

---

Appendix F  
Five-Year Implementation  
Summary Memorandum

*This page left intentionally left blank.*

# Five-year Implementation Summary Memorandum

Acronym	Definition
Conservation Strategy (or Strategy)	Central Valley Flood Protection Plan Conservation Strategy
CPA	Conservation Planning Area
CVFPB	Central Valley Flood Protection Board
CVFPP	Central Valley Flood Protection Plan
DWR	California Department of Water Resources
NGO	nongovernment organization
O&M	operations and maintenance
SPA	Systemwide Planning Area
SPFC	State Plan of Flood Control
State	State of California
Strategy (Conservation Strategy)	Central Valley Flood Protection Plan Conservation Strategy
TRLIA	Three Rivers Levee Improvement Authority
USACE	U.S. Army Corps of Engineers

This memorandum summarizes contributions to the measurable objectives of the Central Valley Flood Protection Plan (CVFPP) Conservation Strategy (Conservation Strategy or Strategy; California Department of Water Resources 2016) and progress toward the Strategy's goals resulting from projects implemented in the Systemwide Planning Area (SPA) between 2016, when the CVFPP Conservation Strategy was finalized, and 2021. Documenting progress toward the goals is a key part of each five-year update and will help the California Department of Water Resources (DWR) and its partners to adaptively manage implementation. This memorandum also describes actions taken between 2016 and 2021 to support the adaptive management of the Strategy's implementation. Chapter 2 of the Conservation Strategy 2022 Update also presents key information from this memorandum.



## F.1 Context of the Goals and Measurable Objectives

The 2016 Conservation Strategy created the following four goals to attain the Central Valley Flood Protection Act's objectives to promote ecosystem functions by integrating recovery and restoration of key physical processes, self-sustaining ecological functions, native habitats, and species into flood management activities:

1. **Ecosystem Processes.** Improve dynamic hydrologic (flow) and geomorphic processes in the State Plan of Flood Control (SPFC) plan area or SPA.
2. **Habitats.** Increase and improve the quantity, diversity, and connectivity of riverine and floodplain habitats.
3. **Species.** Contribute to the recovery and sustainability of native species populations and overall biotic community diversity.
4. **Stressors.** Reduce stressors related to development and operations of the SPFC that negatively affect at-risk species.

To achieve these goals, measurable objectives were developed to target processes, habitats, and species in need of recovery, and the stressors to these processes, habitats, and species that could be addressed by flood risk management. The targets of the Conservation Strategy's measurable objectives (or the amount of restoration needed) were determined by reviewing restoration needs and opportunities across the flood system. (For further explanation of how the objectives were determined, refer to the 2016 Conservation Strategy.) Progress toward the measurable objectives will inform CVFPP implementation and future State of California (State) funding guidelines and grant programs.

## F.2 Conservation Strategy Measurable Objectives Outcomes 2016 to 2021

The projects identified here generated outcomes that correspond to the metrics of one or more measurable objectives, and meet the following criteria:

- The project was designed after 2012, and completed between 2016 and 2021. Although planning, permitting, and funding of many projects progressed during the 2016 to 2021 period, only projects, or phases of projects, completed in this period are reported here. In addition, projects that were planned and designed before 2012 were generally considered part of baseline conditions while the measurable objectives were developed, and therefore do not represent ecosystem improvements resulting from the CVFPP's implementation.



- The project implements the CVFPP via a multi-benefit project (defined later in this section) or through a habitat enhancement project with a positive result for one or more measurable objectives as identified in the Conservation Strategy (typically through other DWR integrated watershed management programs, such as the Riverine Stewardship Program).
- The project is within the geographic scope of the CVFPP (i.e., the SPA), and within SPFC facilities or on lands protected by the SPFC.
- If an identified fish passage barrier from Appendix K of the 2016 Conservation Strategy has been removed as part of the CVFPP or any other program or project (e.g., Fremont Weir Adult Fish Passage Modification Project), it is considered resolved and thus counts toward meeting the measurable objective for this stressor, regardless of the effect on flood risk (i.e., not necessarily a multi-benefit project).

The CVFPP defines multi-benefit projects as follows (California Department of Water Resources 2017): “projects designed to reduce flood risk and enhance fish and wildlife habitat; multi-benefit projects may also create additional public benefits such as sustaining agricultural production, improving water quality and water supply reliability, increasing groundwater recharge, supporting commercial fisheries, and providing public recreation and educational opportunities, or any combination thereof.”

The outcomes reported here are planned project outcomes as reported in environmental planning documents, permits, and spatial data provided by project managers. These outcomes will be monitored and verified so the achieved outcomes are documented accurately. The Flood Performance Tracking System will be updated once data become available for verified outcomes. When project outcomes are used to mitigate habitat loss caused by other projects, contributions to the measurable objectives will be reduced to account for that habitat loss.

### F.2.1 Completed Projects

The four multi-benefit projects summarized here were completed between 2016 and 2021, and contributed to the measurable objectives by reconnecting floodplains, restoring riparian habitats, and providing other ecosystem benefits. These projects were funded through DWR’s flood management programs and meet the CVFPP criteria for a multi-benefit project:

- **The Oroville Wildlife Area Flood Stage Reduction Project (Feather River Conservation Planning Area [CPA])** reduced flood risk, increased the area of inundated floodplain, and restored riparian habitat by augmenting the existing system of inflow and outflow weirs to safely divert additional floodwaters through the Oroville Wildlife Area and by improving drainage to reduce fish stranding.
- **The Three Rivers Levee Improvement Authority (TRLIA) Feather River Conservation Bank (Feather River CPA)** restored 500 acres of a previously created levee setback area to a mosaic of mixed riparian forest and riparian scrub. This project is anticipated to be used as a bank; therefore, measurable objectives contributions will be reduced as credits are used.



- **The Southport Setback Levee Project (Lower Sacramento River CPA)** increased the area of inundated floodplain and restored riparian habitat by constructing a setback levee along the west bank of the Sacramento River. A portion of this project may be used as a mitigation bank and therefore, measurable objectives may be reduced as credits are used.
- **The Dos Rios Ranch Floodplain Expansion and Ecosystem Restoration Project, Phase I (Lower San Joaquin River CPA)** reconnected approximately 1000 acres of inundated floodplain by constructing notches in agricultural berms resulting in restored riparian habitat on most of the reconnected floodplain.

Multi-benefit projects being developed within the legal Sacramento–San Joaquin Delta (Delta) independent of the CVFPP before 2016 (e.g., the McCormack-Williamson Restoration Project) were excluded from the measurable objectives, and thus, are not included in this summary of multi-benefit projects implemented between 2016 and 2021. Other projects were completed during this timeframe but do not contribute to the measurable objectives because they do not meet the required criteria. Except where components of EcoRestore projects are being used to meet specific mitigation requirements, any uplift created by EcoRestore projects will count toward meeting the Conservation Strategy’s Measurable Objectives. In addition, one project did not meet the criteria as a multi-benefit project and was not implemented under the CVFPP, but it is included because it contributed to addressing a Conservation Strategy measurable objective:

- **The Fremont Weir Adult Fish Passage Modification Project (Lower Sacramento River CPA, non-CVFPP)** reduced a stressor (fish passage barrier) as identified in Appendix K of the Conservation Strategy. This project improved fish passage by replacing the existing fish ladder at Fremont Weir with a step pool channel leading up to the weir and gated notch through the weir. Note that only the fish passage barrier component of the project is being counted toward that stressor’s measurable objective.

## F.2.2 Methodology

The data reported here were acquired by reviewing project documents, collecting spatial information, and interviewing project managers. All data will also be captured and reported in the Flood Performance Tracking System for long-term storage and use.

To determine how each project contributed to the measurable objectives, project plans and environmental reports were reviewed, then compared to the descriptions of the measurable objectives in the Conservation Strategy. Some project outcomes, like riparian habitat (acres) and natural bank (linear miles), were often not reported using the same metrics as the Conservation Strategy. In these cases, the consistency between project outcomes and the Conservation Strategy’s measurable objectives was determined based on the project description and the objective descriptions and definitions in the Conservation Strategy.

To quantify each project’s contribution to the measurable objectives, project spatial data for pre-project and post-project conditions, and baseline datasets for the objectives were used. The



project's contributions to the measurable objectives were measured as the change between pre- and post-project conditions.

DWR is developing a set of methodology sheets for future use, which will clarify how project managers can translate their project outcomes to contributions to the measurable objectives. These methodology sheets, along with the data entered into the Flood Performance Tracking System, will allow for a clear understanding of progress toward the measurable objectives (and, potentially, other plans and programs).

#### F.2.2.1 Case Study: Oroville Wildlife Area Flood Stage Reduction Project

To illustrate this translation of project outcomes to project contributions to the Conservation Strategy's measurable objectives, Table F-1 displays the outcomes for the Oroville Wildlife Area Flood Stage Reduction Project, and shows how they were mapped to each of the 10 measurable objectives for the Feather River CPA. The habitat types listed in Table F-1 are the restored habitats as listed in the Initial Study/Mitigated Negative Declaration for the Oroville Wildlife Area Flood Stage Reduction Project (ICF International, Inc. 2016).

Table F-1. Example Conversion from Project Habitat Types and Actions to Measurable Objectives of the Conservation Strategy

Oroville Wildlife Area Flood Stage Reduction Project Habitat Types and Actions	Quantity	Related Measurable Objective	Contribution
Riparian woodland/riparian scrub	36.3 acres	Riparian habitat	36.3 acres
Gravel understory	48.5 acres	Not applicable—no corresponding objective	Not applicable
Riparian scrub/wetland	44.3 acres	Marsh/other wetland habitat	44.3 acres
Floodplain habitat	125.8 acres	Inundated floodplain	125.8 acres
Removal of water primrose	500 acres	Not applicable—no corresponding objective	Not applicable
Removal of other invasive plant species <sup>[a]</sup>	200 acres	Not applicable—no corresponding objective	Not applicable
Re-grading of interior channel system	7,500 linear feet	River meander potential	Not applicable—no corresponding objective

<sup>[a]</sup> The Conservation Strategy has measurable objectives for the removal of prioritized invasive plant species; however, in this example, the removal of invasive plant species did not contribute toward the measurable objective because it did not include a prioritized invasive plant species as identified in the 2016 Conservation Strategy.



### F.2.3 Project Outcomes

Table F-2 captures the outcomes of each of the aforementioned projects, allocated to the Conservation Strategy's 10 measurable objectives. As Table F-2 shows, these completed projects all contributed to one or more of the measurable objectives. However, in all five of the CPAs, only minimal progress was made toward most measurable objectives.

Tables F-3 and F-4 show each CPA's progress toward the Conservation Strategy's measurable objectives, and Figures F-1 through F-3 show progress toward each CPA's measurable objectives. Significant additional work is needed in each CPA to meet their objectives. Several additional projects are in the planning or funding stages. These in-progress projects are discussed in Attachment F-1, and will make additional contributions to the measurable objectives in the next few years as they are implemented.





Table F-2. Contributions to the Conservation Strategy's Measurable Objectives by Project

Project Name	Conservation Planning Area	Status	Funding Amount	Funding Source(s)	Inundation– Major River Reaches (acres)	Inundation – Bypasses/ Transient Storage (acres)	Natural Bank (miles)	River Meander Potential (acres)	Natural Bank (miles)	Riparian-Lined Bank (miles)	Riparian Habitat (acres)	Marsh/ Wetland (acres)	Fish Passage Barriers (number)	Invasive Plants (acres)
Oroville Wildlife Area Flood Stage Reduction	Feather River	Complete	\$47,938,698	Prop. 1, WCB	125.8	0	0	0	0	0	36.3	44.3	0	0
Three Rivers Levee Authority Feather River Conservation Bank <sup>[a]</sup>	Feather River	Plantings Complete	\$6,482,501	Prop. 1E, State of California General Fund	0	0	3.4	0	3.4	0	402.1	0	0	0
Fremont Weir Adult Fish Passage Modification <sup>[b]</sup>	Lower Sacramento River	Complete	\$6,782,325	SWP, Reclamation, NGOs	0	0	0	0	0	0	0	0	1	0
Southport Setback Levee <sup>[c]</sup>	Lower Sacramento River	Construction Complete	\$183,500,000	Prop. 1E, WSAFCA	110.2	0	4.9	0	4.9	0	107.7	13.4	0	0
Dos Rios Floodplain Expansion and Ecosystem Restoration, Phase I	Lower San Joaquin River	Complete	\$53,182,575	DWR, WCB, NRCS, Prop. 1, Prop. 13, others	0	0	0.2	0	0.2	0.2	739.1	0	0	0
Total SPA					236.0	0	8.5	0	8.5	0.2	1,285.2	57.7	1	0

<sup>[a]</sup> Because this is a bank, uplift is temporary until credits are used. Acreage does not include approximately 100 acres of elderberry mitigation plantings.

<sup>[b]</sup> This project does not qualify as a multi-benefit project and was not implemented as part of the CVFPP but because it reduced a stressor as identified in the 2016 Conservation Strategy, it is included.

<sup>[c]</sup> Because portions of this project may be used as advance mitigation, uplift is temporary until credits are used.

Notes:

NGO = nongovernment organization

NRCS = U.S. Natural Resources Conservation Service

Prop. 1/1E/13 = State of California propositions

Reclamation = U.S. Bureau of Reclamation

SPA = Systemwide Planning Area

SWP = State Water Project

WCB = Wildlife Conservation Board

WSAFCA = West Sacramento Area Flood Control Agency



*This page left blank intentionally.*



Table F-3. Contributions to the Conservation Strategy's Measurable Objectives by Conservation Planning Area: Ecosystem Processes

Conservation Planning Area	Contributions to Floodplain Inundation—Major River Reaches	Contributions to Floodplain Inundation—Bypasses/Transient Storage Areas	Contributions to Riverine—Natural Bank	Contributions to Riverine—River Meander Potential
Feather River <sup>[a]</sup>	125.8 acres created (3.4% of target of 3,700 acres)	0 acres created (no target applicable in this CPA)	3.4 miles created (no target applicable in this CPA)	0 acres created (0% of target of 400 acres)
Upper Sacramento River	0 acres created (0% of target of 6,300 acres)	0 acres created (0% of target of 9,600 acres)	0 miles created (0% of target of 20 miles)	0 acres created (0% of target of 5,600 acres)
Lower Sacramento River <sup>[b]</sup>	110.2 acres created (1.6% of target of 7,650 acres)	0 acres created (0% of target of 7,500 acres)	4.9 miles created (122% of target of 4 miles)	0 acres created (0% of target of 1,300 acres)
Upper San Joaquin River	0 acres created (0% of target of 2,800 acres)	0 acres created (no target applicable in this CPA)	0 miles created (0% of target of 8 miles)	0 acres created (0% of target of 2,100 acres)
Lower San Joaquin River <sup>[c]</sup>	0 acres created (0% of target of 11,600 acres)	0 acres created (0% of target of 200 acres)	0.2 miles created (1.5% of target of 13 miles)	0 acres created (0% of target of 4,300 acres)

<sup>[a]</sup> Contributing projects in the Feather River CPA include the Oroville Wildlife Area Flood Stage Reduction and Three Rivers Levee Authority Feather River Conservation Bank.

<sup>[b]</sup> Contributions in the Lower Sacramento River CPA are made by the Southport Setback Levee.

<sup>[c]</sup> Contributions in the Lower San Joaquin River CPA are made by the Dos Rios Floodplain Expansion and Ecosystem Restoration, Phase I.

Notes:

% = percent

CPA = Conservation Planning Area



Table F-4. Contributions to the Conservation Strategy's Measurable Objectives by Conservation Planning Area: Habitats and Stressors

Conservation Planning Area	Contributions to Habitat Objectives— SRA Cover: Natural Bank	Contributions to Habitat Objectives— SRA Cover: Riparian-Lined Bank	Contributions to Habitat Objectives— Riparian	Contributions to Habitat Objectives— Marsh (and Other Wetlands)	Contributions to Stressor Objectives— Fish Passage Barriers	Contributions to Stressor Objectives— Invasive Plants
Feather River <sup>[a]</sup>	3.4 miles created (no target applicable in this CPA)	0 miles created (0% of target of 0 miles)	438.4 acres created (24% of target of 1,800 acres)	44.3 acres created (no target applicable in this CPA)	0 barriers removed (0% of target of 0 barriers)	0 acres restored (0% of target of 257 acres)
Upper Sacramento River	0 miles created (0% of target of 20 miles)	0 miles created (0% of target of 8 miles)	0 acres created (0% of target of 3,400 acres)	0 acres created (0% of target of 2,400 acres)	0 barriers removed (0% of target of 5 barriers)	0 acres restored (0% of target of 268 acres)
Lower Sacramento River <sup>[b]</sup>	4.9 miles created (122% of target of 4 miles)	0 miles created (0% of target of 3 miles)	107.7 acres created (5.6% of target of 1,900 acres)	13.4 acres created (0.4% of target of 3,500 acres)	1 barrier removed (25% of target of 4 barriers)	0 acres restored (0% of target of 363 acres)
Upper San Joaquin River	0 miles created (0% of target of 8 miles)	0 miles created (0% of target of 2 miles)	0 acres created (0% of target of 2,100 acres)	0 acres created (no target applicable in this CPA)	0 barriers removed (target to be determined)	0 acres restored (0% of target of 143 acres)
Lower San Joaquin River <sup>[c]</sup>	0.2 miles created (1.5% of target of 13 miles)	0.2 miles created (3.3% of target of 6 miles)	739.1 acres created (12.7% of target of 5,800 acres)	0 acres created (0% of target of 100 acres)	0 barriers removed (target to be determined)	0 acres restored (0% of target of 34 acres)

<sup>[a]</sup> Contributing projects in the Feather River CPA include the Oroville Wildlife Area Flood Stage Reduction and Three Rivers Levee Authority Feather River Conservation Bank.

<sup>[b]</sup> Contributing projects in the Lower Sacramento River CPA include the Fremont Weir Adult Fish Passage Modification and Southport Setback Levee.

<sup>[c]</sup> Contributions in the Lower San Joaquin River CPA are made by the Dos Rios Floodplain Expansion and Ecosystem Restoration, Phase I.

Notes:

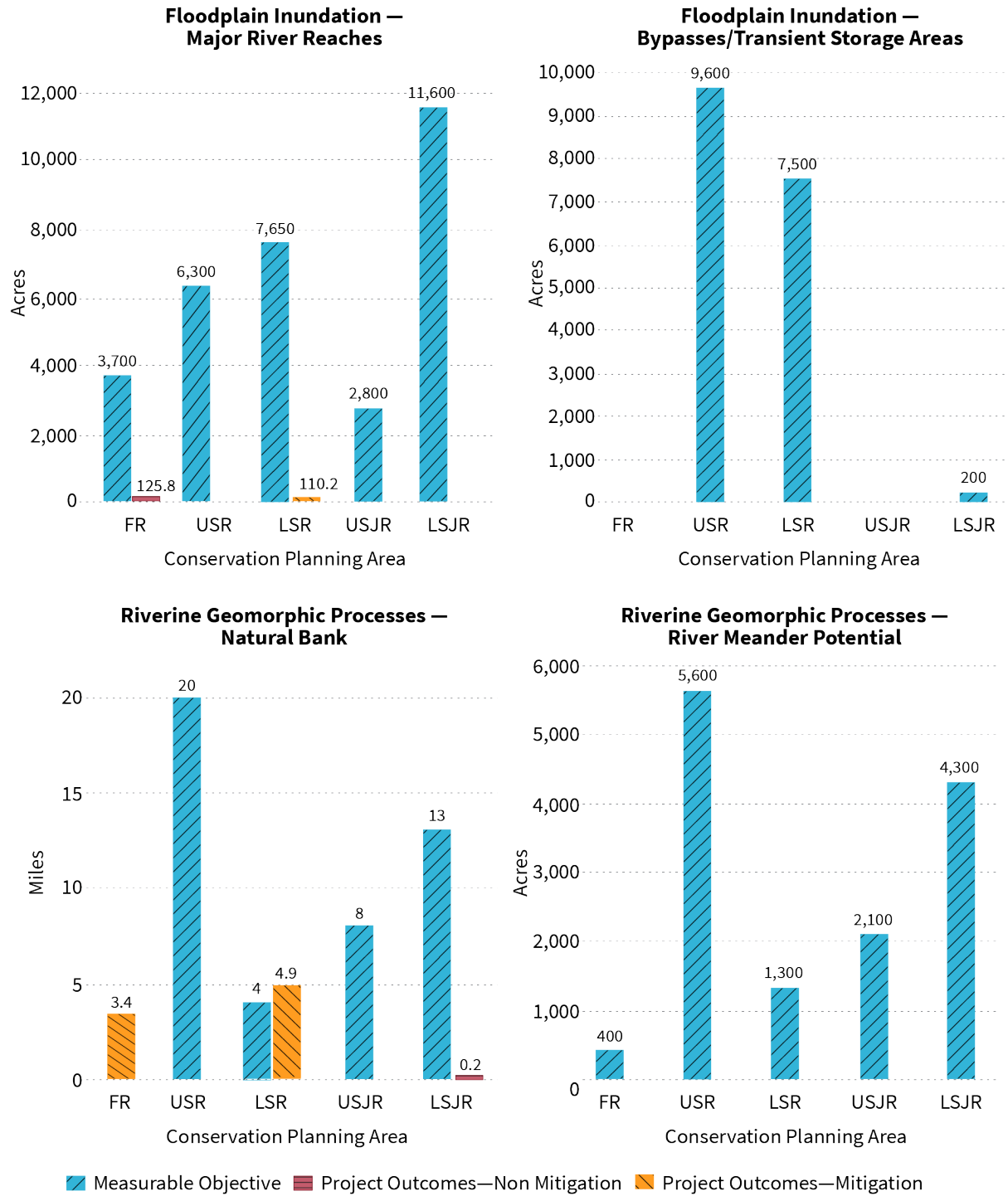
CPA = Conservation Planning Area

SRA = shaded riverine aquatic



**Figure F-1. Potential Contributions of Completed Projects to Ecosystem Process Objectives**

*Note: Compensatory mitigation and non-mitigation are displayed separately because using restored ecosystem processes as mitigation reduces progress toward the Conservation Strategy’s goals.*



**Figure F-2. Potential Contributions of Completed Projects to Habitat Objectives**

*Note: Compensatory mitigation and non-mitigation are displayed separately because using restored habitats as mitigation reduces progress toward the Conservation Strategy’s goals.*

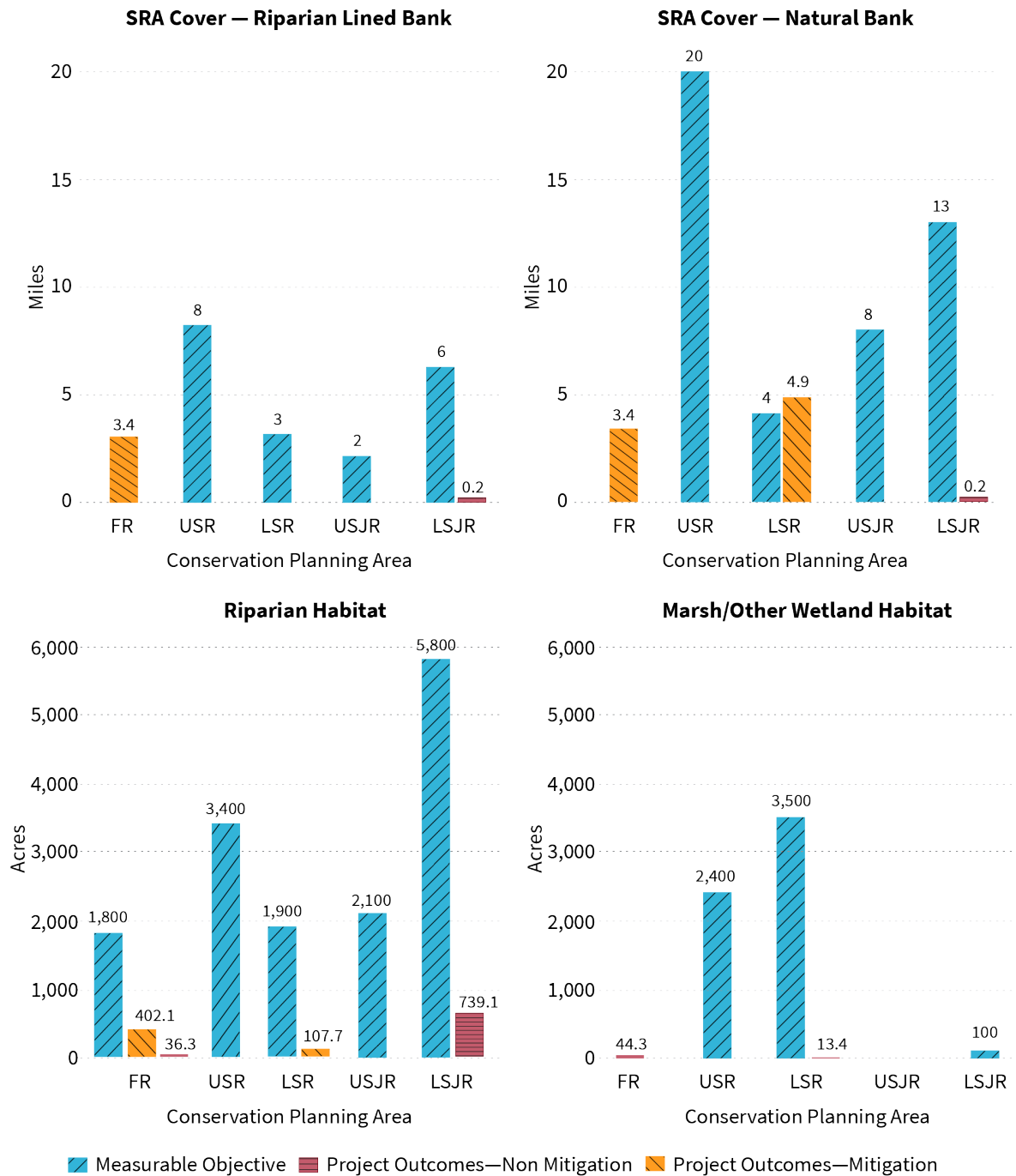
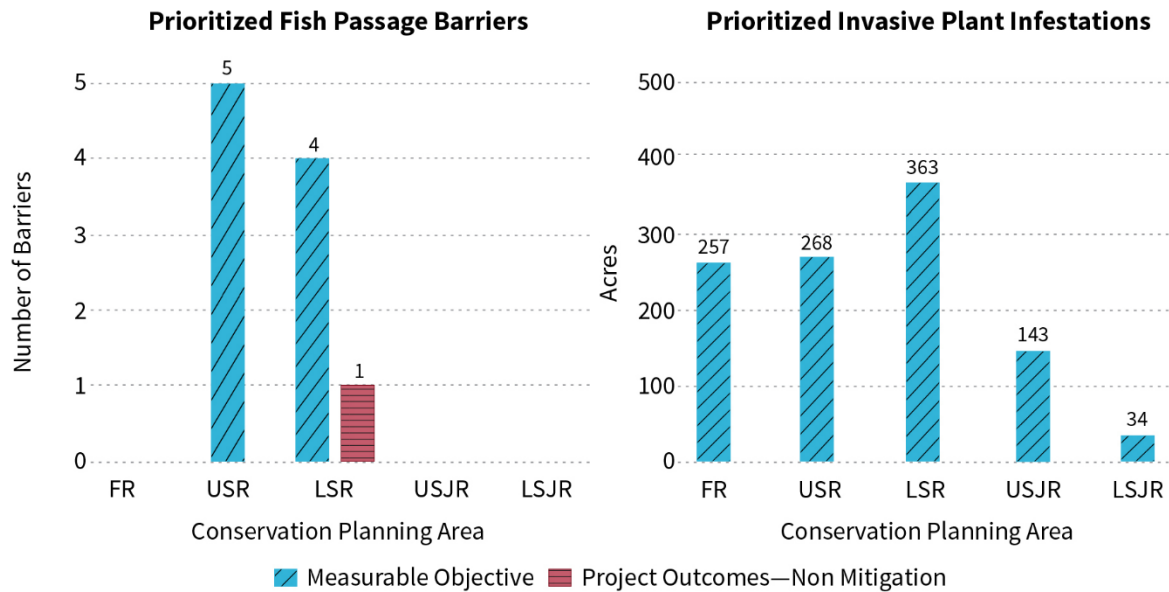


Figure F-3. Potential Contributions of Completed Projects to Stressor Objectives

Note: Compensatory mitigation and non-mitigation are displayed separately because using reduced stressors as mitigation reduces progress toward the Conservation Strategy's goals.



#### F.2.4 Funding for Multi-Benefit Projects Contributing to the Conservation Strategy's Measurable Objectives

As Table F-5 shows, the completed multi-benefit projects listed in Table F-2 received funding from multiple sources, including federal, State, and local contributions. A total of \$297,886,099 was spent on these five projects. State bonds were the largest funding source.

Table F-5. Funding Sources and Amounts for Multi-benefit Projects

Source	Funding Amount
<b>Federal Funding</b>	<b>\$21,079,511</b>
U.S. Natural Resources Conservation Service	\$10,100,000
U.S. Bureau of Reclamation	\$6,782,325
Central Valley Project Improvement Act	\$2,775,186
U.S. Fish and Wildlife Service	\$1,422,000
<b>Local Funding</b>	<b>\$42,020,000</b>
West Sacramento Area Flood Control Agency	\$40,000,000
San Francisco Public Utilities Commission	\$2,000,000
Other private and local contributions	\$20,000



Source	Funding Amount
<b>State—Propositions</b>	<b>\$229,986,588</b>
Proposition 1E	\$181,783,501
Proposition 84	\$14,850,000
Proposition 1	\$27,305,587
Proposition 13	\$6,047,500
<b>State—Other Funds</b>	<b>\$4,800,000</b>
Other State funds	\$4,800,000
<b>Total Funding</b>	<b>\$297,886,099</b>

### F.2.5 Recommendations for Documenting Outcomes

The documentation of project outcomes for the Conservation Strategy 2022 Update and in the development of this memorandum has highlighted a few key processes that should be improved in the future. These improvements would promote greater understanding of floodplain progress toward the measurable objectives.

- Project reporting guidance should be created and distributed.** Project reporting guidance would enable project managers across the flood system to know how, when, and what to report at each stage of project implementation. Such guidance would lessen the reporting burden, reduce inconsistencies, and keep DWR’s records up to date. This guidance should describe how to report on funding amounts and sources, project statuses, and multi–benefit outcomes planned or achieved to date. This could be done using the methodology sheets (described in the “Methodology” section). These methodology sheets also clarify how different project actions could contribute to the measurable objectives, which may incentivize project managers to include elements in their project design that they otherwise may not have considered, to show advance progress toward their region’s measurable objective targets. These sheets also clarify the spatial analyses needed to understand contributions to the measurable objectives.
- A central repository of information should be promoted.** An easily accessible repository for project information should be updated regularly by project managers, so DWR can keep an accurate record of current project information. This repository should also contain contact names to enable followup with project managers as questions arise.
- Post-construction monitoring should occur regularly and should be reported to a centralized source.** The project outcomes reported here are planned outcomes. However, verified outcomes via monitoring are critical to ensure projects achieve their intended outcomes. Although it is easy to assume projects will produce and maintain all planned outcomes, it is difficult to understand ecological change on the ground and over time without consistent monitoring and maintenance. Monitoring can ensure projects stay on track and continue to provide both flood and habitat benefits as intended.





## F.3 Adaptive Management of Implementation 2016 to 2021

The 2016 Conservation Strategy included an approach to adaptive management based on implementation tracking and data dissemination; systemwide or regional inventories of targeted ecosystem processes, habitats, and stressors; studies focused on key uncertainties; and solicited guidance. The following sections describe how these components were implemented between 2016 and 2021.

### F.3.1 Implementation Tracking and Data Dissemination

The 2016 Conservation Strategy described a proposed system of tracking and data management to facilitate necessary reporting, information sharing, and adaptive management.

Since 2016, to meet these needs, DWR has been creating new, more efficient systems for data management, including two systems to manage data from the implementation of the Conservation Strategy. The Flood Performance Tracking System compiles and tracks flood management and environmental outcomes. Another system that is under development will associate these outcomes with DWR programs, and will support project prioritization and outcome-based evaluations of programs. These new, centralized systems use common data from across programs and applications while maintaining the unique functionality of existing applications. This data management infrastructure has the following characteristics:

- Relies on an integrated set of databases and applications.
- Integrates shared data across programs.
- Reduces redundancy and duplicated data management efforts by storing shared data in a single location that can be accessed across DWR.

Together, these data systems manage information about projects, funding, habitat outcomes, and ecosystem metrics across DWR programs. They are described further in Section 3.3.5, “Adaptive Management,” of the Conservation Strategy 2022 Update, which provides the updated approach to adaptive management.

### F.3.2 Inventories

While developing the 2016 Conservation Strategy and 2017 CVFPP Update, DWR produced several systemwide or regional inventories of targeted ecosystem processes, habitats, and stressors. These inventories supported the development of the measurable objectives and also inform project planning. As described in the 2016 Conservation Strategy, updating these datasets every 5 to 10 years would document regional changes to the amount and distribution of these targets, thereby supporting adaptive management of the Strategy’s implementation and development of multi-benefit projects (refer to Table 8-1 in the 2016 Conservation Strategy).

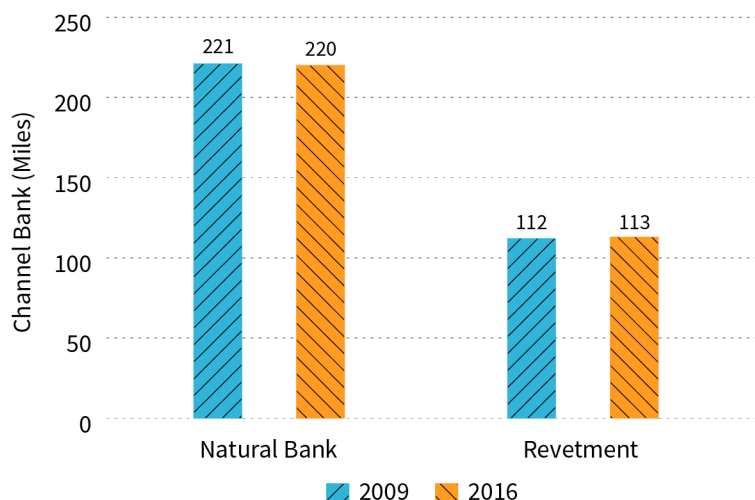
Between 2016 and 2021, DWR updated vegetation mapping systemwide in three separate efforts: the legal Sacramento-San Joaquin Delta, a portion of the Feather River CPA, and the rest of the SPA. These updates are based on 2016 imagery and fieldwork and validation studies conducted from 2018 until 2021. The previous map of vegetation in the SPA was based on 2009 imagery.



The channel-bank datasets (revetted and natural banks) were also updated for the Upper Sacramento River and Lower Sacramento River CPAs. These updates were based on 2016 aerial imagery and field work that took place during 2019 and 2020. The Feather River CPA is scheduled to be updated in 2022. The previous mapping for the Lower Sacramento River CPA was based on a U.S. Army Corps of Engineers (USACE) inventory of revetment along the Sacramento River (U.S. Army Corps of Engineers 2007). The previous mapping for the Upper Sacramento River CPA was based on 2009 imagery and field work that took place in 2014.

The updated inventory of revetted and natural banks in the Upper Sacramento River CPA illustrates the value of regional inventories for adaptively managing implementation of the Conservation Strategy. Between 2009 and 2016, revetment was eroded away from or deposited at nearly 100 locations with a combined length of nearly 3 miles. These changes resulted in a net decrease in natural bank of approximately 1 mile. Figure F-4 and Table F-6 show that this net reduction in ecosystem processes and habitat does not substantially alter 2009 conditions, but continues a trend that has already dramatically reduced ecosystem processes and habitat for target species. Because revetment is placed on the most actively eroding locations along channel banks, the placement of revetment on approximately one-third of bank length has had a disproportionate impact on geomorphic processes and the regeneration of early successional vegetation (Fremier 2003).

**Figure F-4. Length of Revetment and Natural Channel Bank in the Upper Sacramento River Conservation Planning Area in 2009 and 2016**



**Table F-6. Length of Natural Bank and Revetment in the Upper Sacramento River Conservation Planning Area in 2009 and 2016**

Year	Natural Bank (miles)	Revetment (miles)
2009	221	112
2016	220	113

Source: DWR, unpublished data



### F.3.3 Focused Studies

The 2016 Conservation Strategy recommended using focused studies to complete key datasets and reduce uncertainty surrounding how targeted habitats and species would respond to management actions. The Strategy identified 17 studies as priorities (refer to Table 8-2 in the 2016 Conservation Strategy). Seven of these studies would complete regional inventories of targeted ecosystem processes or habitats, nine are focused on targeted species, and one is focused on fish passage barriers.

None of these focused studies have taken place since 2016 to support the implementation of the CVFPP or relevant conservation programs. New priorities have also been identified, particularly related to the need to update older inventories and inform climate change adaptation. These new priorities are provided in the Conservation Strategy 2022 Update.

### F.3.4 Implementation Guidance

As described in the 2016 Conservation Strategy, an adaptive management approach to implementation must be guided not only by project outcomes, regional resource inventories, and focused studies, but also by input from other agencies and scientists. To obtain this guidance, an interagency advisory committee and scientific advisory committee were proposed. Neither of these committees has convened during the 2016 and 2021 period. However, DWR solicited advisory input from agencies, NGOs, and project proponents.

In addition to conducting its own assessment of implementation of this Conservation Strategy, DWR solicited input regarding implementation and applied the input to this update. Input was solicited from the Central Valley Flood Protection Board (CVFPB), other project proponents and maintainers, regulatory agencies, NGOs, and other stakeholders.

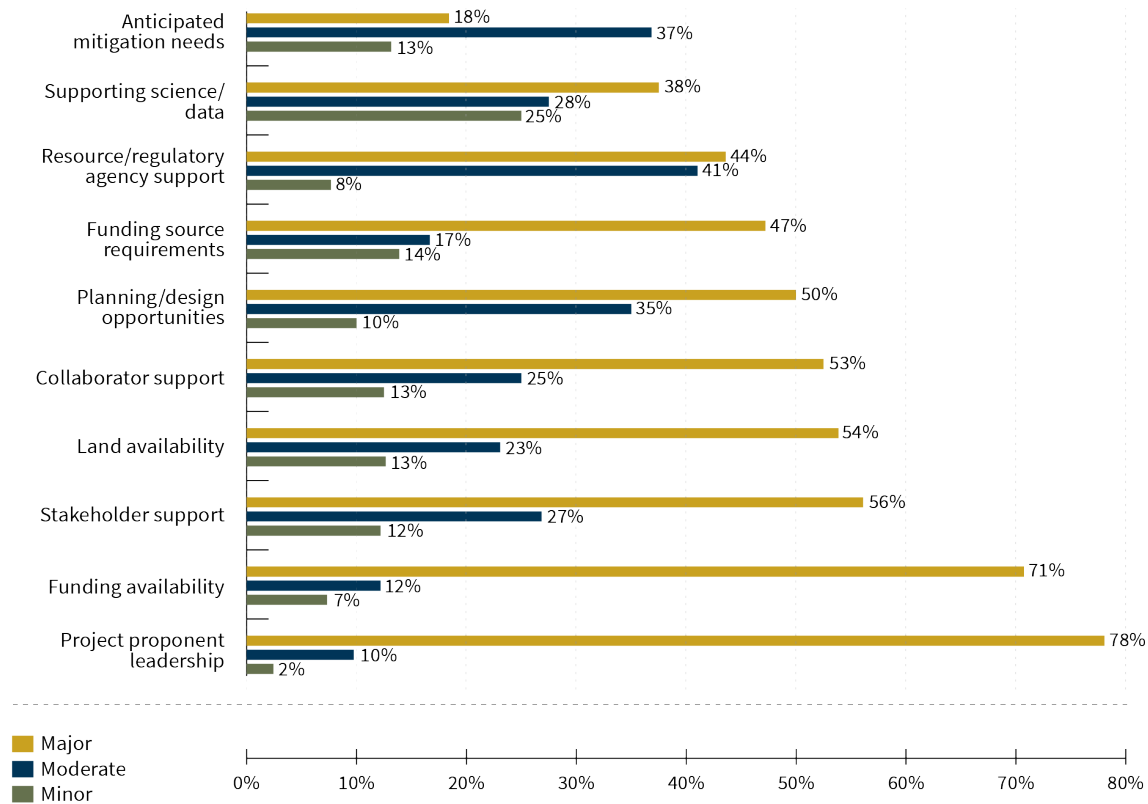
This input was initially solicited through a survey (distributed to approximately 240 individuals, 42 of whom responded) and 16 interviews, and subsequently through participation in the CVFPB's Conservation Strategy Advisory Committee. The experience of survey recipients and interviewees represented the range of regions, roles, project types, and project phases relevant to the Conservation Strategy's implementation.

Survey respondents identified funding availability, funding-source requirements, and regulatory requirements as major factors limiting multi-benefit projects, among other factors (Figure F-5 and Table F-7). They identified funding availability and project proponent leadership as the major factors contributing to the successful implementation of multi-benefit projects (refer to Figure F-5 and Table F-8).



Figure F-5. Survey Responses regarding Factors Contributing to or Limiting Ecosystem Improvements by Multi-benefit Projects

**A. Contributing Factors**



**B. Limiting Factors**

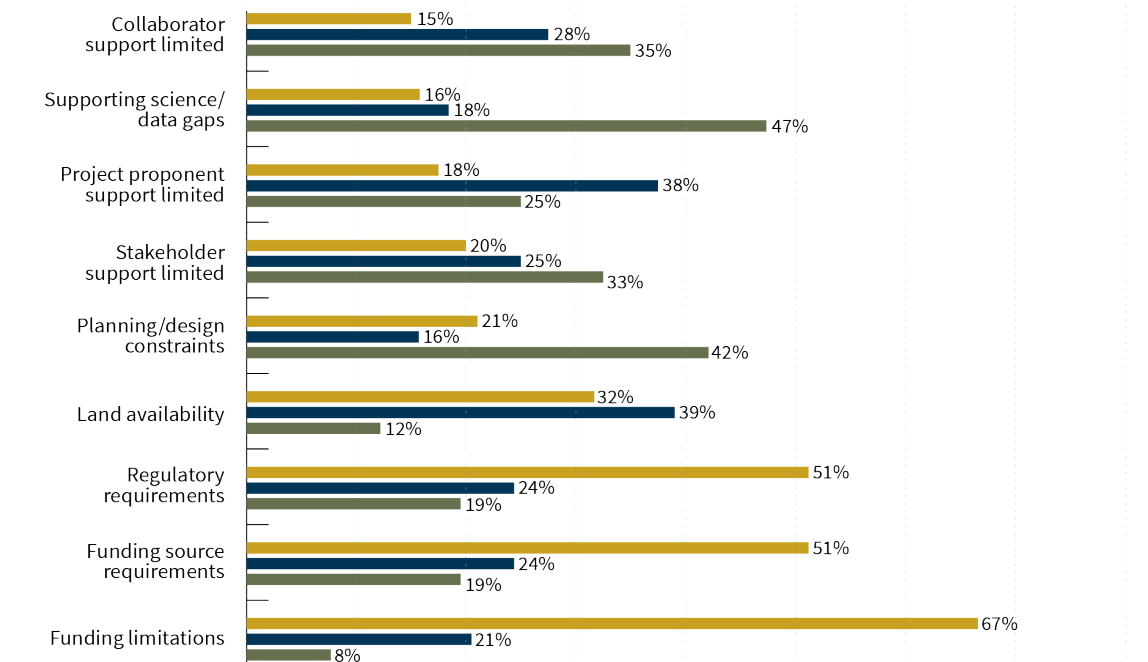


Table F-7. Survey Responses regarding Factors Limiting Ecosystem Improvements by Multi-benefit Projects

Factor	Minor (%)	Moderate (%)	Major (%)
Collaborator support limited	35	27.5	15
Supporting science/data gaps	47	18	16
Project proponent support limited	25	38	18
Stakeholder support limited	33	25	20
Planning/design constraints	42	16	21
Land availability	12	39	32
Regulatory requirements	20	24	51
Funding source requirements	20	24	51
Funding limitations	8	21	67

Table F-8. Survey Responses regarding Factors Contributing to Ecosystem Improvements by Multi-benefit Projects

Factor	Minor (%)	Moderate (%)	Major (%)
Anticipated mitigation needs	13	37	18
Supporting science/data	25	28	38
Resource agency support	8	41	44
Funding source requirements	14	17	47
Planning/design opportunities	10	35	50
Collaborator support	13	25	53
Land availability	13	23	54
Stakeholder support	12	27	56
Funding availability	7	12	71

Interview participants provided more extensive and detailed input regarding implementation needs. The interviews led to the following major findings:

- **Better alignment is needed among agency policies, funding sources, and regulatory requirements.** Participants called for better policy integration and coordination within and among agencies to facilitate the development of multi-benefit projects. Such projects are subject to the policy and regulatory requirements of fish and wildlife agencies and USACE, and to the requirements of funding sources, which often do not align well with the



multi-benefit project objectives described in the CVFPP. Much of this alignment will have to occur at higher State and federal policymaking levels; however, participants also noted the need for better alignment of divisions and programs within key CVFPP agencies to support the development and implementation of multi-benefit projects.

- **CVFPP criteria are needed that define multi-benefit projects and contributions to measurable objectives.** Participants also called for clearer policy guidance in the CVFPP, particularly regarding criteria that define multi-benefit projects and determine contributions to the measurable objectives (e.g., mitigation contributions, if any).
- **The CVFPP should consider how to strike an appropriate balance between multi-benefit and single-purpose projects.** Some participants expressed concern that because of the difficulty of developing multi-benefit projects, placing substantially greater emphasis on such projects could leave important flood safety needs unaddressed. They were also concerned that it may not be feasible for every flood management project to achieve meaningful ecosystem improvements.
- **Regional planning is working well, but more early engagement is needed between project proponents, stakeholders, and regulatory agencies.** Developers of multi-benefit projects reported that early engagement with local stakeholders and State and federal agencies, particularly regulators, is essential to a successful project. Participants considered the collaborative environments established by the regional flood management plan process and the CVFPP's Advisory Committee to be effective at the planning level; however, they also identified the need for additional, earlier engagement among all stakeholders and agencies (including divisions and programs within agencies) in the project development process.
- **Funding requirements are a major constraint, including the lack of funding for monitoring and long-term operations and maintenance (O&M) associated with ecosystem improvements.** Project developers consistently cited the divergent requirements of various funding sources as a significant barrier to project development. Multi-benefit projects usually package funds from multiple sources, many of which can only be used for specified purposes, and which may have different deadlines and administrative requirements. The perennial lack of funding for post-construction O&M and monitoring is an even larger problem for restoring habitats through multi-benefit projects.
- **Improved post-construction monitoring, data management, and documentation of project outcomes are needed to adaptively manage implementation.** Participants reported that funding of post-construction activities, including monitoring, is generally inadequate. Some noted data are recorded inconsistently and project outcomes are insufficiently documented. Without more complete, consistent methods of tracking and recording project features and outcomes, it will be difficult to accurately assess progress toward this Conservation Strategy's measurable objectives, or to improve management strategies in response to ecological conditions and lessons learned from previous implementation experiences.



The CVFPB's Advisory Committee also provided recommendations. During summer 2020, the CVFPB Advisory Committee formed three stakeholder-led subgroups to provide input into the update of this Strategy and its implementation. The subgroups addressed the following topics:

- Implementation of multi-benefit projects.
- Permitting.
- Performance tracking.

Each subgroup met multiple times between August 2020 and February 2021 to formulate recommendations. DWR requested that these recommendations be grouped to distinguish recommendations pertaining to this update of the Conservation Strategy from other recommendations. These subgroup-specific recommendations were finalized in January 2021. Cross-cutting themes (e.g., topics applicable to all three subgroups) were also identified and include: funding, O&M support, technical assistance for disadvantaged communities, and clarification on the definitions of mitigation and allocation of multi-benefit project features toward meeting the Conservation Strategy's measurable objectives. The cross-cutting themes were finalized in January 2021 and formed the basis for a unified set of recommendations to DWR (provided in Appendix G).

## F.4 Implementation Summary

During the past five years, DWR has developed tracking systems; updated systemwide vegetation mapping ; updated mapping of natural and riparian-lined banks in the Upper Sacramento River CPA; developed permitting mechanisms for O&M activities; funded and developed multi-benefit projects; aligned efforts with non-flood programs making conservation-related investments in the SPA; and sought input on the implementation of this Strategy from resource agencies, project proponents, maintainers, and other stakeholders.

Overall, completed projects have attained only a small portion of most measurable objectives (less than 5 percent). Projects under construction and proposed projects are anticipated to result in contributions to additional objectives, and for multiple objectives, cumulative contributions could exceed 20 percent of the objective by 2027. Nonetheless, for most of the objectives, the cumulative contributions of projects could still be less than 20 percent of the objective in 2027.

This level of implementation indicates that without systemic changes that expedite the development or increase the number of multi-benefit projects (particularly those analyzed in the 2017 CVFPB's Basin-Wide Feasibility Studies that expand the footprint of the flood system) multiple measurable objectives may not be attained, leaving the goals of this Conservation Strategy unfulfilled.

The input from DWR staff, survey respondents, interviewees, and the CVFPB's Advisory Committee indicated that project funding and permitting have been major impediments to the successful implementation of multi-benefit projects, and that multiple factors are important



contributors to the success of these projects. The input received also includes numerous recommendations for aiding the development and implementation of multi-benefit projects, and for aligning implementation with non-flood programs making conservation-related investments in the SPA. Those recommendations have been applied to development of the updated content for the Conservation Strategy and priority actions for 2022–2027 that are provided in the Conservation Strategy 2022 Update.

## F.5 References

*Note: The following references are cited in the text of this appendix. For references cited in Attachment F1, “Project Descriptions,” please refer to the lists in Attachment F1.*

California Department of Water Resources (DWR). 2016. *Central Valley Flood Protection Plan Conservation Strategy*. Sacramento (CA).

California Department of Water Resources (DWR). 2017. *Central Valley Flood Protection Plan 2017 Update*. Sacramento (CA).

Fremier AK. 2003. *Floodplain Age Modeling Techniques to Analyze Channel Migration and Vegetation Patch Dynamics on the Sacramento River, California*. Master’s thesis. Davis (CA): University of California, Davis.

ICF International, Inc. 2016. *Draft Oroville Wildlife Area Flood Stage Reduction Project, Initial Study/Mitigated Negative Declaration*. Sacramento (CA). Prepared for Sutter Butte Flood Control Agency, Yuba City (CA). May 2016. Viewed online at: [Oroville\\_Flood\\_Risk\\_Reduction\\_Project](#). Accessed: January 2021.

U.S. Army Corps of Engineers (USACE). 2007. *Bank Revetment Inventory, Sacramento River Bank Protection Project*. Sacramento (CA). Prepared by Stillwater Sciences, Berkeley (CA).





# Project Descriptions

Acronym	Definition
CDFW	California Department of Fish and Wildlife
CPA	Conservation Planning Area
DWR	California Department of Water Resources
SWP	State Water Project
TRLIA	Three Rivers Levee Improvement Authority
USFWS	U.S. Fish and Wildlife Service

This attachment describes each project completed during the 2016 to 2021 period and identifies anticipated 2022 to 2027 projects, defined as projects under construction or proposed projects that may begin construction during 2022 to 2027. Project descriptions include the project implementer, type, location, and funding sources and amounts. In the following descriptions, project funding often does not include staff time for the California Department of Water Resources (DWR) and other agencies and other in-kind costs.

## Completed Projects

The following four projects were completed between 2016 and 2021. Together, they represent a diverse set of multi-benefit projects that both provide flood control benefits and improve habitat features. An additional (5<sup>th</sup>) project is described below because although it does not qualify as a multi-benefit project, it contributed to addressing a Conservation Strategy measurable objective (i.e., reduced a stressor).

### Oroville Wildlife Area Flood Stage Reduction Project

This project improved State Water Project (SWP) operations, reconnected the Feather River floodplain, provided inundated floodplain, improved fish habitat, and removed fish passage barriers. The project augmented the existing system of inflow and outflow weirs to safely divert additional floodwaters through the Oroville Wildlife Area and reduce flood stages in the main channel. The improvements were completed to reduce flood stages, improve SWP operations, reconnect the Feather River to its historic floodplain, provide more frequently inundated floodplain rearing habitat for juvenile salmonids, and improve drainage and fish stranding



conditions. The project also incorporated removal of invasive species, new riparian restoration plantings, and construction of new recreational footbridges and grading work to provide improved river access, public parking, and site access improvements.

- **Project Implementer:** Sutter Butte Flood Control Agency
- **Project Status:** Constructed
- **Type:** Multi-benefit flood and ecosystem enhancement project
- **Location:** Feather River Conservation Planning Area (CPA)
- **Funding:** Total cost \$47,938,697
  - Proposition 1 (California Department of Fish and Wildlife and Wildlife Conservation Board): \$15,217,697.81
  - Proposition 1E (DWR Emergency Levee Repair Work and Emergency Flood Fighting and Protective Measures): \$29,201,000
  - Private and Local Contributions: \$20,000
  - Other State Funds: \$3,500,000
- **Sources:**
  - California Department of Fish and Wildlife. 2017. “California Endangered Species Act Consistency Determination No. 2080–2017–005–02.” California Regulatory Notice Register No. 26-Z (June 30, 2017): Page 947.
  - California Natural Resources Agency. 2015a. “Bond Accountability: Oroville Wildlife Area Restoration Project.” Viewed online at: [Bond Accountability Resources](#). Accessed: January 2021.
  - California Natural Resources Agency. 2015b. “Bond Accountability: Oroville Wildlife Area Floodplain Reconnection and Habitat.” Viewed online at: [Bond Accountability Resources](#). Accessed: January 2021.
  - ICF International. 2016. *Draft Oroville Wildlife Area Flood Stage Reduction Project, Initial Study/Mitigated Negative Declaration*. Sacramento (CA). Prepared for Sutter Butte Flood Control Agency, Yuba City (CA). May 2016. Viewed online at: [Oroville Flood Risk Reduction](#). Accessed: January 2021.
  - Sutter Butte Flood Control Agency. 2017. Lease agreement. June 22, 2017.
  - Sutter Butte Flood Control Agency. 2019. “Sutter Butte Flood Control Agency Overview of Activities.” Central Valley Flood Protection Board briefing, May 10, 2019.



- Bureau of Reclamation. 2017. Fisheries Charters Appendix B for the 2017 Annual Work Plan. Public Final. Central Valley Project Improvement Act, Title XXXIV of Public Law 102-575.

### Three Rivers Levee Improvement Authority Feather River Setback Conservation Bank

The Three Rivers Levee Improvement Authority (TRLIA) Feather River Setback Conservation Bank restored approximately 500 acres of a previously created levee setback area to a mosaic of mixed riparian forest and riparian scrub. This project is expected to generate advance mitigation credits from the California Department of Fish and Wildlife (CDFW), for riparian habitat and possibly for yellow-billed cuckoo, and the U.S. Fish and Wildlife Service (USFWS), for valley elderberry longhorn beetle and possibly for yellow-billed cuckoo.

- **Project Implementer:** TRLIA
- **Project Status:** Planting completed
- **Type:** Conservation bank (approval pending)
- **Location:** Feather River CPA
- **Funding:** \$6,482,501 million
  - Proposition 1E (DWR FloodSAFE Ecosystem Stewardship and Statewide Resources Office): \$5,182,501
  - State of California General Fund: \$1,300,000
- **Sources:**
  - Three Rivers Levee Improvement Authority. 2016. Final Initial Study/Mitigation Negative Declaration Feather River Setback Conservation Bank Project. July. Marysville, California. Viewed online at: [Feather-River](#). Accessed: July 2021.
  - Three Rivers Levee Improvement Authority. 2020. Feather River Conservation Bank – FESSRO. Viewed online at: [Feather-River-Floodway](#). Accessed: July 2021.

### Southport Setback Levee Project

This project involved constructing a setback levee along the western bank of the Sacramento River, which resulted in approximately 138 acres of inundated floodplain and riparian habitat. The setback area is a mixed floodplain and riparian habitat intended to provide floodplain restoration benefits to native fish species. The project is self-mitigating, and all habitat created is reserved for later use as mitigation for other projects under the West Sacramento Levee Improvement Program.

- **Project Implementer:** West Sacramento Area Flood Control Agency
- **Project Status:** Constructed
- **Type:** Multi-benefit flood and ecosystem enhancement project
- **Location:** Lower Sacramento River CPA, Yolo County



- **Funding:** Estimated total cost: \$183,500,000
  - Proposition 1E (DWR Flood Project Office Early Implementation Projects and Urban Flood Risk Reduction Program): \$143.5 million
  - Local contribution (West Sacramento Area Flood Control Agency): \$40 million
- **Sources:**
  - California Natural Resources Agency. [Date unknown]. *Southport Setback Levee Project, West Sacramento, CA: Mixed Floodplain and Riparian Habitat*. Viewed online at: [Southport-Setback-Levee](#). Accessed: January 2021.
  - Dirksen Jr. P. Flood protection planner, City of West Sacramento, West Sacramento (CA). February 9, 2021—email to Boysen K, Environmental Incentives, Denver (CO).
  - West Sacramento Area Flood Control Agency. 2020. *Draft Southport Levee Setback Implementation Report*. July 2020.

#### Dos Rios Floodplain Expansion and Ecosystem Restoration Project, Phase 1

River Partners' Dos Rios project provides almost 1,000 acres of floodplain reconnection and habitat restoration via a controlled breach of agricultural berms on the site, which increases floodwater storage and potentially reduces flood stages in the San Joaquin River. Dos Rios also provides extensive habitat for salmonids, migratory birds, and many other native aquatic and terrestrial species, including the endangered riparian brush rabbit. A planned second phase of Dos Rios would breach the federal project levee on the site and reconnect approximately 1,100 more acres of floodplain habitat to the San Joaquin River, ultimately providing more than 2,100 acres of total floodplain restoration, absorbing approximately 10,000 acre-feet of floodwaters, and increasing flood protection for downstream communities. Because Dos Rios is an expansive project, only a portion of the project qualifies to be included in this implementation summary. Some of the work had been done before the 2016 Conservation Strategy, and future phases, including the neighboring Hidden Valley Ranch parcel, have yet to be implemented.

- **Project Implementer:** River Partners
- **Project Status:** Constructed
- **Type:** Ecosystem enhancement project
- **Location:** Lower San Joaquin River CPA
- **Funding:** \$53,182,575 million
  - Proposition 1 (CDFW Watershed Restoration Grants and Wildlife Conservation Board): \$12,087,889
  - Proposition 13 (DWR, Costa Machado Water Act): \$6,047,500



- Proposition 84 (DWR Flood Protection Corridor Program and California Natural Resources Agency River Parkways Program): \$14,850,000
- Proposition 1E (DWR FloodSAFE Ecosystem Stewardship and Statewide Resources Office): \$3,900,000
- U.S. Bureau of Reclamation and USFWS Central Valley Project Improvement Act Habitat Restoration Program and Conservation Project: \$2,775,186
- USFWS Anadromous Fish Restoration Project and North American Wetland Conservation Act: \$1,422,000
- U.S. Natural Resources Conservation Service: \$10,100,000
- San Francisco Public Utilities Commission: \$2,000,000
- **Sources:**
  - Akiona R, P.E. San Joaquin Valley Regional Director, River Partners. Turlock (CA). January 13, 2021—email to Boysen K, Environmental Incentives, Denver (CO).
  - U.S. Bureau of Reclamation. 2016a. *Dos Rios Ranch Riparian Brush Rabbit Recovery Project Environmental Assessment*. May 2016.
  - U.S. Bureau of Reclamation. 2016b. *Dos Rios Ranch Riparian Brush Rabbit Recovery Project Finding of No Significant Impact*. June 2016.

### Fremont Weir Adult Fish Passage Modification Project

Fremont Weir Adult Fish Passage Modification Project led by the Bureau of Reclamation is not considered a multi-benefit project, and was not implemented under the CVFPP. However, it reduced a stressor (fish passage barrier) as identified in Appendix K of the Conservation Strategy. This project improved adult fish passage at Fremont Weir and along the Tule Canal in the Yolo Bypass. The project constructed a new fish passage structure at Fremont Weir to widen and deepen the fish ladder and removed barriers in the Tule Canal.

- **Project Implementer:** DWR
- **Project Status:** Constructed
- **Type:** Fish passage project
- **Location:** Lower Sacramento River CPA, Yolo County
- **Funding:** Estimated total cost \$6,782,325
- U.S. Bureau of Reclamation: \$6,782,325

Documentation of contribution amount not available for DWR and nongovernmental organization contributions.



- **Sources:**

- California Department of Water Resources. 2014. *Lower Sacramento River/Delta North Regional Flood Management Plan*. July 2014. Viewed online at: [www.yolocounty.org](http://www.yolocounty.org). Accessed: January 2021.
- California Natural Resources Agency. [Date unknown]. *Fremont Weir Adult Fish Passage Modification Project, Yolo Bypass, CA: Fish Passage Improvements*. Viewed online at: [www.resources.ca.gov](http://www.resources.ca.gov). Accessed: January 2021.
- California Natural Resources Agency. 2018. *Fremont Weir Adult Fish Passage Modification Project—Securing Fish Passage in the Yolo Bypass: Frequently Asked Questions (FAQ)*.” May 2018. Viewed online at: [Fremont-Weir](http://Fremont-Weir). Accessed: January 2021.
- U.S. Bureau of Reclamation. 2017. “Project Details.” Viewed online at: [www.usbr.gov](http://www.usbr.gov). Accessed: January 2021. Last updated: August 22, 2017.
- U.S. Bureau of Reclamation. 2020. “Fremont Weir Adult Fish Passage Modification Project.” Viewed online at: [Fremont-Weir](http://Fremont-Weir). Accessed: January 2021. Last updated: November 4, 2020.

## Anticipated to be Proposed 2022 to 2027 Projects

In addition to the projects described that were completed between 2016 and 2021, many more projects progressed in terms of their funding and planning. The following projects are categorized as anticipated to be proposed, meaning they are under construction or are likely to be proposed for consideration and may be implemented over the next five years. Input from these projects, relevant to the measurable objectives will be placed into the Flood Performance Tracking System and information will be updated as the projects are developed.

### Upper Sacramento River Conservation Planning Area

- **Knights Landing Flood Management Project:** This proposed project would improve the existing SPFC levees near the small community of Knights Landing while creating ecosystem restoration and enhancement.
- **Kopta Slough Flood Damage Reduction and Habitat Project:** This proposed project would restore floodplain and riparian habitat, re-establish the historical river channel, and establish erosion protection.
- **Lower Deer Creek Flood and Ecosystem Improvement Project, Phase I:** This proposed project would enhance fish passage and rearing conditions for salmonids and improve the reliability of flood protection along lower Deer Creek.



- **Tisdale Weir Rehabilitation and Fish Passage Project:** This proposed project would restore the weir to improve performance and provide passage for fish to the Sacramento River.
- **Sutter Bypass Weir #1 Remediation Project:** CDFW has identified this weir as a major fish passage barrier for Butte Creek spring-run Chinook salmon. This project has received non-CVFPP (via the Central Valley Project Improvement Act) funding for a feasibility study, planning, design, and implementation. This project will restore physical processes and provide other habitat and species benefits consistent with the Conservation Strategy.

#### Lower Sacramento River Conservation Planning Area

- **Agricultural Road Crossing 4 Fish Passage Project:** This proposed project will remove a priority fish passage barrier while maintaining private land access.
- **Little Egbert Tract Multi-Benefit Project:** This proposed project aims to reduce flood risk, improve agricultural sustainability, and restore habitat in the Little Egbert Tract.
- **Lookout Slough Tidal Habitat Restoration & Flood Improvement Project:** This proposed project would create tidal habitat for delta smelt and other salmonids by building a setback levee that will provide flood protection and improve climate resiliency in the region. Although this project is not being implemented under the CVFPP, it is located within the footprint of the Lower Sacramento River CPA and is expected to contribute towards the measurable objectives.
- **Lower Elkhorn Basin Levee Setback Project:** This project that is under construction is setting back levees and modifying SPFC facilities, thus widening the Yolo and Sacramento Bypasses, and will restore floodplain and riparian habitat.
- **Yolo Bypass Salmonid Habitat Restoration & Fish Passage Project:** This is a non-CVFPP project that would improve fish passage and increase floodplain rearing habitat in the Yolo Bypass and lower Sacramento River Basin. Funding for this project is provided by the Central Valley Project and State Water Project as a mitigation requirement stipulated by the 2009 Biological Opinion for impacts related to the operation of their facilities. Because this project will likely be counted as mitigation, it may not count toward meeting Conservation Strategy measurable objectives.

#### Upper San Joaquin River Conservation Planning Area

- **Arroyo Canal Screening and Sack Dam Passage Project:** This proposed project would construct a new dam and fish screen at the Arroyo Canal to improve fish passage.
- **Eastside Bypass Improvements Project:** This project that is under construction would address fish passage barriers in the Eastside Bypass in conjunction with reinforcing the levee, modifying the control structure, replacing existing culverts, and removing two weirs.



- **Reach 2B and Mendota Pool Bypass Improvement Project:** This proposed project would provide flood benefits by creating an expanded floodplain and creating an alternate channel around Mendota Pool.
- **Cottonwood, Dry, Berenda Creek Arundo Eradication and Sand Removal Project:** This ongoing project is in the process of restoring 17 miles of creeks by removing 25,000 tons of sediment and eradicating false bamboo (*Arundo donax*) in order to enhance flood flows, provide groundwater recharge, and restore native riparian habitat.

#### Lower San Joaquin River Conservation Planning Area

- **Three Amigos Non-structural Alternative Flood Management Project:** This proposed project would restore the historic floodplain and provide transient storage to more than 3,100 acres along 3 miles of the San Joaquin River.
- **Dos Rios Floodplain Expansion and Ecosystem Restoration Project and Hidden Valley Ranch Mitigation Project (Phase 2):** This proposed project would expand previous phases to include the Hidden Valley Ranch parcel and continue to reconnect and expand floodplain habitat.
- **Paradise Cut Multi-Benefit Improvement Project:** This proposed project would modify Paradise Cut to enhance flood conveyance and ecosystem benefits, including expansion of the bypass, modifications to the weir, and habitat restoration along the channel and adjacent floodplains.

#### Feather River Conservation Planning Area

- **Sunset Pumps Facility Removal Project:** This project is currently in the design and planning phase and seeks to remove the Sunset Pumps Diversion Dam, pumps, and pump platform constructed in the 1920s. This project will restore the channel elevation consistent with the upstream and downstream slope, restore connectivity for fish species including spring-run Chinook salmon and green sturgeon, reduce flood risk, and by improving physical processes will provide other benefits to Conservation Strategy habitats and species.





---

Appendix G  
Central Valley Flood Protection Board  
Advisory Committee  
Recommendations

*This page left blank intentionally.*

# Central Valley Flood Protection Board Advisory Committee Recommendations

Acronym	Definition
CVFPB	Central Valley Flood Protection Board
CVFPP	Central Valley Flood Protection Plan
DWR	California Department of Water Resources
NGO	nongovernment organization
State	State of California

## G.1 Introduction

As part of the California Department of Water Resources’ (DWR’s) continuing outreach to stakeholders, DWR is committed to participate in the Central Valley Flood Protection Board (CVFPB) Advisory Committee, which was first formed during development of the 2016 Conservation Strategy. The Advisory Committee is composed of federal and State of California (State) agency staff, nongovernment organizations (NGOs), regional and local stakeholders, and other interested parties. The Advisory Committee provides a productive, collaborative forum for dialogue on a wide range of issues relevant to the successful implementation of the Central Valley Flood Protection Plan (CVFPP) and its Conservation Strategy (or Strategy). The CVFPB reconvened the Advisory Committee in the summer of 2020 to develop recommendations that would help inform the content of the Conservation Strategy Update. To do so, and to address key issues, it formed the following three subgroups:

- Permitting.
- Performance Tracking.
- Implementation of Multi-benefit Projects.



Each Advisory Committee subgroup used specific guidance for the types of input requested to develop recommendations for the Conservation Strategy Update:

- Permitting:
  - Examples of successful project permitting and the lessons learned from those projects.
  - Information about recent and ongoing efforts to develop more efficient permitting mechanisms.
  - Key issue areas for each permit or approval.
- Performance Tracking:
  - Proposed monitoring and performance tracking needs, in addition to measurable objectives tracking.
  - Issues in documenting project outcomes and data handling.
- Implementation of Multi-benefit Projects:
  - Additional recommendations or priorities for future actions to reduce impediments to multi-benefit project implementation.
  - Examples of successful multi-benefit project development and implementation and the lessons learned from those projects, particularly related to engagement and funding.
  - Potential legislative actions to aid implementation of multi-benefit projects.

Each subgroup developed their recommendations through a series of individual meetings, discussions, and presentations to the larger CVFPB Advisory Committee, which occurred during the summer, fall, and winter months of 2020. The final subgroup recommendations were provided to the CVFPB in January and February 2021.

Table G-1 provides the list of recommendations from the Advisory Committee, along with how their incorporation is intended via the CVFPP planning process. The Advisory Committee submitted 79 recommendations to DWR, several of which contained various actions and were therefore placed in multiple categories. Some recommendations that are in several categories are also being considered (or are already being implemented) for various actions. Some of the recommendations are not within the scope of the CVFPP or not within the authorization of DWR. These have been placed in Category 6, along with a notation explaining this designation.



Category 1 recommendations can primarily be found in Table 3-8 of the Conservation Strategy Update, although some of these are incorporated in content. The statuses are defined as follows:

**1. Included in Conservation Strategy Public Draft.**

This recommendation aligns with the purpose, scope, and content of the Conservation Strategy and is included in the 2022 Public Draft. This status also applies to recommendations whose overall intent aligns with the Strategy but contains specifics it may not be feasible to include to the full level of detail given.

**2. Considered for inclusion in CVFPP Public Draft.**

This recommendation aligns with the purpose, scope, and content of the CVFPP and is considered for inclusion in the 2022 Public Draft. This status also applies to recommendations whose overall intent aligns with the CVFPP but contains specifics it may not be feasible to include to the full level of detail given.

**3. Considered for use as guidance or best management practices to inform other program or planning activities.**

This recommendation does not align with the content or scope (or both) of the Conservation Strategy and CVFPP, but provides valuable insight that can be incorporated into broader policies or other DWR efforts (such as development of an agricultural stewardship tool or vegetation roughness model).

**4. Already being implemented by other ongoing activities.**

This recommendation is in the process of being implemented, either by DWR or other agencies. For recommendations that are in the process of being implemented and are also included in the Conservation Strategy or CVFPP, a status of 1 or 2 will also be assigned.

**5. Considered for future CVFPP planning cycles.**

This recommendation aligns with purpose of the Conservation Strategy or CVFPP (or both) but may not be feasible to implement in the 2022 planning cycle, due to cost or practicality. This recommendation may be revisited in future planning cycles as additional resources become available.

**6. Not considered for inclusion in this CVFPP planning cycle.**

This recommendation is outside of the scope of the Conservation Strategy and CVFPP, either due to jurisdictional or resource limitations. The recommendation may be beyond the authorization of DWR or the CVFPP (such as requiring actions from outside agencies); may be more appropriate for implementation by other plans, programs, or agencies (such as development of an agricultural mitigation program); or may involve a level of detail not appropriate for the CVFPP.



Within Table G-1, the first column provides the assigned recommendation number, with the applicable subgroup identified as follows:

- I = Implementation of Multi-benefit Projects.
- P = Permitting.
- T = Performance Tracking.

We encourage the Advisory Committee members to continue to evaluate the advancement of these recommendations. Statuses are subject to change as both the CVFPP and the Conservation Strategy develop toward Final Drafts. It is also important to note that although DWR will attempt to make progress on the recommendations identified as Status 1 or 2 (considered for inclusion in the Conservation Strategy or CVFPP Updates), their inclusion does not guarantee implementation or adoption of the full suite of actions during the 2022 to 2027 planning cycle. Many of the Advisory Committee recommendations have been compiled for consideration in the 2022 CVFPP Update Public Draft, along with recommendations from the following other sources:

- 2017 CVFPP Update Recommendations.
- 2017 CVFPP Update Chapter 2 Areas of Agreement/Areas Continuing Conversation.
- 2016 Conservation Strategy.
- RFMP Regional Priorities White Papers.
- Advisory Committee Subgroup Recommendations.
- Water Resilience Portfolio Actions.
- DWR and Division of Flood Management Strategic Plans.
- Stakeholder surveys and interviews related to the Conservation Strategy.

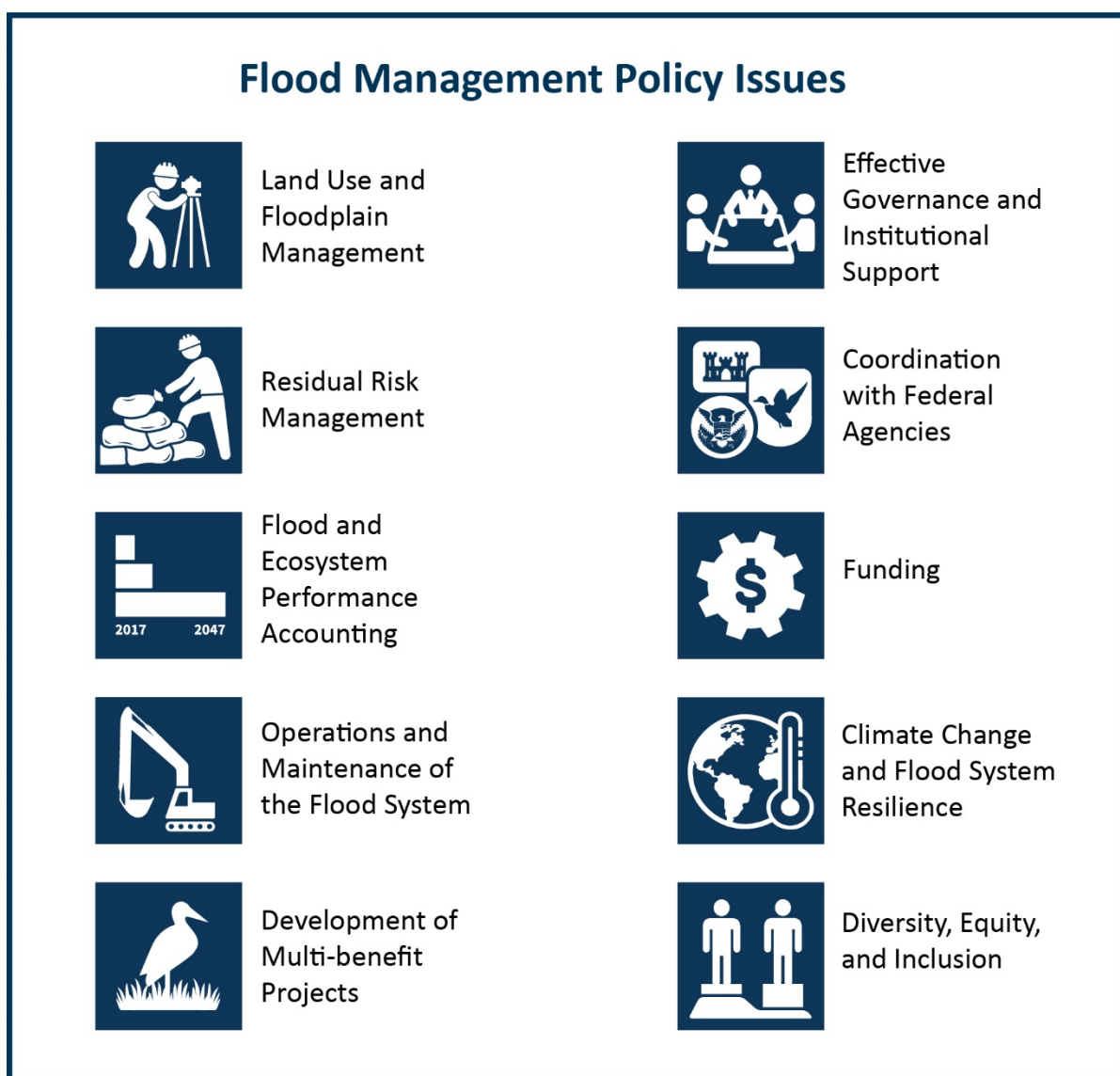
After consolidating these recommendations, the CVFPP planning team is synthesizing the recommendations into a manageable list for consideration and prioritization in the 2022 CVFPP Update Public Draft. The CVFPP planning team is considering these policies based on:

- The identification of relevant federal, State, and local partners that may be engaged for effective collaboration and implementation of policies.
- The appropriateness of recommendations for the level of detail and ability to implement.
- Priority near-term (< 5 years) and longer-term (>+ 5 years) recommendations and the appropriate location for their documentation.
- The inclusion of range for consideration, based on cost and practicality.



The Working Draft of the 2022 CVFPP Update (released in September 2021) included a short list of high-priority policy recommendations. Draft recommendations are organized around 10 policy issue categories (Figure G-1). Two categories are new and developed through this process for the 2022 CVFPP Update: Climate Change and Flood System Resilience; and Diversity, Equity, and Inclusion.

Figure G-1. Policy Issue Categories



22\_120

Stakeholder feedback and input on the short list of high-priority recommendations are both needed to refine recommendations for the 2022 CVFPP Update Public Draft.

*This page left blank intentionally.*





Table G-1. CVFPB Advisory Committee Recommendations

Note: Recommendations were kept verbatim as received from the Advisory Committee.

No.	Recommendation	Status of Incorporation of Advisory Committee Recommendations <sup>[a]</sup>	Comments	How the Public Draft of the Conservation Strategy can address this Recommendation	How the Working Draft of the 2022 CVFPP Update can address this Recommendation
I01	Include specific examples of each a Multi-Benefit flood system, a Single Purpose project, a Multi-Benefit project, a mitigation project, and a project that provides uplift in the updated Conservation Strategy. Consider using the performance tracking tool to show projects advancing the Conservation Strategy.	1 - Included in Conservation Strategy Public Draft. (Appendix F).	Conservation Strategy Appendix F provides examples of projects that meet various criteria relevant to the Conservation Strategy. (Refer to I11, T01a)	Refer to content in Appendix F, Attachment F.1	Not Applicable
I02	Include in the Conservation Strategy a protocol that can be provided by resource agencies and RFMPs to assist a project proponent in understanding and guiding them through project formulation and identify how a particular project warrants consideration as a multi-benefit project.	1 - Included in Conservation Strategy Public Draft.	Refer to I07a, P25	(Table 3-8) Develop guidance to help project proponents identify project components meet multi-benefit and Conservation Strategy measurable objectives. They can use this beginning in the early design phase and through project permitting to optimize ecological features and potentially expedite the regulatory process.	Not Applicable
I03	State to issue funding and guidance to the Regional Flood Management Program (RFMP) areas on engagement and formulation in developing a landscape vision for the Region that includes an integrated portfolio of multi-benefit projects to advance the Conservation Strategy measurable objectives while meeting CVFPP goals.	2 - Considered for inclusion in CVFPP Public Draft.	Not Applicable	Not Applicable	(Table 3-3 #08) Secure annual dedicated funding to continue and expand the successful Regional Flood Management Plan Program, which will support the six planning regions and facilitate the following (S/L): <ul style="list-style-type: none"> <li>• Encourage and support the establishment of centralized governance mechanisms with budgetary resources, such as joint powers authorities, designed to effectively engage in, sponsor, and coordinate regional flood management activities, improve regional planning, and support the regional implementation of flood and multi-benefit projects.</li> <li>• Continue to collaborate and coordinate on flood and multi-benefit projects within and across regions in each basin.</li> <li>• Establish regional technical advisory committees to improve coordination, landscape-scale connectivity, and the development of a regional vision for multi-benefit projects.</li> </ul>

No.	Recommendation	Status of Incorporation of Advisory Committee Recommendations <sup>[a]</sup>	Comments	How the Public Draft of the Conservation Strategy can address this Recommendation	How the Working Draft of the 2022 CVFPP Update can address this Recommendation
I04	Each of the RFMPs to map regional opportunities for flood improvement, habitat, water supply, water quality, recreation, agriculture sustainability, etc.	4 - Already being implemented by other ongoing activities. 5 - Considered for future CVFPP planning cycles.	RFMPs are currently scoped to provide this type of content for CVFPP planning processes; however, additional details and mapping formats may be added in the future.	Not Applicable	Not Applicable
I05a	Encourage funding agencies to coordinate amongst themselves (interagency coordination) prior to issuing guidelines to sync schedules, strategize on how to best fund large projects, and align various funding programs to best advance multi-benefit projects.	2 - Considered for inclusion in CVFPP Public Draft.	Not Applicable	Not Applicable	(Table 3-3 #01) Establish an intra-agency, basin-specific task force of high-level decision makers and staff to (S): <ul style="list-style-type: none"> <li>• Champion and manage agency coordination on multi-benefit project funding on or near SPFC facilities, facilitating interagency coordination before issuing guidelines to sync schedules, funding strategies, and priorities; and align various funding programs to best advance multi-benefit projects.</li> </ul>
I05b	CNRA or state/fed should designate a high-level person (or team of people) to champion and manage agency coordination on multiple benefit project funding on or near SPFC facilities.	6 - Outside the scope of CVFPP and Conservation Strategy.	Promoting agency coordination is a priority of the CVFPP and efforts are ongoing, but directing actions of other agencies is outside the scope of the CVFPP. (Refer to P02, P03)	Not Applicable	(Table 3-3 #01) Establish an intra-agency, basin-specific task force of high-level decision makers and staff to (S): <ul style="list-style-type: none"> <li>• Champion and manage agency coordination on multi-benefit project funding on or near SPFC facilities, facilitating interagency coordination before issuing guidelines to sync schedules, funding strategies, and priorities; and align various funding programs to best advance multi-benefit projects.</li> </ul>
I05c	Expand membership on the CDFW Restoration Leaders Committee, which is working to simplify funding requirements, to include other agencies.	6 - Outside the scope of CVFPP and Conservation Strategy.	Directing actions of other agencies is outside the scope of the CVFPP.	Not Applicable	Not Applicable

No.	Recommendation	Status of Incorporation of Advisory Committee Recommendations <sup>[a]</sup>	Comments	How the Public Draft of the Conservation Strategy can address this Recommendation	How the Working Draft of the 2022 CVFPP Update can address this Recommendation
I06a	State and/or Federal agencies should designate a high-level person (or team of people) to better identify where permitting requirements align across agencies on multiple-benefit project implementation on or near SPFC facilities and disclose where alignment is not possible.	6 - Outside the scope of CVFPP and Conservation Strategy.	Promoting agency coordination is a priority of the CVFPP and efforts are ongoing, but directing actions of other agencies is outside the scope of the CVFPP. (Refer to I05b, P02, P03)	Not Applicable	(Table 3-3 #01) Establish an intra-agency, basin-specific task force of high-level decision makers and staff to (S): <ul style="list-style-type: none"> <li>Review existing agency governance and authorities to identify overlapping authorities and propose meaningful recommendations for reconciliation between and among local, State, and federal levels of government to improve implementation of flood projects, particularly in rural and underserved communities.</li> </ul>
I06b	Intra-agency leadership vision is communicated down to staff level and across divisions within agencies to provide guidance on what project champions and agency staff can do to navigate implementation challenges, while ensuring project expectations are clearly articulated from the leadership and staff level.	6 - Outside the scope of CVFPP and Conservation Strategy.	Directing actions of other agencies is outside the jurisdiction of the CVFPP. (Refer to I06a)	Not Applicable	Refer to I06a
I06c	Commitment from agency staff and project proponents to follow a dispute resolution process when challenges arise (with an emphasis of working with agency at the staff level from the bottom up.) If the “Cutting the Green Tape Initiative” works well on restoration projects, expand this effort for Multi-Benefit Project’s.	6 - Outside the scope of CVFPP and Conservation Strategy.	The "Cutting the Green Tape Initiative" aligns with the goals of the CVFPP, but implementing this level of detail is outside the scope of the document. (Refer to P06a)	Not Applicable	Refer to P06a
I07a	<p>Promote early engagement and coordination with regulatory agencies to improve permitting and conservation outcomes:</p> <ul style="list-style-type: none"> <li>RFMPs should provide the forum for early agency engagement coordination. RFMPs should convene quarterly or bi-annual meeting (virtual meeting sufficient) to share progress and obtain agency input on Multi-benefit projects</li> <li>Develop a protocol for minimum description of a multi-benefit project to create a productive, early engagement with state and federal regulators to get “not-regulatory, pre-permitting” guidance on projects. Marry protocol recommendation with list of funding sources.</li> <li>Project proponents should work within the RFMP structure to host workshops with multiple agencies and stakeholders early in the planning process and concept design phase to identify expectations and goals, incorporate meaningful fish and wildlife enhancements, and identify ways to ways to avoid and minimize biological impacts and associated mitigation requirements.</li> </ul>	<p>1 - Included in Conservation Strategy Public Draft.</p> <p>2 - Considered for inclusion in CVFPP Public Draft.</p> <p>3 - Considered for use as guidance or best management practices to inform other program or planning activities.</p>	Part of a broader strategy to coordinate with regulatory agencies. Early engagement and agency coordination is a key component of the CVFPP/Conservation Strategy. (Refer to I02, P02, P25)	(Table 3-8) Promote early engagement and coordination with regulatory agencies to improve the permitting process and conservation outcomes. DWR, project proponents, and RFMPs may benefit by convening workshops and meetings with the regulatory agencies when developing project priority lists and during project design.	(Table 3-8 #08) Secure annual dedicated funding to continue and expand the successful Regional Flood Management Plan Program, which will support the six planning regions and facilitate the following (S/L): <ul style="list-style-type: none"> <li>Establish a collaborative forum for early agency engagement and coordination where project proponents (e.g., State or local partners) can share progress and obtain agency input.</li> </ul>

No.	Recommendation	Status of Incorporation of Advisory Committee Recommendations <sup>[a]</sup>	Comments	How the Public Draft of the Conservation Strategy can address this Recommendation	How the Working Draft of the 2022 CVFPP Update can address this Recommendation
I07b	<p>Provide Information and tools to assist potential multi-benefit project champions in advancing multi-benefit projects. The DWR team drafting the Conservation Strategy update should work with regulatory agency staff to:</p> <ul style="list-style-type: none"> <li>Develop an efficient format for summarizing the information (type of information and level of detail expected) necessary to determine if and how a project reduces flood risk and advance the conservation strategy, the minimum requirement of all multi-benefit flood management projects.</li> <li>Describe a process for how project proponents should advance the project through the funding and permitting process. Consider a four phased process: 1) introduction and early conceptual design with multiple agencies and stakeholders, 2) project proponents' complete checklist to identify how the project meets minimum criteria for special consideration as multi-benefit projects 3) agency assistance in identifying funding sources and achievable implementation strategies, 4) permitting. Provide clear milestones delineating the end of each phase to help project proponents avoid expensive delays. Consider how the performance tracking tool already under development could be used to provide information useful for completing the form and process described above.</li> </ul>	<p>1 - Included in Conservation Strategy Public Draft.</p> <p>3 - Considered for use as guidance or best management practices to inform other program or planning activities.</p> <p>5 - Considered for future CVFPP planning cycles.</p>	<p>Part of a broader strategy to coordinate with regulatory agencies. DWR is exploring additional means of assisting project proponents to advance multi-benefit projects. Decision support tools are under development, and this level of detail may be considered as additional resources become available. (Refer to I01, I02)</p>	<p>(Section 3.3.5) DWR has been developing internal data management and decision support tools to balance DWR's compensatory mitigation needs and other habitat obligations, while working toward goals to increase the quantity and quality of habitats and contribute to species' recovery. These decision support tools complement the FPTS: they are forward-looking, comparing project data from the FPTS to forecasted needs and objectives across DWR programs.</p>	Not Applicable
I07c	<p>Project proponents and regulators should view each other as project partners in the development of multi-benefit projects that advance the conservation strategy.</p> <ul style="list-style-type: none"> <li>Encourage and fund trust building efforts as part of planning and implementation grants including agency and public engagement events such as field trips, volunteer days, and ribbon cutting ceremonies.</li> <li>For particularly complicated projects, encourage and fund structured decision-making processes to clarify underlying assumptions of different parties.</li> </ul>	<p>3 - Considered for use as guidance or best management practices to inform other program or planning activities.</p>	<p>Coordination between entities is a key component of the CVFPP, but the implementation of this recommendation may be done within program or planning activities. (Refer to P02)</p>	Not Applicable	Not Applicable
I07d	<p>CVFPB should draft and send letter to CNRA secretary explaining how funding of the RFMPs both could advance the governor's water resilience portfolio and save the agency money and staff time.</p>	<p>6 - Outside the scope of CVFPP and Conservation Strategy.</p>	<p>The intent of this recommendation aligns with the purpose of the CVFPP, but its implementation is outside the scope of these documents.</p>	Not Applicable	Not Applicable

No.	Recommendation	Status of Incorporation of Advisory Committee Recommendations <sup>[a]</sup>	Comments	How the Public Draft of the Conservation Strategy can address this Recommendation	How the Working Draft of the 2022 CVFPP Update can address this Recommendation
I08a	Consider impacts and benefits to regional agricultural sustainability and county tax base in multi-benefit project planning.	4 - Already being implemented by other ongoing activities.	Systemwide and regional projects already consider economic impacts as a result of land use conversion during project planning and formulation.	(Table 3-8) Seek revisions to federal funding guidelines to fully account for the benefits provided by agricultural lands and restored ecosystems, and thereby increase federal funding for multi-benefit flood projects.	Refer to I08b
I08b	Support efforts of YB/CS Partnership Agricultural Sustainability Working Group to identify an agricultural sustainability program that would be implemented with large-scale multi-benefit projects.	2 - Considered for inclusion in CVFPP Public Draft.	Supporting the YB/Conservation Strategy Partnership aligns with the purpose of the CVFPP, but the specific implementation measures apply to other DWR programs.	Not Applicable	(Table 3-3 #07) Promote agricultural land stewardship and sustainability in multi-benefit project planning by leveraging regional flood management planning and partnerships to support the development and standardized use of relevant data and tools.
I08c	Support efforts to develop an agricultural stewardship/land planning tool to improve the agricultural outcome of multi-benefit flood management projects. Consider simplifying and adapting DWRs 2018 Agricultural and Land Workgroup Framework. Engage the Regions to shape the tool to meet regional needs.	5 - Considered for future CVFPP planning cycles.	The CVFPP considers agricultural land stewardship is a consideration, and this level of detail may be considered in future planning cycles. (Refer to I09)	Not Applicable	Refer to I09
I08d	Adopt and encourage use of standardized agricultural and land stewardship tool and guidance to make agricultural land stewardship planning a routine part of multi-benefits flood project planning in the Central Valley at both the programmatic regional and site-specific project levels.	5 - Considered for future CVFPP planning cycles.	Refer to I09	Not Applicable	Refer to I09
I09	Support efforts of YB/CS Partnership Agricultural Sustainability Working Group to develop and refine an agricultural sustainability tool.	2 - Considered for inclusion in CVFPP Public Draft.	Supporting the YB/Conservation Strategy Partnership aligns with the purpose of the CVFPP.	Not Applicable	(Table 3-3 #07) Promote agricultural land stewardship and sustainability in multi-benefit project planning by leveraging regional flood management planning and partnerships to support the development and standardized use of relevant data and tools.
I10	Develop an ag mitigation program that reinvests in nearby agriculture to make marginal lands more productive.	6 - Outside the scope of CVFPP and Conservation Strategy.	Refer to I08a, I08b	Not Applicable	Not Applicable

No.	Recommendation	Status of Incorporation of Advisory Committee Recommendations <sup>[a]</sup>	Comments	How the Public Draft of the Conservation Strategy can address this Recommendation	How the Working Draft of the 2022 CVFPP Update can address this Recommendation
I11	Support DWR's efforts to develop a tracking tool (i.e., Lori Clamurro-Chew's efforts) and encourage DWR to clarify how the tracking tool will be used to support the goals and objectives of the CVFPP 2022 Update and the Conservation Strategy.	1 - Included in Conservation Strategy Public Draft (Appendix F). 4 - Already being implemented by other ongoing activities.	A tracking system is under development. (Refer to I01, I07b, T09)	(Table 3-8) Develop guidance to help project proponents identify components in their projects that meet multi-benefit and Conservation Strategy measurable objectives. Project proponents can use this in the early design phase and through project permitting to optimize ecological features, and potentially expedite the regulatory process. Refer to content in Appendix F.	Not Applicable
I12a	DWR and the CVFPB should develop a vegetation roughness model and map for the Sutter Bypass, as is done for the Yolo Bypass, that allows landowners and wildlife managers to identify those bypass areas that are critically important for continued vegetation control.	4 - Already being implemented by other ongoing activities. 5 - Considered for future CVFPP planning cycles.	The Mid-Upper Sacramento River RFMP is refining existing modeling for the Sutter Bypass as part of the Sutter-Tisdale Bypass Multi-Benefit Bypass Management Plan.  Further updates and modeling analyses may be considered for future planning cycles.	Not Applicable	Not Applicable
I12b	Develop metrics that facilitate a cross walk between hydrologic roughness and habitat quality to integrate flood and environmental objectives.	3 - Considered as guiding principles or best management practices to inform other program or planning activities.	The analysis for this concept applies to other programs.	Not Applicable	Not Applicable
I12c	Have the RFMP assist project proponents in characterizing the effects of land use changes on flood conveyance capacity.	5 - Considered for future CVFPP planning cycles.	This level of detail could be considered once additional resources became available.	Not Applicable	Not Applicable
I12d	Proposals to restore ecosystem function within bypass lands should include consideration of the potentially increased costs of vegetation and sedimentation management that may be incurred if agriculture or duck club land uses were to cease.	3 - Considered as guiding principles or best management practices to inform other program or planning activities.	Refer to I13, P17	Not Applicable	Refer to I13
I12e	In regions of the Yolo and Sutter Bypasses where flood conveyance could be potentially impacted if vegetation were to grow uncontrolled, the CVFPB and DWR should prioritize multi-benefit habitat projects that enhance fish and wildlife benefits while retaining within the project footprint active agricultural production, wetland or grassland management, or otherwise include long-term funding to ensure that tree growth does not impede CVFPB's hydrologic design criteria.	3 - Considered as guiding principles or best management practices to inform other program or planning activities.	Refer to I13, P17	Not Applicable	Refer to I13

No.	Recommendation	Status of Incorporation of Advisory Committee Recommendations <sup>[a]</sup>	Comments	How the Public Draft of the Conservation Strategy can address this Recommendation	How the Working Draft of the 2022 CVFPP Update can address this Recommendation
I13	Require all proposed projects to provide a comprehensive OMRR&R plan that describes those actions and costs in the project planning documentation, such that during environmental analysis and permitting, the future O&M requirements will be included in the CEQA/Environmental document analysis, thereby be included in project permit. (O&M is part of implementing the project)	3 - Considered as guiding principles or best management practices to inform other program or planning activities. 4 - Already being implemented by other ongoing activities.	DWR supports this recommendation; however, it is not considered to be a requirement at this time. However, the CVFPB does require an O&M plan for projects as part of their permitting process. (Refer to P16)	(Table 3-8) Encourage and assist implementers of multi-benefit projects to develop O&M plans and incorporate these into their overall project descriptions and regulatory applications.	Not Applicable



No.	Recommendation	Status of Incorporation of Advisory Committee Recommendations <sup>[a]</sup>	Comments	How the Public Draft of the Conservation Strategy can address this Recommendation	How the Working Draft of the 2022 CVFPP Update can address this Recommendation
I14	<p>Develop a policy memo on potential revenue streams and explore potential legislation to identify funding mechanism to allow for long term O&amp;M of ecosystem restoration projects/components while also allowing entities like LMA's to take on long term obligations without using their funds and increase long-term liabilities. The memo should also look into liability waivers for LMA's that are used for other public items, like trails, and explore the option of having the agencies benefiting from multi benefit project (CDFW, CVFPB, and DWR) to jointly share in the long-term liability. Solicit input from the RFMPs on funding concepts. Reference recommendations from the 2017 Investment Strategy, included and not limited to:</p> <ul style="list-style-type: none"> <li>• Consider using revised bond language from proposition 13, modified to allow fund maintenance endowments on existing lands and newly acquired lands</li> <li>• endowment grants from DWR using General funds</li> <li>• endowment grants from CDFW or WCB</li> <li>• endowment funds from the Ecological non-profit organizations</li> <li>• New SSJDD assessment or another-type of systemwide assessment</li> <li>• Water fee</li> <li>• Sell sequestered carbon and water conserved water</li> <li>• User fees</li> <li>• Includes prioritization of funding for long term O&amp;M in/near disadvantaged communities</li> <li>• Use AB 2087 to obtain credits that can be sold over time to finance long term O&amp;M</li> </ul>	<p>2 - Considered for inclusion in CVFPP Public Draft.</p> <p>3 - Considered as guiding principles or best management practices to inform other program or planning activities.</p> <p>5 - Considered for future CVFPP planning cycles.</p>	<p>The CVFPP considers overarching recommendation to address challenges associated with long-term O&amp;M, including funding, but some specifics from this recommendation may not be included.</p>	<p>Not Applicable</p>	<p>(Table 3-3 #09) Continue to prioritize actions that repair and rehabilitate existing system features by “taking care of what we have” (S/F/L):</p> <ul style="list-style-type: none"> <li>• Incorporate long-term O&amp;M considerations and best management practices into planning, design, permitting (including long-term O&amp;M coverage in permits for system improvement projects), and construction phases of flood management and multi-benefit projects, and encourage other project proponents to do the same.</li> <li>• Continue to provide financial and technical assistance for programs such as the FMAP to decrease deferred maintenance in the system. Encourage local maintaining agencies to participate in FMAP and consider amendments to FMAP guidelines as appropriate to allow work activities to span multiple funding years, expand list of covered OMRR&amp;R activities, and pursue federal funding opportunities.</li> <li>• Continue to use FMAP to provide financial and technical assistance to local flood agencies to prepare SWIF applications, notice of intents, and SWIF implementation to regain Public Law 84-99 program eligibility to maximize federal cost-share.</li> <li>• Establish an interagency workgroup, in conjunction with California Silver Jackets, to investigate solutions for reducing the impact of encampments on levees and the associated operation and maintenance challenges that arise from inhabitation on the flood management infrastructure.</li> </ul>





No.	Recommendation	Status of Incorporation of Advisory Committee Recommendations <sup>[a]</sup>	Comments	How the Public Draft of the Conservation Strategy can address this Recommendation	How the Working Draft of the 2022 CVFPP Update can address this Recommendation
I15a	Encourage DWR to continue to develop a decision support tool to provide flexibility to meet multi-benefit objectives when using multiple multi-benefit sources, i.e. the DWR "One Landscape Vision"	3 - Considered for use as guidance or best management practices to inform other program or planning activities. 4 - Already being implemented by other ongoing activities.	This recommendation is being implemented by ongoing activities that apply to other DWR programs. (Refer to I17)	Not Applicable	Not Applicable
I15b	Simplify and unify administrative and application requirements for state and potentially federal grants. <ul style="list-style-type: none"> <li>State of California or CNRA together with CAL EPA develops uniform, administrative terms for all state grants used to fund Multi-benefit projects similar to the OMB Uniform guidance and Federal Form SF 424. Consider making state administrative requirements identical to federal requirements.</li> <li>State of California or CNRA together with CAL EPA develops uniform policy on indirect cost definitions and recovery consistent with federal guidance. Consider using federal negotiated indirect cost recovery agreements.</li> </ul>	2 - Considered for inclusion in CVFPP Public Draft. 5 - Considered for future CVFPP planning cycles.	The intent of this recommendation aligns with the CVFPP, but the implementation of specific actions is outside of CVFPP jurisdiction.	Not Applicable	(Table 3-3 #01) Establish an intra-agency, basin-specific task force of high-level decision makers and staff to (S): <ul style="list-style-type: none"> <li>Champion and manage agency coordination on multi-benefit project funding on or near State SPFC) facilities, facilitating interagency coordination before issuing guidelines to sync schedules, funding strategies, and priorities; and align various funding programs to best advance multi-benefit projects.</li> </ul>
I15c	Simplify the grant application process for bond funds. Encourage conceptual proposals and shorten the time required between grant application and executed grant agreement. See recommendations of CDFW Restoration Leaders Committee. <ul style="list-style-type: none"> <li>Create a special multi-benefit planning fund to assist landowners (private or public) with timely provision of planning and CEQA funds to avoid the long delays associated with getting planning grants. Need to develop special criteria to clarify what type of projects and applicants would qualify for this special program (i.e. a NGO that recently acquired a riverside land with state grant funds for restoration or conservation – don't make them get in line again for planning grant).</li> <li>Encourage CNRA Departments to coordinate and pool funding to adequately fund Multi-benefit projects under a single, larger grant agreement rather than multiple, smaller grant agreements from different agencies or encourage individual departments/agencies to give larger grants.</li> </ul>	2 - Considered for inclusion in CVFPP Public Draft. 5 - Considered for future CVFPP planning cycles.	The intent of this recommendation aligns with the CVFPP, but the implementation of specific actions is outside of CVFPP jurisdiction.	Not Applicable	(Table 3-3 #06) Obtain increased State and federal stable funding for flood management and multi-benefit for capital projects and ongoing investments in the SPFC by (S/F/L): <ul style="list-style-type: none"> <li>New general obligation bond funding that promotes flexibility in funding flood management projects with single or multiple societal benefits.</li> </ul>
I15d	CNRA or state/fed should designate a high-level person (or team of people) to champion and manage agency coordination on multiple-benefit project funding on or near SPFC facilities.	6 - Outside the scope of CVFPP and Conservation Strategy.	Refer to I05b, I06a	Not Applicable	Refer to I05b

No.	Recommendation	Status of Incorporation of Advisory Committee Recommendations <sup>[a]</sup>	Comments	How the Public Draft of the Conservation Strategy can address this Recommendation	How the Working Draft of the 2022 CVFPP Update can address this Recommendation
I16	<p>Make recommendations for future bond language to provide flexibility needed to fund planning, implementation, and long-term monitoring and maintenance of multi-benefit projects. DWR legal staff (or their consultants) to develop a technical memorandum on how past bond language resulted in unintended barriers or delays for planning, implementation, and long-term maintenance of Multi-benefit projects and make recommendations for future bond language to facilitate multi-benefit projects. Evaluate what limitations are controlled by bond language as opposed to overarching bond laws and regulations.</p>	<p>2 - Considered for inclusion in CVFPP Public Draft. 5 - Considered for future CVFPP planning cycles.</p>	<p>While the CVFPP may not include some specifics, the intent of this recommendation is included to the extent currently feasible with available resources.</p>	<p>Not Applicable</p>	<p>(Table 3-3 #06) Obtain increased State and federal stable funding for flood management and multi-benefit for capital projects and ongoing investments in the SPFC by (S/F/L):</p> <ul style="list-style-type: none"> <li>• New general obligation bond funding that promotes flexibility in funding flood management projects with single or multiple societal benefits.</li> </ul>



No.	Recommendation	Status of Incorporation of Advisory Committee Recommendations <sup>[a]</sup>	Comments	How the Public Draft of the Conservation Strategy can address this Recommendation	How the Working Draft of the 2022 CVFPP Update can address this Recommendation
117	<p>Direct more funding and incentives to local, regional, non-profit, and public/private partnerships to plan and implement Multi-benefit projects to achieve CVFPP goals rather than attempting to impose from the top down.</p> <ul style="list-style-type: none"> <li>• DWR to provide planning grants to RFMP agencies to engage regional stakeholders in the development of regional multi-benefit visions with a portfolio of specific multi-benefit projects.</li> <li>• Fund and empower Reclamation Districts to advance multi-benefit projects.</li> <li>• CNRA and or DWR provide leadership and technical assistance on developing advance mitigation credits.</li> <li>• Provide grants to regions and local flood management agencies to advance mitigation plans.</li> <li>• Provide incentives and/or legal mechanisms for urban flood control agencies to advance ecosystem restoration or multi-benefit project in nearby rural areas.</li> <li>• Give urban flood management agencies advance mitigation credits for ecosystem restoration and multi-benefit projects in nearby rural areas. (RCIS and MCAs that allow urban areas to get advance mitigation credit for projects in nearby rural areas.)</li> <li>• DWR should provide technical assistance and special planning grants to assist disadvantaged communities.</li> <li>• DWR should contract with local agencies or NGO's that specializes in working with disadvantaged communities to help multiple disadvantaged communities advance multi-benefit projects.</li> <li>• Prioritize public funding for projects that benefit disadvantaged communities.</li> <li>• Encourage DWR to continue to develop a decision support tool to provide flexibility to meet multi-benefit objectives when using multiple multi benefit sources, i.e. the DWR "One Landscape Vision".</li> </ul>	<p>2 - Considered for inclusion in CVFPP Public Draft.</p> <p>3 - Considered for use as guidance or best management practices to inform other program or planning activities.</p> <p>4 - Already being implemented by other ongoing activities.</p>	<p>While some specifics of this recommendation may not be included, the overarching intent is reflected in the CVFPP and is being implemented through ongoing and proposed activities undertaken by DWR and other agencies.</p>	<p>Not Applicable</p>	<p>(Table 3-3 #01) Review existing agency governance and authorities to identify overlapping authorities and propose meaningful recommendations for reconciliation between and among local, State, and federal levels of government to improve the implementation of flood projects, particularly in rural and underserved communities.</p> <p>(Table 3-3 #06) Obtain increased State and federal stable funding for flood management and multi-benefit for capital projects and ongoing investments in the SPFC.</p> <p>(Table 3-3 #08) Secure annual dedicated funding to continue and expand the successful Regional Flood Management Plan Program, which will support the six planning regions.</p>

No.	Recommendation	Status of Incorporation of Advisory Committee Recommendations <sup>[a]</sup>	Comments	How the Public Draft of the Conservation Strategy can address this Recommendation	How the Working Draft of the 2022 CVFPP Update can address this Recommendation
P01	Clarify required elements of a multi-benefit project and for specific regions determine whether a regional permitting approach, such as participation in HCPs or RCIS's for example, would facilitate subsequent permitting for future multi-benefit projects.	1 - Included in Conservation Strategy Public Draft. 2 - Considered for inclusion in CVFPP Public Draft.	The CVFPP and Conservation Strategy discuss a regional permitting approach.	(Table 3-8) Consider developing a regional permitting approach to facilitate the implementation of multi-benefit projects. Established permitting mechanisms such as HCPs, RCISs/MCAs, etc. can facilitate the coordinated planning of multi-benefit projects throughout a region or corridor, potentially expediting permitting and providing a mechanism to secure advance mitigation.	(Table 3-3 #02) Explore, create, and implement regional-scale and long-term permitting mechanisms (administrative structures, protocols, interagency cooperative agreements, etc.) in conjunction with resource agencies, for the implementation and O&M of flood management activities, including multi-benefit projects.  (Table 3-3 #08) Secure annual dedicated funding to continue and expand the successful Regional Flood Management Plan Program, which will support the six planning regions.
P02	Encourage project proponents to engage in early coordination with regulatory agencies during conceptual design phase.	1 - Included in Conservation Strategy Public Draft. 2 - Considered for inclusion in CVFPP Public Draft.	Early engagement and agency coordination is a key component of the CVFPP and Conservation Strategy. (Refer to I07a)	(Table 3-8) Promote early engagement and coordination with regulatory agencies to improve the permitting process and conservation outcomes. DWR, project proponents, and RFMPs may benefit by convening workshops and meetings with the regulatory agencies when developing project priority lists and during project design.	(Table 3-3 #01) Establish an intra-agency, basin-specific task force of high-level decision makers and staff to (S): <ul style="list-style-type: none"><li>• Champion and manage agency coordination on multi-benefit project funding on or near SPFC facilities, facilitating interagency coordination before issuing guidelines to sync schedules, funding strategies; and priorities; and align various funding programs to best advance multi-benefit projects.</li></ul> (Table 3-8 #08) Secure annual dedicated funding to continue and expand the successful Regional Flood Management Plan Program, which will support the six planning regions and facilitate the following (S/L): <ul style="list-style-type: none"><li>• Establish a collaborative forum for early agency engagement and coordination where project proponents (e.g., State or local partners) can share progress and obtain agency input.</li></ul>



No.	Recommendation	Status of Incorporation of Advisory Committee Recommendations <sup>[a]</sup>	Comments	How the Public Draft of the Conservation Strategy can address this Recommendation	How the Working Draft of the 2022 CVFPP Update can address this Recommendation
P03	Develop agency workgroup with multiple agencies represented; encourage consistency among agencies where possible regarding permitting timelines and requirements.	1 - Included in Conservation Strategy Public Draft. 2 - Considered for inclusion in CVFPP Public Draft.	Agency coordination is a key component of the CVFPP and Conservation Strategy.	(Table 3-8) Consider reconvening the IAC workgroup to collaborate on effectively permitting multi-benefit projects and develop permitting protocols to find efficiencies among agencies, as appropriate.	(Table 3-3 #02) Explore, create, and implement regional-scale and long-term permitting mechanisms (administrative structures, protocols, interagency cooperative agreements, etc.) in conjunction with resource agencies, for the implementation and O&M of flood management activities, including multi-benefit projects, considering the following (S/F/L): <ul style="list-style-type: none"> <li>Initiate memorandums of agreement or memorandums of understanding between the DWR and regulatory agencies (consistent with the “Cutting Green Tape” initiative) to standardize and streamline some permitting elements for multi-benefit projects and provide greater transparency of the regulatory process</li> </ul>
P04	Work toward standardization of permitting/mitigation and avoidance and mitigation measure requirements that can be applied to multi-benefit projects in recognition that these projects provide important habitat components as part of their project description.	4 - Already being implemented by other ongoing activities.	DWR is participating in programs that are contributing to this effort, for example the RCIS and MCA process in Yolo County and the Yolo Bypass Master Planning approach. However, given project-specific details and differences among permits, some standardization is not feasible. (Refer to P03, P06)	Not Applicable	Not Applicable
P05	Regulatory agencies should provide greater transparency in permitting processes and mitigation requirements, to assist applicants in understanding the conditions and how mitigation measures are applied.	4 - Already being implemented by other ongoing activities. 6 - Outside the scope of CVFPP and Conservation Strategy.	Implementation of this recommendation is applicable to other agencies. However, pursuant to SB 473, CDFW is now posting new ITPs on their public website; refer to Appendix D for the link. (Refer to P02)	Not Applicable	Not Applicable

No.	Recommendation	Status of Incorporation of Advisory Committee Recommendations <sup>[a]</sup>	Comments	How the Public Draft of the Conservation Strategy can address this Recommendation	How the Working Draft of the 2022 CVFPP Update can address this Recommendation
P06a	Consider MOAs or MOUs between DWR and regulatory agencies (consistent with Cutting Green Tape initiative) to standardize permitting for multi-benefit projects.	1 - Included in Conservation Strategy Public Draft. 2 - Considered for inclusion in CVFPP Public Draft.	Agency coordination is a key component of the CVFPP & / Conservation Strategy.	(Table 3-8) Seek a memorandum of agreement or memorandum of understanding between DWR, LMAs, and regulatory agencies that establishes standard avoidance and minimization measures for multi-benefit projects and O&M.	(Table 3-3 #02) Initiate MOAs or MOUs between the DWR and regulatory agencies (consistent with the “Cutting Green Tape” initiative) to standardize and streamline some permitting elements for multi-benefit projects and provide greater transparency of the regulatory process.
P06b	Recognizing that each project is unique and regulatory agencies must specify acceptable mitigation to offset the specific impacts of the project, agencies should clarify policies applied to determine mitigation needs and requirements for individual unique projects, to reduce the unpredictability of case-by-case decision-making (policies are currently somewhat vague or not well understood by project proponents).	6 - Outside the scope of CVFPP and Conservation Strategy.	Standardizing and streamlining permitting processes aligns with the purpose of the CVFPP; however, directing the actions of other agencies is outside the CVFPP’s scope. (Refer to P04)	Not Applicable	Not Applicable
P06c	Work with agencies to develop templates that can be applied to multi-benefit projects.	1 - Included in Conservation Strategy Public Draft. 3 - Considered for use as guidance or best management practices to inform other program or planning activities.	This is part of a broader strategy to coordinate with regulatory agencies. (Refer to I02)	Develop guidance to help project proponents identify components in their projects that meet multi-benefit and Conservation Strategy measurable objectives. Project proponents can use this beginning in the early design phase and through project permitting to optimize ecological features, and potentially expedite the regulatory process.	Not Applicable
P06d	Regional permitting could result in better consistency in permit requirements	1 - Included in Conservation Strategy Public Draft. 4 - Already being implemented by other ongoing activities.	Refer to P01	(Table 3-8) Consider developing a regional permitting approach to facilitate the implementation of multi-benefit projects. Established permitting mechanisms, such as HCPs, RCISs/MCAs, etc. can facilitate coordinated planning of multi-benefit projects throughout a region or corridor, potentially expediting permitting and providing a mechanism to secure advance mitigation.	Not Applicable

No.	Recommendation	Status of Incorporation of Advisory Committee Recommendations <sup>[a]</sup>	Comments	How the Public Draft of the Conservation Strategy can address this Recommendation	How the Working Draft of the 2022 CVFPP Update can address this Recommendation
P06e	Take advantage of CDFW and other agencies' processes for making incidental take permits available and seek access to incidental take permits early in project design/planning phase.	1 - Included in Conservation Strategy Public Draft.	This recommendation will require coordination with other agencies. However, pursuant to SB 473, CDFW is now posting new ITPs on their public website; refer to Appendix D for the link. (Refer to P02 & P05)	Refer to content related to this topic in Appendix D. (Table 3-8) Promote early engagement and coordination with regulatory agencies to improve the permitting process and conservation outcomes. DWR, project proponents, and RFMPs may benefit by convening workshops and meetings with the regulatory agencies when developing project priority lists and during project design.	Not Applicable
P07	Describe communication path opportunities and steps to include public agency coordination during project planning. Inform project proponents that early coordination can lead to improved understanding of permit requirements, and ways to optimize project benefits and avoid/minimize impacts. Where appropriate include project components that seek to meet the definition of multi-benefit and which measurable objectives are being met within the project description.	1 - Included in Conservation Strategy Public Draft. 3 - Considered for use as guidance or best management practices to inform other program or planning activities.	This is part of a broader strategy to coordinate with regulatory agencies. Early engagement and agency coordination is a key component of the CVFPP and Conservation Strategy. (Refer to I07, P02 & P06c.)	(Table 3-8) Promote early engagement and coordination with regulatory agencies to improve the permitting process and conservation outcomes. DWR, project proponents, and RFMPs may benefit by convening workshops and meetings with the regulatory agencies when developing project priority lists and during project design.  Develop guidance to help project proponents identify components in their projects that meet multi-benefit and Conservation Strategy measurable objectives. Project proponents can use this beginning in the early design phase and through project permitting to optimize ecological features, and potentially expedite the regulatory process.	Not Applicable
P08	Identify challenges and opportunities associated with species protected by both FESA and CESA where different mitigation paths are needed.	3 - Considered as guiding principles or best management practices to inform other program or planning activities.	While specifics of this recommendation may not be included, the overarching intent of aligning permitting requirements is consistent with the CVFPP's purpose.	Not Applicable	Not Applicable

No.	Recommendation	Status of Incorporation of Advisory Committee Recommendations <sup>[a]</sup>	Comments	How the Public Draft of the Conservation Strategy can address this Recommendation	How the Working Draft of the 2022 CVFPP Update can address this Recommendation
P09	Certain multi-benefit projects may help some species but impact other species. In the past, DWR provided advanced mitigation funding, so this could be done for multi-benefit projects to offset adverse effects to species impacted by the project, particularly when it is not possible to incorporate mitigation for a particular species or habitat type into the project.	1 - Included in Conservation Strategy Public Draft. 3 - Considered for use as guidance or best management practices to inform other program or planning activities. 4 - Already being implemented by other ongoing activities.	Refer to P12	(Table 3-8) Secure funding for advance mitigation projects. Numerous multi-benefit flood, O&M, and single-purpose projects will require mitigation for impacts on multiple resources; funding advance mitigation increases the availability of compensatory mitigation and could provide conservation benefits over time.	Not Applicable
P10	Look at opportunities to elevate qualifying RFMP multi-benefit projects as a state prioritized regional beneficial project (i.e. as a Basin-Wide Feasibility Study project) to allow greater State participation for permitting, etc.	5 - Considered for future CVFPP planning cycles.	This level of coordination could be considered once additional resources were available.	Not Applicable	Not Applicable
P11	Explore options for providing improved funding, technical support, and incentives; explore regional or statewide led solutions for assisting disadvantaged communities with permitting of multi-benefit projects.	2 - Considered for inclusion in CVFPP Public Draft.	The overarching goal of assisting underserved communities is included in the CVFPP.	Not Applicable	(Table 3-3 #01) Review existing agency governance and authorities to identify overlapping authorities and propose meaningful recommendations for reconciliation between and among local, State, and federal levels of government to improve the implementation of flood projects, particularly in rural and underserved communities.
P12	DWR could develop mitigation banks to alleviate mitigation needs for species and habitats not readily addressed by mitigation on-site.	1 - Included in Conservation Strategy Public Draft. 2 - Considered for inclusion in CVFPP Public Draft.	Refer to P09	(Table 3-8) Secure funding for advance mitigation projects. Numerous multi-benefit flood, O&M, and single-purpose projects will require mitigation for impacts on multiple resources; funding advance mitigation increases the availability of compensatory mitigation and could provide conservation benefits over time.	(Table 3-3 #02) Use mitigation banks or create mitigation credits through a mitigation credit agreement, as appropriate, and for opportunities to streamline costs such as purchasing or creating mitigation credits in bulk for use for flood risk reduction projects.
P13	Regulatory agencies should clarify rules and policies used to establish mitigation requirements for individual projects.	6 - Outside the scope of CVFPP and Conservation Strategy	The implementation of this recommendation applies to the regulatory agencies. (Refer to P01)	Not Applicable	Not Applicable
P14	Where habitat creation onsite exceeds mitigation requirements, uplift should be acknowledged and described in the project description.	4 - Already being implemented by other ongoing activities.	Project proponents are incorporating this practice.	Not Applicable	Not Applicable



No.	Recommendation	Status of Incorporation of Advisory Committee Recommendations <sup>[a]</sup>	Comments	How the Public Draft of the Conservation Strategy can address this Recommendation	How the Working Draft of the 2022 CVFPP Update can address this Recommendation
P15	Where channel vegetation must be removed periodically for conveyance, project proponents could enter into agreements with regulatory agencies for one-time mitigation up front that exceeds anticipated impacts from future periodic vegetation removal.	1 - Included in Conservation Strategy Public Draft.	Refer to P16	(Table 3-8) Encourage and assist implementers of multi-benefit projects to develop O&M plans and incorporate these into their overall project descriptions and regulatory applications.	Not Applicable
P16	In developing multi-benefit projects, include in agency consultation the need for long term operation and maintenance (from Sec. 7 standpoint) to develop a mutually acceptable long-term maintenance plan and to get listed species take coverage.	1 - Included in Conservation Strategy Public Draft. 2 - Considered for inclusion in CVFPP Public Draft.	The implementation of specific actions will depend on agency partners.	(Table 3-8) Encourage and assist implementers of multi-benefit projects to develop O&M plans and incorporate these into their overall project descriptions and regulatory applications.	(Table 3-3 #02) Explore, create, and implement regional-scale and long-term permitting mechanisms (administrative structures, protocols, interagency cooperative agreements, etc.) in conjunction with resource agencies, for the implementation and O&M of flood management activities, including multi-benefit projects.  (Table 3-3 #09) Incorporate long-term O&M considerations and best management practices into planning, design, permitting (including long-term O&M coverage in permits for system improvement projects), and construction phases of flood management and multi-benefit projects, and encourage other project proponents to do the same.
P17	Describe methods to secure maintenance plans and species take authorization approved by agencies and proponents to avoid repeated conflicts and repeated mitigation each time maintenance occurs. Describe environmentally sensitive methods and conditions for vegetation removal and replacement. Long-term maintenance plans should include structuring the actions that could affect the habitat in ways that maintain the habitat quality and also meet flood risk reduction needs.	1 - Included in Conservation Strategy Public Draft. 2 - Considered for inclusion in CVFPP Public Draft.	Refer to P16	(Table 3-8) Develop guidance with standardized avoidance and minimization measures that can be incorporated into O&M plans for multi-benefit projects to maintain and optimize habitat quality while providing assurances and standardized methods for completing O&M.	Refer to P16
P18	Develop templates for O&M that consider long-term maintenance of restoration projects. Long-term maintenance should be assumed and calculated during permitting process. Maintenance plans also need to consider long-term protection and enhancement of vegetation.	1 - Included in Conservation Strategy Public Draft. 2 - Considered for inclusion in CVFPP Public Draft.	Refer to P16	(Table 3-8) Develop guidance with standardized avoidance and minimization measures that can be incorporated into O&M plans for multi-benefit projects to maintain and optimize habitat quality while providing assurances and standardized methods for completing O&M.	Refer to P16

No.	Recommendation	Status of Incorporation of Advisory Committee Recommendations <sup>[a]</sup>	Comments	How the Public Draft of the Conservation Strategy can address this Recommendation	How the Working Draft of the 2022 CVFPP Update can address this Recommendation
P19	Conflicting permit requirements related to protection of vegetation versus removal needs to be resolved through negotiations with standardized language developed that can be applied to individual situations.	5 - Considered for future CVFPP planning cycles.	This level of detail could be considered once additional resources became available. (Refer to P06d)	Not Applicable	Not Applicable
P20	Consider that providing State funding for long-term maintenance because multi-benefit project elements provide a statewide "general" benefit.	2 - Considered for inclusion in CVFPP Public Draft.	Not Applicable	Not Applicable	(Table 3-3 #06) Obtain increased State and federal stable funding for flood management and multi-benefit for capital projects and ongoing investments in the SPFC.
P21	Because there is a need for improved coordination among projects and landscape-scale connectivity, establish regional technical advisory committees. For the Upper Sacramento River region, the technical advisory committee met monthly to discuss status of projects, conflicts, and solutions which proved to be an effective process.	1 - Included in Conservation Strategy Public Draft. 2 - Considered for inclusion in CVFPP Public Draft.	Not Applicable	(Table 3-8) Develop landscape-scale permitting mechanisms that apply or complement existing means of expediting the permitting of multi-benefit projects.  Consider reconvening the IAC workgroup to collaborate on effectively permitting multi-benefit projects, and to develop protocols to find efficiencies among agencies as appropriate.	(Table 3-3 #08) Establish regional technical advisory committees to improve coordination, as well as landscape-scale connectivity, and develop a regional vision for multi-benefit projects.
P22	Describe opportunities and methods for improved inter-project coordination and project integration with natural processes (climate change, hydrology, species migration, groundwater recharge and flow patterns, etc.) at a landscape scale. Look for and support opportunities to develop regional working groups.	1 - Included in Conservation Strategy Public Draft. 2 - Considered for inclusion in CVFPP Public Draft.	Some of this information is provided in the Conservation Strategy and the Climate Change Adaptation for the CVFPP Conservation Strategy Update Memorandum (Appendix H).	Refer to content in Section 3.4.1	(Table 3-3 #07) Continue to periodically update best available science, tools, and data to improve understanding of the condition, performance, and response of floodplain and flood system for CVFPP updates, Conservation Strategy updates, and related performance tracking systems in collaboration with partners (S/F/L).  (Table 3-3 #08) Secure annual dedicated funding to continue and expand the successful Regional Flood Management Plan Program, which will support the six planning regions.
P23	Ensure project proponents are aware of and have access to mapping and data that identifies connectivity gaps so their projects can be designed in a way to maximize habitat connectivity and species movement through corridors.	5 - Considered for future CVFPP planning cycles.	Making data available to project proponents is a goal of the CVFPP, and efforts are underway, but it is currently not feasible to provide this level of detail and certainty.	(Table 3-8) Re-inventory vegetation, natural bank, and riparian-lined bank throughout all CPAs and continue to make this data publicly available.  Refer to Table 3-6, "Data Gaps Related to Targeted Ecosystem Processes, Habitats, and Species."	(Table 3-3 #07) Continue to periodically update best available science, tools, and data to improve understanding of the condition, performance, and response of floodplain and flood system for CVFPP updates, Conservation Strategy updates, and related performance tracking systems in collaboration with partners (S/F/L).

No.	Recommendation	Status of Incorporation of Advisory Committee Recommendations <sup>[a]</sup>	Comments	How the Public Draft of the Conservation Strategy can address this Recommendation	How the Working Draft of the 2022 CVFPP Update can address this Recommendation
P24	Continue to align other statewide plans – comprehensive approach not piecemeal or incremental approach to planning multiple benefit projects.	1 - Included in Conservation Strategy Public Draft. 2 - Considered for inclusion in CVFPP Public Draft.	Not Applicable	Refer to content in Section 3.4.1	(Table 3-3 #01) Champion and manage agency coordination on multi-benefit project funding on or near SPFC facilities, facilitating interagency coordination before issuing guidelines to sync schedules, funding strategies, and priorities; and align various funding programs to best advance multi-benefit projects.  Review existing agency governance and authorities to identify overlapping authorities and propose meaningful recommendations for reconciliation between and among local, State, and federal levels of government to improve implementation of flood projects, particularly in rural and underserved communities.
P25	Develop a protocol for determining whether a particular project meets the 2017 CVFPP definition of a multi-benefit project.	1 - Included in Conservation Strategy Public Draft (Appendix F). 4 - Already being implemented by other ongoing activities.	This recommendation is being implemented by ongoing activities and is covered in the Conservation Strategy. (Refer to I02, I07)	Refer to content in Appendix F.	Not Applicable
P26	Public, stakeholder, and agency engagement should be encouraged in development of a regional vision.	4 - Already being implemented by other ongoing activities.	Consistent with the past two CVFPP updates, stakeholder engagement is a core consideration as part of the public engagement and planning process. (Refer to I17, P01)	Not Applicable	Not Applicable
P27	Ensure regular engagement of local communities throughout project development, design, and construction of projects.	4 - Already being implemented by other ongoing activities.	Refer to P26	Not Applicable	Not Applicable
T01a	Define the difference and create clear distinction between uplift and mitigation and track how a single site or parcel might change its status over time (for example, it might be uplift for five years and then convert to mitigation). [Cross-cutting with Permitting]	1 - Included in Conservation Strategy Public Draft (Appendix F).	Refer to I01	Refer to content in Appendix F.	Not Applicable
T01b	Track current and projected extent of available suitable habitat in different categories over time. (e.g. inundated floodplain, shaded riverine aquatic, Swainson's hawk foraging, etc.) Identify and track different kinds of mitigation (compensatory, out-of-kind, surplus, self-mitigation, and advanced).	6 - Outside the scope of CVFPP and Conservation Strategy.	Tracking habitat and mitigation is a key component of the CVFPP; however, this level of detail is beyond the scope of the CVFPP/Conservation Strategy. (Refer to T03)	Not Applicable	Not Applicable

No.	Recommendation	Status of Incorporation of Advisory Committee Recommendations <sup>[a]</sup>	Comments	How the Public Draft of the Conservation Strategy can address this Recommendation	How the Working Draft of the 2022 CVFPP Update can address this Recommendation
T01c	Track amount of land/habitat needed to achieve CS objectives in relation to current and projected extent of available suitable habitat (previous bullet) to ensure that CS objectives can be met.	5 - Considered for future CVFPP planning cycles.	Tracking habitat related to the measurable objectives is a key component of the CVFPP, but providing this level of detail is not currently feasible. (Refer to T03a, T03b)	Refer to T03a	Not Applicable
T02a	Track uplift that 'free-rides' with a targeted mitigation project (e.g., Swainson's hawk mitigation for nesting includes a lot of SRA that improves habitat for other aquatic species as an unintended consequence). [Cross-cutting with Multi-Benefit Implementation] [Cross-cutting with Permitting]	6 - Outside the scope of CVFPP and Conservation Strategy.	Refer to T01b	Not Applicable	Not Applicable
T02b	Need to address and track how these additional benefits are categorized/credited (under what circumstances do they become mitigation and get credited as such or not).	6 - Outside the scope of CVFPP and Conservation Strategy.	Refer to T01b	Not Applicable	Not Applicable
T03a	Track gains and losses in habitat for different species and for different functions so that we understand how much real (net) progress we are making towards CS measurable objectives, recovery plan objectives and others.	1 - Included in Conservation Strategy Public Draft (Appendix F). 6 - Outside the scope of CVFPP and Conservation Strategy.	Tracking habitat and mitigation has been and continues to be a key component of the Conservation Strategy, but tracking recovery plan objectives is outside the CVFPP's scope.	(3.3.5) DWR has been developing internal data management and decision support tools to balance its DWR's compensatory mitigation needs and other habitat obligations, while working toward goals to increase the quantity and quality of habitats and contributing to species' recovery. These decision support tools complement the FPTS: they are forward-looking, comparing project data from the FPTS to forecasted needs and objectives across DWR programs.	Not Applicable
T03b	As a component of this, track lands not included in projects designated as mitigation where uplift is possible, relative to remaining need necessary to meet CS objectives (see bullet above).	1 - Included in Conservation Strategy Public Draft (Appendix F). 4 - Already being implemented by other ongoing activities.	(Refer to T03a)	Refer to content in Appendix F.	Not Applicable
T04	Track habitat types (marsh, riparian, SRA, natural bank, floodplain), outlined in the Conservation Strategy (Appendix L Sections 2 and 3 [Tables L3-x]) as well as species specific habitats. [Cross-cutting with Permitting]	1 - Included in Conservation Strategy Public Draft (Appendix F). 4 - Already being implemented by other ongoing activities.	Refer to T03a	Refer to content in Appendix F.	Not Applicable

No.	Recommendation	Status of Incorporation of Advisory Committee Recommendations <sup>[a]</sup>	Comments	How the Public Draft of the Conservation Strategy can address this Recommendation	How the Working Draft of the 2022 CVFPP Update can address this Recommendation
T05	Track lost opportunities for restoring habitat that could occur with restoration or mitigation projects that block or otherwise preclude restoration of other habitat on those lands or the same or other habitat on adjacent lands. [Cross-cutting with Multi-Benefit Implementation]	5 - Considered for future CVFPP planning cycles.	Tracking habitat is a key component of the Conservation Strategy; however, this level of detail was not determined to contribute significantly toward obtaining the measurable objectives. Existing FROA and future EcoFIP data could allow this type of analysis. (Refer to P09)	Not Applicable	Not Applicable
T06	Address question of baseline that arose a few times: to what baseline do we compare observed 'uplift'? Do we need to establish a baseline if we have objectives and are tracking current conditions?	1 - Included in Conservation Strategy Public Draft (Appendix F). 4 - Already being implemented by other ongoing activities.	This element is addressed in Appendix F, and continues to be developed.	Refer to content in Appendix F.	Not Applicable
T07a	Assemble (/Develop) thresholds for suitable habitat quantity and quality and consistent metrics/ methods for tracking habitat relative to thresholds (e.g. CVHE). [Cross-cutting with Permitting]	6 - Outside the scope of CVFPP and Conservation Strategy.	This level of detail is beyond the scope of the CVFPP and Conservation Strategy; however, the measurable objectives were established with the goal of promoting ecosystem vitality throughout the system. (Refer to T06)	Not Applicable	Not Applicable
T07b	The above may involve assembly and relation of habitat types and thresholds from different sources (e.g., CS, species recovery plans, CVHE, etc.) and identification of gaps or inconsistencies.	6 - Outside the scope of CVFPP and Conservation Strategy.	Refer to T07a	Refer to T03a	Not Applicable
T08	Make the CVFPP Performance Tracking Tool and the DWR Habitat Portfolio Management System (HPMS) linkable/ connected. Since there will be considerable overlap in content and application, we recommend the linkage between the two be considered deliberately from the beginning to facilitate updating and maintaining the two as simply and effectively as possible.	4 - Already being implemented by other ongoing activities.	This alignment is under progress within the planning teams of the CVFPP 2022 process, and may have a publicly available interface when further developed.	Refer to T03a	Not Applicable

No.	Recommendation	Status of Incorporation of Advisory Committee Recommendations <sup>[a]</sup>	Comments	How the Public Draft of the Conservation Strategy can address this Recommendation	How the Working Draft of the 2022 CVFPP Update can address this Recommendation
T09	This tracking system should reveal the amount of current, planned, and potential habitat relative to CS measurable objectives as well as what is and is not working vis a vis 1) funding of project types (uplift, mitigation), 2) locations and landscape level coherence, and 3) increasing actual extent and quality of habitat over time. Ideally, the tracking process would include an inherent set of systematic incentives for actual net uplift so that we can meet our measurable objectives. Documenting quantitatively and in map form, these areas that are and are not working in the existing system should help motivate and direct improvements, so that we can move more quickly and effectively towards the Conservation Strategy goals and objectives. [Cross-cutting with Multi-Benefit Implementation]	4 - Already being implemented by other ongoing activities. 5 - Considered for future CVFPP planning cycles.	A tracking system is under development, and this level of detail may be considered as additional resources become available.	Refer to T03a	Not Applicable

[a]

1. Included in Conservation Strategy Public Draft.
2. Considered for inclusion in CVFPP Public Draft.
3. Considered as guiding principles or best management practices to inform other program or planning activities.
4. Already being implemented by other ongoing activities.
5. Considered for future CVFPP planning cycles.
6. Outside the scope of CVFPP and Conservation Strategy.

Notes:

& = and

AB = assembly bill

CAL EPA = California Environmental Protection Agency

CDFW = California Department of Fisheries and Wildlife

CEQA = California Environmental Quality Act

CESA = California Endangered Species Act

CNRA = California Natural Resources Administration

CS = Conservation Strategy

CVFPB = Central Valley Flood Protection Board

CVHE = Central Valley Habitat Exchange

DWR = California Department of Water Resources

EcoFIP = ecological floodplain inundation potential

F = federal

FESA = federal Endangered Species Act

FMAP = Flood Maintenance Assistance Program

FPTS = Flood Performance Tracking System

FROA = Floodplain Restoration Opportunity Analysis

HCP = habitat conservation plan

ITP = incidental take permit

MCA = mitigation credit agreement

MOA = memorandum of agreement

MOU = memorandum of understanding

O&M = operations and maintenance

OMRR&R = operations and maintenance, repair, replacement, and rehabilitation

RCIS = regional conservation investment strategy

RFMP = Regional Flood Management Program

SB = State Bill

Sec. = Section management

SPFC = State Plan for Flood Control

SRA = shaded riverine aquatic

SWIF = Systemwide Infrastructure Framework

WCB = Water Control Board

YB = Yolo Bypass

