Due to the deficient condition of levees protecting the southern sub-basin and reliance on decades-long State and federal implementation processes, the southern sub-basin is subjected to unacceptably high risk. Limited levee repairs and other risk reduction measures will increase public safety until comprehensive improvements are implemented, and possibly for the long-term.

## **5. Support improved residual risk management**

Because no flood control structures can reduce all flood risk (regardless of condition), reduce or mitigate the consequences of extreme floods that could overwhelm the region's dams and levees.

## **6. Facilitate the development of long-term funding and governance for Operations and Maintenance (O&M) of flood control infrastructure**

Changes to existing O&M requirements, as well as additional federal responsibilities for the repair, replacement and rehabilitation of flood control facilities have created unfunded burdens on local maintenance agencies (LMA's). While SBFCA plans no future role in long-term O&M of flood infrastructure, O&M funding is critical to protect capital investments and comply with funding commitments, regulations and other agreements with the State and federal government.

### **6.0 Objectives**

Achievement of Agency goals requires the integration of State, federal and local investment, as well as respective policies and laws, into a defined set of objectives. Objectives are formulated within the context of: 1) ongoing and completed work, 2) the relationship between the CVFPP and federally authorized project, 3) the distinctions between the northern and southern sub-basins and 4) long-term and interim risk reduction.

#### **6.1 Ongoing and Completed Work**

To date, SBFCA has planned, permitted and designed 35 miles of West Feather River Levee Project (FRWLP) from Thermalito Afterbay in the north to Star Bend in the south and is currently completing the third of four years of construction. In doing so, SBFCA has addressed a number of significant permitting, funding and environmental challenges, including the discovery of significant cultural resources during construction. Over 27 miles of slurry walls, 1.5 miles of seepage berms, replacement or removal of 118 pipe penetrations and another 211 encroachments are nearing completion. When major construction activities are completed by the end of 2016, this project will provide the physical flood control measures required for 200-year level of flood protection for the northern sub-basin and increased protection for the southern sub-basin. SBFCA is also preparing the final design and permitting of the Oroville Wildlife Area Flood Stage Reduction Project which will further improve flood protection, flood O&M, the natural environment, recreation and State Water Project O&M. In addition, SBFCA has completed a complementary basin-wide floodplain management plan and a flood safety plan that will be implemented to reduce residual risk.

#### **6.2 CVFPP and Federal Authorizations**

Provisions of both the State CVFPP and federal authorization(s) must be integrated with local efforts to achieve SBFCA goals. Congress has authorized the federal Sutter Basin

Project from Thermalito Afterbay in the north to a half-mile south of Laurel Avenue<sup>1</sup>. This authorization describes the federal risk reduction plan and associated federal fiscal interest in the region. Importantly, the federal government agreed to cost share the project from Sunset Weir (near Live Oak) in the north to the southern project limit, leaving the funding of northern levee improvements to State and local sources. Contingent on future federal appropriations, the segment south of Star Bend (approximately 5 miles) and other improvements not already completed by State/local projects are anticipated to be constructed by the USACE. The majority of the federal investment is directed at levee improvements, but the authorized project also includes “non-structural,” residual risk management measures. One of these measures is a flood relief structure in the southern sub-basin that would lower the base flood elevations and advance recovery efforts in the wake of the inevitable flood—the federal authorization recommends analysis during the Preliminary Engineering and Design phase of the project. A flood-relief structure is typically a hardened structure that allows the safe release of flood flows from within the basin without damaging surrounding structures; this non-federal initiative may also include other alternatives to reduce the consequences of flooding, such as a levee relief cut and associated emergency response plan.

The federally authorized project comports with the broader 2012 CVFPP and must be integrated with subsequent updates. This integration is essential to provide for the State’s endorsement as the non-federal sponsor (along with SBFCA) and to leverage further benefits for the region from State investments through the CVFPP. For example, proposed CVFPP improvements of Fremont Weir and Yolo Bypass may complement the federal Sutter Basin project.

### **6.3 Sub-basins**

The northern and southern sub-basins are connected both hydraulically and financially—northern levee reaches that protect the small communities of Biggs and Gridley received State urban levee funding primarily because these same levees protect the larger, urban communities of Yuba City and Live Oak, as well as northern and western evacuation routes. At the same time, floodplain management and flood control goals differ for each sub-basin:

*Northern sub-basin:* Ongoing improvements to the existing Feather River levee will achieve 200-year level of riverine flood protection for the northern sub-basin. The northernmost limit of the northern sub-basin is formed by the Cherokee Canal floodplain, which is subject to frequent shallow flooding. Though impacts to the SBFCA service area are minimal, conveyance capacity and associated maintenance of Cherokee

---

<sup>1</sup> The Water Resources and Reform Development Act of 2014 (WRRDA 2014) authorized the Sutter Basin Flood Risk Management Project as approved by the USACE Chief of Engineers on March 12, 2014.

Canal remain an important regional issue; therefore, SBFCA seeks to improve flood management within the adjacent floodplain through the Feather River Regional Flood Management Plan.

*Southern sub-basin:* This sub-basin is home to a vibrant agricultural economy that has been largely unaffected by development pressure that would otherwise put large populations at risk in this deep floodplain. It has been long recognized that agriculture is wise use of the floodplain; the accordant, thriving agricultural economy in the southern floodplain is not only wise land use, but also funds the existing Assessment District, flood O&M, and future flood risk reduction. Because agricultural infrastructure developed during a period when levees met less stringent 100-year FEMA standards, FEMA's ongoing National Flood Insurance Rate Map update program will likely lead to decertification of the southern sub-basin levees. This will result in stringent new restrictions on repair and construction of homes and agricultural buildings, which could destroy the agricultural economy and open up the region to other riskier land use.

The Sutter Bypass and Wadsworth Canal (including associated interceptor canals) present a significant hazard to the southern sub-basin, and under California Water Code 8361, the State is obligated to operate and maintain these structures to the original design standard. Consequently, the SBFCA Assessment District was approved under the premise that the State would eventually repair these structures while SBFCA would repair the Feather River levees. Since this time, however, the 2012 CVFPP has stipulated that any repairs to the Sutter Bypass and Wadsworth Canal levees must be incorporated into the State's broader, system-wide investment strategy. Leading proposals of the system-wide plan (in-progress) include a widened Fremont weir and Yolo Bypass that may reduce flood risk for the southern sub-basin. The State is also evaluating new Feather River bypasses and widening of the Sutter Bypass. It is SBFCA's policy position that, before considering these new or widened facilities, the State should demonstrate that existing facilities are operated and maintained in a manner which conveys flood flows as originally designed. This is essential in light of the potentially devastating impact of these proposals on local farming operations and the greater local economy.

#### **6.4 Progressive Risk Reduction in the Southern Sub-basin**

Despite the ongoing improvements to the Feather River west levee, the Southern Sub-basin, with a population of 3,000 and valuable agricultural infrastructure, will continue to be imperiled by the low level of flood protection provided by the remaining levees surrounding the basin. These levees, including the lower Feather River west levee, the Sutter Bypass east levee and Wadsworth Canal levees are estimated to currently provide 10-year level of flood protection. While SBFCA will work closely with the State to implement critical levee repairs on these levees as rapidly as feasible, the overall rated level of flood protection is not expected to improve much—and will most likely fall short of 100-year flood protection--before the State implements system-wide



improvements now in the planning stage. Thus, while pursuing the long term goal of 100-year flood protection for the southern sub-basin that achieves the dual goals of reducing flood risk and regulatory/financial burden in the FEMA floodplain, SBFCA will concurrently pursue a two-track approach. First, SBFCA will prioritize limited improvements of critically deficient levees that provide the greatest risk reduction at least cost. Second, SBFCA and its partners will seek appropriate FEMA regulatory relief for the agricultural floodplain.

### **6.5 Agency Objectives**

Based on the regulatory framework, the unique challenges facing the SBFCA region, and the implementation scenario described above, specific Agency objectives are summarized as follows:

#### **1. Rehabilitation and improvement of northern sub-basin Feather River levees by the end of 2016:**

Completion of the Feather River West Levee Project (FRWLP) will improve the Feather River West Levee from Star Bend to Thermalito Afterbay to the State's 200-year standard as codified in Urban Levee Design Criteria (ULDC).

#### **2. Restore and enhance the Oroville Wildlife Area D-Unit by 2020**

The Oroville Wildlife Area Flood Stage Reduction Project (OWA FSRP) is a multi-benefit component of the FRWLP that will reduce flood stage, provide resiliency for small flood events, improve operations and maintenance, help accommodate climate change, provide significant rearing habitat for out-migrating salmonids, restore and enhance natural floodplain processes (including wetland and terrestrial habitat) and improve recreational opportunities.

#### **3. Support for member agencies' Urban Level of Protection (ULOP) adequate progress findings by July 2016**

Provide member land-use agencies with deliverables from the FRWLP to support findings of adequate progress as required under SB 5.

#### **4. ULDC certification and support for member agencies' ULOP finding for northern sub-basin by 2017**

As mandated by SB 5, Feather River west levees will meet ULDC in order for constituent land use agencies to demonstrate ULOP.

#### **5. FEMA accreditation for northern sub-basin by 2025**

Construction of the FRWLP and associated work will meet Title 44 CFR Section 65.10 and other requirements necessary for accreditation by FEMA.

**6. Rehabilitation or replacement of the east levee of the Sutter Bypass, Wadsworth Canal, Interceptor Canals and the southern three miles of the lower Feather River to 100-year level of protection or equivalent in terms of public safety and FEMA regulation relief.**

These improvements would substantially improve public safety and provide FEMA regulation relief, while at the same time State law limits or prevents unwise development that would increase overall risk. This goal requires substantial investment in the larger flood system that is beyond SBFCA's fiscal capability and authority, thus investment by the State and/or federal government is essential. State investment would require major policy and fiscal decisions by the State through the CVFPP. Federal investment decisions could be facilitated through USACE Civil Works studies, including the existing Sutter Basin Project authorization, the Sacramento River General Reevaluation Report, Central Valley Integrated Flood Management Study, or legislation.

**7. To the extent funding is available, complete critical repairs in the southern sub-basin by 2018**

The large, system-wide work described in Objective 6 will take decades to plan and implement, exposing residents and property in the southern sub-basin to unacceptable interim risk from existing structures. Accordingly, critically deficient levees in the southern sub-basin will be repaired on a risk-prioritized basis as SBFCA concurrently pursues long-term, comprehensive solutions.

**8. Advocate for improved implementation of existing FEMA floodplain regulations that facilitates wise agricultural land use by 2017**

By removing FEMA obstacles that might otherwise prevent the agricultural economy to thrive, the potential for increased residual risk due to development is substantially reduced. In collaboration with other Regional Flood Management Planning Programs, and without requiring new legislation, the Feather River Region will advocate for practical implementation of existing regulations that support wise agricultural land use of the floodplain with minimal or no obligation to the National Flood Insurance Program (NFIP). SBFCA will also investigate local floodplain management measures and actual hazard to inform and potentially mitigate the fiscal impacts of proposed guidance improvements. These investigations will be coupled with the preparation of emergency response plans (including a potential flood relief structure/cut) to inform a comprehensive flood management plan that is specific to the southern sub-basin. Property owners and land use agencies will realize the benefits of this advocacy by 2017.

**9. Advocate for federal appropriations that begin funding implementation of the Sutter Basin Project in late 2017**

Authorized by Congress in WRRDA 2014, the Sutter Basin Project requires federal appropriations to be implemented. This project will improve five miles of some of the

highest hazard levees in the Basin; this reach of levee is immediately south of the ongoing FRWLP and excludes the approximately one mile of levee at Laurel Avenue that will be constructed by SBFCA in 2016. Additionally, this project will address residual risk management, including a proposed relief structure/cut that will lower interior basin water surface elevations if the basin floods during a flood event that exceeds the capacity of the region's levees and dams. As there is intense national competition for federal project funds and the trend over the past decade has been a marked reduction in federal appropriations for such purposes, SBFCA will play an aggressive advocacy role to secure funding for federal design and construction. The first appropriations will fund preliminary design efforts beginning in late 2017.

**10. Update and continue implementation of the Sutter Butte Basin Floodplain Management Plan by 2017**

Implementation of an integrated, comprehensive plan will lessen residual risk for the Basin. Importantly, a coordinated and unified plan for flood emergency response among State and local agencies will be integrated into the recently completed flood safety plan.

**11. Close out DWR contract compliance for urban levee repairs (FRWLP) by 2020**

Comply with DWR funding agreements, including provisions requiring assurances that Local Maintaining Agencies are fiscally capable of operating and maintaining infrastructure rehabilitated and improved by SBFCA and willing to accept the responsibility for their maintenance in accordance with current State and federal standards.

**12. Recommend a governance structure for long-term O&M by 2018**

While SBFCA has no long-term O&M responsibility or authority, turnover of improved flood control infrastructure to an effective and financially sustainable operation and maintenance agency(ies) is essential to flood risk reduction as well as a State funding requirement. This is also a key objective of the Feather River Regional Flood Management Plan (under the auspices of the CVFPP) currently underway.

**13. By 2018, adopt a plan to scale SBFCA operations to an appropriate level**

By design, SBFCA was conservatively organized and planned to flexibly scale operations to a level commensurate with workload without the burden of long-term contracts or employees. By the close of 2017, the SBFCA Board will be able to assess the key remaining actions to be taken by SBFCA and then act to scale agency operations to an appropriate level by 2018.

**6.6 Partners**

Achievement of the Vision, Goals and Objectives requires the collaboration and performance of several partners, many of whom are outside SBFCA's direct control or influence; these include: Assessment District property owners, USACE, California

Department of Water Resources (Division of Flood Management, Sutter Yard and Division of Operations and Maintenance), Central Valley Flood Protection Board, Federal Emergency Management Agency, California Department of Fish and Wildlife, tribal governments, Yuba-Sutter Farm Bureau, Butte Farm Bureau, Citizens Assessment District Advisory Committee, FRRFMP agencies and non-governmental organizations. Brief descriptions of these entities are included in Appendix 1.

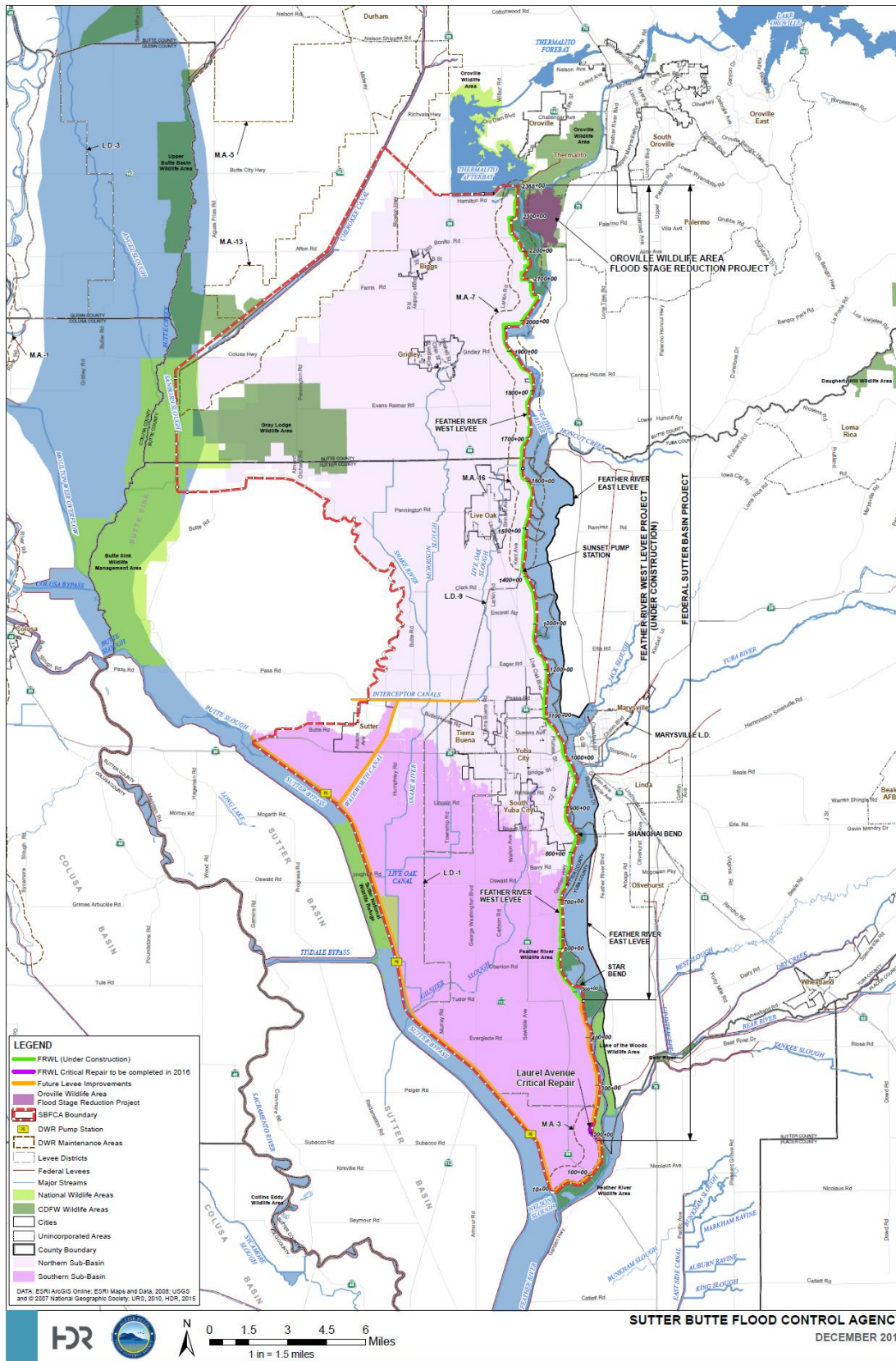


Figure 1. Sutter Butte Flood Control Agency Service Area

## **APPENDIX 1: Partner Descriptions**

### **Assessment District Property Owners**

These are property owners within the geographical boundaries of the Assessment District who receive a benefit from SBFCA activities. In 2010, property owners in the Basin receiving a benefit from SBFCA's proposed projects authorized the creation of an assessment district whereby each would pay an assessment to fund SBFCA projects. Projects and actions funded by the assessment are limited to the scope of actions and projects identified in the SBFCA Engineer's Report and on the ballot.

### **California Department of Fish and Wildlife (DFW)**

DFW serves a dual role. It is the State's primary agency that manages the native fish, wildlife, plant species and natural communities for their intrinsic and ecological value. In addition, it serves a regulatory role for the protection of natural resources, enforcing the California Endangered Species Act (CESA) and Fish and Game Code 1600 (Streambed Alteration Agreements). DFW also manages numerous Wildlife Areas on the Feather River and within the Sutter-Butte Basin for the conservation and protection of species and habitat.

### **California Department of Water Resources (DWR), Division of Flood Management**

DWR, through its Division of Flood Management, plays a number of critical strategic and funding roles. DWR provides overarching leadership and the blueprint for the State's vision of flood management for the Central Valley through the Central Valley Flood Protection Plan. Funding is provided, primarily on a cost-shared basis, through General Obligation Bonds, such as state bonds sold pursuant to Propositions 1e, 84, 13, 1 and other grant programs. The Department also informs and recommends State and Legislative positions on funding decisions.

### **California Department of Water Resources, Division of Flood Management, Sutter Yard**

Sutter Yard operates and maintains flood management facilities in five important areas within the Sutter-Butte Basin. These include State Maintenance Areas 3, 7 and 16; under California Water Code §8361, Sutter Yard is responsible for operating and maintaining capacity of the major flood control channels in the region, including the Sacramento River, Feather River, the Sutter Bypass/Wadsworth Canal and Cherokee Canal. DWR also operates and maintains the interior drainage system and pumping plants in the Sutter County portion of the Basin.

### **California Department of Water Resources, Division of Operations and Maintenance**

State Water Project (SWP) Facilities along the northern reaches of the Feather River are either directly impacted by SBFCA programs and projects or play a role in achieving SBFCA objectives. Operation of Oroville Dam directly impacts flood operations and maintenance

on the Feather River. The DWR Division of O&M administers, operates and maintains SWP facilities.

### **Central Valley Flood Protection Board (CVFPB)**

The CVFPB has jurisdictional authority throughout the drainage basin of the Central Valley and for the 1.7 million acres within 14 counties that make up the Sacramento-San Joaquin Drainage District, including facilities of the Central Valley Flood Control System. Under California law, any modification to the State/federal flood control system, encroachment, or project on or near the Sacramento and San Joaquin Rivers or their tributaries must be approved by the CVFPB. In this regulatory role, the CVFPB also serves as the liaison between the State of California, residents, property owners, Central Valley agencies, and the United States government, with the goal of providing high levels of flood protection to California's Central Valley, while also considering environmental and habitat concerns. The CVFPB is governed by a board consisting of seven Governor-appointed and Senate-confirmed members, plus two non-voting ex-officio members from the California Legislature. The CVFPB works in close partnership with local agencies, DWR and the USACE to reduce the risk of catastrophic flooding in California's Central Valley.

While USACE has historically been the primary source of funding for flood improvement projects, the State and many local government agencies have stepped forward in recent years to provide funding for projects in advance and in the absence of federal funding. In its agreements with USACE, the CVFPB fulfills the State's cost-sharing responsibilities to the federal government by providing lands, easements, rights-of-way, relocations, and cash payments for USACE-constructed or cost-shared flood control projects. When a project is completed and local maintaining agency (LMA) assurance agreements are secured, the CVFPB accepts responsibility for the project and transfers it to the local agency (such as LD1 and LD9) to operate and maintain.

**Citizens Assessment Advisory Committee (CADAC):** The SBFCA Board of Directors established CADAC for the general purpose of reviewing SBFCA's expenditure of funds generated by the Assessment District. The CADAC Charter can be viewed at <http://sutterbutteflood.org/wp-content/uploads/2013/09/CADAC-Charter.pdf>.

**Feather River Regional Flood Management Program Partners:** SBFCA, Three Rivers Levee Improvement Agency (TRLIA), Yuba County Water Agency (YCWA) and Marysville Levee Commission (MLC) are collaborating on a regional flood management plan under the auspices of the State of California Central Valley Flood Protection Plan.

### **Federal Emergency Management Agency (FEMA)**

FEMA carries out emergency management programs that help communities prepare for disasters, including floods, and recover in their aftermath. FEMA maps floodplains and prepares studies to identify areas of likely flooding based on existing and planned

development and existing flood control facilities. FEMA also administers the National Flood Insurance Program (NFIP) which provides flood insurance and flood disaster assistance for communities and land-use agencies that meet its requirements to reduce flood risk.

**Non-Governmental Organizations (NGOs):** There are many NGOs whose involvement ranges from direct and active implementation of SBFCA programs/projects to those who are merely interested in SBFCA actions. American Rivers, a conservation organization, is an example of an NGO directly involved in implementing a multi-benefit project in the Oroville Wildlife Area and has executed a Memorandum of Understanding with SBFCA agreeing to partner in seeking funding for projects that reduce flood risk.

### **Tribal Governments**

Tribes have a unique government-to-government relationship with the United States Government through treaties, federal law, and executive orders. Tribal governments are responsible for providing for the health, safety and welfare of all of their members, and have a vested interest in managing their heritage. Many ancestral tribal lands are adjacent to, or coincide with, flood control infrastructure. As a result, flood protection activities may intersect with tribal heritage sites and cemeteries, which require respectful and appropriate consideration in the planning process.

### **United States Army Corps of Engineers (USACE)**

The USACE regulates federal project levees and floodways. Under Section 408, the Secretary of the Army, through the USACE, grants permission for the alteration or occupation or use of USACE civil works projects to ensure that the activity will not be injurious to the public interest and will not impair the usefulness of the project. USACE also has primary responsibility for regulating the placement of dredged or fill material in the "waters of the United States" under Section 404, which includes the Sacramento and Feather rivers.

In addition to its regulatory authority, USACE has a long history of building flood protection projects. Traditionally, Congress authorizes and appropriates funds for specific USACE projects, which are then cost-shared with non-federal sponsors.

USACE also administers other important federal programs: PL 84-99 gives USACE emergency management authority to prepare for and respond to flood emergencies, as well as to rehabilitate flood control facilities; the Sacramento River Bank Protection Project evaluates levees along the Sacramento River and associated floodways and reduces stream bank erosion to minimize the threat of flooding.

### **Yuba-Sutter and Butte Farm Bureaus**

Farming practices both within the floodway and protected areas are integral to effective flood risk reduction. The Farm Bureaus represent important land-use, economic and floodplain interests in the Sutter-Butte Basin



## **APPENDIX 2: Glossary**

**Federal Emergency Management Agency (FEMA) Accreditation:** FEMA accredits a levee as providing adequate risk reduction on the Flood Insurance Rate Map (FIRM) if the certification and adopted operation and maintenance plan provided by the levee owner are confirmed to be adequate. An operations and maintenance plan specifies key operating parameters and limits, maintenance procedures and schedules, and documentation methods. FEMA's accreditation is not a health and safety standard – it only affects insurance and building requirements.

**Flood Insurance Rate Map (FIRM):** An official map of a community that displays the floodplains or--more explicitly--special flood hazard areas and risk premium zones, as delineated by the Federal Emergency Management Agency (FEMA).

**Floodplain Management:** Policies and programs that limit the exposure and vulnerability of people and assets to flooding.

**Local Maintaining Agency (LMA):** A local agency, such as a Reclamation District, Levee District, City or County, that is responsible for the long-term operations and maintenance of flood facilities.

**National Flood Insurance Program (NFIP):** The NFIP is a federal program created by Congress to mitigate future flood losses nationwide through sound, community-enforced building and zoning ordinances and to provide access to affordable, federally backed flood insurance protection for property owners. The NFIP is designed to provide an insurance alternative to disaster assistance to meet the escalating costs of repairing damage to buildings and their contents caused by floods.

**Non-Governmental Organization (NGO):** An organization that is neither a part of a government nor a conventional for-profit business. Usually set up by ordinary citizens, NGOs may be funded by governments, foundations, businesses, or private persons.

**Residual Risk:** The level of flood risk for people and assets located in a floodplain that remains after implementation of flood risk reduction actions.

**Residual Risk Management:** Management of factors and actions that increase the ability of people and assets to return to pre-flood conditions and functionality in the aftermath of a flood including: post-disaster assistance programs, rebuilding of public infrastructure, flood emergency response and recovery, availability of insurance (NFIP, commercial, crop), flood and conservation easements, structural improvements to levees and other flood infrastructure.

**Senate Bill 5 (SB 5):** The centerpiece California law of a far-reaching package of flood management legislation passed in 2007.

**Special Flood Hazard Area (SFHA):** Areas defined by FEMA that will be inundated by a flood event having a 1 percent chance of being equaled or exceeded in any given year (1 out of 100 years). These areas are indicated on flood insurance rate maps (FIRMs).

**Title 44 CFR Section 65.10:** Title 44 of the Code of Federal Regulations (44 CFR) Section 65.10 provides the minimum design, operation, and maintenance standards levee systems must meet and continue to meet in order to be recognized as providing protection from the base flood (1 percent chance of exceedance in any given year) on a Flood Insurance Rate Map (FIRM).

**Urban Areas:** Pursuant to SB 5, urban areas are defined as communities that have 10,000 residents or more.

**Urbanizing Areas:** Pursuant to SB 5, an urbanizing area is a developed area, or an area outside a developed area, that is planned or anticipated to have 10,000 residents or more within the next 10 years.

**Urban Levee Design Criteria (ULDC):** Pursuant to SB 5, ULDC is criteria and guidance for the design, evaluation, operation, and maintenance of levees and floodwalls in urban and urbanizing areas. Levees meeting these criteria will withstand flooding that has a 0.5 percent chance of occurring in any given year (1 out of 200 years).

**Urban Level of Protection (ULOP):** Pursuant to SB 5, ULOP is the level of protection that is necessary to withstand flooding that has a 0.5 percent chance of occurring in any given year (1 out of 200 years) using criteria consistent with, or developed by, the Department of Water Resources.