

MEMORANDUM OF UNDERSTANDING

ON COORDINATION OF EFFORTS TO ADDRESS THREATS OF FLOODING AND SEA LEVEL RISE AMONG THE BAY AREA REGIONAL COLLABORATIVE AND ITS MEMBER AGENCIES: THE ASSOCIATION OF BAY AREA GOVERNMENTS, BAY AREA AIR QUALITY MANAGEMENT DISTRICT, CALIFORNIA DEPARTMENT OF TRANSPORTATION DISTRICT 4, THE CALIFORNIA STATE COASTAL CONSERVANCY, THE METROPOLITAN TRANSPORTATION COMMISSION, THE SAN FRANCISCO BAY CONSERVATION AND DEVELOPMENT COMMISSION, AND THE SAN FRANCISCO BAY REGIONAL WATER QUALITY CONTROL BOARD

This Memorandum of Understanding (MOU) is executed among the Association of Bay Area Governments (ABAG), also host of San Francisco Estuary Partnership (SFEP); the Bay Area Air Quality Management District (BAAQMD); the Bay Area Regional Collaborative (BARC); the California State Coastal Conservancy (The Conservancy); the California Department of Transportation District 4 (Caltrans D4); the Metropolitan Transportation Commission (MTC); the San Francisco Bay Conservation and Development Commission (BCDC); and the California Regional Water Quality Control Board, San Francisco Bay Region (SF Bay Water Board) (individually, “Agency” and collectively or together, “Agencies”) to coordinate efforts to address the threats of flooding and sea level rise in the San Francisco Bay Area.

WHEREAS,

- A. Extreme storms, sea level rise, groundwater rise, and coastal flooding are hazards already impacting the San Francisco Bay Area, and will intensify over the coming decades. Without careful planning across jurisdictional boundaries, our responses to these hazards can make matters worse.
- B. Flood management projects designed to protect individual localities (building shoreline levees, for example) may contribute to increased flooding in adjacent areas unless there is careful multi-jurisdictional coordination.
- C. Some of the region’s most flood-prone areas include under-resourced communities that lack the ability to plan and build specific flood risk management projects.

- D. Given geographic interdependencies and the competitive nature of securing funding for multi-benefit flood management infrastructure, the current jurisdiction-by-jurisdiction approach to climate adaptation will not be sufficient to address the growing risk in our region. We need unprecedented coordination to prioritize the implementation of multi-benefit, flood risk management projects in the places that need them most, and at an accelerated pace and scale commensurate to the problem.
- E. In the July 2023 *Sea Level Rise Adaptation Funding and Investment Framework*, a joint report by BCDC, MTC and ABAG, it is estimated the San Francisco Bay Area region will need at least \$110 billion of new flood protection investments to adequately defend shoreline infrastructure and communities from a worst-case sea level rise and storm surge scenario by 2050.¹ Of that amount, the report estimates that Bay Area governments can currently anticipate just over \$5 billion being available through existing federal, state, regional, and local funding programs. This leaves a funding shortfall of at least \$105 billion in the coming decades.
- F. While this funding need is significant, not preparing for the coming flood risk will cost much more, both in damages to property (a partial estimate of assessed property values and some transportation assets is estimated to cost \$230 billion) and the indirect cost of damages to the societal, environmental, and cultural assets of our region. The scale of resources needed is significant, and the Bay Area is already competing against other regions in California and other states for available funds. In this environment we will be more successful working together, systematically advocating for resources to implement the most urgent projects across the region, while coordinating our planning to identify key future projects we can accelerate through joint actions.
- G. In this regard, the San Francisco Bay Area can build on its legacy of leadership in addressing regional threats.

¹ *The Investment Framework* assumed 4.9 feet of Total Water Level (TWL) and assumed that all assets, including low density areas and agricultural land, are protected in place. It did not consider alternative approaches that do *not* protect in place, which could change the cost estimate for adaptation. It relies on the 2018 Ocean Protection Council's 5% probability for 2050, which projects 1.4 feet of permanent inundation from sea level rise, combined with a 100-year storm, which is estimated to add 3.5 feet above MHW. The combined projected permanent inundation plus a 100-year storm is 4.9 feet TWL. The Framework does not yet account for the cost of damage from fluvial flooding and rising groundwater, although these costs will undoubtedly accrue in the region.

- H. In 2016, voters in the nine Bay Area counties overwhelmingly passed Measure AA, the first regionwide property tax measure of its kind. Measure AA is generating half a billion dollars for multi-benefit shoreline habitat restoration projects to help restore environmental resilience and human health in the Bay Area.
- I. The *Bay Adapt Joint Platform*, a regional strategy for how to adapt faster, better, and more equitably to a rising San Francisco Bay, was completed in 2021, and is endorsed by over 55 cities, counties and agencies including the Agencies of this MOU.
- J. In September 2023, Governor Newsom signed SB 272 (Laird, 2023) ensuring that local governments will plan for resilience and adaptation to rising sea levels with the targeted assistance of the State of California.
- K. Recognizing there is no one agency solely responsible for managing these threats, the Agencies commit to working and learning together to protect Bay Area communities, infrastructure, and the environment from the threats posed by flooding and sea level rise.

THEREFORE, to the extent authorized by law, the Agencies commit to coordinate as follows:

I. PURPOSE

The purpose of this MOU is to align efforts, expertise, and core functions across agencies to support the delivery of priority, multi-benefit, flood risk management projects across the Bay Area. By coordinating the Agencies' respective roles and authorities, the Agencies can further the following objectives:

- Accelerate the implementation of flooding and sea level rise adaptation projects to better prepare communities, businesses, infrastructure, and the environment for the expected impacts.
- Increase the Bay Area's competitiveness for state and federal funding to support needed projects.
- Establish a structure and process to support coordinated planning, project prioritization, and project delivery to address flooding and sea level rise risk and reduce interagency and interjurisdictional competition for funding.
- Seek consensus on project priorities through a strategic, data-driven, and equitable approach that takes subregional sea level rise adaptation plans into consideration.

- Support multi-jurisdictional partnerships to efficiently advance multi-benefit projects at scale.
- Help communities, cities, counties, and special districts expand planning and funding of important climate adaptation projects.
- Create a cooperative environment where agencies and jurisdictions support each other's goals and climate adaptation projects through greater clarity of responsibilities across functions.

II. PRINCIPLES OF AGREEMENT

This article outlines essential functions and activities needed to help address the threats of flooding and sea level rise, and identifies the agencies best positioned to serve as the lead on these activities. Appendix A provides an overview of each agency's mission and purview to inform the distribution of roles and responsibilities in furthering the goals of this MOU. Appendix B provides a table showing the roles and responsibilities of each agency. Appendix C offers definitions of key terms in the MOU.

1. PLANNING: PREPARING FOR FLOODING AND SEA LEVEL RISE RISKS

Through coordinated and collaborative efforts, the Agencies are focused on establishing plans, policies, and project priorities to foster an enabling environment to support the wide-scale advancement of equitable, multi-benefit climate adaptation projects.

- a. As required by SB 272 (Laird 2023)², BCDC will establish Regional Shoreline Adaptation Plan (RSAP) Guidelines by the end of 2024 to provide standards for local governments in developing subregional sea level rise adaptation plans, while connecting them to a regional vision and strategy.
- b. BCDC, MTC and ABAG will partner, with BCDC as the lead project manager, on creating a San Francisco Bay Area Funding Sea Level Rise Funding and Investment Strategy (Investment Strategy) by 2026 and every four years thereafter.
- c. The Investment Strategy will be used to guide investment decisions and will be included in MTC and ABAG's Plan Bay Area (the Regional Transportation Plan/Sustainable Communities Strategy) and other regional plans, as appropriate.

² SB272 is codified as Public Resources Code section 30985.2(b)

- d. The Investment Strategy will be informed by key stakeholders such as cities, counties, flood management agencies, non-profits, and community-based organizations through a public process, and through the projects that emerge from completed subregional sea level rise adaptation plans, per SB 272, and supported by BCDC's RSAP Guidelines.
- e. The Investment Strategy will:
 - i. Build on the analysis and recommendations from the 2023 Sea Level Rise Funding and Investment Framework (MTC/ABAG/BCDC, 2023), Adapting to Rising Tides Bay Area (MTC/ABAG/BCDC, 2020), and the Bay Adapt Joint Platform (BCDC, 2021).
 - ii. Identify and categorize regionally significant projects and strategies for sea level rise adaptation with the intent of protecting communities, natural resources, and critical infrastructure as feasible.
 - iii. Develop estimated project costs and estimated timelines for projects.
 - iv. Analyze existing and future federal, state, regional, and local funding resources to support these projects. Analyze regionwide funding shortfalls and identify potential new revenue sources.
 - v. Be based on a science and risk-based methodology to develop funding priorities; have an equity framework that elevates the resource and capacity needs of disadvantaged communities; recommend nature-based solutions; and seek a balanced approach to the region's economic, housing, and environmental needs.
- f. BCDC will maintain an inventory and map of sea level rise projects and plans that can be used to support, track, and visualize the Investment Strategy.

2. FUND MANAGEMENT: SECURING AND AWARDING FEDERAL, STATE, AND REGIONAL FUNDING

The Agencies agree, to the extent authorized by law, to collaborate on efforts to seek, secure, and distribute funding to support the delivery of equitable, multi-benefit climate adaptation projects at the scale and speed needed to address flooding and sea level rise risks, including the activities outlined in this MOU.

- a. The Conservancy is identified as the lead agency in developing and submitting funding proposals to federal agencies. This may involve leading joint proposals with multiple partners to secure resources from agencies such as the US Army Corps of Engineers, National Oceanic and Atmospheric Administration (NOAA), and the Federal Emergency Management Agency (FEMA) for a range of needed flooding and sea level rise adaptation projects. This does not imply the Conservancy is the only agency eligible to apply for federal funding; special districts like flood management agencies will continue to pursue funding for specific projects and/or may be better suited to apply for certain funding opportunities.
- b. The Conservancy, with support from BARC, will take the lead in tracking federal, state, and local grant opportunities and other sources of funding and convene interested Agencies to determine who should be a lead applicant. Through greater coordination, collaboration, and support, the Agencies can submit more competitive funding proposals that reflect both local and regional priorities.
- c. The Conservancy will manage and distribute federal grants as outlined in project proposals unless that role is designated to another Agency.
- d. SFEP, in its capacity as a collaborative program founded by the State of California and the US Environmental Protection Agency (EPA) under the Clean Water Act's National Estuary Program, will work with the Agencies to apply for grants well matched with its expertise.
- e. Caltrans District 4 will consult with the Agencies to help align investment priorities and target resources where the region has identified critical needs as part of its ability to secure federal and state infrastructure resources for resilient transportation.

- f. MTC, in its capacity to manage and secure federal and state funding for transportation, will consult with the Agencies to apply for funding for the delivery of resilient transportation projects.
- g. MTC and ABAG, acting in their capacity as the developer and manager of regional revenue measures will consult with Agencies to help align adaptation priorities and investments as appropriate and allowable under state law.
- h. The Agencies will work together to determine viability and mechanisms for putting a regional measure on the ballot to address sea level rise and flooding (*lead and structure to be determined*).
- i. MTC and ABAG, with support from BARC, can support appropriate Agencies in working together to advance coordinated advocacy on state legislation.
- j. BCDC's Bay Adapt Implementation Coordinating Group will serve as a key venue for coordination with a broader stakeholder group on funding and legislation.

3. TECHNICAL ASSISTANCE: SUPPORTING PROJECT DEVELOPMENT & DELIVERY

The Agencies are uniquely situated to establish and deliver a Collaborative Regional Technical Assistance (TA) Program for communities that augments the capacity of local governments, special districts, and local organizations to advance climate adaptation policies, plans, and projects at the pace and scale necessary to address risks from flooding and sea level rise. Pending sufficient funding, like those resources deployed through California Housing and Community Development (HCD) Regional Early Action Planning Grant Program (REAP) administered by ABAG³, this program can be scaled appropriately to allow the Agencies to organize their collective tools and resources into a cohesive program with a suite of technical services and offerings oriented to meet the needs of users at different stages of project development. The goal is to support the development and implementation of multi-benefit adaptation projects (chronicled via the

³ ABAG delivers technical assistance and grant support to jurisdictions through funding provided by the California Housing and Community Development Agency (HCD) via a Regional Early Action Planning (REAP) grant. ABAG provides Local Early Action Planning (LEAP) grants to support jurisdictions completing their Housing Element Updates. The HCD grant was over \$20 million and supported a team of ABAG staff and resources deployed to local jurisdictions.

Investment Strategy) that will measurably and equitably protect communities, businesses, infrastructure and the environment from flooding and sea level rise.

- a. BARC will facilitate a staff-level Technical Assistance Working Group among the Agencies to provide ongoing coordination on technical assistance methods, priorities, and strategies. This includes identifying agencies to take the lead on (or participate in) various aspects of the TA Program, such as:
 - i. Providing funding to local jurisdictions, community-based organizations, and other planning entities for adaptation planning and project development.
 - ii. Working in partnership with disadvantaged communities to support capacity building, planning, and project advancement.
 - iii. Helping cities, counties and other entities update land use plans, subregional plans, feasibility studies, zoning, and relevant ordinances to prepare for climate hazards.
 - iv. Leading cross-agency and cross-jurisdictional project development and delivery.
- b. As part of a TA Program, the Agencies identified below will lead the following core activities, and collaboratively seek additional resources and partnerships to support, expand, and deliver them:
 - i. ABAG will administer and lead a Regional Technical Assistance Program which provides staffing, services and support to cities, counties, special districts, and other key partners to move from planning to project management and delivery. The scale of the program will be dependent on sufficient resources being secured.
 - ii. BCDC will provide initial technical assistance to jurisdictions in completing sub-regional sea level rise adaptation plans as required by SB 272, and coordinate with State funding programs that may provide additional resources for communities.

- iii. Coastal Conservancy, Caltrans D4, MTC, and SFEP (hosted by ABAG) can offer their respective capabilities and experience in managing the design, permitting, and construction of on-the-ground projects in close partnership with local entities.

4. REGULATORY ALIGNMENT: PERMITTING FOR CLIMATE ADAPTATION

To facilitate the pace and scale of climate adaptation projects needed to address the risks of flooding and sea level rise, the Agencies will continue to work collaboratively with the regulated community to continually improve and accelerate the permitting process, within the scope of their respective laws and to the extent authorized, so that projects are able to move forward as expeditiously as possible while helping to achieve critical local and regional adaptation goals.

- a. The Agencies will work collaboratively together and with other key regulatory agencies and regulatory coordination bodies - such as the *Bay Restoration Regulatory Integration Team (BRRIT)* and the *Dredged Material Management Office (DMMO) of the US Army Corps of Engineers* - and the regulated community to identify potential revisions to environmental regulations and other types of relevant regulations and policies to facilitate multi-benefit climate adaptation project delivery.

5. STRUCTURES FOR COLLABORATIVE DECISION-MAKING

Each Agency has its own leadership structure; this MOU does not supersede any authorities or jurisdictions of individual agencies. For the purposes of this MOU, collaborative decision-making is defined as working together to identify and determine a course of action and activities that will help us meet our shared goals and objectives. It is vital that the Agencies develop routine, on-going opportunities to share information, identify and confirm roles and responsibilities, and report progress and challenges. There may be instances where a collaborative decision is made that will need to be brought back to an individual agency or agencies for approval.

The following bodies are positioned to serve as ongoing, routine venues for collaboration:

- **BARC Governing Board** serves as the venue in which the activities and priorities outlined in this MOU can be shared, vetted, and discussed.
- **BARC Executive Leaders Management Team** guides agenda of BARC Governing Board and review of coordinated work program.
- **BARC Cross-Agency Working Group** serves as venue for key staff from across the Agencies to coordinate on technical assistance, funding, and legislative priorities and activities. This is the home of the Technical Assistance Working Group.
- **BCDC's Bay Adapt Implementation Coordination Group (ICG)** is composed of an array of expert stakeholders from public, provide, nonprofit, community-based organizations, academic institutions, and others who are convened to review and provide guidance on flooding and sea level rise activities and interventions outlined in this MOU, including updates to the Investment Strategy and technical assistance services.

III. ADMINISTRATIVE PROVISIONS

- A. The following procedures are proposed for any amendments or provisions made to the MOU:
- i. The BARC Governing Board will receive an annual report on progress of the MOU at its January meeting.
 - ii. Provisions and amendments can be introduced annually. MOU signatories can propose recommended changes to the MOU to be voted on by the BARC Governing Board, with final approval by their respective boards and commissions as necessary.
- B. Each and every provision in this MOU is subject to the laws of the State of California, the laws of the United States of America, and to the delegated authority assigned in each instance.

- C. All cooperative work under the provisions of the MOU will be carried out in accordance with all applicable laws of the State of California and the United States, including anti-discrimination laws.
- D. Any Agency may propose amendments to the MOU. Amendments shall become effective upon written approval by the Agencies and shall be appended hereto.
- E. This MOU shall become effective upon signature by the Agencies. This MOU may be executed in one or more counterparts, each of which will be considered an original document. The effective date shall be the date of the last signature as shown below, excepting subsequent amendments and addition of counterparts.
- F. This MOU shall be in effect from the date of execution until terminated by the Agencies. If an Agency seeks to withdraw from or terminate the MOU, that Agency shall give the other Agencies at least 30 days advance written notice of withdrawal or termination.
- G. This MOU is intended to facilitate cooperation among the Agencies. This MOU does not constitute a legally binding commitment by any Agency, and it does not create any rights in any third party. This MOU is not legally enforceable by any Agency or third party, and nothing in this MOU may be the basis of any challenges or appeals. This MOU does not create any legal obligation for or between any of the Agencies.
- H. The Agencies enter this MOU while wishing to maintain their own separate and unique missions and mandates, and their own accountabilities. This MOU does not provide any new powers or authorities to any of the Agencies beyond those that the Agencies already possess under the law. Likewise, this MOU is not intended to limit, abrogate, delegate, or otherwise alter any of the Agencies' existing powers and authorities which it may possess under the law, but rather memorializes the Parties' intent to advance the objectives of the MOU consistent with and within the parameters of each Agency's powers and authorities under the law.

- I. The Agencies acknowledge that this MOU is not an obligation or a commitment of funds. Each Agency must be responsible for its own costs associated with advancing the objectives of the MOU, while recognizing that it can be beneficial to work together to raise or distribute funds for the activities in this MOU. Nothing in this MOU shall be construed as superseding or interfering in any way with any agreements or contracts entered into between or among the Agencies, either prior to or after the signing of the MOU.

APPENDIX A: ORGANIZATIONAL AUTHORITIES

The signatories of this MOU bring an array of authorities, experience, resources, and capacities that when brought together through a coordinated strategy will be instrumental in helping Bay Area communities manage risks to flooding and sea level rise. Recognizing there are other federal, state, and local agencies that have significant roles to play to address these challenges, the MOU signatories will work together to optimize their respective roles to support the broader network of stakeholders involved in multi-benefit, flood risk management efforts across the Bay Area. Table 1 below outlines key roles and authorities of each of the agencies, while Appendix A provides a more detailed description of the mission, scope of activities and primary functions, and governance/board structure of each agency. This information will inform the following section which identifies agency leads for specific functional areas. Agencies are listed in alphabetical order.

- The **Association of Bay Area Governments (ABAG)** is the Council of Governments (COG) for the nine counties and 101 cities and towns of the Bay Area. ABAG is governed by an executive board and led by the ABAG President and Vice President. Member representatives are elected officials and make operating decisions, authorize expenditures, and recommend policy. As a membership body of local governments, ABAG serves as a conduit for communication among cities and counties regarding their needs and challenges on issues related to land use, housing, environmental and water resource protection, disaster resilience, and energy efficiency.

- **San Francisco Estuary Partnership (SFEP)** is hosted by ABAG and staffed by MTC under a MOU and contract for services. SFEP was established in 1988 by the State of California and the U.S. Environmental Protection Agency under the Clean Water Act's National Estuary Program to protect and restore the San Francisco Bay-Delta Estuary. The Partnership is a collaboration of local, state, and federal agencies, non-governmental organizations, academia, and business leaders. Its work is guided by the San Francisco Estuary Blueprint, a comprehensive and collective vision for the Estuary's future that was developed and approved by SFEP's Implementation Committee and Executive Council. Its climate adaptation work focuses on promoting integrated, coordinated, multi-benefit approaches to increase the resilience of estuarine tidal habitats, tributaries, and at-risk communities. SFEP helps staff the San Francisco Bay Restoration Authority (SFBRA) discussed in more detail under the State Coastal Conservancy.
- The **Bay Area Air Quality Management District (BAAQMD)** is the first regional air pollution control agency in the country, created by the California Legislature in 1955. The Air District is tasked with regulating stationary sources of air pollution in all nine Bay Area counties. It is governed by a 24-member board of directors composed of locally elected officials from each of the nine counties. The Board oversees policies and adopts regulations for the control of air pollution with the district. One important goal of BAAQMD is to establish the Bay Area as a leading area for emissions reductions in mobile sources, land use planning, innovative technology, and energy. Its monitoring and regulatory roles will be important when evaluating multi-benefit adaptation projects to address flooding and sea level rise.
- The **Bay Area Regional Collaborative (BARC)**, also known as the Joint Policy Committee (JPC) was created through Senate Bill 849 (Torlakson) and signed into law on September 24, 2004, with the purpose of coordinating the major regional planning efforts of ABAG, MTC, and BAAQMD. The passage of Assembly Bill 2094 (DeSaulnier) brought BCDC on as a member of BARC. An organizational plan completed in 2015 focused the activities of the BARC Governing Board and BARC staff on addressing climate change. The BARC Governing Board is comprised of 4 appointees each from ABAG, BAAQMD, BCDC, and MTC for a total of 16 voting members. The Executive Directors of the California State

Coastal Conservancy, Caltrans District 4, and the San Francisco Regional Water Quality Control Board participate in BARC Governing Board meetings and in cross-agency collaborative project work. BARC staff help facilitate cross-agency coordination, identifying opportunities for further integration across functions.

- The **California State Coastal Conservancy (The Conservancy)** is a state non-regulatory agency that leads and funds projects to protect coastal resources, increase opportunities for the public to enjoy the coast, and help communities prepare for the impacts of climate change. The Coastal Conservancy is governed by a seven-member Board of Directors appointed by the Governor and the state legislature. Six members of the Legislature, three from each house, provide legislative oversight and participate in Conservancy activities. Under its San Francisco Bay Area Program, the Conservancy may undertake projects within the entirety of the nine Bay Area counties. The Conservancy's Climate Ready Program authorizes the Conservancy to undertake projects that "*reduce greenhouse gas emissions, address extreme weather events, sea level rise, storm surge, beach and bluff erosion, salt water intrusion, flooding, and other coastal hazards that threaten coastal communities, infrastructure, and natural resources.*" The Conservancy is not prohibited from supporting grey infrastructure projects but is required to prioritize projects that use natural infrastructure and provide multiple public benefits, including protection of communities, natural resources, and recreational opportunities. The Conservancy may also provide technical assistance to communities developing projects that use natural infrastructure. Other Conservancy priorities include providing support for historically excluded communities, protecting critical public infrastructure, preserving public access to the shoreline, maintaining economically viable waterfronts, and planning for nature-based post-disaster recovery and adaptation pathways to strategic relocation.









































- The **San Francisco Bay Restoration Authority (SFBRA)** is staffed by the Conservancy with additional support from MTC, including SFEP. SFBRA grants parcel tax revenues from Measure AA (2016) towards projects that protect and restore the Bay shoreline, as well as public access and flood protection elements that are part of a shoreline habitat restoration project. It is designed to deliver essential local funding to restoration projects developed by others. It does not have a regulatory role. The SFBRA is led by a regionally representative governing board comprised of seven local and regional elected officials.
- The **San Francisco Bay Conservation and Development Commission (BCDC)** is a state planning and regulatory agency with permitting authority over the San Francisco Bay, the Bay shoreline, and Suisun Marsh. BCDC's mission is to protect these areas for future generations, expand public access to the Bay and its shoreline, and to address the impacts of sea level rise. The Commission is comprised of 27 members representing the 9 Bay Area counties, 4 cities appointed by ABAG, gubernatorial and legislative appointees, and regional, state, and federal agencies. BCDC establishes land use and shoreline management policies for the Bay in the San Francisco Bay Plan, which provides the basis for the Commission's permitting decisions and federal consistency determinations under its Coastal Zone Management Act authority. BCDC's Adapting to Rising Tides (ART) program supports the sea level rise planning efforts of local practitioners. Its Bay Adapt Initiative developed a joint platform of priority actions to address sea level rise and is guiding the implementation of the platform. SB 272 (Laird 2023) requires local governments to submit, and BCDC to approve, subregional sea level rise resiliency plans, consistent with BCDC-developed guidelines. Sea level rise adaptation strategies and projects identified in BCDC-approved plans will be prioritized for State funding, upon appropriation by the Legislature. BCDC is currently developing a Regional Shoreline Adaptation Plan, which will fulfill the requirements of SB 272's guidelines and serve as a regional planning vision for the future of the Bay shoreline.

- **Caltrans District 4** is one of the California Department of Transportation's (Caltrans) 12 district offices based in Oakland. Caltrans' mission is to provide a safe, sustainable, integrated, and efficient transportation system to enhance California's economy and livability. District 4 covers the nine-county Bay Area, and its adaptation activities include corridor planning, transportation planning, grant management, and flood prevention and response, including repairs focused on the State Highway System (SHS). Additionally, Caltrans is charged with minimizing fire risk through vegetation control along transportation corridors. Caltrans has responsibility for the State Highway Operations and Protection Program (SHOPP) which funds the repair and preservation of the SHS, including a Climate Adaptation and Resilience Program that facilitates comprehensive and long-term resilience strategies to address flooding and sea level rise (and associated hazards) on the SHS. Caltrans is responsible for the State Climate Resilience Improvement Plan for Transportation (SCRIPT) as part of the federal program Promoting Resilient Operations for Transformative, Efficient and Cost Saving Transportation (PROTECT) funded by the Infrastructure Investment and Jobs Act (IIJA) (2021). PROTECT's purpose is "to help make surface transportation more resilient to natural hazards, including climate change, sea level rise, flooding, extreme weather events and other natural disasters through support of planning activities, resilience improvements, community resilience and evacuation routes, and at-risk coastal infrastructure."⁴ This provides an important source of federal funding to Caltrans to support investments in climate resilient transportation infrastructure. Caltrans also administers the Sustainable Transportation Planning Grant Program to encourage local and regional planning that supports state goals, including identification of transportation-related climate vulnerabilities through the development of climate adaptation plans, as well as project-level adaptation planning to identify adaptation projects and strategies for transportation infrastructure.

⁴ State Climate Resilience Improvement Plan for Transportation, Draft September 2023.

- The **Metropolitan Transportation Commission (MTC)** is the federally designated Metropolitan Planning Organization (MPO) with experience planning and funding complex infrastructure projects in close collaboration with the state, local jurisdictions, transit operators, and communities. There are 21 Commissioners appointed to MTC comprised mostly of elected officials representing the nine counties of the Bay Area. MTC directly distributes more than \$1 billion a year to local public transit agencies, transportation authorities, and other recipients and prioritizes requests from local agencies for millions more in state and federal funds. Acting as the Bay Area Toll Authority (BATA), MTC collects approximately \$700 million a year in bridge tolls on the region's seven state-owned toll bridges and allocates these funds for transportation improvements. Together with ABAG, MTC produces Plan Bay Area, the regional long-range plan addressing land use, transportation, and the environment in the Bay Area. MTC and ABAG are distinct boards sharing one integrated staff. MTC staff work to support ABAG Executive Board initiatives via a contract for services.
- The **San Francisco Regional Water Quality Control Board** is a regulatory agency responsible for preserving, enhancing, and restoring the quality of the San Francisco Bay Region's water resources for the protection of the environment, public health, and beneficial uses. The Regional Board is required to develop, adopt (after public hearing), and implement a Water Quality Control Plan (Basin Plan) for the San Francisco Bay region. The Basin Plan is the master policy document that contains descriptions of the legal, technical, and programmatic basis of water quality regulation in the San Francisco Bay region. The Regional Board has the authority to enforce all its requirements, orders, and standards. The primary goal of enforcement is to stop on-going problems and cleanup as necessary to preserve the beneficial uses of the Bay Area's water resources.

APPENDIX B: ORGANIZATIONAL ROLES AND RESPONSIBILITIES TABLE

| | ABAG/ SFEP | BAAQ MD | BARC | BCDC | Caltran s | MTC | Conser- vancy | Water Board |
|---------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Planning |  |  |  |  |  |  |  |  |
| Fund Management |  |  |  |  |  |  |  |  |
| Technical Assistance |  |  |  |  |  |  |  |  |
| Regulatory Alignment |  |  |  |  |  |  |  |  |
| Coordination |  |  |  |  |  |  |  |  |

SYMBOL KEY for Graphic Table above:



PRIME



RESPONSIBLE



INVOLVED

APPENDIX C: DEFINITION OF KEY TERMS

The following definitions⁵ apply to this MOU.

- **Climate adaptation** (California Governor's Office of Planning and Research) is how natural and human systems adjust to a new or changing climate. This is frequently combined with the term “climate resilience” which is the capacity for entities (individual, community, organization, or natural system) to prepare for disruptions, recover from shocks and stresses, and adapt and learn from them. *Climate adaptation can include policies, programs, and on-the-ground projects that reduce projected hazard impacts.*
- **Infrastructure** (Cambridge Dictionary) is the basic systems and services, such as transportation and power supplies, that a country or organization uses in order to work effectively. *Two types of physical infrastructure for adapting to flooding and sea level rise are:*
 - **Natural and nature-based (green) infrastructure** (San Francisco Estuary Institute, 2020) are physical landscape features that are created and evolve over time through the actions of environmental processes, or features that mimic characteristics of natural features but are created by engineering and construction (in concert with natural processes) to provide coastal protection and other ecosystem services. *An ecotone levee is an example of nature-based infrastructure.*

⁵ Bay Area Regional Collaborative. (2023). *Regional System Assessment Report*. self.
California Governor's Office of Planning and Research. (n.d.). *California Adaptation Planning Guide*. Retrieved from Governor's Office of Planning and Research: <https://resilientca.org/apg/>
Cambridge Dictionary. (n.d.). Cambridge Academic Content Dictionary. Cambridge, England: Cambridge University Press. Retrieved April 23, 2024, from https://dictionary.cambridge.org/us/dictionary/english/infrastructure#google_vignette
Intergovernmental Panel on Climate Change. (n.d.).
San Francisco Estuary Institute. (2020). *San Francisco Bay Shoreline Adaptation Atlas*. Retrieved from SFEI: <https://www.sfei.org/adaptationatlas>
U.S. Environmental Protection Agency. (2012). State and Local Climate and Energy Program Glossary of Terms. Office of Air and Radiation/Office of Atmospheric Protection/Climate Change Division. Retrieved April 24, 2024, from https://sor.epa.gov/sor_internet/registry/termreg/searchandretrieve/glossariesandkeywordlists/search.do?details=&glossaryName=State/Local%20Climate%20and%20Energy

- **Conventional (grey) infrastructure** (San Francisco Estuary Institute, 2020) are physical features constructed by humans to provide coastal protection and reduce flood risk, usually with relatively hard materials such as concrete, rock, and steel, and without incorporation of biological components. *A seawall is an example of a type of grey infrastructure built to address sea level rise.*
- **Flooding** (Intergovernmental Panel on Climate Change) is the overflowing of the normal confines of a stream or other waterbody, or the accumulation of water over areas that are not normally submerged. *Flooding can be caused by sea level rise, storm surge, high tides, river flooding, heavy rainfall, and/or groundwater rise.*
- **Multi-benefits** (also referred to as **Co-benefits**) (U.S. Environmental Protection Agency, 2012) are the ancillary or additional benefits of policies or projects that are implemented with a primary goal, such as climate change mitigation - acknowledging that most efforts designed to reduce greenhouse gas emissions also have other, often at least equally important, benefits (e.g., energy savings, economic benefits, air quality benefits, public health benefits). *For example, a multi-benefit flood risk reduction project can also enhance ecological functions, improve water quality, and provide public access opportunities.*
- **Sea level rise** (Intergovernmental Panel on Climate Change) is the change to the height of sea level, both globally and locally due to ocean volume change (glacier and ice sheet melt, expansion under warmer temperatures); changes in ocean basin shapes, Earth's gravitational and rotational fields; and local subsidence or uplift of land.
- **Technical assistance** (Bay Area Regional Collaborative, 2023) is a set of services provided to help intended (general or targeted) audiences have the knowledge, ability, and/or capacity to achieve specific goals and outcomes related to climate adaptation. These services may include, but are not limited to assistance in raising funds, policy writing, technical guidance and tools, one-on-one support, and training.