

INFORMATION ITEM

Climate Change Vulnerability Assessment and Adaptation Strategy Project Update

Summary: The Climate Change Vulnerability Assessment (CCVA) and Adaptation Strategy (AS) will provide critical support to the Council to improve understanding of regionally specific climate change risks and address how Delta communities, infrastructure, and the ecosystem can adapt to future conditions. The project will incorporate stakeholder input and guidance from a technical advisory committee to increase public awareness through targeted outreach efforts. Staff will provide a project overview and status update, and will seek Council input on Draft Delta Climate Change Resilience Goals.

Delta Reform Act Requirements

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

Since the Delta Plan was adopted in 2013, research on climate change has advanced significantly, with important implications for the Council as it seeks to further the coequal goals. 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 difficulties with the provision of basic services. Many of these impacts will disproportionately affect disadvantaged communities; including those located within the Delta. Climate change is already altering the physical environment throughout the Delta.

Council members voted to approve a contract to support the CCVA and AS on May 24, 2018, and requested periodic check-ins as the project progresses.

Project Overview

The general project scope reflects statutory requirements of the Delta Reform Act, assets and resources considered in the Delta Plan, and existing Delta Plan policies, recommendations, and performance measures. The project will apply state agency guidance on climate change to the Delta. This will include guidance from the Governor’s Office of Planning and Research (OPR), the Ocean Protection Council, the Natural Resources Agency, and the California Coastal Commission for local and regional government engagement and planning.

The project contains two phases:

Phase 1: Climate Change Vulnerability Assessment (CCVA)

Based on the best available scientific technical information, guidance, and stakeholder engagement, the project will assess climate vulnerability and risk to key sectors, assets and

resources, and services using information describing how climate change, and associated impacts from sea level rise, changing precipitation and runoff patterns, air temperature, and water temperature, affect a variety of assets. These assets include: residents, disadvantaged communities, agriculture, community facilities and services, business and industrial land uses, water management and flood control, parks and recreation facilities, transportation, natural resources, and energy and fuel supply. Where appropriate, the CCVA will use information from the San Francisco Bay Conservation and Development Commission Adapting to Rising Tides (ART) program.

Phase 2: Adaptation Strategy

In this phase, the project will evaluate alternative responses that could be implemented in the Delta region or elsewhere. These responses could enable achievement of the resilience goals in a manner that considers society, equity, environment, economy, and governance. The Adaptation Strategy will recommend high priority responses in the context of the Delta Plan. For each recommended strategy, the project will include a general assessment of costs and benefits, governance, and opportunities for Council action and leadership.

Process and Roles

Council staff will convene two groups to provide advisory direction and guidance for the project. A Technical Advisory Committee (TAC) has been assembled, 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. This group has met twice to date. TAC members are identified by name and affiliation in Attachment 1. A Stakeholder Workgroup will also be convened to represent Delta city/county planning or resource management agencies, community organizations, and interested stakeholders. In addition to the Council, these two groups will provide input and guidance to Council staff and consultants throughout the project.

Engaging with local and regional Delta government agencies and communities is a fundamental objective of the project. Several local agencies have already adopted climate adaptation policies and recommendations, many of which seek regional collaboration on climate change and sea level rise planning (i.e., Solano County, San Joaquin County, Sacramento County, Yolo County, Contra Costa County, San Joaquin Council of Governments, Sacramento Area Council of Governments). Council staff will engage these agencies and seek to collectively identify adaptation strategies that advance state goals for the Delta while improving regional resilience.

Draft Delta Climate Change Resilience Goals

In its guidebook for state agencies, *Planning and Investing for a Resilient Future*, OPR defines resilience as “the capacity of any entity – an individual, a community, an organization, or a natural system – to prepare for disruptions, to recover from shocks and stresses, and to adapt and grow from a disruptive experience” ([OPR 2018](#)). In understanding resilience, the Delta Independent Science Board has also emphasized that resilience strategies should also recognize the continuous nature of environmental change.

As an initial part of the project, Council staff have composed a set of Draft Delta Climate Change Resilience Goals (resilience goals) for Council discussion. These goals outline a broad, long-term vision of Delta values and priorities that should persist in the face of a changing climate. The resilience goals will be used throughout the project to evaluate adaptation options, identify tradeoffs and synergies, and to prioritize adaptation options that would increase the resilience of Delta assets. The draft goals draw from both the coequal goals for the Delta and the sustainability framework used by the ART program in the Bay Area. Like the ART goals, the resilience goals are organized by theme: water, environment, society, equity, economy, and

governance. Council and stakeholder input is needed to ensure the resilience goals advance the state's goals for the Delta, while also considering local interests. Staff will present a draft version of the resilience goals to the Council for discussion, see Attachment 2. Once the Phase 1 vulnerability assessment is completed, staff recommends the resilience goals be revisited to align with emerging planning issues and continue to advance the state's coequal goals for the Delta.

Timeline

Phase 1 of the project began in January 2019 and will conclude with a final CCVA in February 2020. Phase 2 will begin in March 2020 and conclude with an Adaptation Strategy in April 2021. In 2019, staff anticipates seeking Council input on draft CCVA results in October.

Today's Discussion:

Staff will provide a project overview and status update, and will seek Council input on the draft resilience goals. Here are a few questions for Council members to consider:

- Are the resilience goals complete? What is missing?
- Does the project adequately reflect state interests in the Delta? In terms of overall risk, where should staff focus efforts: economic risk, risk to infrastructure, people, property, state water supply reliability, ecosystem?
- After the vulnerability assessment is completed, in 2020 staff anticipates seeking Council input and direction with regard to potential adaptation alternatives for Delta assets; does this align with the Council's desire to be engaged?
- Does the Council have interest in hearing from a panel of practitioners on approaches they have taken in conducting climate change vulnerability assessments and adaptation strategies? For example, OPR, through the Integrated Climate Adaptation and Resilience Program has provided several resources for State agencies in planning for climate change and could offer examples where coordination between state and local agencies has worked well.

Fiscal Information

This contract uses General Fund resources approved by the Council in May 2018 and encumbered in FY 2017/18 to support a contract with AECOM, not to exceed \$650,000.

List of Attachments

Attachment 1: Technical Advisory Committee Members

Attachment 2: Draft Delta Climate Change Resilience Goals

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