

# Delta Adapts: Creating a Climate Resilient Future

## Summary of Staff Edits to the Public Review Draft Adaptation Plan



**Delta  
Stewardship  
Council**

A CALIFORNIA STATE AGENCY

- This document provides a high-level summary of changes made to the public review draft Delta Adapts Adaptation Plan to create the final draft presented to the Council.
- The changes were informed predominantly by tribal consultation (3 tribes) and verbal and written public comments (from 32 commentors), comments raised during Council staff presentations and tabling at community events throughout the last several months (comments from 20 presentations), and comments from Council staff's January drop-in event (6 comments).
- Comments from Councilmembers and members of the public at the March 2024 Council meeting are also included (15 separate commentors).
- Finally, Council staff made changes to the plan to be consistent with other Council initiatives, new research findings, partner organization documents, and other sources.

The changes include minor clarifications and edits as well as global, substantive comments including:

- Referred to climate change impacts in the present, not just the future.
- Added additional detail regarding other state plans and initiatives the Adaptation Plan supports or aligns with.

- Made additional connections between the Delta Adapts Vulnerability Assessment and proposed strategies.
- Clarified how outreach informed the proposed strategy and action language.
- Added emphasis to the need for sustained support for levees.
- Clarified that not all wetland restoration projects will sequester carbon and adjusted language so as not to overemphasize carbon sequestration benefits.
- Adjusted language concerning subsidence reversal and flood risk.
- Added minor details about next steps and implementation following completion of the Adaptation Plan.
- Identified 30 adaptation accelerator actions.

The following is a section-by-section summary of changes.

## **Executive Summary**

- Specifically listed tribes known to have lived in the Delta region.
- Added language regarding the term “stakeholder,” explaining that our understanding and usage of the term has changed.
- Added language about near-term priority actions under Adaptation Approach.
- Added language that explains why the scope of Council’s staff’s costing evaluation was limited to levee improvements and restoration.
- Added language describing original Delta inhabitants into the Agriculture section.
- Other minor edits, such as including other diverse ways of knowing in the formation of adaptation strategies, consequences of flooding, the scope of Council’s staff’s costing evaluation, and next steps.

## **Ch. 1. Introduction**

- Graphic updates to Figure 1-1 to reflect adaptive management process.
- Updated Background section to include examples of legislation and state initiatives that Delta Adapts supports or aligns with; added summary of the Council’s Delta Science Program.

- (Section 1.3) Updated Geographic Setting to mention Indigenous peoples and explained history of subsidence and the levee system and its importance today; added a map for context.
- (Section 1.4) Updated Equity Considerations to include additional information on the outreach process and how it informed the strategies. Added a footnote that explains that some responses in the Delta Residents Survey came from residents that live outside of the legal Delta.
- (Section 1.5) Updated Tribal History in the Delta to mention the reciprocal relationship Native communities had with the land, the history of state-sponsored violence against Native peoples, the importance of consulting with tribes and knowledge holders in the application of Traditional Knowledge and climate adaptation.
  - Updated Traditional Knowledge definition to align with the Council's Tribal and Environmental Justice (TEJ) Issue Paper and added reference to the TEJ Issue Paper for additional information.
- (Section 1.6) Updated Summary of Key Vulnerabilities to reference specific adaptation strategies that address vulnerabilities identified in the Climate Change Vulnerability Assessment.
  - Added call-out box about the Delta Residents Survey.
- (Section 1.7.2) Added information on the numbering scheme of adaptation strategies to help the reader navigate the plan.

## **Ch. 2. Strategy Development and Outreach**

- Reorganized Ch. 2 Strategy Development and Outreach to include a summary of the outreach and engagement and strategy development processes, essentially combining material from what were Chapters 2 and 3. Renamed the chapter "Strategy Development and Outreach" to replace "Outreach and Engagement."
- Added the Delta Plan Connection call-out box.
- (Section 2.2.2) Added additional findings from the Focus Groups.
- (Section 2.2.3) Added additional detail on Community Outreach, and linked to strategies or actions that directly relate to what we heard in outreach. Cited farmworker interviews from Yolo County's Climate Action and Adaption Plan to incorporate the farmworker climate vulnerability perspective.

- (Section 2.2.5) Added additional details on tribal consultation (2.2.5).
- (Section 2.2.6) Added additional detail about grower interviews and impacts to farmworkers.
- (Section 2.2.7) Added additional organizations that Council staff consulted with in engagement activities.
- (Section 2.3) Added additional context about the disproportionate impacts tribes, tribal communities, and socially vulnerable communities face and provided link to TEJ Issue Paper to Socially Vulnerable Communities.

### **Ch. 3. Navigating the Strategies**

- Renamed the section from “Strategy Development” to “Navigating the Strategies.”
- (Section 3.1) Added a reference to multi-species assessment work for ecosystem tradeoffs.
- (Section 3.4) Noted that tribes and tribal communities can and should be consulted for adaptation projects in the Delta and could be considered partners for all strategies.
- (Section 3.4) Added alignment of each strategy with State Adaptation Strategy priorities, explained in Strategy Layout.

### **Ch. 4. Flood Risk Reduction Strategies**

- (Section 4.1) Cited applicable strategies throughout the introduction.
- Replaced the use of “flood control” with “flood management.”
- (Action FL-2-4) Added need for establishing permanent funding mechanisms for ongoing levee upkeep.
- (Action FL-2-4) Moved emphasis of equitable distribution of resources in this action to FL-2-6.
- (Action FL-2-11) Re-worded action to refer to pilot program, funding mechanism, and implementation strategy.
- Minor text edits to Dos Rios case study mentioning the example is only relevant to areas of the Delta where floodplain expansion is possible, and added “where feasible” to the discussion of setback levees in FL-8.

- (Strategy FL-4) Added flood emergency response to the title. Added considerations about how low-income and socially vulnerable households are the least able to recover from the impacts of flooding.
  - (Action FL-4-1) Rephrased to emphasize emergency planning gap analysis efforts and the importance of prioritizing the needs of underserved and functional needs populations.
  - (Action FL-4-4) Rephrased to emphasize the importance of strengthening current emergency response plans with local partners.
- (Action FL-6-2) Noted the applicability to both the State Plan of Flood Control (SPFC) and non-SPFC areas.
- Added Action FL-7-5 regarding piloting innovative flood insurance approaches that complement National Flood Insurance Program coverage.
- Minor edits to the Geologic Hazard Abatement District case study for clarity and flow, including removal of text about lowering insurance premiums.
- Minor text edits to strategy profiles, leads, and partner agencies throughout.
- Added information to equity considerations regarding impacts to low-income, socially vulnerable, and smaller and under-resourced communities.

## **Ch. 5. Ecosystem Strategies**

- (Section 5.1) Minor text changes about expected climate impacts to ecosystems, the approach to ecosystem adaptation, and potential for greenhouse gas (GHG) emission reductions from restoration. Cited applicable strategies throughout introduction to approach.
- (Strategy ECO-1) Rephrased the strategy title for clarity and to emphasize the importance of ecosystem restoration. Recognized alignment with the State Air Resources Board's (CARB) restoration targets, recognized the trade-offs of flows needed for ecosystems and for human uses.
  - Added term "nature-based solutions" to relevant actions to align with state terminology.
  - Added ECO-1-11 related to protecting water quality.
- (Strategy ECO-2) Recognized the trade-offs of methylmercury production and restoration. Added a note about the importance of proactive planning, monitoring, maintenance, and adaptive management.

- Removed ECO-2-3 in response to comments that it was too prescriptive and conflicted with other actions.
  - (Action ECO-2-4) Added a note about planning for the economic costs of special benefit assessments within restoration projects.
- (Action ECO-3-5) Added a footnote describing the regulatory context of growing tules in wetland habitats.
- (Strategy ECO-4) Changed the title to better reflect the importance of nature-based solutions. Added information about how developed areas provide unique opportunities for implementing nature-based solutions.
- (Action ECO-4-4) Replaced the use of the word "urban" with "developed."
- Minor text edits to strategy profiles, leads, and partner agencies throughout, including adding specificity about the Natural Resources Agency (CNRA) departments that would act as leads and partners, as applicable.

## **Ch. 6. Agricultural Strategies**

- (Section 6.1) Added language about the Prime Farmland classification of Delta farmland. Cited applicable strategies throughout the introduction to approach.
- (Section 6.1) Minor text changes to describe the range of climate change threats to Delta agriculture.
- (Strategy AG-1) Incorporated detail on the conversion of corn to wetlands on Staten Island, funded by the Sacramento-San Joaquin Delta Conservancy (Delta Conservancy).
  - Removed AG-1-3 in response to tribal consultation and other comments that this strategy and action were not directly relevant to tribes.
  - (Action AG-1-3) Edits to the text to ensure consistency with terminology changes and elaborate on best uses of highly mineral/non-organic soils.
  - (Action AG-1-6) Minor language edits to emphasize the GHG emission reduction potential of certain crops.
- (Strategy AG-3) Minor language edits explaining carbon credits as an example of environmental credits and highlighting the threats of mercury contamination for subsistence fishing areas.

- (Action AG-3-2) Explained “stubble” as crop residue left on the soil after harvesting.
- (Action AG-3-3) Further highlighted the value of carbon credits from wetland projects, incentives for tule farming, and other state and federal incentive programs as examples.
- (Action AG-3-4) Minor language edits to describe the circular bioeconomy.
- (Strategy AG-4) Removed “agrivoltaics” and replaced with solar panels.
  - Added AG-4-5 related to identifying access, co-management, and land return opportunities for tribes and tribal communities with connections to the Delta.
- Minor text edits to strategy profiles, leads, and partner agencies throughout, including emphasizing opportunities to partner with tribes and tribal communities.

## **Ch. 7. Water Supply Reliability Strategies**

- (Section 7.1) Cited applicable strategies throughout the introduction to approach.
- Renamed WSR-2 to include areas “outside of the Delta” rather than just “north and south.”
- Replaced “flood control” with “flood hazard management.”
- (Strategy WSR-5) Removed WSR-5-1 related to regular external reviews by the Delta Independent Science Board (DISB) in response to DISB comments.
- Minor text edits to strategy profiles, leads, and partner agencies throughout, including emphasizing opportunities to partner with tribes and tribal communities.

## **Ch. 8. Implementation Roadmap**

- (Section 8.0) Incorporated language regarding using best available science to adaptively manage strategies.
- (Sections 8.0, 8.1, 8.2, 8.3, 8.4) Highlighted the importance of exploring opportunities to partner with tribes and tribal communities during the implementation of adaptation strategies.



- (Section 8.1) Replaced the use of the word "urban" with "developed."
- (Section 8.2) Added detail regarding Central Delta levees and flood risk. For clarity, removed language referring to levee setbacks as a solution to flooding.
- (Section 8.2) Minor language edits to highlight the importance of re-wetting soils as a strategy to reverse subsidence.
- (Section 8.4) Added additional detail regarding challenges related to flooding in the Suisun Marsh.
- (Section 8.4) Included examples of strategies to diversify economic and revenue-generating activities on grazing lands and duck clubs in the Suisun Marsh. Added examples of competing Marsh management objectives, such as increasing dissolved oxygen levels in water.

## **Ch. 9. Costs and Benefits of Adaptation**

- (Section 9.1) Added language denoting risk reduction and the co-benefits of implementing climate adaptation strategies, and cited to a recent U.S. Chamber of Commerce report demonstrating these findings.
- (Section 9.1) Added language describing the cost-effectiveness of nature-based solutions.
- (Section 9.1) Added a footnote referencing the flood protection funding analysis by the San Francisco Bay Conservation and Development Commission and Metropolitan Transportation Commission.

## **Ch. 10. Governance**

- (Sections 10.1, 10.3) Highlighted findings from recently released research and figures on Delta governance and collaboration.
- (Section 10.1) Identified new governance considerations, including the state's Natural and Working Lands Climate Smart Strategy, the Delta Conservancy's Delta Carbon Program, and CARB's compliance market for wetland carbon credits.
- (Section 10.2) Added information describing the Adaptation Plan's use of "adaptive management," the Council's Adaptive Management Unit, and how



adaptive management will be used to track the implementation of adaptation strategies.

- Incorporated adaptation strategy examples throughout the chapter.
- (Section 10.3) Added additional context for adaptive management, with specific reference to the Council's Adaptive Management Unit.
- Changed the title of Section 10.4 to better reflect the broad nature of governance efforts in the Delta.
- (Section 10.4) Elaborated on the best practices around incorporating Traditional Knowledge, including tribal data sovereignty and data governance.
- (Section 10.4) Added a reference to Delta Adapts as a model to overcome challenges, and the consideration of creating a formal Delta regional climate collaborative.

## Ch. 11. Conclusions and Next Steps

- Added a forward-looking statement about collaboration with proposed leads and partners through the implementation phase of Delta Adapts. Stated Council staff's intention to review the Delta Plan and identify opportunities to interweave Adaptation Plan strategies into future Delta Plan amendments.

## Ch. 12. References

- Added and edited new references as needed.

## Ch. 13. Glossary

- Added and edited definitions for clarity and to ensure consistency with the Delta Plan and other Council documents.

## Appendix A

- Changed the title to better reflect the appendix content.

## Appendix B

- Changed the title to better reflect the appendix content.

## Appendix C

- No changes.