

STATE OF CALIFORNIA  
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION

STAFF SUMMARY REPORT (Lisa Horowitz McCann)  
MEETING DATE: August 8, 2018

**ITEM:** 6

**SUBJECT:** Workshop Focusing on Climate Change Activities

**CHRONOLOGY:** October 2017 – The Board discussed annual priorities at its regular Board Meeting.  
November 2017 – The Board appointed a subcommittee of Board members Battey and Ogbu to work with Assistant Executive Officer McCann to establish an approach to set annual priorities for the Board  
April 2018 – The Board agreed to focus on climate change as a new priority  
July 2018 – An inventory of current Board staff climate change activities was provided in the Executive Officer’s Report

**DISCUSSION:** This workshop is intended to provide an opportunity for Board members to dialogue with staff and interested persons about climate change, its impact on water quality and habitat protection, and actions the Board can take to respond and ensure protection of water quality and aquatic habitat in the face of climate change. The Board and staff will identify goals for the Board in responding to climate change, review and discuss current activities, and consider new activities not currently underway.

*Background:*

Climate change is affecting and will continue to affect the San Francisco Bay Region. Current and future impacts include increasing frequency of extreme weather events, prolonged fire seasons with larger and more intense fires, heat waves, sea-level rise, and storm surges. Changes in hydrology include declining snowpack and more frequent and longer droughts, more frequent and more severe flooding, changes in the timing and volume of peak runoff, and consequent impacts on water quality and water availability. Vulnerabilities of water resources include, but are not limited to, changes to water supplies, subsidence, degradation of watersheds, alteration of aquatic ecosystems and loss of habitat, ocean acidification, and increased amounts of water pollution, erosion, flooding, and related risks to water and wastewater infrastructure and operations.

Examples of water quality impacts include, but are not limited to, dry periods and drought lowering stream flow and reducing dilution of pollutant discharges; harmful algal blooms due to a combination of warm waters, reduced ability of warm water to hold dissolved oxygen, and nutrient pollution; more erosion and sedimentation caused by intense rainfall events and increased velocity of stream flow; potential sewer overflows due to more intense precipitation and increased stormwater runoff; rising sea levels inundating lowlands, displacing wetlands, altering tidal ranges, and increasing areas subject to saltwater intrusion into

groundwater; and water pollution and increased absorption of carbon dioxide creating coastal zone “hotspots” of acidification and hypoxia.

Board staff are evaluating activities to address climate change impacts in the context of the Board’s overall priorities to consider how water quality regulation and policies can best protect water quality and habitat.

In November 2017, the Board appointed a subcommittee of Board members, Jayne Battey and Cecilia Ogbu, to work with Assistant Executive Officer Lisa Horowitz McCann to review and improve the Board’s annual prioritization process and consider affirming existing or adding new priorities. The subcommittee is developing an approach to review and improve annual priorities for fiscal year 2019-2020. The subcommittee also approved implementation of a pilot project to address climate change adaptation as a new priority. One of the goals of the prioritization project is to increase Board member and stakeholder input on Board priorities. This workshop provides an opportunity to initiate such input and focus on climate change as a new priority for fiscal year 2018-2019.

*Key issues:*

At the workshop, staff and the Board will discuss the following:

- Board goals to protect water quality and habitat from climate change impacts
- Current Board activities to protect water quality and habitat from climate change impacts
- Potential new Board activities to protect water quality and habitat from climate change impacts

Board staff seeks input from the Board on the following goals and actions to protect water quality and habitat from climate change impacts:

- Focus on nexus between climate change impacts and water quality/habitat protection
- Continue/expand partnerships with organizations and communities in the Bay Area addressing climate change (e.g., planning and adaptation)
- Assess and address risks/vulnerabilities due to anticipated sea level rise, increased flooding and drought on 1) aquatic habitat and 2) water-quality related infrastructure (e.g. water treatment facilities, including groundwater cleanup sites, wastewater treatment and collection systems)
- Rely on best science and regional monitoring to indicate impacts, improvements, and trends in bay and watershed conditions related to climate change and sea level rise
- Use Basin Plan policies and permitting authorities to address climate change and sea level rise adaptations, including streamlining permitting and easing mitigation expectations for resiliency projects; allowing broader beneficial reuse of dredge materials and treated wastewater for wetlands; and increasing green infrastructure, water recycling, and groundwater recharge

Board staff are currently conducting the following activities and actions related to climate change and seek input from the Board members on these and other possible activities and actions:

#### *Groundwater Cleanup*

- Require prompt cleanup of sites with groundwater contamination ahead of sea level rise impacts, addressing sites nearest sensitive waters (for drinking or aquatic life beneficial uses) as highest priority
- Require sites with groundwater contamination and land disposal facilities located adjacent to or near the Bay, rivers, or the ocean to submit and regularly update “long term flood protection” plans that consider sea level rise

#### *Permitting Discharge and Bay/Wetland Fill*

- Issue permits for capital projects and operation and maintenance projects that restore tidal marshes and riparian habitat and protect existing development from the effects of sea level rise with innovative and green technology (e.g., horizontal levees, reuse of dredge materials, and creation of floodplain benches along creeks where space is available)
- Require the 37 wastewater treatment plants that discharge to the San Francisco Bay to consider sea level rise and climate change as part of evaluating nutrient upgrade options via the San Francisco Bay Nutrients Watershed Permit
- Require other permitted dischargers to regularly review and evaluate facilities and operational practices to adapt to the potential impacts of sea level rise and storm surge

#### *Planning and Policies*

- Update existing policies for wetland fill and use of treated wastewater for wetlands to address regulatory challenges for large-scale wetland restoration and shoreline adaptation projects (Board staff has scheduled public workshops for input on these policies on August 14, 2018, and later in 2018, respectively. Notices for the workshops can be found at [Wetland Policies Update.](#))
- Participate in regional planning efforts and interagency project development to provide guidance on our regulatory requirements and promote opportunities to implement innovative solutions that protect beneficial uses for future generations, (e.g., South Bay Shoreline Levee Project, Novato Creek Dredging Project, South Bay Salt Pond Restoration Project, Bothin Marsh, and Resiliency by Design)
- Support regional planning efforts for sea level rise adaptation, including the San Francisco Estuary Institute’s Operational Landscape Unit Project to identify shoreline adaptation strategies, the proposed Wetland Regional Monitoring Program for tidal wetlands, the Bay Conservation and Development Commission’s Rising Tides Program, and the Coastal and Oceans Resources Working Group of the Ocean Protection Council

#### *Water Recycling and Stormwater Management*

- Issue permits for water recycling projects that improve the resilience of water supply, such as the City and County of San Francisco’s regulatory program for the reuse of non-potable water sources

- Coordinate with local regulatory agencies and the Bay Area One Water Network to implement non-potable water reuse strategies for both public agencies (e.g., municipal wastewater treatment facilities) and private entities (e.g., technology company campuses)
- Support the State Water Board's Strategy to Optimize Resource Management of Stormwater, which seeks to evolve stormwater management in California by considering stormwater a valuable resource to be captured and put to multiple beneficial uses to improve water quality and supply
- Regulate municipal stormwater discharges with increasing emphasis and requirements for green infrastructure and stormwater capture as beneficial strategies for water quality control

*Board Workshop:* This workshop will be an opportunity for Board members to provide input to staff on climate change goals and activities. The format of this workshop will be informal and include small group discussions to brainstorm and suggest priorities for current and future activities related to climate change. As such, the workshop will be held in Room 2, Second Floor, Elihu Harris Building, 1515 Clay Street, Oakland, starting at 11:15 a.m. Any interested parties who attend may participate in the discussions.

**RECOMMEN-  
DATION:**

This is a discussion item only.