



EAST BAY DISCHARGERS AUTHORITY  
2651 Grant Avenue  
San Lorenzo, CA 94580-1841  
(510) 278-5910  
FAX (510) 278-6547

*A Joint Powers Public Agency*

## **ITEM NO. 12**

### **REGULATORY AFFAIRS COMMITTEE AGENDA**

**Monday, November 13, 2023**

**12:00 P.M.**

**East Bay Dischargers Authority  
2651 Grant Avenue, San Lorenzo, CA 94580**

**This meeting will be teleconferenced from the following location:  
the Guest Parking Area Located on Ocaso Camino, West of and Closest to the  
Intersection of Paseo Padre Parkway**

**Teleconference link: <https://us02web.zoom.us/j/87152748706>  
Call-in: 1(669) 900-6833 and enter Meeting ID number: 871 5274 8706**

**Committee Members: Andrews (Chair); Lathi**

- RA1. Call to Order**
- RA2. Roll Call**
- RA3. Public Forum**
- RA4. EBDA NPDES Compliance – See Item No. OM4**  
(The Committee will review NPDES Permit compliance data.)
- RA5. Update on Total Residual Chlorine Effluent Limit**  
(The Committee will receive a report on the blanket permit amendment.)
- RA6. EPA PFAS Reporting Rule**  
(The Committee will review the rule adding PFAS to Toxics Release Inventory reporting)
- RA7. Update on Shoreline Nature-based Solutions Projects**  
(The Committee will receive an update on multi-benefit shoreline projects.)
- RA8. Rescheduling January Meeting**  
(The Committee will discuss rescheduling the meeting from the Martin Luther King, Jr. holiday.)
- RA9. Adjournment**

Any member of the public may address the Committee at the commencement of the meeting on any matter within the jurisdiction of the Committee. This should not relate to any item on the agenda. Each person addressing the Committee should limit their presentation to three minutes. Non-English speakers using a translator will have a time limit of six minutes. Any member of the public desiring to provide comments to

Agenda Explanation  
East Bay Dischargers Authority  
Regulatory Affairs Committee  
November 13, 2023

the Committee on any agenda item should do so at the time the item is considered. Oral comments should be limited to three minutes per individual or ten minutes for an organization. Speaker's cards will be available and are to be completed prior to speaking.

In compliance with the Americans with Disabilities Act of 1990, if you need special assistance to participate in an Authority meeting, or you need a copy of the agenda, or the agenda packet, in an appropriate alternative format, please contact the Administration Manager at (510) 278-5910 or [juanita@ebda.org](mailto:juanita@ebda.org). Notification of at least 48 hours prior to the meeting or time when services are needed will assist the Authority staff in assuring that reasonable arrangements can be made to provide accessibility to the meeting or service.

In compliance with SB 343, related writings of open session items are available for public inspection at East Bay Dischargers Authority, 2651 Grant Avenue, San Lorenzo, CA 94580. For your convenience, agenda items are also posted on the East Bay Dischargers Authority website located at <http://www.ebda.org>

<b>Next Scheduled Regulatory Affairs Committee meeting</b> <b>Week of January 15, 2024 – date and time to be determined</b>
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## **ITEM NO. RA5 UPDATE ON TOTAL RESIDUAL CHLORINE EFFLUENT LIMIT**

### **Recommendation**

For the Committee's information only; no action is required.

### **Background**

EBDA's National Pollutant Discharge Elimination System (NPDES) Permit, as with all NPDES permits for discharge to San Francisco Bay, contains a limit on total residual chlorine of 0.0 mg/L as an instantaneous maximum. To ensure consistent compliance with this limit, EBDA adds an excess of dechlorinating agent, sodium bisulfite (SBS). By detecting SBS in the effluent, EBDA can demonstrate at all times that chlorine cannot be present. While this approach ensures consistent compliance with permit requirements, it results in significant unnecessary SBS discharges to the Bay. With chemical costs continuing to rise, this use of extra SBS without clear environmental benefit diverts resources from higher priority investments.

For the past decade, the Bay Area Clean Water Agencies (BACWA) has been working with the San Francisco Bay Regional Water Quality Control Board (Water Board) on an approach to revising total residual chlorine discharge limits to prevent SBS overdosing while continuing to protect environmental health. In 2020, the Water Board adopted an amendment to the Basin Plan, the document governing water quality standards for the region, that removed the 0.0 mg/L instantaneous maximum standard and replaced it with an EPA-established water quality-based criterion of 0.013 mg/L as a one-hour average. Prior to implementing the new criterion in permits, EPA Region IX needed to approve the Basin Plan Amendment. Unfortunately, EPA Region IX determined that they were unable to approve the Basin Plan Amendment due to concerns raised by other federal agencies that the new standard would not be sufficiently protective of endangered species.

Undeterred by EPA's lack of approval of the Basin Plan Amendment, Water Board staff continued to think creatively about ways to implement protective yet practical effluent limits for total residual chlorine. To that end, they developed a new Order amending all NPDES permits in the region to revise chlorine limits that uses the Basin Plan's narrative toxicity objective to support use of the 0.013 mg/L one-hour average standard. To satisfy the concerns of EPA Region IX and the federal species agencies, the blanket permit amendment also requires dischargers to establish an operational control plan that targets 0.0 mg/L chlorine at the point where their discharge enters the Bay.

### **Discussion**

On November 8, the Water Board unanimously approved the blanket permit amendment. The amendment will take effect on January 1, 2024. Because EBDA discharges to the deepest part of the Bay, EBDA's new effluent limit is calculated with a dilution factor of 74:1, making it 0.98 mg/L over a one-hour average. With potential future introduction of brine from Cargill, the buoyancy of the effluent and hence the dilution factor would change slightly, bringing the effluent limit to 0.94 mg/L. Staff expects that either limit will be met

without utilizing SBS for large portions of the year. Staff plans to do some pilot testing to establish a set point for chlorine residual at the compliance monitoring point at the Marina Dechlorination Facility that will ensure that chlorine residual is zero by the time it travels seven miles through the outfall to the Bay discharge location.

## ITEM NO. RA6 EPA PFAS REPORTING RULE

### Recommendation

For the Committee's information only; no action is required.

### Strategic Plan Linkage

5. **Regulatory Compliance:** Proactively meet or exceed regulatory requirements for protection of the environment and public health.
  - e. Track and share scientific and regulatory developments related to emerging contaminants, and advocate for source control.

### Background

Per- and polyfluoroalkyl substances (PFAS) are a large group of human-made substances that are very resistant to heat, water, and oil. PFAS have been used extensively in surface coating and protectant formulations. Common PFAS-containing products are non-stick cookware, cardboard/paper food packaging, water-resistant clothing, carpets, and fire-fighting foam. All PFAS are persistent in the environment, can accumulate within the human body, and have demonstrated toxicity at relatively low concentrations. PFOA and PFOS, two of the most common PFAS compounds, were found in the blood of nearly all people tested in several national surveys.

As a result of public attention on the issue of PFAS, there is a lot of activity at the national, state, and local levels on regulations, legislation, and research. The Regulatory Affairs Committee's [April 2023 Staff Report](#) contained a summary of recent developments. An [article](#) on the topic written by CASA staff in Western City Magazine was also shared in September.

### Discussion

As noted at last month's Commission meeting, the California Association of Sanitation Agencies (CASA)'s efforts to support legislation related to PFAS source control over the past two years have been met with vetoes by Governor Newsom. In 2022, CASA sponsored AB 2247, which would have required disclosure of PFAS in commercial products. The Governor [vetoed](#) the bill on the basis of the cost for the Department of Toxic Substances Control (DTSC) to implement the program. In 2023, the Governor vetoed CASA's co-sponsored bill AB 727 which aimed to ban PFAS in cleaning products, along with two other PFAS bills – AB 246 and AB 1423 – which would have banned PFAS in feminine hygiene products and artificial turf, respectively. The Governor [explained](#) that while he agreed with the objective of the bills, he was concerned about the lack of enforcement and regulatory oversight. He further directed DTSC to "engage with the author and the Legislature and consider alternative approaches to regulating the use of these harmful chemicals in consumer products."

While these California legislative efforts have been stymied, efforts have continued at the federal level to implement EPA's [PFAS Strategic Road Map](#). On October 20, 2023, EPA finalized a [rule](#) that improves reporting on PFAS to the Toxics Release Inventory (TRI). This rule essentially accomplishes what CASA was envisioning with AB 2247, requiring extensive disclosure and reporting by manufacturers of products containing PFAS.

TRI data is reported to EPA annually by facilities in industry sectors such as manufacturing, metal mining, electric power generation, chemical manufacturing and hazardous waste treatment, as well as federal facilities that manufacture, process, or otherwise use notable quantities of [TRI-listed chemicals](#). The data include quantities of chemicals that were released into the environment or otherwise managed as waste. The 2020 National Defense Authorization Act initially added 172 PFAS to the list of chemicals covered by TRI. However, the thresholds for reporting were sufficiently high that many uses of PFAS qualified for a "de minimus" exemption. By designating PFAS as "chemicals of special concern" for TRI-reporting purposes, this rule eliminates that exemption and requires facilities to report on PFAS regardless of their concentration in mixtures, since many PFAS are used in low concentrations. As a result of removing this reporting exemption, industry sectors such as manufacturing, metal mining, and chemical manufacturing will no longer be able to avoid disclosing the quantities of PFAS they manage or release into the environment.

The wastewater community views this type of reporting and disclosure as an important first step to understanding sources of PFAS to the environment. By understanding these sources, future action can be taken to regulate manufacturing and use of these chemicals and prevent them from making their way into wastewater treatment plant influent and other pathways to the environment.

## ITEM NO. RA7 UPDATE ON SHORELINE NATURE-BASED SHORELINE PROJECTS

### Recommendation

For the Committee's information only; no action is required.

### Strategic Plan Linkage

6. **Resilience:** Champion resilience for communities and the environment through regional leadership and advancing priority programs to support the Member Agencies in achieving their sustainability goals.
  - b. Advance concepts for shoreline adaptation and climate resilience.

### Background

A recent [study](#) by the Bay Conservation and Development Commission (BCDC) estimated the cost for the Bay Area to adapt to rising sea levels to be \$110 Billion. EBDA and its Member Agencies' infrastructure, along with the communities we serve, are at risk from a rising Bay and associated groundwater rise, as exemplified by this [article](#) profiling issues in San Leandro. At the same time, the cost for Bay Area wastewater treatment plants to reduce nutrients to prevent further algal blooms could be on the order of \$13 Billion.

These staggering costs to deal with imminent challenges are driving a focus on multi-benefit projects. Wetlands, horizontal levees, and other "Nature-based Solutions" (NbS) have the potential to provide water quality improvement through reduction of nutrients and contaminants of emerging concern, creation or restoration of habitat, and protection from sea level rise. The Authority has been engaged in several parallel projects that seek to advance NbS concepts along the East Bay shoreline. This report summarizes the status of current and planned efforts, along with recent legislation requiring adaptation planning in the Bay Area.

### Discussion

#### [Oro Loma Horizontal Levee Demonstration](#)

In 2015, Oro Loma and Castro Valley Sanitary Districts constructed the Oro Loma Horizontal Levee demonstration project, a "living laboratory" to test the water quality improvement benefits of horizontal levees. A horizontal levee is a gently sloped, vegetated shoreline feature that protects against sea level rise and storm surge, while providing subsurface wastewater polishing and creating upland habitat transition zones for sensitive species (see graphical depiction on the next page). For the past eight years, researchers from U.C. Berkeley, under the leadership of Professor David Sedlak, have worked to understand the effectiveness and mechanisms of water quality improvement through the treatment layer of the horizontal levee. The attached memo summarizes findings to date.

In the summer of 2023, the Oro Loma and U.C. Berkeley team, in partnership with the



San Francisco Estuary Partnership (SFEP), Santa Clara Valley Water District, and other stakeholders, reconfigured several cells at the demonstration site to test the effects of slope and subsurface media on treatment efficacy. Current efforts include examining removal of per- and polyfluoroalkyl substances (PFAS) and other constituents from reverse osmosis concentrate.



Credit: Angela Stiegler

#### [First Mile Horizontal Levee Project](#)

The “First Mile” Horizontal Levee Project was conceived to scale up the concepts tested at the Oro Loma Horizontal Levee Demonstration to an approximately one-mile stretch of shoreline immediately south of the Oro Loma/Castro Valley Wastewater Treatment Plant. The First Mile would be built on land managed by the East Bay Regional Park District (EBRPD) in an area called Oro Loma Marsh, between Bockman Canal and Sulphur Creek. To compensate for fill that would be placed in the existing marsh to build the horizontal levee, the project will also encompass restoration of areas known as Frank’s East and Frank’s West, owned by the Hayward Area Recreation District (HARD). Both the First Mile Horizontal Levee and restoration of the Frank’s wetlands are projects envisioned by the [Hayward Regional Shoreline Adaptation Master Plan](#) adopted in 2021 by the Hayward Area Shoreline Planning Agency (HASPA).

The EBDA Commission approved Resolution 19-42 authorizing the General Manager to enter into a funding agreement with the Association of Bay Area Governments/San Francisco Estuary Partnership passing through \$650,000 in EPA grant funds for EBDA to lead development of the First Mile project conceptual design. EBDA’s design consultant, ESA, is working on finalizing a 30% design package for the First Mile Horizontal Levee, as well as a conceptual restoration plan for Frank’s wetlands. EBDA’s consultant, Nate Kauffman, is also working on renderings of the future project that can



be used in public communications. These visuals will be shared with the Commission and project stakeholders early next year.

EBDA staff is working closely with SFEP, along with EBRPD, HARD, and other stakeholders to develop a strategy for stakeholder engagement on the First Mile project. This will likely include a design charrette in early 2024 to seek input and creative ideas on project elements. Staff is also continuing to work with an inter-agency team to explore regulatory pathways for nature-based shoreline resilience projects, and reduce barriers to project permitting.

To fund the next phase of work on the First Mile, EBDA partnered with SFEP on a grant application to the EPA Water Quality Improvement Fund (WQIF), the same grant program that funded the current First Mile scope. Staff expects to be notified in December whether the application was successful. If awarded, the grant would fund final design and permitting of the First Mile project, getting it to a place where it's "shovel ready." In addition to the First Mile scope, the grant application also includes funding for HASPA to develop a Hayward Regional Shoreline Adaptation Implementation Plan that outlines phasing and responsibilities for executing the Master Plan. Lastly, it includes support for a HASPA governance evaluation and vision to build on HASPA's recent efforts to renew and expand its Joint Powers Agreement and position HASPA and its members and stakeholders to deliver the Master Plan projects.

#### Hayward Nature-based Solutions Development

After completing initial feasibility studies, the City of Hayward recently received an EPA WQIF grant to further develop potential nature-based solutions at the Hayward Water Pollution Control Facility. Under this grant, which kicked off this summer, Hayward will further develop concepts around treatment wetlands in the existing oxidation ponds, and/or a horizontal levee at the outboard side of the ponds. These projects would ensure continued use of the ponds in winter for wet weather storage, while providing summer nutrient removal and potentially flood protection and habitat enhancement. The projects would complement Hayward's plant upgrade project, currently in design.

#### [San Leandro Treatment Wetland](#)

Under a grant from the San Francisco Bay Restoration Authority, funded by Measure AA, the City of San Leandro has designed and permitted this project to convert a 4.3-acre storage basin into a multi-benefit treatment wetland. The project is slated for construction next summer.

To further build on the treatment wetland concept, San Leandro also submitted a grant application to this year's EPA WQIF. If successful, the next phase would explore development of a larger treatment wetland on a parcel owned by the City south of Estudillo Canal.

*Regional Shoreline Adaptation Plan and SB 272*

In recognition of the significant challenge of adapting the San Francisco Bay shoreline to sea level rise, and the distributed nature of governance along the shoreline, BCDC is currently developing a [Regional Shoreline Adaptation Plan](#) (RSAP). As described in the attached fact sheet, the RSAP will include regional guidelines, sub-regional shoreline plans, and an online regional adaptation map. BCDC's process is in line with recently passed legislation, [SB 272](#): Sea Level Rise Adaptation and Planning (Laird, 2023). SB 272 requires local governments along the Bay shoreline to develop sub-regional shoreline resiliency plans by 2034, using guidelines that BCDC plans to develop by end of 2024. Projects and strategies contained within plans approved by BCDC will be prioritized for State funding.

EBDA and its Member Agencies are in a good position to comply with SB 272. The HASPA Master Plan provides a model for sub-regional planning and can be adapted as needed to conform to BCDC guidelines. To the north, San Leandro is participating in the [Oakland Alameda Adaptation Committee](#)'s efforts to develop collaborative adaptation strategies. San Leandro is also currently developing its own City Sea Level Rise Adaptation Plan, and Union Sanitary District completed a Sea Level Rise study earlier this year. These efforts, coordinated with EBDA and other stakeholders, will ensure that the East Bay shoreline is prepared to adapt to sea level rise and that critical wastewater infrastructure is protected.

## San Francisco Estuary Partnership Transforming Shorelines Project

### Oro Loma Outdoor Laboratory Implementation of Additional Strategies



#### Overview

The Oro Loma Experimental Horizontal Levee was designed and built in 2015-2016 to demonstrate the capability of horizontal levees to remove nutrients, specifically nitrogen and phosphorus, from wastewater effluent. Since its initial conception, the scope of research at the horizontal levee has expanded to examine reduction of trace contaminant concentrations in addition to nutrients in both wastewater effluent and reverse osmosis concentrate (ROC). During the scope of the grant, a team of UC Berkeley researchers, led by Dr. David Sedlak, conducted water quality monitoring to quantify the performance of the horizontal levee and provide recommendations for future designs. Many of these findings have been published in peer-reviewed journals (see Scientific Publications section below).

Monitoring results demonstrate that the project is meeting performance goals and providing the intended benefits. The wet-weather equalization basin and ecotone slope were operational and actively maintained by Oro Loma Sanitary District (OLSD) throughout the project. The UC Berkeley team continues to monitor the water quality performance of the ecotone slope with respect to nutrients and important water quality indicators as well as contaminants of emerging concern. Results are informing a redesign of a portion of the horizontal levee to implement recommendations and pursue new research questions that have emerged through the past 5 years of research under this grant.

#### Monitoring Results

Water quality monitoring has examined the fate of trace organic contaminants, trace metals, nitrogen, and phosphorus within the horizontal levee. In order to characterize processes occurring in the subsurface, such as evapotranspiration and microbial metabolism, additional water quality parameters are also monitored. These general water quality parameters include pH, dissolved organic carbon (DOC), electrical conductivity, chloride, and sulfate.

Among the monitored contaminants, the aim is to reduce concentrations in wastewater effluent and ROC to levels that are acceptable for discharge into San Francisco Bay. The monitored trace metals (nickel and copper) are regulated contaminants that must meet discharge criteria limits. Discharge to

the lower South Bay, where the project is located, is subject to limits set out in wastewater treatment plant discharge permits. Initial analysis of porewater indicates that cells receiving wastewater effluent and ROC exhibit removal of approximately 90% of influent copper with effluent concentrations ( $< 1$  ppb) well below the discharge criteria limit. Nutrients, trace organic contaminants, and general water quality parameters are not currently regulated for discharge into the Bay. Performance of the horizontal levee was compared to more cost-intensive engineering solutions like nitrification/denitrification retrofits (82% removal) or coagulation processes (86% removal) for nitrogen and phosphorus respectively (Cloern et al., 2020). The removal of trace organic contaminants was compared to reported values during conventional (primary and secondary) wastewater treatment. If the horizontal levee could outperform other, more expensive engineering nutrient removal solutions while removing additional trace organic contaminants and reducing metal concentrations to below the discharge limits, then the implementation of this technology would be increasingly feasible.

Results of monitoring are promising, and several findings from water quality and ecological monitoring are being used to inform the design and implementation of other horizontal levees. For example, nitrate-N is completely removed within the first ~20% of the ecotone slope provided that water is flowing underground. Trace organic compounds (e.g., pharmaceuticals, urban use pesticides) are also well removed within this zone. Initial experiments in a sub-section of the ecotone indicated that these same contaminants are removed from reverse osmosis concentrate (ROC) produced by a potable water reuse demonstration facility.

Qualitative vegetation monitoring results indicate that the dense planting regime and nutrient-rich wastewater promoted plant health and native plant success. However, some non-native plants (*C. selloana* - pampas grass) were established on unplanted clay berms that separate the experimental treatments. Some of these plants were removed manually during maintenance operations.

During 2020-2021, one cell was reconfigured to test out the use of ROC at the site. Monitoring of this cell is ongoing, in partnership with Santa Clara Valley Water District. Porewater samples were collected from both the ROC cell and an identically constructed cell that was still receiving wastewater. Monitoring results indicate partial removal of nitrate and trace organic contaminants from the ROC. Although rates of removal are slower than those observed in the cell that receives conventional wastewater effluent, the mass removal (i.e., mass of nitrate and trace organics removed per square meter of the wetland) is higher in the ROC-receiving wetland due to the higher inlet concentrations.

## Recommendations

The research team engaged with OLSD, a design team, and other partners to plan reconfiguration of additional cells that enable exploration of new research questions that resulted from the findings described above.





The finding that nitrate-N removal occurs in the first 20% of the ecotone slope indicates that a steeper slope may allow equal treatment and less costly construction. Therefore, the team proposes to test a 15:1 slope for comparison with the 30:1 slope used in the original design. This updated design will be informative to other projects that are challenged with a lack of space to accommodate a 30:1 slope. A 15:1 slope may also be advantageous if resource agencies continue to require mitigation for the installation of these natural systems.

Similarly, successful nitrate-N removal indicates that the horizontal levee may be able to accommodate increased flow. This question is of interest to other projects looking to scale up the horizontal levee design to fulfill greater wastewater treatment needs. Recommendations for accommodating increased flow include increasing the thickness of the gravel layer.

While the success of copper removal highlights the feasibility of horizontal levees, initial analysis of porewater suggests that the influent nickel in the ROC receiving cell was not removed. Under some conditions, nickel concentrations in the effluent were higher than those in the ROC or influent water (i.e., about 30 ppb). One potential explanation for this outcome is the potential leaching of nickel from the gravel used in this project. However, additional research is needed to fully understand nickel mobilization in the subsurface. Therefore, careful consideration must be taken when selecting materials for future projects to prevent potential metal leaching and ensure project sustainability.

An additional goal of the reconstruction is the treatment of per- and polyfluorinated alkyl substances (PFAS) from wastewater and ROC. To accomplish this goal, the subsurface of the reconstructed horizontal levee will include additions of activated carbon and a PFAS-specific geomedia. Removal of PFAS from wastewater sources is a growing concern as these compounds are becoming increasingly regulated and monitored in drinking water and waste streams. Monitoring of PFAS will begin in the reconstructed cells receiving both wastewater and ROC. This monitoring will aid in quantifying the ability of these systems to remove PFAS from a variety of waste streams via sorption processes.

Given promising treatment of ROC in the one recently reconfigured cell, the upcoming reconfiguration will provide a means of conducting additional research on ROC treatment, including testing of different substrate materials. Recommendations include testing PFAS-selective resin. If this material or the activated carbon exhibits sufficient retention of PFAS it may offer a means of preventing PFAS discharges while these materials are phased out of production.

### Scientific Publications

Stiegler, A. N.; Cecchetti, A. R.; Sedlak, D. L. Plant Uptake of Trace Organic Contaminants in Effluent-Dominated Streams: An Overlooked Terrestrial Exposure Pathway. *Environmental Science and Technology Letters* 2022, 9, 11, 929–936.

Cecchetti, A. R.; Stiegler, A. N.; Gonthier, E. A.; Bandaru, S. R. S.; Fakra, S. C.; Alvarez-Cohen, L.; Sedlak, D. L. Fate of Dissolved Nitrogen in a Horizontal Levee: Seasonal Fluctuations in Nitrate Removal Processes. *Environmental Science and Technology* 2022, 56, 4, 2770-2782.

Cecchetti, A. R.; Systema, A.; Stiegler, A. N.; Dawson, T. E.; Sedlak, D. L. Use of stable nitrogen isotopes to track plant uptake of nitrogen in a nature-based treatment system. *Water Research X* 2020, 9, 100070.

Cecchetti, A. R.; Stiegler, A. N.; Graham, K.; Sedlak, D. L. The Horizontal Levee: A Multi-Benefit Nature-Based Treatment System That Improves Water Quality And Protects Coastal Levees From The Effects Of Sea Level Rise. *Water Research X* 2020, 7, 100052.

# Regional Shoreline Adaptation Plan

An implementing project of **BAY ADAPT**



## WHAT IS THE REGIONAL SHORELINE ADAPTATION PLAN?

Rising sea levels from climate change are already encroaching along our shorelines and will only accelerate in the coming decades. The impacts of sea level rise – and resources to plan and prepare for them – are unevenly distributed across the nine-county Bay Area. If everyone “goes it alone,” we risk maladaptation - catastrophic consequences such as unintentional flooding of our neighbors, leaving behind communities most at risk and with the least resources to adapt, and missing out on opportunities to find shared solutions that benefit both local communities and the region as a whole.

The Regional Shoreline Adaptation Plan (RSAP) will set the region on a path towards more coordinated and consistent local adaptation planning that advances our shared goals together. The Shoreline Plan will be collaboratively developed and include:

**Regional Guidelines**

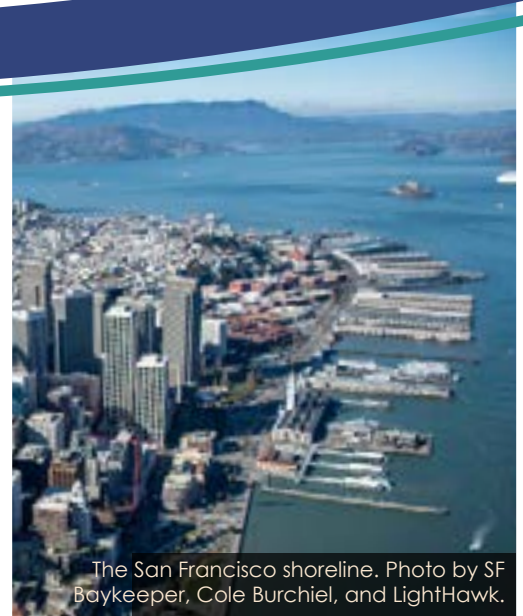
**Sub-Regional Shoreline Plans**

**Online Regional Adaptation Map**

Following adoption of the Vision and Regional Guidelines by BCDC's Commission by the end of 2024, BCDC will support cities and counties to develop sub-regional shoreline plans that are consistent with the guidelines to ensure that the region is prepared for sea level rise both locally and in alignment with the region.

## WHAT WILL THE RSAP DO?

- Adaptation that **coordinates** with neighboring jurisdictions
- Priority resources to **frontline communities**
- Long-term **health of wetlands**
- Strategy for **adaptation implementation** based on risk
- Common **standards and methods** for plans, policies, and science
- **Pipeline of funding** that reduces burdens on jurisdictions
- Track and measuring progress towards a **collective vision**



The San Francisco shoreline. Photo by SF Baykeeper, Cole Burchiel, and LightHawk.

## WHO IS BCDC?

The San Francisco Bay Conservation and Development Commission (“BCDC”) is a California State regulatory and planning agency in the nine-county San Francisco Bay Area with a mission to **protect and enhance the resources of the San Francisco Bay and ensure its responsible and productive use for this and future generations.**

[www.bcdc.ca.gov](http://www.bcdc.ca.gov)

## WHAT IS BAY ADAPT?

**Bay Adapt: Regional Strategy for a Rising Bay** is a BCDC-led initiative that brings together partners across the San Francisco Bay Area to establish regional agreement on the actions necessary to protect people and the natural and built environment from rising sea levels. The **Joint Platform** was adopted by BCDC in 2021 and has been endorsed by 55 cities and counties, regional, state, and federal agencies, non-profit organizations and more.

[www.BayAdapt.org](http://www.BayAdapt.org)



Palo Alto Baylands Nature Preserve. Photo by Stanislav Sedov, CC BY 2.0.

# WHAT IS SB 272?

SB 272: Sea Level Rise Adaptation and Planning (Laird, 2023) requires local governments along the San Francisco Bay shoreline to develop “subregional shoreline resiliency plans.”

It requires BCDC to develop subregional resilience plan guidelines by end of 2024, which will be built on Bay Adapt’s Guiding Principles, and developed in coordination with the California Coastal Commission, the Ocean Protection Council, and the California Sea Level Rise State and Regional Support Collaborative, for use by local governments as they develop plans. Subregional plans must be submitted to BCDC for review and approval by January 1, 2034.

The bill also includes an important carrot: Projects and strategies contained within approved plans by BCDC or CCC will be prioritized for State funding.

# HOW ARE WE ALIGNED?

Bay Adapt, The Regional Shoreline Adaptation Plan, and SB 272 are **aligned**, **on track** and **linked to funding**.

## BENEFITS OF SB 272

### REGIONAL PREPARATION

The RSAP and SB 272 will establish common, regionwide standards and support for plans that transcend jurisdictions and issue areas.

### COORDINATION

The RSAP and SB 272 will compel communities to prepare adaptation plans that prioritize disadvantaged communities, science and critical infrastructure – without endangering their neighbors, habitat, or infrastructure.

### PRIORITIES & FUNDING

The RSAP and SB 272 will help us plan where and when to make smart investments that prioritize at-risk, low-income communities, natural areas, and the critical infrastructure, and links those plans to state funds to implement them.

### ALIGNED

BCDC’s Regional Shoreline Adaptation Plan mirrors the basic blueprint of SB 272.

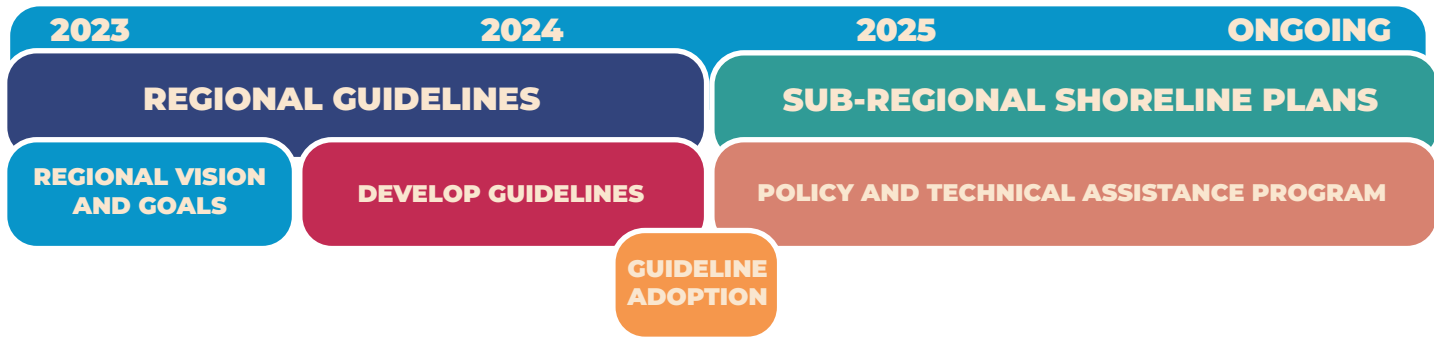
### ON TRACK

BCDC is on track to develop Guidelines by end of 2024, in alignment with SB 272 requirements.

### LINKED TO FUNDING

Grant funding for developing plans will be available starting at the end of 2023 from the Ocean Protection Council.

# PROJECT TIMELINE



For additional questions, please contact the Project Manager of the Shoreline Plan, Jaclyn Mandoske at [jaclyn.mandoske@bcdca.gov](mailto:jaclyn.mandoske@bcdca.gov). This work is supported with grant funds provided by the Ocean Protection Council and the State Coastal Conservancy.