



INFORMATION ITEM

Update and Public Comment on the Delta Adapts Public Review Draft Vulnerability Assessment

SUMMARY: Delta Adapts: Creating a Climate Resilient Future (Delta Adapts) is the Council's climate change study consisting of a first-ever climate change vulnerability assessment and adaptation strategy for the Delta and Suisun Marsh. Council staff will present an update on the Delta Adapts public review draft Vulnerability Assessment and the public will have an opportunity to provide comment.

BACKGROUND

The Delta Reform Act specifies consideration of “the future impact of climate change and sea level rise” in restoration planning (Water Code [Wat. Code] section 85066) and identifies a restoration timeline horizon of the year 2100 (Wat. Code section 85302). 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” (Wat. Code section 85307). Executive Order B-30-15, signed by Governor Brown in April 2015, requires that State agencies incorporate climate change into planning and investment decisions, and requires State agencies to prioritize natural infrastructure, actions for climate preparedness, and the protection of the most vulnerable populations.

Climate change is already altering the physical environment of the Delta. Over the long term, climate change in the Delta is expected 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 will help the Council assess specific climate risks and vulnerabilities in the Delta and, in coordination with a diverse group of stakeholders, develop adaptation strategies to address those vulnerabilities. The Council endorsed a set of Climate Change Resilience Goals (resilience goals) in early 2019 to provide a long view toward Delta regional values and priorities. The project team used the resilience goals to focus Delta Adapts' methods and recommendations.

Delta Adapts consists of two phases: 1) a **vulnerability assessment** to improve understanding of regional vulnerabilities due to climate change in order 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 strategy** detailing strategies and tools that State, regional, and local governments can use

to help communities, infrastructure, and ecosystems thrive in the face of climate change. The vulnerability assessment analyzes the vulnerability of various asset sectors to several climate stressors and hazards. Climate stressors include sea level rise, precipitation and runoff patterns, and air temperature changes. Climate hazards include flooding, extreme heat, drought, and wildfire smoke.

Asset sectors include:

- Residents
- Agriculture
- Key community facilities and services
- Flood control infrastructure
- Parks and recreation
- Transportation
- Water supply
- Ecosystems

DELTA ADAPTS GOALS

The Delta Adapts study has an overarching goal of building climate resilience in the Delta, along with several more specific goals to:

- inform future work at the Council;
- provide local governments with a toolkit of information to incorporate into their regulatory and planning documents;
- integrate climate change into the state's prioritization of future Delta actions and investments; and
- serve as a framework to be built upon by the Council and others in years to come.

OUTREACH AND ENGAGEMENT

To promote information exchange between diverse Delta stakeholders, the Council established a Stakeholder Work Group (SWG) with members from local and regional government agencies, State agencies, utility companies, water districts, and environmental organizations. SWG members met on October 2, 2019 to provide input on key assets to be considered in the analysis, and again on December 10, 2020 to provide preliminary feedback on draft vulnerability assessment results. The SWG will meet one or two additional times in 2021.

A Technical Advisory Committee (TAC) provides expert knowledge, peer-review, and guidance throughout Delta Adapts' development. The TAC is comprised of experts from public agencies, academic institutions, non-profit organizations, the

private sector, and individuals with particular knowledge of climate change, the Delta, and its resources. The TAC has met both as a larger group and in smaller group briefings on particular technical subjects. A list of TAC members can be found on the Delta Adapts webpage: <https://deltacouncil.ca.gov/delta-plan/climate-change>.

In addition to convening the SWG and TAC, Council staff have provided briefings to various agencies and working groups throughout Delta Adapts' development, including the Department of Water Resources (DWR), California Natural Resources Agency, and the Delta Levees and Habitat Advisory Committee, among others. Council staff has also presented on Delta Adapts at various regional events. Particular focus has been given to briefing local governments and flood control agencies on the draft flood maps to ground-truth the data and analysis and seek recommendations for improvements.

Staff has also conducted outreach with community-based organizations (CBOs) that represent and provide services to vulnerable communities in the Delta region. Council staff has reached out to over 40 CBOs and consulted with 16 of these organizations to establish relationships and receive input on Delta Adapts toward a goal that the Delta Adapts engagement approach is equitable and inclusive. On February 4, 2021, the Council and four CBOs cohosted a virtual community workshop that focused on the vulnerability findings for the portion of San Joaquin County located within the Delta. More than 60 people participated in the workshop, including 13 young community leaders, who presented their feedback on the draft Vulnerability Assessment findings and the impacts identified for their communities.

VULNERABILITY ASSESSMENT PUBLIC REVIEW DRAFT

On January 15, 2021, the Council released the public review draft of the Delta Adapts Vulnerability Assessment, along with supporting technical documents. At the request of stakeholders, the public comment period has been extended to 60-days and will end on March 16, 2021. Comments can be submitted via email to climatechange@deltacouncil.ca.gov. The public review draft Vulnerability Assessment and supporting materials are available at deltacouncil.ca.gov/delta-plan/climate-change.

KEY VULNERABILITY ASSESSMENT RESULTS

Flood risk is one of the most pressing threats to the Delta and will continue to

worsen in the future with changes in sea levels, precipitation, hydrology, and temperatures. These impacts will continue to affect the central and southern Delta the most, with a concentration in the Stockton area. These impacts will not impact all Delta residents equally: approximately 65% of the population that could be exposed to a 100-year flood by 2050 resides in areas with high concentrations of socially vulnerable residents. This means many of the residents exposed to flooding may have a higher sensitivity to flood impacts and a lower capacity to adapt.

The number of extreme heat days will increase Delta-wide, though the communities identified as most vulnerable to extreme heat are located in the cities of Stockton and Tracy.

Delta water exports will be less reliable in the future due to climate change. The existing water supply system does not provide enough storage to capture anticipated increases in runoff due to more variable precipitation. Adaptation of the existing water supply system will require significant modifications to accommodate the expected changing climate conditions while maintaining water supply reliability. In terms of water quality, in-Delta water uses may be threatened by episodic water quality declines, with future droughts potentially exposing more acres of Delta agriculture to more saline water than has historically occurred.

Delta ecosystems are vulnerable to climate change. For example, of the ecosystems currently protected by levees, 73% are at risk of flooding due to levee overtopping resulting from a combination of sea level rise and storm events. This risk is especially high in the Central Delta and Suisun Marsh. Changing precipitation patterns will further stress Delta species.

Finally, Delta agricultural production trends will shift due to climate change. Increasing temperatures and number of extreme heat days are projected to reduce yields for many Delta crops. By 2050, the combined effects of sea level rise, changing Delta inflows, and storm events will expose 35% of Delta farmland, \$72 million in agricultural assets, and \$79 million in annual agricultural economic activity to the 100-year flood event.

TODAY'S MEETING

At today's meeting, Council staff will update the Council on the status of the Delta Adapts public review draft Vulnerability Assessment. Members of the public will also have the opportunity to offer comments on the public review draft. Following the close of the 60-day public comment period, Council staff will finalize the Vulnerability Assessment and seek Council endorsement of the final

Vulnerability Assessment in spring 2021.

Council staff is also preparing a scope for an Adaptation Strategy to address key findings from the Vulnerability Assessment and will seek Council input on that work at a future meeting.

FISCAL INFORMATION

Not applicable.

LIST OF ATTACHMENTS

No attachments.

CONTACT

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