State of California

Natural Resources Agency

Department of Water Resources

Annual Report for the Delta Stewardship Council

Investments in Delta Levees

FY 24-25

February 2026

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1. Purpose

The purpose of this report is to inform the Delta Stewardship Council (Council) of Department of Water Resources' (DWR) investment decisions regarding Sacramento-San Joaquin Delta (Delta) levees in Fiscal Year (FY) 24-25, pursuant to California Code of Regulations Title 23 §5012, Prioritization of State Investments in Delta Levees and Risk Reduction.

2. DWR's Mission

DWR's mission is:

> To sustainably manage the water resources of California, in cooperation with other agencies, to benefit the state's people and protect, restore, and enhance the natural and human environments.

DWR manages California's water resources, systems, and infrastructure, including the State Water Project (SWP) Our specific responsibilities and duties include:

- Preventing and responding to floods, droughts, and catastrophic events
- Informing and educating the public on water issues
- Developing scientific solutions
- Restoring habitats
- Planning for future water needs, climate change impacts, and flood protection
- Constructing and maintaining facilities
- Generating power
- Ensuring public safety
- Providing recreational opportunities

3. DWR's Investment Role in the Delta

The State of California has significant, broad interests in the Delta. Over time, many policies have been enacted with the goal of preserving the Delta in its current configuration to the extent possible. More recently, new policies have recognized that the Delta is in a state of transition and most State actions must account for that change. While DWR seeks to implement authorized programs in the context of its mission described above, individual programs and their funding sources are typically tied to specific legislative language and subsequent enacted regulations.

DWR's investments in the Delta are varied, reflecting the varied needs of Delta communities including rural, small communities, and urban areas. DWR has implemented the Delta Levees Subventions and Delta Levees Special Flood Control Projects programs (described below) to cost-share Delta levee maintenance and levee improvements in the Delta. DWR also is cost sharing

with local agencies and the Unites States Army Corps of Engineers (USACE) to reduce flood risk in urban communities as well as administering and funding a program to assist small communities achieve a higher level of flood protection. These expenditures in flood risk management have contributed to preservation of ecosystem functions and water supply reliability of the Delta Expenditures in improving emergency response, conducting scientific research, updating hydraulic and hydrologic models, and gathering new geotechnical and topographic data have also been considerable. DWR's investments support the State's goal of creating a resilient and sustainable water management system for all Californians while protecting and enhancing natural habitat for native species. As large-scale planning efforts, such as Delta Conveyance, the *Delta Plan*, and Central Valley Flood Protection Plan (CVFPP) proceed, DWR will continue to use available resources strategically to improve integrated water management and help preserve the unique characteristics of the Delta.

4. Legal Delta

The definition of the legal Delta is contained in Water Code §12220 (Delta Protection Act, 1959). Figure 1 illustrates the extent of Delta boundaries, island names, and location of State Plan of Flood Control (SPFC) (Project) levees and non-SPFC (non-Project) levees.

5. The *Delta Plan* Priority Islands

Water Code §85306 directs that the Council shall recommend in the *Delta Plan* priorities for State investments in levee operation, maintenance, and improvements in the Delta. Table 1 is the Council's Island priority list which ranks Delta Islands into "Very High", "High" and "Other" priority categories.

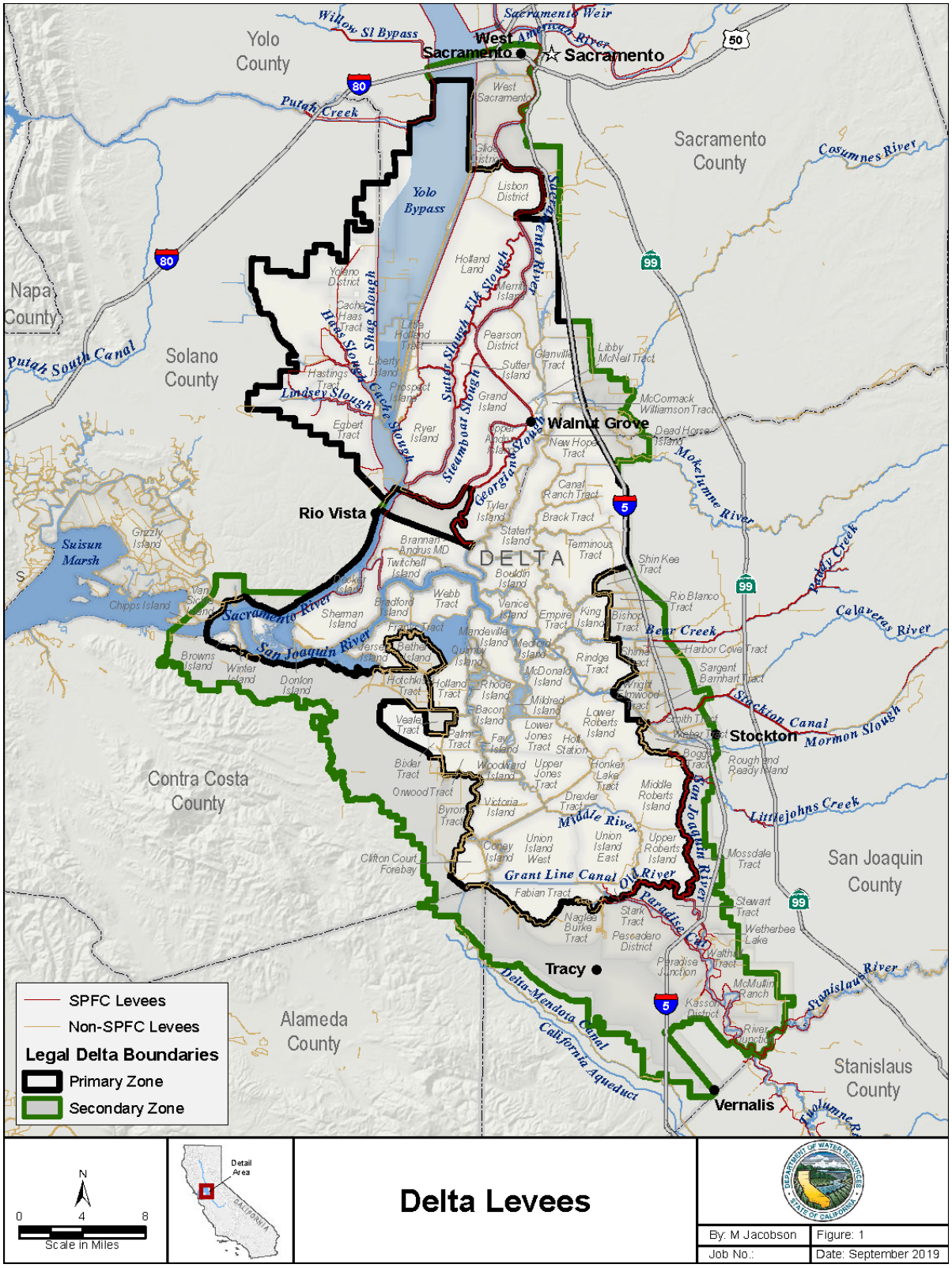
Table 1 - Island Priority List - January 1, 2024

Priority Level	Delta Islands by Priority Level		
Very High Priority	Bacon Island Bethel Island Bishop/DLIS-14 (North Stockton) Brannan-Andrus Byron Tract DLIS-19 (Grizzly Slough Area) DLIS-28 DLIS-33 DLIS-63 (Grizzly Island Area) Drexler Tract	Dutch Slough Hasting Tract Hotchkiss Tract Jersey Island Jones Tract (Upper and Lower) Maintenance Area 9 North Maintenance Area 9 South McCormack-Williamson Tract McDonald Island McMullin Ranch New Hope Tract	North Stockton Paradise Junction Reclamation District 17 Roberts Island (Middle and Upper) Ryer Island Sherman Island Staten Island Terminous Tract Twitchell Island Upper Andrus Island Victoria Island Webb Tract

High Priority	Bouldin Island Brack Tract Bradford Island Cache Haas Area Central Stockton Clifton Court Forebay DLIS-01 (Pittsburg Area) DLIS-07 (Knightsen Area) DLIS-08 (Discovery Bay Area) DLIS-20 (Yolo Bypass) DLIS-22 (Rio Vista) DLIS-26 (Morrow Island)	DLIS-29 DLIS-30 DLIS-31 (Garabaldi Unit) DLIS-32 DLIS-39 DLIS 41 (Joice Island Area) DLIS-44 (Hill Slough Unit) DLIS- 55 DLIS-59 Egbert Tract Fabian Tract Glanville	Grand Island Holland Tract Honker Bay Kasson District Libby McNeil Little Egbert Tract Lower Roberts Island Mandeville Island Mossdale Island Netherlands Palm-Orwood Paradise Cut Pearson District Pescadero District	Rindge Tract River Junction Shima Tract Stewart Tract Sunrise Club Tyler Island Union Island Veal Tract Walnut Grove Woodward Island Yolano	
Other Priority	Atlas Tract Bixler Tract Canal Ranch Tract Chipps Island Coney Island Dead Horse Island DLIS-06 (Oakley Area) DLIS-10 DLIS-15 DLIS-17 DLIS-18	DLIS-25 DLIS-27 DLIS-34 DLIS-35 DLIS-36 DLIS-37 (Chadbourne Area) DLIS-40 DLIS-43 (Potrero Hills Area) DLIS-46 DLIS-47 DLIS-48	DLIS-49 DLIS-50 DLIS-51 DLIS-52 DLIS-53 DLIS-54 DLIS-56 DLIS-57 DLIS-62 Drexler Pocket Ehrheardt Club Empire Tract Fay Island Glide District	Holt Station Honker Lake Tract King Island Lisbon District Medford Island Mein's Landing Merritt Island Peters Pocket Pico-Naglee Prospect Island Quimby Island Randall Island Rio Blanco Tract	Rough and Ready Island Shin Kee Tract Stark Tract Sutter Island Venice Island Walthall West Sacramento Wetherbee Island Winter Island Wright Elmwood Tract

January 1, 2024 (Source: [www.delta.council.ca.gov/dlis/)](www.delta.council.ca.gov/dlis/)

Figure 1 - Delta Boundaries and Levees



6. DWR's Reporting Requirements

California Code of Regulations Title 23 §5012 requires DWR to submit a written annual report to the Council and make the report publicly available, as well as present the report to the Council, on State funds distributed or provided by DWR within the legal Delta.

This report includes the following sections, as required by California Code of Regulations Title 23 §5012:

(A) A description of all discretionary State funding for levees awarded by the California Department of Water Resources, during the reporting year FY 24-25;

(B) A list of each levee improvement project proposal submitted to the California Department of Water Resources for funding, regardless of whether the California Department of Water Resources awarded funding to the project;

(C) A list of the improvement projects awarded funding, the funding level awarded, the local cost share, and the applicable priority of the island or tract from Table 1 where the levee improvement project is located;

(D) A description, for each awarded project, of changes (when completed) to levee geometry, the specific locations of those changes, and expected changes in the level of flood protection provided or standard achieved;

(E) If the California Department of Water Resources awards funds for any levee improvement project that is inconsistent with the priorities identified in subsection (b), the annual report shall identify for each project: how the funding is inconsistent with the priorities, describe why variation from the priorities is necessary, and explain how the funding nevertheless protects lives, property, or other State interests, such as infrastructure, agriculture, water supply reliability, Delta ecosystem, or Delta communities;

(F) A summary of the California Department of Water Resources' rationale for levee improvement project proposals submitted, but not awarded funding during the reporting year; and

(G) A summary of all previous California Department of Water Resources funded levee improvement project activities completed during the reporting year and location of those activities.

(A) **A description of all discretionary State funding for levees awarded by the California Department of Water Resources, during the reporting year**

DWR has developed various programs to support its mission to sustainably manage the water resources of California, in cooperation with other agencies, to benefit the state's people and protect, restore, and enhance the natural and human environments. The programs and efforts listed and described below have responsibilities and/or interests, in whole or in part, associated with levees that are within the legal Delta.

- Delta Levees Program
  - Delta Levees Ecosystem Enhancement
  - Delta Levees Maintenance Subventions Program
  - Delta Levees Special Flood Control Projects
  - West Delta Projects
  - North Delta Projects
- Systemwide Flood Risk Reduction Program
- Flood Management Program
  - Urban Flood Risk Reduction
  - Small Communities Flood Risk Reduction Program (SCFRRP)
  - State Plan of Flood Control System Improvements
  - Flood System Repair Project (FSRP)
  - Emergency Response
  - Sacramento River Bank Protection Project
  - Levee Repairs cost shared under Public Law 84-99
  - Flood Maintenance Assistance Program (FMAP)
  - Storm Damage DWR Emergency Rehabilitation
  - DWR Flood System Maintenance
  - Floodplain Management, Protection, and Risk Awareness (FMPRA)

Table 2 - Summary of Fiscal Year 2024-2025 Annual Program Awards (Excluding Delta Levees Subventions)

Program	Number of Projects	FY 24-25 Awards
Delta Levees	0	$0
Systemwide	1	$1.5 million
Flood Management	0	$0

Table 2A - List of Projects Awarded Funding in FY 24-25

Program	Reclamation District No.	Location	Project Title	Funding Awarded FY 24-25 ($)	Project Status	DLIS Priority
Systemwide Flood Risk Reduction	RD 536	Egbert Tract	RD 536 Lindsey Slough Levee Remediation	$1,500,000	In Progress	High
			Total	**$1,500,000**		

(B) **A list of each levee improvement project proposal submitted to the California Department of Water Resources for funding, regardless of whether the California Department of Water Resources awarded funding to the project.**

No DWR programs issued solicitations or accepted new proposals for work during FY 2024–2025.

(C) **A list of the improvement projects awarded funding, the funding level awarded, the local cost share, and the applicable priority of the island or tract where the levee improvement project is located.**

Table 3 - List of Improvement Projects Awarded Funding in FY 24-25

Program	Location	Project Title	Total Project Cost ($)	State Cost Share ($)	Federal or Local Cost Share ($)	Funding Amount Awarded FY 24-25 ($)	Project Status	DLIS Priority
Systemwide Flood Risk Reduction	Egbert Tract	RD 536 Lindsey Slough Levee Remediation	$1,500,000	$1,500,000	$0	$1,500,000	In Progress	High

(D) **A description, for each awarded project, of changes (when completed) to levee geometry, the specific locations of those changes, and expected changes in the level of flood protection provided or standard achieved.**

Table 4 – Project Information for Awarded Funding in FY 24-25

Reclamation District or Location	Project Title	Project Description	Specific Location	Protection Objective	DLIS Priority
RD 536 Egbert Tract	RD 536 Lindsey Slough Levee Remediation	Rehabilitation of seepage and stability issues on the Lindsey Slough Levee.	Levee mile 1.3 to levee mile 5.6 US Latitude: 38.2588 DS Latitude: 38.2456 US Longitude: -121.7574 DS Longitude: -121.6975	Restore current design level of protection	High

(E) **If the California Department of Water Resources awards funds for any levee improvement project that is inconsistent with the prescribed priorities, the annual report shall identify for each project: how the funding is inconsistent with the priorities, describe why variation from the priorities is necessary, and explain how the funding nevertheless protects lives, property, or other State interests, such as infrastructure, agriculture, water supply reliability, Delta ecosystem, or Delta communities.**

No DWR programs issued solicitations or accepted new proposals for work during FY 2024–2025.

(F) **A summary of the California Department of Water Resources' rationale for levee improvement project proposals submitted but not awarded funding during the reporting year.**

No DWR programs issued solicitations or accepted new proposals for work during FY 2024–2025.

(G) **A summary of all previous California Department of Water Resources funded levee improvement project activities completed during the reporting year and location of those activities.**

No DWR programs completed levee improvement projects during FY 2024–2025.

7. Delta Levees Maintenance Subventions Report

The Delta Levees Maintenance Subventions Program is a cost-share program that provides funding to local levee maintaining agencies in the Sacramento–San Joaquin Delta. In FY 2023–24, seventy-one local levee maintaining agencies participated in the program. Maintenance activities were completed during FY 2023–24 and reimbursed in FY 2024–25. Table 5 in Appendix D identifies the state cost provided to participating local levee maintaining agencies.

8. Current FY 2025-26 Efforts for Future Report

During FY 2025–26, DWR does not have, nor does it anticipate, issuing any program solicitations or making awards.

However, following the passage of Proposition 4, DWR has Delta levee and flood risk reduction programs that are expected to receive Proposition 4 funding. During FY 2025–26, DWR will focus on planning activities, including the development of program solicitations, guidelines and regulations (per bond requirements) associated with these funds. Specifically, the Delta Levees Special Flood Control Projects and the Small Communities Flood Risk Reduction Programs are anticipated to receive Proposition 4 funding in FY 2026–27.

Appendix A – Program Description

Urban Flood Risk Reduction – This program provides funding for projects that contribute to achieving an urban level of flood protection (200-year, 05% annual chance) by improving SPFC facilities in the Central Valley. Urban areas are defined in statute as "…any contiguous area in which more than 10,000 residents are protected by project levees" (PRC 5096805.) While primarily focused outside the Delta, this program funds some urban areas with at least a portion of their footprints within the Delta. These include Sacramento, West Sacramento, Stockton, and Reclamation District 17 (Lathrop area). Urban flood protection investments are generally shared among USACE, the State, and local agencies in accordance with federal and State law. Because of the high cost and the rigor of the federal-State-local flood project implementation process, investments in this category are projected for periods up to 30 years.

Small Communities Flood Risk Reduction – Following adoption of the 2012 CVFPP, DWR initiated this program to help communities having fewer than 10,000 residents protected by the SPFC achieve a 100-year level of protection, where feasible. The program currently supports actions for the continued viability of small communities within the SPFC Planning Area to preserve cultural and historical continuity and important social, economic, and public services to rural agricultural populations, agricultural enterprises, and commercial operations. This will help preserve small community development opportunities within specific boundaries without providing urban level of protection and encouraging broader urban development.

Like urban areas, small communities located in floodplains contain a degree of risk to human life, and the density of existing development somewhat limits the types of management actions available within the small community footprints. However, unlike urban areas, the smaller scale of development and openness of the surrounding landscape often allows for a more diverse and resilient approach to flood management that holistically addresses all components of risk and contains more multi-benefit opportunities. Many small communities in the Central Valley are disadvantaged communities with limited resources to plan or implement flood management system repairs, rehabilitation, or improvements without greater assistance from the State and other partners.

State Plan of Flood Control System Improvements – In the Central Valley, the CVFPB and DWR are partnering to lead formulation of systemwide improvements to the SPFC "Systemwide improvements" are distinct improvements that positively impact how the entire system functions – e.g., improving the Yolo Bypass can reduce stress on upstream levees. These improvements are intended to reduce flood risks while achieving multiple benefits, as described in the CVFPP. The State is proceeding with planning and implementing certain systemwide features to achieve greater system sustainability, resiliency, and multiple resource benefits. The opportunity to incorporate riparian and floodplain habitat features into systemwide improvements is also important because it may enhance sustainability and potentially reduce long-term operation and maintenance costs.

Delta Levees Maintenance Subventions (Subventions) – Through reimbursements to local levee maintaining agencies, this program leverages State and local funds to support the

maintenance of eligible levees, which helps preserve the Delta essentially in its present configuration. Non-SPFC levees, which account for about 65 percent of the Delta levee system, were the historical focus of the program. However, since 1996, maintenance costs for SPFC levees in the Primary Zone of the Delta are also eligible for reimbursement under the program when the majority of the acreage protected by the maintenance area falls within the Primary Zone of the Delta, per AB 360 (1996). Guidelines governing distribution of Subventions program funds, drafted by DWR and adopted by the CVFPB, are designed to facilitate the distribution of funds to achieve at least a minimum standard of levee maintenance for as much of the Delta as possible. Maintenance of the existing Delta levee system is essential for both conveying the water supply for 27 million Californians through the Delta and conveying flood waters from the Sacramento and San Joaquin rivers through the Delta and into San Pablo Bay.

The Subventions program has been continuously administered by DWR since 1973 and supported by various State funding sources over the years. Program administrative procedures and guidelines have been refined over time, such that it has achieved a high degree of efficiency and effectiveness. Types of activities funded by this program include vegetation control, rodent control, erosion control, erosion repair, access road repairs, levee rehabilitation, rip rap replacement, clearing drains and toe ditches, encroachment removal, levee crown repairs, seepage control, debris removal, regular inspection, and levee crown raise to compensate for subsidence.

Delta Levees Special Flood Control Projects–To ensure protection of statewide interests in the Delta, this program was established in 1988 by the California State Legislature under SB 34 and later revised under SB 1065 (1991) and AB 360 (1996). The Program was originally authorized to address flooding on the eight western Delta islands, as well as the communities of Thornton, New Hope and Walnut Grove. It was expanded in 1996 to the entire Delta and to portions of the Suisun Marsh, and new language was added that requires achieving net long-term improvement in aquatic habitat (Water Code §12311). DWR disburses funds to local agency projects on a competitive basis. The guidelines governing distribution of program funds focus on levee work with statewide benefit while giving DWR the ability to select the most effective projects to cost-share. This program also provides the opportunity to construct critically important habitat projects, and the program's restoration sites are proving grounds that advance the science needed to accomplish projects on a larger scale. Types of activities funded by this program include:

- **Five-Year Plan** – The Five-Year Plan assesses the current conditions of a local agency's levees and sets out a strategy for rehabilitation, repair, and/or improvement of its facilities to meet a desired levee standard and/or level of protection .Anticipated funding assistance, required permitting, expected mitigation, and potential habitat enhancement may also be included in the Five-Year Plan.
- **Bulletin 192-82 Levee Improvement** – Levee improvement work to achieve Bulletin 192-82 Agricultural requirements.
- **Levee Improvement** – Projects that reduce the probability of flooding of the land protected by the local agency's levees. Work may include adding fill to the landside,

waterside, and/or crest of the levee. Work may also include drainage or stability berms, erosion protection, or other geotechnical work.

- **Programmatic Habitat Improvement Projects** – Large-scale habitat improvement and/or enhancement projects within the Delta that contribute to meeting the Water Code §12311 requirement to provide for a net improvement in aquatic habitat.
- **Multi-Benefit Projects** – Combined levee improvement and habitat enhancement projects that can help simultaneously improve the environment, flood management, and water supply reliability.

Delta Emergency Response – As the State's lead agency for flood management, DWR has broad authority to collect and disseminate hydrologic data, issue flood and water supply forecasts, stockpile and deploy flood fighting equipment and supplies, conduct flood response operations, offer assistance to other agencies, and participate in post-flood recovery operations among other activities. These activities are collectively referred to as "flood emergency preparedness, response, and recovery activities" Although DWR responsibilities are statewide, the Delta warrants greater attention due to its critical importance and vulnerability to flooding. This program maintains a high degree of readiness to respond quickly and effectively to threatening levee conditions and levee failures in the Delta, including potential simultaneous failures affecting multiple islands DWR has, in recent years, invested in facilities for stockpiling flood-fight materials and annually replenishes supplies and equipment needed for flood fighting in the Delta. The program supports local agencies by offering grant funding to improve emergency response capabilities in the Delta including enhancing local emergency response plans, stockpiling flood fight materials and equipment, training and exercises, and additional critical improvements. While the focus of this program is the legal Delta, it currently does not specifically fund levee improvements or rehabilitation as defined by the DSC.

West Delta– Continuing subsidence not only makes the Delta more susceptible to flooding due to increased hydrostatic pressure on the levee walls resulting in levee failure, but also makes farming more difficult and expensive, while threatening public safety, infrastructure, water supply, and water quality It is in the State's interest to curtail subsidence in the Delta by initiating mitigation studies and actions that will result in neutralizing subsidence and possibly help in the accretion of soils. Under this program, in collaboration with other agencies for more than 20 years DWR has conducted scientific experiments on Sherman and Twitchell islands to develop a better understanding of subsidence processes and how to slow or reverse them. Historically, this program focused on work within the island and landside of the levee prism. Various regimes of soil cultivation, plantings, and inundation have been studied to formulate practical approaches to subsidence reversal, habitat creation, and carbon sequestration. Sufficient understanding has been achieved to justify a major expansion in this program.

North Delta Projects– These projects implement flood management improvements principally on and around McCormack Williamson Tract, Dead Horse Island, and Grizzly Slough in a manner that benefits habitats, species, and ecological processes. By breaching levees, the projects attenuate floods in surrounding areas and provide aquatic and floodplain habitat along

the downstream portion of the Cosumnes Preserve along the Cosumnes and Mokelumne Rivers. The North Delta Projects are being conducted within the Division of Multi-Benefit Initiatives in partnership with Reclamation District 2110, Reclamation District 348, and the Cosumnes River Preserve, The Nature Conservancy, Bureau of Land Management, and Sacramento County. In addition to flood management benefits, these projects enhance Delta productivity, provide habitat for native fish including splittail and salmonids, and various wildlife and provide recreation opportunities. Knowledge gained through these projects will lead to more practical Delta restoration approaches.

Delta Levees Programmatic Restoration—The Dutch Slough Tidal Marsh Restoration Project is a multi-benefit project that will restore ecological processes to provide critical habitat for native fish and wildlife species currently in decline as well as provide flood protection, resilience to climate change including sea level rise. The project supports the Water Code §12311 requirement to provide for a net improvement in aquatic habitat. The project is being carried out by the Division of Multi-Benefit Initiatives in partnership with Reclamation District 2137. In addition to habitat and flood protection benefits, the project provides a place for recreational and educational opportunities and to study ecological restoration in the Delta to inform future restoration design.

Flood System Repairs Project (FSRP) – A bond-funded program that supports repairs to rural SPFC facilities of the Sacramento and San Joaquin River systems under State and local maintaining agency (LMA) cost-share agreements. On an annual basis, DWR compiles and updates a list of all potential repair sites from a variety of sources including USACE inspection and evaluation data, DWR maintenance and evaluation program data, and input from LMAs For each site that meets FSRP screening criteria, DWR works with LMAs to assess the funding and remediation options and prioritize sites to maximize flood risk reduction for implementation. For participating LMAs, a project agreement is developed allowing for DWR to provide funding for the LMA to implement and complete all phases of the project. **FSRP does not solicit projects and is a maintenance program that does not improve the level of flood protection of the levee.**

Sacramento River Bank Protection Project – The goal of this USACE program is to evaluate the levees and embankments of the Sacramento River and tributaries to reduce stream bank erosion and minimize the threat of flooding. While the original 1960 authorization approved the rehabilitation of 430,000 linear feet of levee, the 1974 Water Resources Development Act added 405,000 linear feet to the authorization and a 2007 bill authorized another 80,000 linear feet for a total of 915,000 linear feet of project. The CVFPB is the local project sponsor who works with DWR to provide the non-federal cost-share and manage the State interests (Land Easements, Relocations, Rights of Way and Disposal, or LERRDs) in these projects.

Levee Repairs (cost shared under PL 84-99) – Established in Section 5 of the Flood Control Act of 1941, PL 84-99 gives USACE emergency management authority Under PL 84-99, USACE may undertake a variety of activities, including emergency response and storm damage rehabilitation. The CVFPB is the local project sponsor who works with DWR to manage the

State interests (Land Easements, Relocations, Rights of Way and Disposal, or LERRDs) in these projects. Levee systems that are eligible for rehabilitation assistance under PL 84-99 following flood or storm damage include those federally authorized, operated and maintained by a non-federal sponsor or non-federally built, operated and maintained by a non-federal sponsor. These levees remain eligible if operated and maintained to acceptable or minimally acceptable standards Federal government cost-share policy regarding repairs to levee systems and flood control projects damaged by floods includes:

- Federally constructed or enhanced, locally maintained systems (in PL 84-99 program): will be repaired by the federal government at 100 percent federal cost pending letter of request by maintaining authority and funding by Congress.

Flood Maintenance Assistance Program (FMAP) – Established in 2018 due to growing recognition that the operation and maintenance (O&M) of SPFC facilities (levees, channels, and structures) have been chronically underfunded and hindered by evolving and conflicting regulatory constraints hampering efficient and timely O&M. Through new State appropriations, FMAP provides funds to LMAs and State-managed maintenance areas (MAs) for eligible maintenance activities For LMAs within the legal Delta, FMAP funding is provided to assist with completing the necessary reports to secure federal eligibility under PL 84-99 or to support securing funding through local assessments to fund levee maintenance. For these levees in the legal Delta, levee maintenance is not funded through FMAP. FY 2024-25 was the last year FMAP was funded.

Storm Damage DWR Emergency Rehabilitation – Consistent with the Office of Emergency Services and the State Emergency Plan, DWR works to restore all flood protection facilities under our jurisdiction. The 2017 atmospheric river storms that occurred in the months of January and February caused flooding in the Central Valley and the Sacramento-San Joaquin Delta, resulting in multiple damage sites Field reconnaissance classified sites as 1) critical, 2) serious, and 3) areas of concern in which a site has problems that need periodic monitoring. A catastrophic failure at one of the sites would have disastrous results, including possible loss of human life, significant property damage, negative environmental impacts and threats to water supply. This State-led emergency rehabilitation program evaluates, designs, permits, and constructs the levee repair projects based on site prioritization and available funding.

DMP-Pipes – Deferred Maintenance Project-Pipes (DMP-Pipes) is a system repair and rehabilitation program focused on evaluating and rehabilitating pipes that were installed when SPFC levee system was constructed. The corrugated metal pipes are well past their design service life and are a significant hazard to levee integrity DMP evaluates the system pipes by means of internal video inspections and identifies the pipes that require replacement and rehabilitation to extend the design service life USACE requires the levee penetrations to be inspected on a five-year basis.

DWR Flood System Levee Maintenance – As described in California Water Code §8361, some Central Valley levees are to be maintained and operated by DWR on behalf of and paid by the State. DWR has also assumed responsibility for some SPFC levees by the formation of State

Maintenance Areas through authority provided by Water Code §12878. Maintenance Area work performed by DWR is reimbursed by beneficiaries of the maintained area. Altogether, DWR is responsible for maintaining over 300 miles of SPFC levees in California's Central Valley. Of these 300 miles, DWR is responsible for maintaining 22 miles of levees in the legal Delta.

Floodplain Management, Protection, and Risk Awareness (FMPRA) – The Floodplain Management, Protection, and Risk Awareness (FMPRA) Grant Program supports local agency efforts to prepare for flooding by providing financial assistance for flood risk reduction activities related to stormwater flooding, mudslides, and flash floods. The program was established in 2019 by the CA. Legislature and the Governor through Assembly Bill 74, which also authorized the use of funds from Proposition 68: The California Drought, Water, Parks, Climate, Coastal Protection, and Outdoor Access for All Fund Act of 2018 of Senate Bill No. 5.

Systemwide Flood Risk Reduction Program (SFRR) – The Systemwide Flood Risk Reduction Program oversees the work necessary to develop and implement Central Valley multi-benefit flood risk reduction and habitat restoration projects that further the goals and objectives of the Central Valley Flood Protection Plan (CVFPP) and other systemwide priorities identified by the Governor or the CA. Legislature, including some projects in the Delta. The State may improve the system through direct investment in new or improved facilities for the State Plan of Flood Control or through proposal solicitations.

Appendix B - Delta Levees Background

The Sacramento-San Joaquin Delta (Delta) lies at the confluence of the Sacramento and San Joaquin rivers, adjacent to San Pablo Bay. Here, the freshwater flows of these rivers and local streams meet seawater in numerous waterways, creating a rich and diverse landscape and ecosystem. While most of the vast expanses of tule marsh that once characterized the Delta have been converted to agricultural uses, remnant natural and managed marshes still support a variety of native and introduced fish, wildlife, and waterfowl. The Delta is a significant stopover for birds migrating along the Pacific Flyway and a migration corridor for millions of salmon annually. Because of its geographic location – stretching from Sacramento to the confluence of the San Joaquin and Stanislaus rivers, from Stockton to the Suisun Bay – the Delta is also an infrastructure hub laced with highways, railroads, aqueducts, oil and gas pipelines, powerlines, and other important infrastructure. With its legacy communities reflecting the rich cultural heritage and history of the region, as well as its natural and recreational resources, the Delta is a National Heritage Area and has been recognized in statute as a unique place that has immense value and must be protected. The Delta is also a key component of California's water infrastructure, providing a critically important source of water for Californians.

A defining feature of the Delta is its 1,100 miles of levees that have facilitated reclamation and development of the islands they protect. However, unlike typical river levees that are stressed by high water during floods, Delta levees constantly have water against them and must continuously withstand the pressures and erosive forces of river flows, tides, and wind waves. Many of these levees were built over 150 years ago with readily available borrow material from adjacent lands or channels and are underlain with low strength/stability organic peat soil and alluvial sands. Current and future threats to the integrity of Delta levees include subsidence, climate change, and sea level rise.

Subsidence in the Delta increases flood risk by lowering the elevation of lands protected by levees and threatening the stability of levees. Many Delta islands have subsided to 15 feet or more below sea level. Due to this subsidence, levees must withstand greater hydraulic pressure as the supporting soil on the landside of the levee sinks. Because peat soils oxidize when exposed to the air, subsidence is expected to continue. Peat soils bacterial oxidation and subsidence are not uniform throughout the Delta but nevertheless pose a major challenge to the sustainability of the Delta under current and projected conditions.

The California Department of Water Resources (DWR) has long recognized this concern. One of the key impacts of global warming and climate change on California's water resources is expected to be storms that produce more rain and less snow. Water that is now held in frozen reserve until summer will fall as rain and flow into streams and rivers, increasing flood risk and flood flows through the Delta. In the future, reservoirs may fill earlier due to changing runoff patterns, and operators will need to release water earlier in the season to make space for flood storage. Sea level rise, which is currently occurring at the rate of approximately 0.7 feet per century, is expected to accelerate, adding to the stress and need for levee strengthening and raising. Although a body of legislation has been enacted over many decades to address several of

these issues, securing necessary funding to sustain and improve the Delta has continued to be a challenge for local agencies and the State.

Levee failures and flooding have been common occurrences over the years. The frequency of flooding has been reduced as levees have been improved. Since many of the lands protected are near or below sea level, when a levee fails and lands are flooded, recovery can be very difficult, time-consuming, and expensive. While recovery costs often exceed the total value of the island's assets, the intrinsic value of the Delta islands extends well beyond this, offering vital benefits for water quality, flood control, agricultural productivity, and environmental health. Through its programs, DWR plays a key role in protecting and enhancing the Delta, addressing the need for investments in flood risk management, prioritizing maintenance, repair, and improvements of the levees that are essential to the Delta's current function and its resilience moving forward.

Appendix C - Types of Levees and Terminology

Levees are structures that direct the flow of water and hold it back from flowing to adjacent floodplains. Over time, there have been various standards established for the Delta which define levee geometry and maintenance requirements. These levee standards include those governed by federal flood control regulations, specifically Title 33 of the Code of Federal Regulations, Section 208.10, and the USACE's Rehabilitation and Inspection Program established under Public Law 84-99 (PL 84-99). General characteristics (see Figure 2), standards, and existing requirements for Delta levees are discussed below:

a) Project Award: The amount of financial assistance awarded to a public agency to support a specific task or project in the Delta.

b) **Hazard Mitigation Plan (HMP):** This local levee configuration has been widely used in the Delta since the flood of 1986. It is only a geometric standard, under which a levee must have a crest width of at least 16 feet, a waterside slope of 1.5 horizontal to 1.0 vertical (1.5H:1V) landside slope of 2H:1V or less, and at least 1 foot of freeboard above 100-year stage. The HMP configuration was originally established as the minimum standard of maintenance under which Delta levees would be eligible for Federal Emergency Management Agency (FEMA) emergency response and recovery assistance. FEMA no longer offers assurances of such assistance based on the HMP standard.

c) **Delta-Specific Public Law (PL) 84-99:** Most levees in the Delta meet the PL 84-99 standard. PL 84-99 guidance provides for somewhat better flood protection than the HMP standard. The PL 84-99 guidance flattens the levee side slope (3H:1V to 5H:1V landside and 2H:1V waterside) from those used for the HMP configuration and increases freeboard above the one-percent annual chance (100-year flood) water level to 1.5 feet; however, the PL 84-99 freeboard is still less than that required for FEMA accreditation.

d) **DWR Bulletin 192-82:** Bulletin 192-82 levee guidance was developed and recommended for major central Delta islands that protect significant State interests. This standard is appropriate where tides are the major consideration for establishing design flood elevations. Bulletin 192-82 recommendations produce a levee that is like one built per the PL 84-99 guidelines, except that the design water level has a 0.33-percent (1 in 300) annual chance of occurrence. Under Bulletin 192-82 standards, freeboard for levees protecting rural areas is 1.5 feet and freeboard for levees protecting urban areas is 3 feet. For much of the Delta, there is little difference (a few inches) between the 1.0-percent (1 in 100) and the 0.33-percent annual chance of occurrence.

e) **Rural State Plan of Flood Control (SPFC) Levees:** SPFC levees generally provide 3 feet of freeboard above the design water surface (USACE 1957 profiles from in the Sacramento River basin and 1955 profiles for the San Joaquin River basin) and 6 feet of freeboard above the design water surface for bypasses. Some rural levees generally do not meet FEMA accreditation standards, which affects the eligibility of landowners for flood insurance.

f) **Urban SPFC Levees:** Urban SPFC levees fall under DWR's *Urban Levee Design Criteria* (ULDC) developed pursuant to Senate Bill 5 (i.e., Government Code [GC] §65007(l)), which provides criteria and guidance for design, evaluation, operation, and maintenance of levees and floodwalls in urban and urbanizing areas (population over 10,000), protecting against floods that have a 1-in-200 chance of occurrence in any given year. The ULDC provides criteria for two types of levees: 1) intermittently loaded, and 2) frequently loaded. A frequently loaded levee is defined as a levee that experiences a water surface elevation of one foot or higher above the elevation of the landside levee toe at least once a day for more than 36 days per year, on average. More stringent requirements apply to the design of frequently loaded levees, with regards to slope stability and seismic vulnerability. The ULDC establishes criteria for levee resilience by requiring factors of safety for slope stability and under-seepage for a water surface elevation that is higher than the 200-year design water surface elevation.

g) **FEMA Accredited Levees:** These levees provide three feet of freeboard above water levels expected with a one percent chance of occurrence event (100-year flood). These levees include geotechnical designs to control through-seepage and under-seepage.

h) **Small Communities:** Small communities are defined by DWR as cities and towns with a population of less than 10,000. Some small communities are protected by SPFC levees (Figure 2). DWR intends to assist local agencies with flood control projects for small communities consistent with the CVFPP, which identifies the 100-year flood event as the targeted level of flood protection for small communities, where feasible.

i) **Urban Levees:** Urban levees are referred to in DWR Bulletin 192-82 as protecting urban development associated with Andrus-Brannan, Bethel, Byron, Hotchkiss and New Hope. Delta urban areas currently receive various levels of protection. The goal for urban area levees protecting 10,000 or more people is to provide a minimum of 200-year level of protection, which is now mandated in California under the Central Valley Flood Protection Act of 2008.

j) **Project Levees:** Project levee as defined by CWC §9110(e) means any levee that is part of the facilities of the SPFC as defined by CWC §9110(F). These are levees for which the State has given assurances to the federal government that we will operate and maintain. Because the State provided assurances to the federal government regarding the standard to which Project levees would be maintained, Project levees will always be a priority for DWR.

Appendix D – FY 2023-24 Subventions Program Funding

RD #	District	FY 2023-24 State Reimbursement
1	Union Island, East	$ 45,886
2	Union Island, West	$ 25,747
3	Grand Island	$ 515,418
38	Staten Island	$ 280,155
150	Merritt Island	$ 58,246
307	Lisbon	$ 24,747
341	Sherman Island	$ 527,412
348	New Hope Tract	$ 156,213
349	Sutter Island	$ 32,561
403	Rough & Ready Island	$ 160,751
404	Boggs Tract	$ 7,817
501	Ryer Island	$ 89,840
524	Roberts Island, Middle	$ 138,445
536	Egbert Tract	$ 181,958
544	Roberts Island, Upper	$ 205,534
548	Terminous Tract	$ 199,370
551	Pearson District	$ 85,512
554	Walnut Grove	$ 30,848
556	Upper Andrus Island	$ 282,557
563	Tyler Island	$ 1,496,274
684	Roberts Island, Lower	$ 28,690
756	Bouldin Island	$ 253,452
773	Fabian Tract	$ 50,008
799	Hotchkiss Tract	$ 91,975
800	Byron Tract	$ 415,273
828	Weber Tract	$ 19,289
830	Jersey Island	$ 135,702
999	Netherlands	$ 119,850
1002	Glannvale	$ 236,612
1007	Pico Nagle	$ 114,440
1601	Twitchell Island	$ 247,670
1607	Van Sickle Island	$ 370,108
1608	Lincoln Village West	$ 309,375
1614	Smith Tract	$ 609,119
1667	Prospect Island	$ 8,470
2023	Venice Island	$ 1,012,070
2024	Orwood/Palm Tract	$ 30,922
2025	Holland Tract	$ 202,730
2026	Webb tract	$ 178,823
2027	Mandeville Island	$ 1,725,199
2028	Bacon Island	$ 225,129

RD #	District	FY 2023-24 State Reimbursement
2029	Empire Tract	$ 184,140
2030	McDonald Island	$ 780,355
2033	Brack Tract	$ 232,686
2037	Rindge Tract	$ 309,645
2039	Jones Island, Upper	$ 118,309
2040	Victoria Island	$ 200,567
2041	Medford Island	$ 356,834
2042	Bishop Tract	$ 188,555
2044	King Island	$ 139,336
2058	Pescadero District	$ 7,223
2059	Bradford Island	$ 40,865
2060	Hasting Tract	$ 61,560
2065	Veale Tract	$ 35,546
2068	Yolano	$ 16,996
2072	Woodward Island	$ 25,700
2074	Sargent-Barnhart	$ 271,275
2084	Little Egbert	$ 111,227
2089	Stark Tract	$ 3,305
2090	Quimby Island	$ 10,319
2098	Cache-Haas Slough	$ 4,879
2110	McCormack-Wm. Tract	$ 17,631
2111	Deadhorse Island	$ 55,538
2113	Fay Island	$ 83,810
2115	Shima tract	$ 20,439
2117	Coney Island	$ 16,819
2119	Wright-Elmwood Tract	$ 30,045
2126	Atlas Tract	$ 32,708
BIMID	Bethel Island MID	$ 150,759
CLD	Collinsville Levee District	$ 7,761
		$ 14,767,620

Appendix E – Delta Levee Protection Levels

Figure 2 - Delta Levee Standards