



INFORMATION ITEM

Delta Adapts Draft Adaptation Plan Update

Summary

This item provides an overview of the draft Delta Adapts Adaptation Plan (Plan) that will be released for public comment. The Plan proposes climate adaptation strategies for the Sacramento-San Joaquin Delta (Delta) and Suisun Marsh, recommends lead agencies and partner agencies to implement the proposed actions, discusses tradeoffs in adaptation actions, and presents several illustrative case studies of implementation actions similar to those proposed in the Plan. Council staff will summarize Plan development to date and present the proposed adaptation strategies according to four focus areas of flood risk reduction, ecosystem, agriculture, and water supply reliability.

Comments received at the Council meeting, as well written comments and others received during meetings and events during the public comment and tribal consultation periods, will be considered for the final Plan, expected to be completed in Spring 2025.

Background

- The Sacramento-San Joaquin Delta Reform Act (Wat. Code, § 85000 et seq.; Delta Reform Act) defines “restoration” to include the consideration of “the future impact of climate change and sea level rise” (Wat. Code, § 85066) and additionally requires the Delta Plan to provide for by the year 2100 the restoration of large areas of interconnected habitats within the Delta and its watershed. (Wat. Code, § 85302 subd. (c)(1).)
- The Delta Reform Act also notes that the Delta Plan may address “the effects of climate change and sea level rise on the three State highways that cross the Delta” in consultation with the Department of Transportation. (Wat. Code, § 85307 subd. (c).)
- Executive Order B-30-15, signed by former Governor Brown in April 2015, requires State agencies to incorporate climate change into planning and

investment decisions. State agencies are also required to prioritize natural infrastructure, actions that both build climate preparedness and reduce greenhouse gas emissions, and to protect California's most vulnerable populations. (Governor's Exec. Order No. B-30-15 (April 29, 2015).)

Climate change is already altering the physical environment of the Delta. Moving forward, climate change in the Delta will continue to adversely affect human health and safety, lead to economic disruptions, diminish water supply, degrade water quality, shift ecosystem function and habitat qualities, and increase the challenges of providing basic services. Many of these impacts will disproportionately affect disadvantaged communities.

Delta Adapts provides a framework to guide the Council and other agencies and organizations in the Delta to address the region's climate adaptation needs. It is the first comprehensive, regional approach to climate resiliency for the Delta that commits to collaboration across federal, State, local, and regional levels.

Delta Adapts consists of two phases:

1) a **Vulnerability Assessment** (VA) to improve understanding of regional vulnerabilities due to climate change to protect the vital resources the Delta provides to California and beyond, with a focus on State interests and investments, followed by

2) an **Adaptation Plan** detailing strategies and actions to adapt and respond to those vulnerabilities.

The Delta Adapts VA was approved by the Council on June 24, 2021, and the public draft of the Plan will be released in November 2024.

Adaptation Process

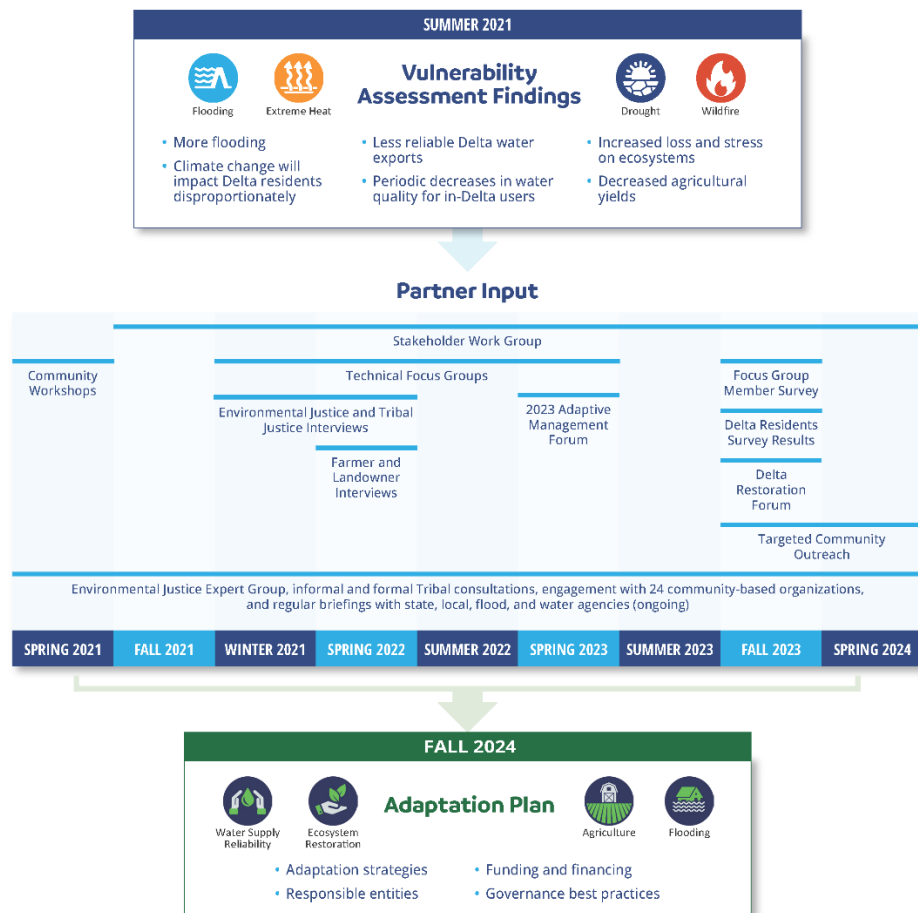
Council staff began the adaptation phase of Delta Adapts in Fall 2021. Throughout this process, staff has engaged with a diverse array of individuals, organizations, and agencies to inform the planning process. This outreach and engagement has included:

- Convening a cross-sector Stakeholder Workgroup and four technical focus groups associated with ecosystems, agriculture, water supply, and flood risk reduction;

- Meeting with and interviewing farmers and landowners across the Delta and Suisun Marsh;
- Meeting with the Council’s former Environmental Justice Expert Group for guidance on incorporating equity into adaptation;
- Presenting and tabling at community meetings and events;
- Conducting additional targeted outreach meetings with State and local agencies, community-based organizations, and other Delta interests; and
- Applying shared concerns and lessons learned from the 2023 Delta Residents Survey and several tribal consultations.

Through these engagements, Council staff have identified climate impacts that are of most concern to these groups and what they desire as an outcome of adaptation.

Figure 1 shows the adaptation planning process and timeline.



Summary of Adaptation Strategies

Council staff developed adaptation strategies for State, tribal, and local decisionmakers and land managers to reduce climate vulnerabilities for Delta communities, infrastructure, and ecosystems. The strategies are informed by the “One Delta, One Science” approach to strengthen coordination between scientists, agencies, and affected parties, and make decisions using the best available science. Adaptation strategies are categorized in four focus areas: flood risk reduction, ecosystem, agriculture, and water supply reliability.

- **Flood risk reduction strategies:** Reduce flood risk through a series of actions focused on in-Delta levee improvements and land use changes, implementation of nature-based solutions to support flood mitigation and ecosystem services, improved emergency preparedness and communication, and upstream management of reservoirs to control flood flows into the Delta. Investing in adaptive levee improvements now is a cost-effective adaptation approach that brings several co-benefits.
- **Ecosystem strategies:** Strengthen the adaptability of Delta ecosystems by restoring and connecting habitats to meet Delta Plan goals, implementing functional flows, halting or reversing land subsidence, protecting native species, and improving biodiversity. Co-benefits include reducing flood risk, improving water quality, increasing public and tribal access, and sequestering greenhouse gases.
- **Agriculture strategies:** The holistic approach to agricultural resilience identifies strategies to support more efficient agricultural water use, building healthier soils, and supporting conversions to climate-resilient crops. Co-benefits include increasing food security, strengthening the local economy, halting or reversing land subsidence, reducing greenhouse gas emissions, and providing habitat for a diverse range of species.
- **Water supply reliability strategies:** The water supply reliability strategy re-doubles the Council’s reduced reliance efforts by working with partners to increase water conservation, expand surface and groundwater storage and regional water supplies, modernize Delta conveyance systems, improve upstream reservoir operations, and update water quality standards to consider the impacts of climate change.

Equity

Equity considerations are embedded throughout the adaptation strategies and implementation actions. Each strategy supports a range of equity outcomes, including improved health, economic stability and prosperity, physical and emotional wellbeing, and social justice for vulnerable communities, including neighborhoods in Antioch, Pittsburg, Stockton, and other locations. Here, residents are more likely to be at risk of extreme heat, flooding, and other climate impacts.

Governance

Climate change governance describes the process by which organizations plan, fund, implement, and manage climate adaptation within existing and evolving legal frameworks. Increasing the representation of those that have been historically left out of government procedures and decision-making (*representational justice*) is also integrated within proposed governance recommendations.

These recommendations aim to ensure that public processes and decision-making bodies include the communities they serve, and that the communities most impacted by decision-making can meaningfully participate in the process (*procedural equity*). Recommendations also propose ways to work through the Delta's historically fragmented governance structure through improved coordination and collaboration, engagement and education, adaptive management, and the incorporation of Traditional Knowledge (tribal expertise, cultural beliefs, practices, and knowledge) and other ways of knowing.

Cost of Adaptation

A critical component of planning for adaptation is understanding how much adaptation will cost. This begins by recognizing that, fundamentally, it costs more to recover assets and communities impacted by climate hazards than it does to address adaptation needs now. Additionally, finding ways to fund adaptation in the Delta requires an understanding of how levees and ecosystem restoration have been funded in the Delta in the past.

The Plan evaluates potential costs to implement needed levee improvements and ecosystem restoration projects throughout the Delta to address climate vulnerabilities through 2050. Levee improvements focus on raising the top of the levee to accommodate projected water level increases in the Delta due to sea level

rise and changes in watershed hydrology. Ecosystem restoration costs were estimated considering planning, design, permitting, and construction costs and a range of restored acreage to meet Delta Plan targets (60,000 to 80,000 restored acres). Total estimated levee improvement and restoration costs through 2050 range between \$5.7 billion to \$8.5 billion, with the variation largely driven by the number of acres targeted for ecosystem restoration.

The funding need is substantial, and there is a critical need to identify sustainable funding sources, prioritize investments, and identify additional revenues to fund the adaptation strategies identified in the Plan.

Next Steps

During the public review period, staff will present the Plan throughout the Delta, with a focus on reaching the most socially vulnerable communities. Tribal consultation requests were sent via U.S. mail and email to tribes. If a tribe is interested in initiating consultation with the Council on the Draft Adaptation Plan, they are encouraged to email the tribal liaison at tribal.liaison@deltacouncil.ca.gov for more information. Comments received at the Council meeting and at various outreach events and meetings, as well as written comments, will be incorporated into the final Plan expected to be completed in Spring 2025.

Fiscal Information

Not applicable.

List of Attachments

Attachment 1 – Delta Adapts Draft Adaptation Plan

Attachment 2- Delta Adapts Information Sheet

Attachment 3 – Delta Adapts: Adaptation Strategies Information Sheet

Contact

Morgan Chow

Environmental Program Manager

Morgan.Chow@deltacouncil.ca.gov

Phone: (916)-902-6472