



715 P Street, 15-300
Sacramento, CA 95814

916.445.5511
DELTA.COUNCIL.CA.GOV

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Jessica R. Pearson

January 17, 2024

The Honorable Dave Min
Chair, Senate Natural Resources and Water Committee
1021 O Street, Room 3220
Sacramento, CA 95814

The Honorable Diane Papan
Chair, Assembly Water, Parks, and Wildlife Committee
1020 N Street, Room 160
Sacramento, CA 95814

RE: Completion of the Delta Levees Investment Strategy (Water Code §85305)

Dear Chair Min and Chair Papan:

As you know, the Sacramento-San Joaquin Delta (Delta) sits at the intersection of numerous California interests and dependencies. A common thread that holds these interests together is an extensive system of over 1,100 miles of levees. These levees protect people and property, the water conveyance system for 27 million Californians, irrigation water for the state's \$50 billion agricultural industry, the Delta ecosystem, and various infrastructure of statewide importance. However, given the number and age of Delta levees and their general condition, and considering the value of the assets they protect, the level of public investment to

maintain, rehabilitate, and improve them is simply not adequate to counter the flood risks they currently face.

Since 1973, the state has invested over \$700 million in Delta levees without a consistent funding strategy. As of January 1, 2024, that has changed, as I write to you with an update on the completion of the Delta Levees Investment Strategy (DLIS), a charge by the legislature to our agency, the Delta Stewardship Council (Council). **The completion of DLIS is significant and timely, as the importance of targeted investment in Delta levee operations, maintenance, improvements, and emergency response has never been greater in the face of climate change.**

The Delta Levees Investment Strategy

In 2009, the legislature passed the Delta Reform Act that created the Council to advance California's coequal goals for the Delta – a more reliable statewide water supply and a resilient Delta ecosystem – in a manner that protects and enhances the unique characteristics of the Delta as an evolving place where people live, work, and recreate. The Council carries out its mission by implementing the Delta Plan, a long-term management plan to ensure coordinated federal, state, and local actions in the Delta to achieve these goals.

Recognizing an ever-present, escalating risk of flooding in the Delta and a substantial gap between available and required Delta levee funding, the legislature also gave the Council the challenging task of leading a multi-agency effort to set priorities for state levee investments in the Delta. These priorities aim to drastically reduce the likelihood and consequences of levee failures, thus safeguarding Delta communities' lives, properties, and state interests (Water Code §85305).

The Delta Levees Investment Strategy takes a risk-based approach and:

- Sets strategic priorities for Delta levee investments to maximize the protection of people, property, and state interests;
- Directs the state's investment of public resources first to Delta levees with the highest risk to protect people, property, and state interests before those with lower risk; and
- Enhances public awareness and transparency regarding how state dollars are used to maximize public safety and protect state interests in the Delta.

The Council completed a significant milestone by adopting the investment strategy and completing the state's regulatory process, with the regulation having taken effect on January 1, 2024.

More information about DLIS can be found at <https://www.deltacouncil.ca.gov/dlis>, and the DLIS prioritization map is attached.

“The Hardest Working Levees in the World”: The Urgency of Sustained Funding

Climate Change is Intensifying Risks of Deteriorating Infrastructure and Escalating Costs

Over 70 percent of the Delta's land is protected by levee systems that fall short of the applicable U.S. Army Corps of Engineers standards (PL 84-99) and were initially constructed over a century ago. These levees were built using available materials and knowledge to reclaim “swamp and overflow” lands, and many have significantly subsided over the years because their foundations are set in soft, organic soils. As a result, over 140 levee failures in the Delta occurred in the last century.

In 1973, the state began investing in Delta levee maintenance, rehabilitation, and improvement with the authorization of the Delta Levee Subventions Program. Over time, the frequency of levee failures dropped by half. However, there is still work to be done. Levee failures can cause catastrophic flooding and potentially cause injury or loss of life, disrupt statewide water supplies, and damage property, infrastructure, and environmental resources of importance to the entire state.

These risks are before considering the immense pressure placed on these levees from earthquakes and the intensifying risks of climate change, including land subsidence, changing inflows, sea-level rise, and even earthquakes. According to the Council's recent climate risk assessment, *[Delta Adapts: Creating a Climate Resilient Future](#)*, without increased funding compared to historic investments, climate-induced flooding by 2050 could expose thousands of people to flooding, jeopardize economic activity (loss of about 20% of agricultural jobs and cropland), damage infrastructure that supplies a good portion of the state's water supply, and further degrade vital ecosystems within the Delta. Addressing these challenges necessitates a substantial increase in sustainable funding to fortify levees and mitigate these evolving risks effectively.

“An ounce of prevention is worth a pound of cure”: The Consequences of Reduced Investment

Investing in Delta levees is a remarkably cost-effective climate adaptation strategy. Utilizing the flood models and scenarios from our Delta climate vulnerability study, we estimate that the total cost to elevate Delta levees from their current flood protection conditions to acceptable standards is \$1.3 billion, and to provide adequate protection under future climate change scenarios is another nearly \$3

billion -- a total of \$4.3 billion. **While this is a sizable investment, especially given the state's current budget challenge, it would protect approximately \$74 billion of assets from flooding.** Notably, historic funding for Delta levees has been only a fraction of this required level of investment.

To underscore the gravity of this situation further, consider the Upper Jones Tract levee failure in 2004. This catastrophic event inundated 12,000 acres of farmland, resulting in costs estimated at \$100 million (roughly \$162 million in today's dollars), as reported by the California Department of Water Resources¹. That amount represents almost 12 percent of the estimated funding needed to reach current flood protection standards for Delta levees, **just to repair one levee break.** This historical incident is a stark reminder of the immense costs associated with levee failures and reinforces the urgent need for substantial and sustained funding to prevent such catastrophic events in the future.

Conclusion

Sustained and prioritized funding for Delta levees is crucial in the face of climate change. Now that the state has a levee investment strategy, such funding for Delta levees is required to go to the highest-risk levees first. Such investment would not just advance the long-term resilience of our communities and vital state infrastructure; it is an urgent necessity to protect the lives and livelihoods of those throughout the Delta region.

We appreciate your dedication and attention to this pressing matter. If you have any questions, seek further details, or would like a comprehensive presentation on the Delta Levees Investment Strategy, please do not hesitate to reach out to the Council's Legislative and Policy Advisor, Brandon Chapin, at brandon.chapin@deltacouncil.ca.gov.

Sincerely,



Jessica R. Pearson

Executive Officer

Delta Stewardship Council

¹ <https://www.doi.gov/ocl/california-water-drought>

CC: The Honorable Kelly Seyarto, Vice Chair, Senate Natural Resources and Water Committee

The Honorable Devon Mathis, Vice Chair, Assembly Water, Parks, and Wildlife Committee

The Honorable Members of the Senate Natural Resources and Water Committee

The Honorable Members of the Assembly Water, Parks, and Wildlife Committee

Attachment 1 – Delta Levees Investment Strategy Prioritization Map

Delta Levees Investment Priorities

