OneShoreline
Building Solutions for a Changing Climate

HYBRID MEETING: IN-PERSON AND BY VIDEOCONFERENCE

This meeting will be held **in-person on the first floor of 1700 S. El Camino Real in San Mateo, and remotely** pursuant to Government Code Section 54953(e). Participants attending the meeting remotely via Zoom should click on the following link:

https://oneshoreline-org.zoom.us/j/86393109610

or call 669-444-9171 (Meeting ID# 86393109610)

San Mateo County Flood & Sea Level Rise Resiliency District

BOARD OF DIRECTORS

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South	Lisa Gauthier
At-Large	Marie Chuang

AGENDA April 24, 2023 4:00 PM

1. **Roll Call**

2. **Public Comment *** Persons wishing to address the Board on District-related matters not on this Agenda may speak for up to two minutes; comments on Agenda items shall be heard during that item for up to two minutes.

3. **Action to Set the Agenda ***

4. **Regular Business**

   A. Discuss the District's Draft *Planning Guidance Policy to Protect and Enhance Bay Shoreline Areas of San Mateo County*, available at OneShoreline.org for public comments through May 19, 2023

   B. Approve the Second Amended and Restated Joint Powers Agreement for the San Francisquito Creek Joint Powers Authority

5. **Chair's Report** *

6. **CEO's Report** *

7. **Board Member Reports and Items for a Future Agenda** *

8. **Adjournment**

* There is no written staff report for this item

Meeting information, and public access and communications

- Verbal public comments will be accepted during the meeting in person or remotely. Remote comments can be submitted at the appropriate time by raising your hand via Zoom's Chat or hand raising functions, or speaking if joining by phone. Written public comments can be submitted by email to board@OneShoreline.org by noon on the meeting day – indicate the agenda item to which your comment applies and it will be read or summarized at the meeting by the Board Clerk.
- If you require assistance to participate in the meeting or wish to submit written communication to all Board Members regarding the meeting, please contact the Clerk of the Board by 9:00 am on the day of the meeting.
- Public records relating to an open session item on the agenda are available at least 72 hours prior to a Regular Board meeting or at least 24 hours prior to a Special Board meeting, when these records are distributed to Board members. Public records are available at the District office at 1700 South El Camino Real, Suite 502, San Mateo, CA 94402 and at OneShoreline.org. To receive these documents electronically, please email board@OneShoreline.org.

San Mateo County Flood and Sea Level Rise Resiliency District

Agenda Report

Date: April 24, 2023

To: San Mateo County Flood and Sea Level Rise Resiliency District Board of Directors

From: Len Materman, CEO

Subject: Discuss the District's Draft *Planning Guidance Policy to Protect and Enhance Bay Shoreline Areas of San Mateo County*, available at OneShoreline.org for public comments through May 19, 2023

Recommendation:

That the San Mateo County Flood and Sea Level Rise Resiliency District ("District") Board of Directors ("Board") receive a presentation on, and discuss, District planning guidance efforts that are described at (OneShoreline.org/planning-guidance), including the recently released Draft *Planning Guidance Policy to Protect and Enhance Bay Shoreline Areas of San Mateo County*.

Background and Discussion:

Over the course of the past few years, weather extremes in San Mateo County were extraordinary in terms of dramatic changes from drought to deluge and we saw repeated, substantial flooding. Meanwhile, the development and redevelopment of our cities and unincorporated areas goes on, guided by the general plans, specific plans, and zoning ordinances that reflect our values and priorities on issues like housing affordability and supply, economic vitality, transportation routes, safety, equity, and open space. While weather extremes have increasingly impacted these key aspects of our communities, until recently climate change has not materially affected the planning documents that guide them and local decision-making regarding where and how development should occur.

This issue has become more pressing as there are many active proposals for major Bayside development and redevelopment projects that are intended to function for decades during which time the impacts of climate change will grow. These projects should be designed to function under future conditions, including extreme storms and rising sea level and groundwater, and be synchronized with regional resilience efforts to avoid the difficult and costly endeavor to retrofit these assets later. Furthermore, while each city has different priorities and processes to shape its future, these transformative impacts of climate change do not respect their jurisdictional boundaries.

To fulfill two objectives – 1) enabling developments, particularly alongside a creek or shoreline, to function for their intended lifespan and contribute to the resilience of surrounding areas, and 2) aligning the long-term protection and enhancement of adjacent communities – in late 2022, the District (also known as OneShoreline) engaged a consultant to develop guidance for the twelve cities and areas of the County along San Francisco Bay. That effort resulted in a draft *Planning Guidance Policy to Protect and Enhance Bay Shoreline Areas of San Mateo County* that was released on April 19 for a 30-day public comment period; it is enclosed within this agenda packet and is available at OneShoreline.org/planning-guidance.

OneShoreline's Planning Guidance Policy is intended to be a standardized yet evolving voluntary resource for Bayside jurisdictions to account for climate change driven conditions in two key areas:

1. Planning documents (general and specific plans, zoning ordinances), and
2. Reviews of private developments in areas near the Bay subject to these foreseeable climate impacts.

The origins of this document began in the summer of 2021 when the City of Burlingame reached out to OneShoreline for assistance in developing a chapter focused on sea level rise in its citywide zoning ordinance update. Burlingame's Public Access, Flood and Sea Level Rise Resilience Performance Guidelines was adopted by the City Council in December of that year, and in 2022 the City of South San Francisco followed with a Flood Plain/Sea Level Rise Overlay in its new zoning code. Also in 2022, OneShoreline engaged with the cities of San Carlos and San Mateo to account for climate-driven impacts in their General Plan updates.

OneShoreline has learned lessons from the development and implementation of these planning documents, and over the past two months we have solicited feedback on our draft Planning Guidance Policy from staff at the County, all twelve cities along the county's Bay shoreline, and other key stakeholders, including the Bay Conservation and Development Commission, City/County Association of Governments of San Mateo County, San Francisco Estuary Institute, and consultants with expertise in land use planning (PlaceWorks) and flood protection engineering/FEMA accreditation (Schaaf & Wheeler Consulting Civil Engineers). The following describes what the draft Planning Guidance Policy document is and is not:

- **This document is for jurisdictions and those who wish to weigh in on land use planning and development** near the Bay shoreline of San Mateo County. The intended audience is the twelve cities within San Mateo County that are directly impacted by sea level rise from the Bay, including Belmont, Brisbane, Burlingame, East Palo Alto, Foster City, Menlo Park, Millbrae, Redwood City, San Bruno, San Carlos, San Mateo, and South San Francisco, as well as the County itself. In addition, this document is designed to advance conversations regarding climate resilience in new development among regulatory agencies and organizations interested in housing, transportation, utilities, environmental protection, environmental justice, and other matters. The specific hazards and jurisdictional landscape along the County's Pacific coast are substantially different from the Bayside and thus planning guidance near that shoreline is also substantially different (a current resource on this topic is the California Coastal Commission's guidance on sea level rise planning).
- **This document is voluntary guidance, not mandatory regulations**. Jurisdictions are highly encouraged to include Planning Guidance Policy provisions in key planning documents and processes.
- **This document is an actionable template, not a reference document only**. While accounting for future conditions does require a perspective shift, this document is designed to be as implementable as possible, with chapters of template text to insert into pre-existing processes and documents (Chapter II: General and Specific Plans, Chapter III: Zoning Amendments, Chapter IV: Project Review Checklist, and Chapter V: Standard Conditions of Approval).
- **This document is focused on new or substantial private development, not existing development or public infrastructure**. OneShoreline's current focus is to ensure new private developments are sited and designed to accommodate protection infrastructure. Complementary guidance on integrating climate risks into capital planning is anticipated in 2024.
- **This document is evolving, not static**. OneShoreline intends to periodically update this document as new climate science – including projections regarding storms, sea level rise, and groundwater rise – becomes available and lessons are learned from the implementation of this guidance.

In addition to this guidance document, OneShoreline is available to provide cities and the County with technical assistance as they seek to integrate climate risks into land use planning, policies, and regulations. Specific forms of technical assistance include:

- presenting on the intersection of climate resilience and land use to governing bodies and commissions;
- providing data regarding vulnerabilities and vulnerable areas – OneShoreline's Map of Future Conditions can be found on our planning guidance webpage; and
- reviewing and providing comments on long-range planning initiatives, capital projects, and proposals for private projects in the entitlement process.

As with all aspects of the Planning Guidance Policy, including OneShoreline in planning processes and project review is voluntary and is intended to help cities achieve their resilience objectives. OneShoreline understands that incorporating resilience to future conditions caused by climate change requires political will and a commitment of time and resources. OneShoreline seeks to add value to local development planning and reviews and boost local capacity and expertise. In addition, the guidance document highlights state and federal grant programs that seek to help close this capacity gap.

More details on the purposes, background, and content of, the Planning Guidance Policy will be presented to the Board and public by OneShoreline staff and consultants on April 24. This will include a discussion of our Bay Protection Standard and interactive online Map of Future Conditions that accompanies this guidance.

Following Board and public input at the April 24 and May 22 Board meetings, as well as our receipt of comments at a virtual Public Information and Feedback Session on May 9 at 12:00 PM or comments that are emailed to Planning@OneShoreline.org by May 19, District staff plans to incorporate comments and bring the final draft of the Planning Guidance Policy back to the Board for approval at its June 26, 2023 meeting.

Impact on OneShoreline Resources: There is no direct fiscal impact on OneShoreline resources of receiving a presentation and discussing its planning guidance efforts.

Attachment:

Draft *Planning Guidance Policy to Protect and Enhance Bay Shoreline Areas of San Mateo County*

To view the draft Planning Guidance Policy and Map of Future Conditions online, and to register for the May 9 Public Information and Feedback Session, visit the District planning guidance webpage, OneShoreline.org/planning-guidance.

AGENDA ITEM 4A

OneShoreline
Building Solutions for a Changing Climate

Planning Guidance Policy

To Protect and Enhance Bay Shoreline Areas of San Mateo County

April 19, 2023 Public Draft

SAN MATEO COUNTY FLOOD AND SEA LEVEL RISE RESILIENCY DISTRICT
OneShoreline.org 1700 S. El Camino Real, Suite 502, San Mateo, CA 94402

ACKNOWLEDGEMENTS

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Input incorporated from:

The cities of Belmont, Brisbane, Burlingame, Menlo Park, Millbrae, Redwood City, San Bruno, San Carlos, San Mateo, and South San Francisco

County of San Mateo

Bay Conservation and Development Commission

City/County Association of Governments of San Mateo County

San Francisco Estuary Institute

PlaceWorks

Schaaf & Wheeler Consulting Civil Engineers

Cover Photo Credit
Primary Photo: Redwood Shores (Google Earth 2022)
Row of Secondary Photos (Left to Right): 7th Avenue in San Bruno (10/24/2021, Resident), Redwood City Shoreline Development (Len Materman), Burlingame Shoreline Development Proposal (Peninsula Crossing Development)

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PREFACE

During the winter of 2022-23, California went from the three driest years on record to the three wettest weeks on record. In San Mateo County, this dramatic change from drought to deluge was a repeat of 2021, when two atmospheric river storms brought almost 3/4 of all precipitation that year and led to major flooding and two deaths. These flood-inducing conditions, particularly in low-lying areas affected by tides from San Francisco Bay, will become more intense and commonplace due to continued sea level rise, which will impact this county more than any other in California.

Meanwhile, the development and redevelopment of our cities and unincorporated areas goes on, guided by the key local planning documents – general plans, specific plans, and zoning ordinances – that reflect our values and priorities regarding issues like housing affordability and supply, economic vitality, transportation routes, safety, equity, and open space. While weather extremes in recent years have impacted these key aspects of our communities, until recently climate change has not materially impacted the planning documents that guide them and local decision-making regarding where and how development should occur.

This began to change in San Mateo County with a state law requiring that climate risks and resilience strategies be included in the Safety Element of cities' General Plans and in 2021 the City of Burlingame went a step further. As part of the process to update its citywide zoning ordinance, Burlingame reached out to the San Mateo County Flood and Sea Level Rise Resiliency District for assistance in developing a chapter focused on site-specific resilience planning. The District, also known as OneShoreline, was established by State legislation in January 2020 as the first countywide government agency in California to build regional resilience to the water-related impacts of climate change.

The objective of that chapter of Burlingame's zoning ordinance (adopted in December 2021) is to ensure that upcoming developments within areas impacted by the Bay, particularly those along a creek or shoreline, can both function for their intended lifespan as our environment changes and enable or contribute to the resilience of surrounding areas. Building on its work with Burlingame, in 2022, OneShoreline engaged with the cities of South San Francisco, San Carlos, and San Mateo to include foreseeable climate-driven conditions into their core planning documents.

Following the experience of recent winters and with a greater understanding of what's to come, OneShoreline aims for all jurisdictions to plan for and build this long-term resilience. As OneShoreline begins its fourth year, two core concepts drive our work to make this happen:

- we can no longer plan our future by looking in the rear-view mirror, and
- we are all in this together.

This Planning Guidance Policy is intended to be a resource for the twelve cities within San Mateo County and the County itself that are directly impacted by the Bay. While each city has different priorities and processes to shape its future, the transformative impacts of climate change, including extreme storms and rising sea level and groundwater, do not respect their jurisdictional boundaries. Thus, through this voluntary planning guidance, as well as ongoing engagement with each city and project proponents, OneShoreline seeks to align the long-term protection and enhancement of our communities and serve as a model for the many areas facing similar challenges.

Dave Pine
Chair, OneShoreline Board of Directors
President, San Mateo County Board of Supervisors

Len Materman
Chief Executive Officer
OneShoreline

HOW TO USE THIS DOCUMENT[1]

OneShoreline's Planning Guidance Policy is intended to be a standardized yet evolving resource for cities and the County to account for climate-driven flooding, stormwater, groundwater rise, and sea level rise in planning documents (General Plan, Specific Plan, Zoning Ordinance) and approvals of projects in areas near the Bay subject to foreseeable climate impacts.

This document IS:	**This document IS NOT:**
Voluntary guidance	**Mandatory regulations**
Including the provisions in this document within a jurisdiction's key planning documents and processes is voluntary but highly encouraged in order to maximize each jurisdiction's resilience to climate change and to align that resilience with their neighbors.	
An actionable template	**A reference document only**
This document is designed to allow cities and the County to insert template text into pre-existing processes and documents. While accounting for future conditions does require a perspective shift, OneShoreline seeks to make this shift as implementable as possible and thus the document highlights situations where a menu of options is most appropriate.	
Focused on new/substantial private development	**Focused on existing development or public facilities and infrastructure**
This document contains recommendations for new or substantial private development rather than guidance for existing development, as OneShoreline's current focus is to ensure private development is sited and designed to accommodate protection infrastructure. Also, while this document includes template policies that pertain to public facilities and infrastructure (particularly in Chapter II), the document does not provide detailed guidance on how to implement those policies. In 2024, OneShoreline anticipates issuing a complementary guidance document on the critical task of integrating climate risks into capital planning. In the interim, jurisdictions are invited to discuss major capital projects with OneShoreline.	
Focused on the County Bayside	**Focused on the County Coastside**
Like jurisdictions along San Mateo County's San Francisco Bay shoreline, the changing climate significantly affects land use decisions along our treasured Pacific coastline. However, the specific hazards and jurisdictional landscape along the County's Pacific coast are substantially different from the Bayside and thus guidance on how to plan and develop for long-term future conditions is also substantially different. At this time, OneShoreline recommends that jurisdictions on the coast review the California Coastal Commission's resources for sea level rise planning assistance for Local Coastal Programs.[2]	
Evolving	**Static**
OneShoreline intends to periodically update this document as new climate science – including projections regarding storms, sea level rise, and groundwater rise – become available, and as lessons are learned from the implementation of this guidance by local jurisdictions.	

The intended audience of this document is the County of San Mateo and the twelve cities within its boundaries that are directly impacted by sea level rise from the Bay, including:

- Belmont
- Brisbane
- Burlingame
- East Palo Alto
- Foster City
- Menlo Park
- Millbrae
- Redwood City
- San Bruno
- San Carlos
- San Mateo
- South San Francisco

ONESHORELINE'S BAY PROTECTION STANDARD

WHY A SINGLE PROTECTION STANDARD?

A community's decision around establishing a standard to protect against a hazard is the result of several factors: the nature of the threat, associated costs, and tolerance for risk. Perhaps no standard for protection is more complex to determine than for the interrelated hazards driven by climate change. Add subjective considerations to this technical uncertainty – like risk tolerance and the sliding scale of the financial, land use, and ecological costs accompanying various mitigation approaches – and it is no wonder that most communities have not begun to build climate resilience.

Meanwhile, it is evident that climate change poses a clear and present danger; that many areas of the shoreline are proposed for development; and that designing, permitting, and building resilience takes a long time. Therefore, a standard must be chosen based upon the best available climate science. Because the timeline for specific levels of sea rise or extreme precipitation is unclear, rather than focus on a specific time horizon, OneShoreline's approach to meeting the urgency of today and the uncertainty of tomorrow is to focus on a specific elevation standard and enable further adaptation. With all of this in mind, OneShoreline has developed an objective, the Bay Protection Standard, to be both meaningful and achievable.

DIFFERENT ADAPTATION STRATEGIES AND THE BAY PROTECTION STANDARD

Adaptation to climate-driven flooding, shallow groundwater rise, and sea level rise must utilize a suite of strategic approaches that – in tandem and/or in sequence – guide a community's response to changing conditions. These approaches include creating physical barriers to reduce risk (*protect*), limiting exposure to the hazard (*avoid*), minimizing the consequences of the hazard when exposed (*accommodate*), and re-locating development out of areas exposed to the hazard (*managed retreat*).[3] This guidance document includes all of these strategies, which can work together to address different interrelated hazards, such as when increased building elevations (*accommodation*) and creek buffer zones (*avoidance/managed retreat*) protect against creek and rising groundwater flooding, while shoreline infrastructure (*protection*) addresses waves and flooding from the Bay.

OneShoreline's Bay Protection Standard is a protection strategy. Due to the constrained and urbanized conditions in communities along this county's Bay shoreline (where coastal erosion impacts are limited), managed retreat is included in this guidance document only in terms of the

highly recommended buffer zones along the Bay shoreline or creek bank. Future iterations of this document may include more substantial guidance in this regard.

WHAT IS ONESHORELINE'S BAY PROTECTION STANDARD?

The Bay Protection Standard is the Base Flood Elevation (BFE) of San Francisco Bay plus 6 feet. The BFE is defined by the Federal Emergency Management Agency (FEMA) as the water-surface elevations of the 1% annual-chance (or commonly called "100-year") flood.[4] In coastal areas impacted by waves, the BFE incorporates tides, storm surge, and wave heights.[5] Based on the current FEMA Federal Insurance Rate Maps (FIRMs) published for San Mateo County in 2019, the BFE Bay water level along the shoreline ranges from 10 feet to 16 feet NAVD88. Therefore, the Bay Protection Standard ranges from 16 feet to 22 feet NAVD88.

WHAT IS NAVD88?

The North American Vertical Datum of 1988 (NAVD88) is the official vertical datum of the United States. Therefore, numbers referenced based on NAVD88 are relative to a national standard and not to the ground level near the shoreline (for context, the average daily high tide along the San Mateo County Bay shoreline is approximately 7 feet NAVD88).

WHAT IS SHORELINE INFRASTRUCTURE?

The Bay Protection Standard represents the minimum, post-settlement elevation required at the top of any shoreline protection infrastructure. For the purposes of this document, shoreline protection infrastructure is defined as engineered structures, likely in concert with natural infrastructure, that are designed to prevent overtopping from coastal hazards – sea level rise, storm surge, wave runup – and meet requirements to be accredited by FEMA so that areas on the landward side of the infrastructure are not mandated to purchase flood insurance. "Grey" structures include traditional levees, seawalls and other types of human-designed infrastructure, while "green" strategies include using natural features such as wetlands or other habitats to reduce flood risk.[6]

At this time, strategies that are only "green" do not meet federal – and thus OneShoreline's – requirements for shoreline protection infrastructure. FEMA Technical Report 89-15[7] currently identifies four primary functional types of coastal flood protection: gravity seawalls, pile-supported seawalls, anchored bulkheads, and dikes/levees. Thus, while marshes provide important flood protection benefits by reducing wave height and absorbing water, they must be paired with "grey" infrastructure and/or with raising or relocating development away from the shoreline. Therefore, this guidance document prioritizes hybrid approaches for protection infrastructure such as an ecotone levee – a vegetated gentle slope connected to marsh and backed by an accredited levee – that incorporate natural features to conserve ecosystem values and functions while also providing meaningful flood protection.

ALIGNMENT WITH STATE SEA LEVEL RISE GUIDANCE

The latest (2018) planning guidance from the State of California outlines sea level rise scenarios ranging from 1 to 10 feet by 2100, based on low and high emissions scenarios. The guidance also provides recommendations for what sea level rise projections to use in low, medium-high, or extreme risk aversion decisions. In February 2022, OPC released a State Agency Sea Level Rise Action Plan for California, which recommended minimum sea level rise adaptation

planning for 3.5 feet by 2050 and 6.0 feet by 2100. As discussed previously, given the wide range of potential outcomes due to uncertainty in future greenhouse gas emissions and their geophysical effects, and variable risk aversion among shoreline communities, OneShoreline has defined its Bay Protection Standard based on a specific elevation (FEMA BFE + 6 feet) rather than on a time horizon. The Bay Protection Standard provides long-term resilience in two ways:

1. **Protecting against overtopping from a Bay Total Water Level:** The term "Total Water Level" collapses the complex array of coastal processes that affect Bay water level into a single representative elevation. Combinations of temporary conditions (storm surge, wave runup, tides, seasonal events such as El Niño) and permanent sea level rise scenarios can result in the same Total Water Level (see Figure 1).[8]

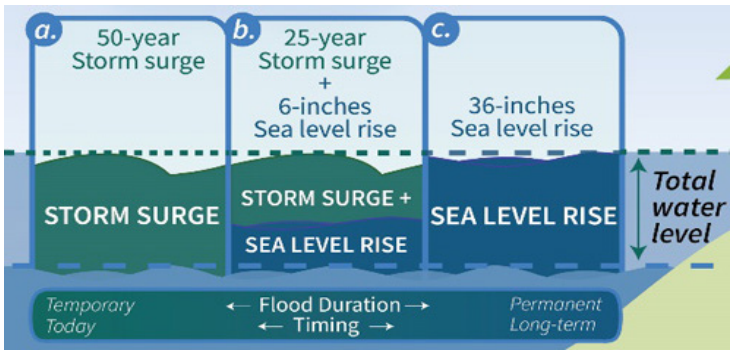


Figure 1. Sample of Multiple Combinations of Conditions that Result in the Same Total Water Level
(Source: BCDC's Adapting to Rising Tides Program)[viii]

2. **Accounting for FEMA freeboard requirements:** Freeboard is defined as an additional height above a design elevation to provide a buffer/factor of safety to compensate for unknown factors that could contribute to flood height.[9] Generally, FEMA requires freeboard for coastal levees to be at least 2 feet above the 100-year stillwater elevation or 1 foot above that stillwater elevation plus wave runup, whichever is greater.[10] This requirement is necessary for a levee to be accredited by FEMA so that areas on the landward side of the levee are not mandated to purchase flood insurance. The Bay Protection Standard exceeds FEMA's current requirements to prevent a situation where a project is completed, only to have the community mapped into the FEMA floodplain upon the next FEMA map revision and subject to the flood insurance mandate once again.

As described above, the Total Water Level of the Bay that can result in overland flooding depends

THE BAY PROTECTION STANDARD: KEY TAKEAWAYS

- The Bay Protection Standard protects against a Bay water level equal to the FEMA BFE + 6 feet, which is not the same as 6 feet of sea level rise during storm surge and associated wave runup.
- The shoreline infrastructure selected for a given project (wall and/or gradual levee slope with natural infrastructure) has a significant impact on the height of wave runup and therefore, the overall performance of infrastructure built to the Bay Protection Standard. Protection measures using more gradual slopes with natural elements not only provide much greater ecological benefits, but also reduce the height needed to protect from higher waves.

on several factors, including sea level, storm surge, and waves. It also depends on what the shoreline looks like. The first two rows of Table 1 below illustrate how, under the same sea level and storm surge conditions, a shoreline levee with a gradual (10:1) Bayside slope can result in substantially less wave runup – and thus less flooding – as compared to a vertical wall of the same elevation. The last two rows of Table 1 illustrate how 6 feet of sea level rise during a 50-year storm surge is equal to 9 feet of sea level rise on a calm day. A Bay Protection Standard value of 16 feet (10 feet BFE + 6 feet = 16 feet) prevents overtopping in all scenarios in Table 1, except for the vertical wall scenario in the second row with 6.5 feet of wave runup.

TABLE 1. EXAMPLE ILLUSTRATING PERFORMANCE OF A 16-FOOT BAY PROTECTION STANDARD

MHHW	+ Sea Level Rise	+ Storm Surge	+ Wave Runup	= Total Water Level
7 feet	3 feet	100-year	3 feet (10:1 Levee)	16 feet
7 feet	3 feet	100-year	6.5 feet (Wall)	19.5 feet
7 feet	6 feet	50-year	None	16 feet
7 feet	9 feet	None	None	16 feet

Note: MHHW = Mean Higher High Water.
Source: Data taken from MHHW + 108" ART scenario[11] and coastal hazard analysis for OneShoreline's Millbrae-Burlingame Shoreline Protection Project.

OneShoreline will update this Planning Guidance Policy and the Bay Protection Standard as climate science, and our understanding of its application for local conditions, advances.

CHAPTER I | IMPLEMENTATION AND INTERAGENCY DEVELOPMENT REVIEW

IMPLEMENTATION

This document is intended to help elected officials and staff at jurisdictions along San Mateo County's Bay shoreline incorporate aligned protection against the water-related impacts of climate change into land use planning, policies, and decisions.

REGULATORY CONTEXT

In October 2015, Governor Brown signed Senate Bill 379 (Jackson), which amended Government Code Section 65302(g) to require all cities and counties in California to incorporate climate adaptation and resiliency into the general plan safety element.

SB 379 requires cities and counties to:

1. Review and update the safety element as necessary to address climate adaption and resiliency strategies;
2. Complete a vulnerability assessment;
3. Develop adaptation and resilience goals, policies, and objectives; and
4. Develop feasible implementation measures.

SB 379 also allows other planning documents, such as climate adaptation plans, local hazard mitigation plans, or others, to fulfill the climate adaptation planning requirements, provided that the alternative plan is consistent with statutes and is adopted and incorporated by reference into the general plan safety element. Per SB 379, by 2022, local governments are required to take action to update the safety element per the above requirements.

SB 1035 (2018, Jackson), further amended Government Code Section 65302(g) to require local agencies to review and, if necessary, update the flood, fire hazards, and climate adaptation portions of the safety element following the housing element update

PLANNING FOR SEA LEVEL RISE IN SAN MATEO COUNTY

In 2018, the County of San Mateo released a Sea Level Rise Vulnerability Assessment to understand how sea level rise will affect San Mateo County residents, businesses, community services, and infrastructure. The County's Assessment maps future risk scenarios and assesses vulnerability of assets and recommends actions and solutions.

Building upon the County's Assessment and with support from the County's Climate Ready SMC program, in 2020, the City of Millbrae updated its Sea Level Rise Adaptation Assessment.

Similarly, in 2019, the City of Burlingame also prepared Sea Level Rise Adaptation Strategies and Risks and Vulnerability Memorandum. Burlingame later completed a comprehensive update of the zoning ordinance in 2021, which includes Public Access, Flood and Sea Level Rise Performance Guidelines for Bayfront Developments.

The City of South San Francisco also recently completed a General Plan Update and Zoning Code Update in 2022. The General Plan includes a Community Resilience chapter, which addresses Climate Change and Sea Level Rise, and the Zoning Code includes a Floodplain/Sea Level Rise Overlay District.

at least every eight years, ensuring a regular update cycle to climate change considerations.

Additionally, SB 272 (Laird, introduced in January 2023), would require local governments within the coastal zone or the jurisdiction of the San Francisco Bay Conservation and Development Commission (BCDC) to plan for sea level rise through a Local Coastal Program approved by the California Coastal Commission or a subregional San Francisco Bay shoreline resiliency plan approved by BCDC by January 2034. This timeline does not reflect the urgency of the challenge for San Mateo County, which is a primary reason for the creation of this Planning Guidance Policy at this time.

CLIMATE ADAPTATION PLANNING TOOLS

In addition to the State's existing and pending requirements for climate adaptation planning, cities and counties have a range of voluntary planning tools that can address and integrate climate change adaptation. Those include:

- General plans, comprehensive plans, specific plans, or area plans;
- Zoning code and other land development codes, ordinances, and resolutions;
- Climate action plans (CAPs), climate change action plans, climate adaptation plans, climate adaptation and resilience plans, climate mitigation and adaptation plans;
- Capital improvement plans/programs;
- Integrated regional water management plans;
- Local coastal program (LCP);
- Local hazard mitigation plans; and
- Emergency operations plan.

CAPACITY BUILDING FUNDING

Incorporating resilience to future conditions caused by climate change requires additional time and resources that many local jurisdictions do not currently have the funding for. State and federal grant programs continue to be rolled out that seek to help close this capacity gap so jurisdictions can take critical steps in planning for climate adaptation. Some examples are featured below:

The Governor's Office of Planning and Research ICARP Programs provide funding to help fill local, regional, and tribal adaptation planning and resilience needs, provide resources, and support the development of a pipeline of climate resilient projects.

The California Strategic Growth Council Regional Climate Collaboratives Program is a new capacity-building grant program that enables community-rooted and cross-sectoral partners to deepen their relationships and develop the processes, plans, and projects that will drive and sustain climate action.

FEMA's Building Resilient Infrastructure and Communities (BRIC) Program funds Capability- and Capacity-Building Activities, which result in a resource, strategy, or mitigation product that will increase resiliency to future natural hazards.

While OneShoreline strongly supports integration of climate change adaptation into all of the above documents, this guidance document specifically focuses on general and specific plans and zoning ordinances. Resilience policies can be integrated into these broad planning documents, or as a stand-alone initiative. To help cities and the County tailor policies to their jurisdiction's specific needs, recommended template language is provided in the following Chapters.

TECHNICAL ASSISTANCE

In addition to this guidance document, OneShoreline provides cities and the County technical assistance with integrating sea level rise into land use planning, policies, and regulations. Specific forms of technical assistance include:

- Presenting on climate change, climate resilience, land use, and the intersection of these at meetings of a City Council, County Board of Supervisors, and their commissions;
- Providing maps and other data of areas and critical assets vulnerable to climate risks;
- Reviewing long-range planning initiatives, such as general plan updates or amendments, new or amended specific plans, zoning ordinance updates, and climate adaptation plans;
- Reviewing capital projects; and
- Reviewing and providing comments on proposals and design documents for private projects vulnerable to sea level rise that are currently undergoing the entitlement process (further outlined in "OneShoreline's Role in Local Development Review" section below).

ONESHORELINE'S ROLE IN LOCAL DEVELOPMENT REVIEW

Rather than only focus on current threats to its specific project site, major development and infrastructure projects must be built to function for their intended life span as the climate changes, as well as enable and integrate with regional climate resilience efforts.

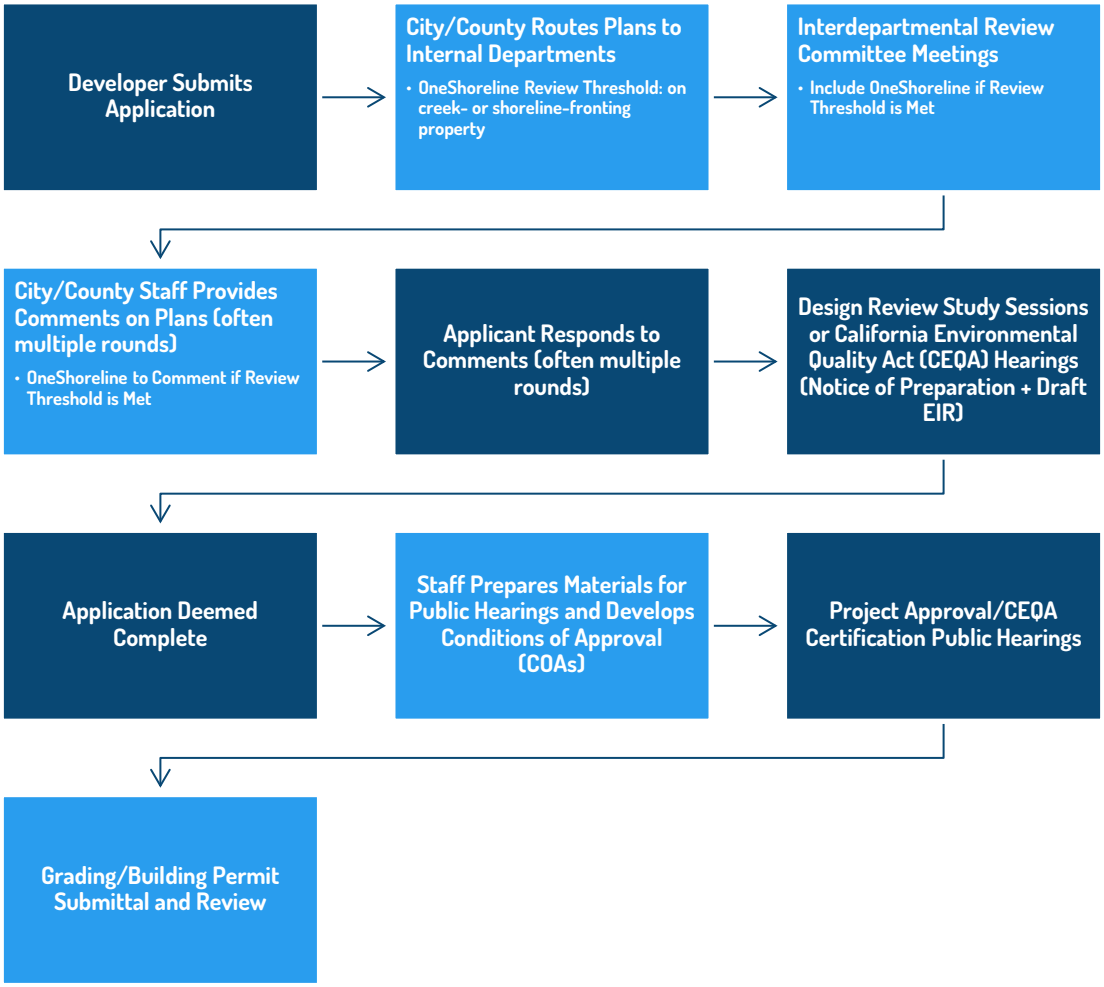
OneShoreline would like to work with cities and the County early in the development review process to ensure that new development evaluates water-related risks, incorporates resilient design practices, and aligns with regional protection projects. This is particularly true of projects on creek- or shoreline-fronting property (see the OneShoreline Review Threshold in Figure 2). Projects that do not front water but are located in areas subject to sea level and groundwater rise (e.g., within the Sea Level Rise and Shallow Groundwater Rise Overlay Districts recommended in Chapter III) are not suggested for OneShoreline review if they meet stormwater and building elevation recommendations (outlined below in Chapter III, Development Standards).

OneShoreline understands that the Permit Streamlining Act limits the time allowed for development reviews and adding another review may require additional time and effort. The first step to reducing the complexities and uncertainties associated with climate change in these reviews is the incorporation of clear resilience requirements in local land use planning documents.

From there, a potential process to incorporate a review by OneShoreline is described in Figure 2. OneShoreline will work with each jurisdiction to maximize the added value of this review to the development approval process. Some development projects may require approval from other county, state, and federal agencies, which would occur outside of the process outlined below. However, OneShoreline would seek consistency with the requirements of these agencies.

As with any recommendations in the OneShoreline Planning Guidance Policy, engagement by cities and the County with OneShoreline is voluntary. Inclusion of OneShoreline in development review procedures is meant to assist cities as they implement regulations and standards to increase climate resilience and align that resilience with their neighbors.

Figure 2. Representative Interagency Development Review Process Model



CHAPTER II | TEMPLATE LANGUAGE FOR GENERAL PLAN AND SPECIFIC PLANS

The following text includes template goals, policies, and actions that could be incorporated into a General Plan's Safety Element, Recreation and Open Space Element, Land Use, and/or Environmental Justice Element. Specific Plan policies could also be based on this language and refined to suit the more specific geographic scope of the Specific Plan area.

SAFETY OR LAND USE ELEMENTS

COMMUNITY RESILIENCE

GOAL: INCORPORATE FUTURE CONDITIONS INTO LAND USE PLANNING

Protect new and/or substantial construction from Future Conditions brought on by climate change by incorporating climate science into land use planning and the development review process.

Policies

- **Future Conditions Data and Monitoring.** In partnership with OneShoreline, review and use the best available science and projections on Future Conditions and regularly identify the areas of the [City/County] that are vulnerable to these impacts. Use this information to continue to develop or adjust planning and adaptation strategies.[12]
- **Future Conditions Planning.** Integrate planning for Future Conditions into all relevant [City/County] processes related to development, including Specific Plans, zoning ordinance updates, and [City/County] entitlement of new and/or substantial construction.
- **Future Conditions Protection.** Ensure that new and/or substantial construction is planned and designed to accommodate Future Conditions.

FUTURE CONDITIONS

References to "Future Conditions" in the policies and regulations within this document focus on water-related hazards associated with climate change, including increases in flooding, sea level rise, and shallow groundwater rise. However, cities and the County can broaden this definition to include a range of climate change hazards, including wildfire, extreme heat, and drought.

This definition intentionally does not specify a time horizon for "future" (e.g., "mid-century" or "end-of-century"), given the wide range of potential outcomes by the end of the century due to uncertainty in future greenhouse gas emissions and their geophysical effects.

Actions

- **Sea Level Rise Adaptation Plan.** Using the County's 2018 Sea Level Rise Vulnerability Assessment[13] as a basis, develop a [City/County] Sea Level Rise Adaptation Plan to develop a clearly defined and locally supported suite of adaptation strategies for Future Conditions. Through inclusive, transparent, and sustained engagement with impacted communities, this Plan should expand the understanding of sea level rise risks to the [City/County],

communicate these risks to the public, and develop implementable adaptation strategies that pairs updated land use policies, zoning and building code revisions, improved data collection/monitoring, nature-based solutions, and infrastructure project planning. For any infrastructure project measures, the Plan should include specific recommendations to plan, fund, design and construct such measures and discuss opportunities for regional collaboration and coordination with OneShoreline.

- **Future Conditions Mapping Data.** Coordinate with OneShoreline and other agencies to maintain and update mapping data pertaining to hazards from Future Conditions, existing conditions (topography, tidal datums), maps of known areas of sensitive habitat, and other related datasets as information becomes available, and make this information easily available to the public. Updates should occur at least every 5 years.
- **Future Conditions Staff.** Identify [City/County] staff who will be responsible for leading the [City/County]'s sea level rise and groundwater rise planning efforts, including coordinating internally with [City/County] departments and externally with relevant agencies.
- **Development Standards.** Collaborate with OneShoreline to evaluate, and amend if necessary, the [City/County]'s building code, zoning ordinance, and other development standards to ensure that new and/or substantial construction adequately incorporating major storms, sea level rise, groundwater rise, and other climate impacts into siting and design. Regularly review (at least every five years) and update the building code, zoning ordinance, and development standards to align with best practices, including:
  - Develop [City/County] Sea Level Rise Overlay and Shallow Groundwater Rise Overlay District Maps or criteria, illustrating areas prone to hazards due to sea level rise and shallow groundwater rise and subject to relevant resilience regulations;
  - Establish buffer zones on the Bay shoreline and creeks;
  - Require improvements to the Bay Trail and/or access to the Bay Trail where possible;

ONESHORELINE MAP OF FUTURE CONDITIONS

OneShoreline has developed an interactive online Map of Future Conditions to accompany this guidance document. The Map illustrates 3 data layers: the Bay Protection Standard layer (which contains information on the numeric value of OneShoreline's Bay Protection Standard along the San Mateo County Bay shoreline) and the Sea Level Rise and Shallow Groundwater Rise Overlay District layers (which illustrates the proposed boundaries of these Overlay Districts recommended in Chapter III).

OneShoreline is exploring the potential of using the Map of Future Conditions to host a wider suite of data for coastal, fluvial, and groundwater hazards in San Mateo County, as well as select data on human and asset vulnerability to these hazards. In the meantime, there are a suite of online maps and dashboards that illustrate this data, including the Our Coast Our Future Hazard Map, BCDC's Adapting to Rising Tides Bay Shoreline Flood Explorer and Tidal Datums Tool, USGS's Hazard Exposure and Reporting Analytics website, and the San Mateo County Hazard Exposure Dashboard.

- Require new and/or substantial construction on properties within 100 feet of the San Francisco Bay to include shoreline protection infrastructure that incorporates natural features to the greatest extent practicable;
- Require new and/or substantial construction proposed in areas subject to hazards to meet a minimum finished flood elevation and elevate critical equipment;
- Require any new stormwater infrastructure to be designed to function under Future Conditions;
- Provide flexibility via exceptions; and
- Require the disclosure of hazards related to sea level rise for real estate transactions in areas subject to such hazards.

SAFETY ELEMENT

COMMUNITY RESILIENCE

GOAL: PROTECT CRITICAL FACILITIES AND PUBLIC INFRASTRUCTURE FROM FUTURE CONDITIONS

Ensure that essential services provided by critical facilities and the [City/County]'s planned and existing infrastructure are resilient to Future Conditions.

Policies

- **Future Conditions Protection.** Ensure that public and critical facilities and the [City/County]'s planned and existing infrastructure are planned and designed to accommodate Future Conditions.
- **Future Conditions Adaptation.** Provide protection for or relocate public and critical facilities in areas vulnerable to Future Conditions to prevent damage and ensure continuity of public and essential services.
- **Capital Improvement Projects.** Plan and prioritize capital improvement projects required to protect public and critical facilities and services from Future Conditions.
- **Future Conditions Planning for Stormwater Infrastructure.** As rainfall amounts and intensities change over time, it becomes necessary to consider how stormwater systems can function today and, in the future, to safely convey, treat, and manage stormwater. Ensure that stormwater infrastructure for all new development in the [City/County] is resilient to Future Conditions by designing with increases in flooding, sea level rise, and groundwater rise in mind.

Actions

- **Develop Sea Level Rise Capital Planning Policy.** Develop a policy and process to analyze and plan capital projects vulnerable to Future Conditions. The process should evaluate set forth an Adaptation Pathway for capital projects based on project lifespan, vulnerability to

damage and closure during a storm event, and risk of costly repairs and impact of disruption of public services.

- **Assess Vulnerability of Existing Critical Facilities and Public Infrastructure and Plan for Adaptation.** Identify critical facilities and public infrastructure vulnerable to Future Conditions and plan upgrades to these facilities with consideration for future increases in flooding, sea level rise, and groundwater rise that may occur over the anticipated life of the asset. In cases where facilities cannot be sustainably maintained, relocation should be evaluated. Where facilities can be safely sited for the near term, but future impacts are likely, require an Adaptation Pathway detailing steps for maintenance, retrofitting, and/or relocation.
- **Siting and Designing New Critical Facilities and Public Infrastructure.** Site new critical facilities and public infrastructure in areas that are not vulnerable to Future Conditions. If new critical facilities and public infrastructure cannot be located outside of areas prone to flooding, sea level rise, and groundwater rise, ensure that facilities are constructed to appropriate standards to maintain operations under these Future Conditions.
- **Develop and Maintain Resilient Infrastructure Standards.** Develop and periodically adjust infrastructure design standards to address asset-specific vulnerabilities associated with future flooding, sea level rise, and groundwater rise.
- **Incorporating Future Conditions into Design of New Stormwater Infrastructure.** Incorporate Future Conditions – including changes in hydrology and extreme precipitation events like atmospheric rivers under future climate scenarios – into the design of any new stormwater infrastructure.

Capital Planning for the Impacts of Future Conditions

While this guidance document contains General Plan policies that pertain to critical facilities and public infrastructure, it does not provide specific guidance on a process for capital planning or climate Adaptation Pathways for existing public assets impacted by Future Conditions.

In 2024, OneShoreline anticipates issuing a complementary guidance document on integrating Future Conditions into capital planning. In the meantime, cities and the County are welcome to contact OneShoreline for technical assistance in reviewing capital projects that may be vulnerable to anticipated increases in flooding, sea level rise, and shallow groundwater rise.

For reference, similar capital planning guidance documents have been prepared by the County of San Mateo and the City of San Francisco. The City of San Francisco has developed a Sea Level Rise Capital Planning Guidance Document and Checklist. The County of San Mateo has developed a Sea Level Rise Policy for County-Owned Assets.

Goal: Adapt to Hazards Caused by Shallow Groundwater Rise

Adapt to existing and future hazards caused by rising shallow groundwater associated with sea level rise.

Policies

- **Shallow Groundwater Rise Vulnerability and Adaptation.** Coordinate with OneShoreline and adjacent jurisdictions as appropriate to study impacts, and develop adaptation strategies, related to shallow groundwater rise caused by sea level rise.

- **Vulnerability Assessment and Mitigation.** Based on the geotechnical data collected on-site, new and/or substantial construction shall assess the project's vulnerability to shallow groundwater rise and submit a list of project measures that will monitor and mitigate seasonal and permanent emergent groundwater impacts, including buoyancy, seepage, infiltration, liquefaction, corrosion, and contaminant mobilization hazards.

Actions

- **Shallow Groundwater Rise Vulnerability Assessment.** Coordinate with OneShoreline and adjacent jurisdictions as appropriate to establish a detailed understanding of the effects of rising shallow groundwater on people, the built environment, and water supply in the [City/County]. This includes buoyancy, seepage, infiltration, liquefaction, corrosion, and contaminant mobilization hazards. This assessment should have an interactive map component that will be updated based on site-specific geotechnical and topographic data submitted by new developments.
- **Shallow Groundwater Rise Adaptation.** Coordinate with OneShoreline and adjacent jurisdictions as appropriate to incorporate regionally coordinated adaptation strategies for shallow groundwater rise into the [City/County]'s Sea Level Rise Adaptation Plan. Adaptation strategies can include updated land use policies, building code revisions, infrastructure investments, better monitoring systems, and nature-based solutions. As a first step, ensure new development and substantial construction, and adjacent areas, account for rising groundwater levels in project design or be designed to avoid them.

GOAL: ALIGN WITH EXISTING FLOODPLAIN MANAGEMENT AND FEMA PROGRAMS
Synchronize new policies and regulations related to Future Conditions with existing floodplain management and associated FEMA requirements, as well as increase participation in FEMA programs.

Policies

- **Alignment with FEMA Floodplain Management Regulations.** Per Title 44, Section 59 of the Code of Federal Regulations, in order to qualify for the sale of federally subsidized flood insurance through FEMA's National Flood Insurance Program (NFIP), a community must adopt floodplain management regulations, satisfying FEMA's minimum criteria to reduce or avoid future flood damages. These floodplain management regulations should be updated to align with State and OneShoreline recommendations and incorporate Future Conditions.
- **Maximize the Benefits of the National Flood Insurance Program's Community Rating System (CRS).** FEMA has established the CRS, which credits community efforts that go beyond the minimum standards established for floodplain management and awards reduced flood insurance premiums for the community's property owners. The [City/County] should establish participation in CRS and realize the full extent of the program's benefits, which reduce flood insurance premiums and can help save lives and property when a flood occurs.

Actions

- **Floodplain Ordinance Update.** Update the [City/County] Floodplain Ordinance to align with State and OneShoreline recommendations and incorporate Future Conditions.
- **Coordination with Floodplain Administrator.** Per Title 44, Section 59 of the Code of Federal Regulations, in order to qualify for the sale of federally subsidized flood insurance through FEMA's National Flood Insurance Program, a community must appoint or designate an official responsible to develop and implement floodplain management regulations and submit all required reporting concerning the community participation in the NFIP. This floodplain administrator should collaborate directly with [City/County] staff responsible for sea level rise and groundwater rise planning efforts and OneShoreline to synchronize relevant management and reporting efforts, including the review of specific developments in the Sea Level Rise and Shallow Groundwater Rise Overlay Districts.
- **Establish Participation in CRS.** Work with OneShoreline to apply to participate in the CRS to allow for opportunities for property owners in the floodplain to achieve reductions in their flood insurance premiums. This includes submitting a letter of interest to FEMA and appointing a CRS coordinator to serve as the liaison between the community and FEMA.
- **Host CRS Training.** Work with OneShoreline and FEMA to host a CRS training with all relevant [City/County] staff that provides an overview of the CRS program, including eligible activities and required documentation to maintain participation in CRS.
- **Earn CRS Credit and Achieve Premium Discounts.** Work with OneShoreline to initiate and document activities to earn CRS credit and achieve premium discounts, focused on activities that can be used by all jurisdictions to lower insurance rates for their property owners and on preparing documentation that verifies any already-ongoing eligible CRS activities. This includes working with the floodplain administrator to document elevation certifications for all buildings built in the FEMA Special Flood Hazard Area (SFHA) after the date of application to the CRS and maintaining these records for public inspection.

COMMUNITY RATING SYSTEM SUPPORT FROM ONESHORELINE

Only 4 of the 20 cities in San Mateo County, and San Mateo County itself, currently participate in the CRS program, despite all Cities having at least one property (and many have hundreds) participating in the National Flood Insurance Program (NFIP). Further, the jurisdictions that do participate in CRS often do not realize the full extent of the program's benefits. Anecdotal evidence suggests there is a lack of city staff capacity to enroll in CRS and coordinate related activities. Many of these activities can be done most efficiently in a multi-jurisdictional context, which is why, with funding from the County, OneShoreline plans to provide support to all cities that wish to apply for and fully participate in CRS. Please reach out directly to OneShoreline to explore what support OneShoreline can provide for your city.

GOAL: PRIORITIZE AND SUPPORT NATURAL INFRASTRUCTURE AND SENSITIVE HABITATS
Prioritize natural infrastructure to the greatest extent practicable when adapting to Future Conditions.

Policies

- **Natural Infrastructure in Shoreline Protection.** Prioritize the use of nature-based solutions and natural infrastructure, including the protection, restoration, and expansion of existing coastal habitats, consistent with the Open Space and Conservation element habitat conservation policies.
  - **Subtidal Habitat Conservation and Restoration.** Promote the conservation, restoration, and enhancement of subtidal habitats, which can help reduce impacts on shoreline infrastructure.
  - **Habitat Migration.** Plan for and accommodate upland migration of habitats vulnerable to sea level rise.
  - **Strengthen Creek-to-Baylands Connections.** Enhance creek-to-Baylands connections to improve regional sediment deficit by linking sediment transportation from upland watersheds to coastal habitats, and support upland migration of wetlands due to sea level rise.

MIGRATION OF THE SHORELINE

The location of the proposed Bay buffer zone is based off the location of the San Francisco Bay Shoreline, as defined by the same statutory provision that specifies BCDC's jurisdiction. Since this provision defines the Bay Shoreline by the location of the Mean High Tide line, the Bay Shoreline as defined by the State - and thus the Bay buffer zone proposed by OneShoreline – will be subject to landward migration as the sea level rises. This landward migration will provide space for upland habitats and require a coordinated effort to integrate existing and future shoreline infrastructure.

Actions

- **Natural Infrastructure**.[14] Shoreline infrastructure projects should evaluate the use or restoration of natural features and ecosystem processes – such as tidal marshes, levees with transitional ecotone habitat, living shorelines, mudflats, beaches, and oyster reefs – and incorporate these features to the greatest extent practicable to conserve ecosystem values and functions and provide a wide array of benefits to people and wildlife.
- **Habitat Buffers.** Ensure that shoreline development projects do not encroach upon transition zones between tidal and upland habitats and provide adequate space to accommodate upland migration of habitats vulnerable to sea level rise.
- **Native Plants.** Require that shoreline development projects and other projects including habitat restoration include native plantings consistent with BCDC Policies and Design Guidelines.
- **Removal of Hard Infrastructure.** To allow opportunities to restore ecological value to shorelines and creek banks and restore natural floodplain processes for increased flood protection, existing hard protection should be removed when the structure(s) no longer requires a hard protective structure (e.g., redeveloped or demolished).

GOAL: REGIONAL COLLABORATION

Develop regionally coordinated climate adaptation measures, programs, and resilience projects.

Policies

- **Regional Coordination.** Coordinate with OneShoreline, adjacent jurisdictions, neighboring counties, and regional and state agencies to develop and implement coordinated approaches to sea level rise with other jurisdictions and asset owners in San Mateo County.
- **Cross-Jurisdictional Collaboration.** Promote cross-jurisdictional project scoping and planning to position all neighborhoods equitably for success.
- **Cross-Sector Collaboration.** Promote cross-sector project scoping and planning to leverage resources and expertise from local government, community-based organizations, and private businesses.
- **Cross-Disciplinary Collaboration.** Promote cross-disciplinary project scoping and planning to incorporate climate resilience into all areas impacting community life and well-being, including water, energy, land use, housing, transportation, and safety.

BCDC's Regional Strategy

Through its Bay Adapt program, BCDC is currently undergoing a process to develop a regional sea level rise adaptation strategy for the nine-county Bay Area. OneShoreline believes that climate change is already upon us and the existential challenge it presents requires all levels of government to act now. Just as OneShoreline engaged with BCDC when developing this Planning Guidance Policy, BCDC's Bay Adapt program has expressed interest in learning from the development and implementation of this document in San Mateo County.

Actions

- **Requirement for OneShoreline Review of Development in Flood Zones.** For proposed developments in the San Bruno Creek Flood Zone and Colma Creek Flood Zone that require modification of site storm drain systems and site runoffs, the [City/County] shall include OneShoreline in the project/plan review process, as OneShoreline is the administrator of these property tax-funded Zones and also has land rights in these Zones.

EMERGENCY READINESS AND EMERGENCY OPERATIONS

GOAL: EMERGENCY RESPONSE

Provide efficient and effective emergency response in the immediate aftermath of a natural or human-caused disaster.

Policies

- **Emergency Notification System.** Participate in OneShoreline's flood early warning notification system to alert flood-prone neighborhoods and businesses before, during, and after a climate hazard event and assist in their evacuation, if needed.
- **Emergency Action Plans**. Where OneShoreline is not currently developing a multi-jurisdictional Emergency Action Plan (EAP),[15] develop an EAP for [insert flood-prone watershed here] with the cities of XXX [name adjacent jurisdictions in watershed] to define flood management and mitigation responsibilities before, during and after flood events,

and outline methods to develop and deliver key flood data to agency staff and the public in case of a flood emergency.

- **Emergency Access Routes.** Evaluate existing emergency access routes for risk of flooding and develop alternative routes and other approaches to reduce risk and ensure access route viability during flood events.

Actions

- **Flood Early Warning.** Collaborate with OneShoreline to provide flood early warning for flood-prone areas of the [City/County] through OneShoreline's flood early warning notification system, as needed.

PUBLIC ACCESS, RECREATION, AND CONNECTIVITY

GOAL: PUBLIC ACCESS

Expand and maintain Public Access along and to the San Francisco Bay shoreline and creeks [insert specific waterbodies as applicable locally].

Policies

- **Public Access in Buffer Zones.** Provide Public Access within the shoreline and creek buffer zones based on the [City/County]-adopted guidelines and BCDC Policies and Design Guidelines.
- **Public Access to Buffer Zones.**[16] Provide Public Access through a site to/from the shoreline and creek buffer zones, based on BCDC Policies and Design Guidelines.

PUBLIC ACCESS

Public Access includes physical access such as Bay shoreline trails as well as pathways and parking to enable people to get to those trails. Public Access also includes services and amenities that encourage Bay-related activities, recreation and viewing opportunities along the shoreline.

- **Gaps in the Bay Trail.** Eliminate gaps in the Bay Trail where applicable[17] in coordination with the Metropolitan Transportation Commission/Association of Bay Area Governments Bay Trail Program by requiring new shoreline development and redevelopment to construct missing Bay Trail segments.
- **Future Conditions Planning.** Site, design, manage and maintain Public Access to mitigate significant adverse impacts from flooding, sea level rise and groundwater rise.
- **Public Access as a Condition of Development.** Require that new development in higher density residential or commercial areas adjacent to the San Francisco Bay shoreline or creeks provide Public Access along and to these water bodies in perpetuity in accordance with BCDC Policies and Design Guidelines. This includes dedicating appropriate access easements to the [City/County] at no cost to the public in the same manner that streets, park sites, and school sites are dedicated to the public as part of the subdivision process in cities and counties.
- **Public Access in Future Conditions.** Require Public Access to remain viable in the event of future flooding, sea level rise, and groundwater rise, or provide equivalent access consistent

with the project as existing access is impacted by Future Conditions in accordance with BCDC Policies and Design Guidelines.

ENVIRONMENTAL JUSTICE AND EQUITY

GOAL: PROTECT VULNERABLE POPULATIONS.
Protect the most vulnerable populations from climate change impacts.

Policies

- **Prioritize Vulnerable Populations.** Ensure that planning and implementation prioritizes communities that are most vulnerable to the impacts of climate change.
- **Community Capacity Building.** Reduce barriers and strengthen the community's capacity to participate and lead local planning and decision-making around adaptation to Future Conditions, especially communities affected disproportionately by hazards and disasters.
- **Build Social Support Networks.** Support residents and community-based organizations efforts to mobilize assets and strengthen social support networks to improve local preparedness and respond to and recover from incidents. This includes coordination with OneShoreline on its [name relevant Emergency Action Plan currently being developed, if applicable].
- **Disaster Communication.** Provide culturally and linguistically appropriate communication during all phases of emergency mitigation, preparation, response, and recovery.
- **Compensation.** Provide fair compensation for time and expertise of community members and community-based organizations for efforts in service to a project.
- **Avoid Redundancy.** Invest resources to build capacity and empower organizations already doing relevant work to avoid duplication of services.
- **Anti-Displacement Policy.** Reduce the harmful impacts of displacement from climate change on individuals, families, and communities by pursuing strategies to create opportunities for existing residents to benefit from adaptation efforts by:
  - Creating local employment and economic opportunities for low-income residents and local small businesses;
  - Expanding and preserving existing housing opportunities available to low-income residents;
  - Connecting low-income residents to resources available at the city, county, state, and federal levels to increase resilience;
  - Siting new affordable housing projects outside of areas vulnerable to Future Conditions or incorporating flood-resilient development techniques if site selection is constrained;
  - Preserving cultural and social resources; and
  - Creating and implementing tools to evaluate and mitigate the potential displacement caused by large-scale investment and infrastructure.

Actions

- **Identify Vulnerable Communities.** Review population characteristics to identify vulnerable communities in the [City/County] that will be affected by Future Conditions, including increases in flooding, sea level rise, and shallow groundwater rise.
- **Provide Technical Support to Community-Based Organizations.** Develop programs and partnerships to help equip community-based organizations with the tools and knowledge needed to participate and lead in adaptation planning and decision-making, such as grant writing assistance programs, and trainings to improve technical and political literacy related to sea level rise adaptation. Therefore, when technical plans and projects are developed, community members are better situated to understand and merge technical knowledge with a localized, place-based understanding to inform decision-making impacting their community.
- **Elevate Communities to Lead.**[18] If they do not already exist, create community-led advisory groups, bodies, or organizations that can be well-positioned to contribute to adaptation plans, projects, and priorities in the [City/County]. Such an effort should elevate community members to positions of authority in planning decisions and give them the tools to succeed in those positions.
- **Partner with Tribal Governments.**[19] Develop or strengthen formal partnerships and coordination with tribal governments to incorporate and recognize tribal history and cultural resources into adaptation plans, projects, and priorities in the [City/County].
- **Community Emergency Response Teams.** Where applicable, engage vulnerable communities in identifying potential hazards and program responses and priorities through Community Emergency Response Teams programs.[20]

WHAT DOES COMMUNITY-LED ADAPTATION PLANNING LOOK LIKE?

Some examples of community-led programs, which offer models for how to meaningfully engage community members in adaptation planning in the Bay Area, include Climate Resilient Communities, North Fair Oaks Community Alliance, the East Oakland Neighborhood Initiative, the Marin City People's Plan, and the West Oakland Environmental Indicators Project.

CHAPTER III | TEMPLATE LANGUAGE FOR ZONING AMENDMENTS

The following text includes sample Sea Level Rise Overlay District and Shallow Groundwater Rise Overlay District Zoning Text Amendments. Key documents consulted to develop sample language include the City of Boston Coastal Flood Resilience Overlay District (Article 25A), City of Burlingame Public Access, Flood and Sea Level Rise Performance Guidelines (Section 25.12.050), City of South San Francisco Flood Plain/Sea Level Rise (SLR) Overlay District (Chapter 20.180), and Shallow Groundwater Response to Sea-Level Rise: Alameda, Marin, San Francisco, and San Mateo Counties (prepared by Pathways Climate Institute and San Francisco Estuary Institute).

The Overlay Districts' regulations intend to enhance the resilience of private development and surrounding communities that are vulnerable to sea level rise, through the following key methods:

- **Buffer Zones:** Providing space and land along the San Francisco Bay and creeks for human-designed and natural infrastructure to protect against floodwaters and accommodate rising sea levels;
- **Shoreline Protection:** Requiring private developers of shoreline properties to construct shoreline infrastructure meeting the Bay Protection Standard;
- **Elevating Development:** Requiring finished floor elevations above FEMA's Base Flood Elevation to improve resilience to multiple hazards, including fluvial flooding and sea level rise;
- **Stormwater Drainage Updates:** Requiring changes in hydrology due to climate change to be incorporated into the design of any new stormwater infrastructure; and
- **Shallow Groundwater Rise:** Establishing development standards to protect the community from existing and future subsurface threats from the response of shallow groundwater to sea level rise.

BCDC Policies and Design Guidelines

New and/or substantial construction in BCDC's jurisdiction will require a BCDC permit and thus be subject to a determination as to whether the project meets BCDC Policies and Design Guidelines. While there are many synergies between the objectives of this guidance document and BCDC Policies and Design Guidelines, there are also areas where OneShoreline and BCDC objectives currently differ. That should not be surprising, given that this guidance document is the first-of-its-kind in the Bay Area and that incorporating climate resilience into land use planning is an evolving area of State and local policy. Inconsistencies between provisions adopted by cities based on this document and BCDC Policies and Design Guidelines can be resolved through discussions among these agencies and project proponents.

Jurisdictions may want to increase the scale of these measures if a location is at particularly high risk, the land use is sensitive, or if the building is a critical facility that must maintain operations and access during flood events. At a minimum, it is critical that landowners and

developers provide adequate space for future infrastructure development and the land rights to use that space in order to build resilience into communities.

SEA LEVEL RISE OVERLAY DISTRICT

XX.XX.010 DEFINITIONS

A. **Application Date:** The Application Date is the date a complete application is accepted by the [City/County], which is distinct from the date the application is deemed complete.

B. **Adjacent:** Directly abutting, having a boundary or property line(s) in common or bordering directly, or contiguous to.

C. **Bay Protection Standard:** The Bay Protection Standard is the FEMA Coastal Base Flood Elevation of the water at that shoreline location plus 6 feet (FEMA Coastal BFE + 6 feet).

D. **Critical Facility:** Critical facilities include hospitals, fire stations, police stations, storage of critical records, major electrical and natural gas distribution facilities, water and waste-water treatment facilities, and similar land uses.

E. **Existing Grade:** The existing elevation (prior to grading) of the ground surface adjacent to the proposed building footprint at a given point.

F. **Future Conditions:** Anticipated increases in flooding, sea level rise, and groundwater rise due to climate change. This definition intentionally does not specify a time horizon for "future" (e.g., "mid-century" or "end-of-century"), given the wide range of potential outcomes by the end of the century due to uncertainty in future greenhouse gas emissions and their geophysical effects.

G. **Health Care Facility:** Any facility that is organized, maintained, and operated for the diagnosis, care, prevention, and treatment of human illness, physical or mental, for one or more person, to which the persons are admitted for a 24-hour stay or longer for any of the following or similar purposes: skilled nursing facility, intermediate care facility, congregate living health facility, nursing facility, or chemical dependency recovery hospital.

H. **Natural Infrastructure:** Using natural ecological systems or processes to reduce vulnerability to climate change related hazards and increase the long-term adaptive capacity by creating or restoring habitats. This includes systems and practices that use or mimic natural processes, such as permeable pavements, bioswales, and other engineered systems, such as levees or walls that are combined with natural systems to provide a wide array of benefits to people and wildlife.

I. **Public Access.**[21] Public access includes both physical access, such as trails, as well as additional public services and amenities that are designed and built to encourage diverse Bay-related activities and movement to and along the shoreline, including recreation opportunities and viewshed access to the Bay shoreline.

J. **Resilience Infrastructure Project:** A Resilience Infrastructure Project is a sea level rise adaptation project along San Mateo County's San Francisco Bay Shoreline or along the tidally influenced reaches of creeks and other waterbodies that is built to the Bay Protection Standard. The implementation of this Standard can in realized in phases, as long

as buffer zones and easements are provided now through the development approval process.

K. **San Francisco Bay Shoreline:** As defined by Government Code Section 66610, which is the statutory provision of the BCDC's originating law (the McAteer-Petris Act[22]) that specifies BCDC's jurisdiction.

L. **Sea Level Rise Base Flood Elevation (SLR-BFE):** The SLR-BFE is defined as 3 feet above the project site's Base Flood Elevation on the FEMA Flood Insurance Rate Map in effect at the time of the Application Date.

M. **Stormwater Management Feature:**[23] Examples of stormwater management features that may be used to reduce the peak flow and/or runoff volume to undeveloped conditions include: drywells, detention basins, bioretention areas, subsurface infiltration systems, infiltration trenches, and pervious pavement.

N. **Top of Creek Bank:** The line connecting all the points where there is substantial grade change between the creek bank and the property as determined by the applicant's engineer and subject to the review and approval of the [City/County] Engineer. Where a fully channelized waterway exists, Top of Creek Bank is the highest edge of the engineered channel.

XX.XX.020 PURPOSE AND INTENT

The Sea Level Rise Overlay District is intended to protect the community from existing and future overland flooding and sea level rise by establishing locally sensitive and regionally coordinated regulations addressing these hazards. New development and substantial retrofit projects are intended to function for decades, during which time the impacts of climate change will grow, and thus these projects should be designed to function under Future Conditions, including higher sea levels and more intense storms, and be synchronized with regional solutions to address this transformative challenge. Incorporating climate resilience into the siting and building of these assets now will avoid the much more difficult and costly effort to retrofit these assets later. The specific purposes of the Sea Level Rise Overlay District are to:

A. Minimize damage to and destruction of life and property.

B. Establish development standards that are aligned across jurisdictions to ensure synchronized resilience on a regional scale in San Mateo County.

C. Sustain the viability of built assets in the floodplain over their proposed project life.

D. Adapt to Future Conditions by providing protection along creeks and the Bay shoreline built to a standard design elevation.

E. Work with nature to the greatest extent practicable by creating space and natural infrastructure to enable diverse, self-sustaining shoreline habitats that can survive future climate conditions over time.

F. Establish standards consistent with the guiding principles and objectives of OneShoreline.

XX.XX.030 APPLICABILITY

A. **Geography.**

1. **Sea Level Rise Overlay District Boundaries.** The provisions of this chapter shall apply to all areas of the [City/County] within the Sea Level Rise Overlay District. The Sea Level Rise Overlay District includes the area identified in the Our Coast, Our Future Hazard Map[24] as the 100-year flood plus 6.6 feet of sea level rise (based on modeling results[25] from the U.S. Geological Survey).
2. **Sea Level Rise Overlay District Map.**[26] The [City/County] Sea Level Rise Overlay District Map (SLR Map) was adopted by the [City Council/County Board of Supervisors] based on the criteria in subsection (1) of this section to provide community resilience to sea level rise and storms. The SLR Map may be revised by the [City Council/County Board of Supervisors] based on updates to the FEMA Federal Insurance Rate Map, sea level rise science, monitoring results, and shoreline and creek conditions. The applicable SLR Map to a development application shall be the SLR Map currently in effect at the time of the Application Date.
3. **Parcel Applicability.** Any parcel with a portion of land located within the Sea Level Rise Overlay District, as defined in subsection (1) and illustrated by the SLR Map in subsection (2), shall be considered to be within the Sea Level Rise Overlay District and the regulations of this Chapter shall apply to the entirety of the parcel.
4. **Additional Areas.** In addition, the [City/County] Engineer or Community and Economic Development Director may require that standards of the Sea Level Rise Overlay District apply to properties outside the Overlay District based on maps and other studies, which document the existence of potential flooding or sea level rise hazards that warrant evaluation.
5. **Appeals.** The [City/County] Engineer or Community and Economic Development Director shall make interpretations, where needed, as to the exact boundaries of the Sea Level Rise Overlay District. If the sea level rise or flood hazard information on which the boundaries of the Overlay District are based does not reflect actual site conditions, the [City/County] Engineer or Community and Economic Development Director may determine that a location is within or outside the Overlay District, based on site-specific data provided by a licensed professional surveyor or licensed professional engineer

MAP ADOPTION APPROACH

The language provided in Section XX.XX.030 provides flexibility for jurisdictions to either simply define the overlay area by the criteria in subsection (1) *or* to define the criteria *and* adopt a Map as set forth in subsection (2).

OneShoreline does not recommend rezoning specific properties by Ordinance, as the map should be reviewed and may need to be adjusted at least every 5 years to reflect the most current sea level rise projections.

OneShoreline recommends any map actions occur via resolution of the City Council or County Board of Supervisors. Regardless of the map approach taken, cities/the County should incorporate a Sea Level Rise Overlay Map layer onto interactive GIS platforms so that the information is transparent and accessible to the public. OneShoreline can provide technical assistance to cities/the County on this mapping effort as needed.

retained by the applicant. The [City/County]'s determination may be appealed to the [Board of Appeal] under the provisions of Section [Appeal Chapter/Section] of this Code.

B. **Project Type.** The provisions of this Section [XX] shall apply to the following project types within the Sea Level Rise Overlay District boundaries:

[Note to City/County staff: Two options are provided for consideration in this section, one of which relies upon a size threshold and the other of which relies upon wall demolition. Both options include retrofit thresholds based on improvement cost relative to building value, which is consistent with FEMA standards for the floodplain ordinance. City and County staff should consider this as a menu of options and select the most appropriate thresholds to harmonize with existing regulations.]

1. **Shoreline Development.** Any development within the San Francisco 100-foot Bay buffer zone requiring a BCDC Permit or any development within the creek 35-foot buffer zone.

[Size Threshold Option][27]

2. **New or Addition of Gross Floor Area.** New construction or expansion of one or more buildings that results in the addition of an aggregate gross floor area of [xx] or more square feet.
3. **Dwelling Units.** Any proposed project for the construction of [xx] or more Dwelling Units (but not including rehabilitation or alteration projects unless they result in a net increase of [xx] or more Dwelling Units).
4. **Change of Use.** The change of the permitted or conditionally permitted uses of a gross floor area of [xx] or more square feet.
5. **Substantial Retrofit.** The renovation, rehabilitation, or expansion of a building where the cost of work is greater than 50% of the appraised value of the building and that has, or will have after rehabilitation, a gross floor area of [xx] or more square feet.

[All Substantial Development Option]

6. **Substantial Construction.** Construction of a wholly new building, or removal or reconstruction of 50% or more of the exterior walls of a building.
7. **Substantial Retrofit.** The renovation, rehabilitation, or expansion of a building where the cost of work is greater than 50% of the appraised value of the building.[28]

C. **Exemption for Low-Density Residential Land Uses.** Single-family homes, duplexes, and low-density multi-family residential housing with less than [insert City/County-selected threshold] units shall only be subject to the following provisions within this Section (and exempt from all others):

1. Buffer Zone setback requirements, as set forth by Section XX.XX.050(D).
2. Land rights/easement dedication over buffer zone area, consistent with the standards set forth by Section XX.XX.050(E)(2)(b) and Section XX.XX.050(E)(3)(b).

XX.XX.040 LAND USE REGULATIONS AND ALLOWABLE USES

A. **Land Use Regulations.** Regulations applicable to the underlying zone that are not in conflict with the provisions of this chapter shall apply. Provisions elsewhere in the Development Code also may apply.

B. **Conditionally Permitted Uses.**[29] The following uses are discouraged within the Sea Level Rise Overlay District:

1. Emergency command centers/communications facilities.
2. Emergency shelters.
3. Fire stations.
4. Hospitals and Health Care Facilities.
5. Schools.
6. Major Electrical and Natural Gas Distribution Facilities.

Meanwhile, these uses can be conditionally permitted with the following additional requirement: an Adaptation Pathway shall be prepared by the applicant and reviewed by the approval body. The Adaptation Pathway shall demonstrate that the building will be functional and accessible with ingress and egress for the lifetime of the structure and identify any adaptation measures that will need to be implemented as sea levels rise. Adaptation measures shall be conditions of approval on the project.

C. **Permitted Uses.** Land uses permitted and conditionally permitted in the underlying zoning district not in conflict with the provisions of this chapter shall apply.

RESIDENTIAL HOUSING

While many of the regulations set forth in this sample zoning text apply to larger development projects along the San Francisco Bay shoreline, many jurisdictions have a substantial amount of single-family and multi-family housing (density ranging from duplex to high- density) within shoreline or inland areas that are vulnerable to sea level rise and groundwater rise. Depending on applicability thresholds adopted by local jurisdictions, additional modifications to address the smaller scale of single-family and low-density housing could be needed. Some approaches could include:

- Incentivize residential projects to implement optional resilience design guidelines;
- Optional or required floodproofing measures for new construction and additions; and
- Planning and construction of comprehensive shoreline infrastructure that protects residential neighborhoods and development, potentially funded via Community Benefits/ Development Agreements or Impact Fees.

XX.XX.050 DEVELOPMENT STANDARDS

A. **Building Elevations.** For all properties within the Sea Level Rise Overlay District, the lowest building finished floor elevation shall be the Base Flood Elevation (BFE) on the FEMA Flood Insurance Rate Map in effect at the time of the Application Date, plus at least 3 feet (Sea Level Rise Base Flood Elevation or SLR-BFE). Where no BFE exists, the lowest building finished floor elevation shall be at least 3 feet above the existing grade. If the site is sloped, the average existing grade shall be used. Upon the completion of the structure, the lowest finished floor elevation shall be certified by a licensed professional engineer or licensed

surveyor retained by the applicant and verified by the [City/County] building inspector to be properly elevated. Such certification shall be provided to the floodplain administrator.

1. **Exception Process.** Exceptions may be granted when there is no feasible way to accommodate Americans with Disabilities Act (ADA) access at the SLR-BFE due to site-specific constraints. Should an exception be granted, an Adaptation Pathway shall be prepared by the applicant and reviewed by the approval body. The Adaptation Pathway shall demonstrate that the building will be functional and accessible with ingress and egress for the lifetime of the structure and identify any adaptation measures that will need to be implemented as sea levels rise. Adaptation measures shall be conditions of approval on the project.

B. **Building Height.** Building height within the Sea Level Rise Overlay District will be measured from the Sea Level Rise Base Flood Elevation (SLR-BFE).[30] [Note to City/County staff: This provision intends to provide relief from existing height measurement regulations for projects that are increasing site or finished floor elevation to increase resilience to sea level rise. Depending on existing rules of measurement, this may or may not be necessary.]

C. **Floodproofing Critical Equipment.** Critical mechanical and electrical equipment shall be elevated above the SLR-BFE (e.g., located on the roof) to ensure operation during flood events.

D. **Buffer Zones.**[31] Buffer zones are intended to provide space to accommodate and maintain built and natural infrastructure, habitat restoration, and Public Access. Below- and above-grade encroachments are prohibited within buffer zones, unless otherwise allowed below.

1. **San Francisco Bay Buffer Zone.** A buffer zone extending 100 feet inland from the San Francisco Bay Shoreline shall be developed and maintained as follows:

   a. **On San Francisco Bay.** A minimum buffer zone of 100 feet from the San Francisco Bay Shoreline is required to accommodate and maintain built and natural infrastructure, habitat restoration, and Public Access consistent with guidelines of the San Francisco Bay Trail Project and BCDC Policies and Design Guidelines.

   b. **On [Bay shoreline water bodies other than SF Bay].** A minimum buffer zone of 100 feet from [Bay shoreline water bodies other than SF Bay] is required to accommodate and maintain built and natural infrastructure, habitat restoration, and Public Access consistent with guidelines of the San Francisco Bay Trail Project and BCDC Policies and Design Guidelines.

   c. **Exception Process.** Below- and above-grade encroachments may be accommodated within the 100-foot buffer zones when the buffer zone would preclude development on a parcel or when there is no other feasible alternative,

WHY 100 FEET FOR THE BAY BUFFER ZONE?

100 feet provides additional space for a higher water level in the Bay, as well as flexibility in the types of shoreline infrastructure that can be used to protect against storms and sea level rise. Rather than being limited to vertical sea walls and hard protective structures, infrastructure can include elements that are more gradually sloped and can incorporate natural and recreational features. Also, 100 feet generally aligns with the statutory provision that specifies BCDC's jurisdiction.

provided that the applicant provides a site plan by the Application Date demonstrating that their proposal does not encroach upon the space needed to accommodate and maintain a Resilience Infrastructure Project, habitat restoration, and Public Access required by the BCDC, and the [City/County] approves this determination.

2. **Creek Buffer Zone**.[32] A minimum buffer zone of 35 feet from the Top of Creek Bank is required to accommodate and maintain built and natural infrastructure, habitat restoration, and Public Access.

   a. **Exception Process**. Below- and above-grade encroachments may be accommodated within the 35-foot buffer zones when the buffer zone would preclude development on a parcel or when there is no other feasible alternative, provided that the applicant provides a site plan by the Application Date demonstrating that their proposal does not encroach upon the space needed to accommodate and maintain a Resilience Infrastructure Project, habitat restoration, and Public Access required by the BCDC (if applicable), and the [City/County] approves this determination.

WHY 35 FEET FOR THE CREEK BUFFER ZONE?

Most cities in San Mateo County have creek setback requirements, though these predate the recent intensity and frequency of atmospheric rivers. Like with the 100-foot Bay Buffer Zone, OneShoreline's creek buffer zone of 35 feet from the Top of Creek Bank (70 feet total in additional creek width when implemented on both sides) provides additional space and flexibility in the types of flood protection infrastructure that can be used to protect from increased storm runoff and sea level rise.

3. **Public Access.** Public Access shall be maintained and developed within the shoreline and creek buffer zones based on [City/County]-adopted guidelines and BCDC Policies and Design Guidelines.

E. **Shoreline Infrastructure Elevation Requirements.**[33] For properties within 100 feet of the San Francisco Bay Shoreline and [Bay shoreline water bodies other than SF Bay], new construction must contribute to regional shoreline infrastructure in **one of the following three ways**:

1. **New construction includes shoreline infrastructure built to a top, post-settlement elevation equal to the Bay Protection Standard (the FEMA BFE + 6 feet).** All required elevations shall meet FEMA's requirements for accreditation (conforming to Title 44, Section 65.10 of the Code of Federal Regulations or a similar relevant Title and Section of the Code, if updated)) and certified by a licensed professional engineer retained by the applicant .

2. **New construction includes shoreline infrastructure built to a top, post-settlement elevation equal to the FEMA BFE + 3.5 feet.** All required elevations shall meet FEMA's requirements for accreditation (conforming to Title 44, Section 65.10 of the Code of Federal Regulations or a similar relevant Title and Section of the Code, if updated) and certified by a licensed professional engineer retained by the applicant. **In addition to**

meeting this interim elevation requirement, the applicant shall also meet the following requirements:

a. Providing a detailed plan to guide how the [City/County] and/or OneShoreline can build to the Bay Protection Standard later within the context of the proposed development site plan; and

b. Providing land rights/an easement to the [City/County] associated with the Bay and creek buffer zones that enables the [City/County] and/or OneShoreline to build to the Bay Protection Standard within the easement.

3. **New construction does not include any shoreline infrastructure.** The applicant shall meet the following requirements, which include:

   a. Providing a detailed plan to guide how the [City/County] and/or OneShoreline can build to the Bay Protection Standard later within the context of the proposed development site plan; and

   b. Providing land rights/an easement to the [City/County] associated with the Bay buffer zone + 50 feet and the creek buffer zone + 10 feet that enables the [City/County] and/or OneShoreline to build to the Bay Protection Standard within the easement.

IN-LIEU FEES

For shoreline projects that do not opt to build to the full Bay Protection Standard or not include any shoreline infrastructure at all, cities and the County can also include a requirement for developers to pay in-lieu fees to fund future improvements. The City of Menlo Park has such a requirement in its Zoning Code (Chapter 16.44.130.4b), which requires new buildings in certain zoning districts to pay a required fee or proportionate fair share for the funding of sea level rise projects, if applicable.

F. **Natural Infrastructure**.[34] Shoreline infrastructure shall evaluate the use or restoration of natural features and ecosystem processes – such as tidal marshes, levees with transitional ecotone habitat, living shorelines, mudflats, beaches, and oyster reefs – and incorporate these features to the greatest extent practicable to conserve ecosystem values and functions and provide a wide array of benefits to people and wildlife.

G. **Additional Requirements for Shoreline Barriers.** If the project proposes to use barriers as part of shoreline infrastructure, the following requirements accounting for rising groundwater and stormwater conveyance shall apply:

1. **Accounting for Rising Groundwater in Barrier Stability.** Seepage from shallow groundwater resulting from future sea level rise, which can impact the stability of shoreline barriers put in place to protect from sea level rise, shall be considered in the design.

2. **Accounting for Rising Groundwater Inland of Barrier.**[35] While strategies that break the connection between the Bay and the inland areas (e.g., cutoff walls) could limit inland groundwater rise due to sea level rise, these strategies can exacerbate inland groundwater rise due to extreme precipitation and prevent the natural outmigration of groundwater toward the Bay. Management of rising groundwater on the inboard side of the proposed barrier shall be considered in the design.

3. **Stormwater Conveyance Through Barriers.** Stormwater pipes that are on the Bayside of a barrier can become pathways for flooding within the barrier. This stormwater conveyance infrastructure should be designed (e.g., through elevations, backflow valves, tide gates) such that backflow is prevented during a Bay water level equivalent to the Base Flood Elevation (BFE) defined by FEMA plus 6 feet (Bay Protection Standard).

H. **Trail Connectivity**

1. **San Francisco Bay Access.** Any property within the jurisdiction of the BCDC shall be required to provide, as a part of the on-site landscaping plan and shoreline infrastructure, connectivity improvements by constructing a new or improved portion of the Bay Trail along the site, including improving access to the Bay Trail from and through the site. The trail shall be consistent with specifications of the [City/County] Public Works Department, San Francisco Bay Trail Project guidelines, and BCDC Policies and Design Guidelines. Each such trail segment shall connect directly to the trail segment of adjacent properties.
2. **Creek Access.** Any property within 35 feet of [name specific flood-prone creeks] shall be required to provide, as a part of the on-site landscaping plan, an improved public-access trail along the top of the bank for the portion of the creek bank on the site. The trail shall be consistent with specifications of the [City/County] Public Works Department and BCDC Policies and Design Guidelines where applicable. Each such trail segment shall connect directly to the termination of the publicly accessible trail segment along the shoreline (e.g., the Bay Trail) or the creek bank on each adjacent property.
3. **Exception Process.** If it is demonstrated to the satisfaction of [City/County] staff that publicly accessible trails along the Bay or creek meeting the requirements above are not feasible due to unique site constraints or conflict with BCDC Policies and Design Guidelines, the applicant may propose an alternative Public Access benefit.

I. **Stormwater Drainage**

1. **Peak Flow and Volume Control Design Criteria.**[36] The post-development stormwater runoff peak flow and volume must be less than or equal to the undeveloped stormwater runoff peak flow and volume at each point of discharge from the project parcel, unless an alternative discharge point is otherwise approved by [City/County] staff.
    a. **Undeveloped Conditions Assumptions**. If undeveloped conditions of the project site are unknown, a runoff coefficient of C=0.3 shall be used for undeveloped peak flow calculations, per the County of San Mateo Draft Drainage Manual.[37]
    b. **Design Storm.** New and/or substantial private construction shall use the future 10-year design storm for all runoff peak flow and volume calculations, using the "Median (RCP 8.5)" scenario from the Climate Adaptation Risk Analysis for the San Mateo Countywide Sustainable Streets Master Plan.[38]
    c. **Storm Duration.**[39] New and/or substantial private construction shall use at least a 6-hour storm duration for all runoff peak flow and volume calculations. If the time of concentration for the tributary drainage area for which the calculations are being performed is greater than 6 hours, then the storm duration shall be at least equal to the time of concentration.

d. **Rainfall Intensity.** New and/or substantial private construction shall use rainfall intensity data derived from the rainfall depth data, using the "Median (RCP 8.5)" scenario from the Climate Adaptation Risk Analysis for the San Mateo Countywide Sustainable Streets Master Plan.[40]

2. **Stormwater Management Feature.**[41] If it is determined that the post-development runoff peak flow and/or volume exceeds the undeveloped runoff peak flow and/or volume for any point of discharge, an on-site Stormwater Management Feature must be designed and incorporated into proposed new and/or substantial private construction to reduce runoff peak flow and volume to undeveloped conditions.

   a. **Natural Features.**[42] Stormwater Management Features shall evaluate the use or restoration of natural features and ecosystem processes – such as vegetated swales, permeable pavement materials, and preservation of existing trees and vegetation – and incorporate these features to the greatest extent practicable to conserve ecosystem values and functions and provide a wide array of benefits to people and wildlife.

   b. **Stormwater Storage Factor of Safety.**[43] If new and/or substantial private construction proposes to use storage of stormwater as a Stormwater Management Feature, the calculated minimum amount of storage needed to meet the requirements shall be multiplied by a minimum factor of safety of 1.2 to determine the required minimum storage volume.

   c. **Stormwater Storage Drawdown Requirements.**[44] If new and/or substantial private construction proposes to use storage of stormwater as a Stormwater Management Feature, drainage facilities must have capacity for a second future 10-year design storm within 24 hours, using the "Median (RCP 8.5)" scenario from the Climate

THE NEED FOR A COUNTYWIDE COLLABORATION TO UPDATE STORMWATER STANDARDS

Recent atmospheric river storms have demonstrated that stormwater drainage standards based on historical rainfall data will not protect people and property going forward. The proposed stormwater drainage template provisions in Section XX.XX.060I seek to incorporate anticipated changes in precipitation and extreme storm events into drainage requirements as climate change progresses. This template language was developed based on consultation with multiple cities on their current requirements and a review of all 12 Bayside city municipal codes, as well as the following resources: Climate Adaptation Risk Analysis for the San Mateo Countywide Sustainable Streets Master Plan, County Draft Drainage Manual, the Water Board's C.3 Requirements in the latest reissuance of the Municipal Regional Permit, California's Fourth Climate Change Assessment, recent academic literature, and local stream gage data from December 2022 and January 2023 storms. Given that incorporating climate change into the design of stormwater drainage systems is an emerging area of practice, there remains a need for a dedicated, accelerated effort among the cities, County, the City/County Association of Governments of San Mateo County, and OneShoreline to update relevant data and establish meaningful and implementable standards to address the new reality around stormwater impacts.

Adaptation Risk Analysis for the San Mateo Countywide Sustainable Streets Master Plan.[45] In addition, drainage facilities must completely drain within 5 days.

3. **Future Conditions in Design of Stormwater Conveyance Infrastructure.**[46] Changes in hydrology due to climate change, including changes in extreme precipitation events like atmospheric rivers, shall be incorporated into the design of any new stormwater conveyance infrastructure proposed in new and/or substantial private construction.
    a. **Conveyance Infrastructure Sizing – Minor Drainage Facilities.** Minor drainage facilities/pipes, as defined by [City/County] staff, shall be sized for at least a future 10-year design storm, using the "Median (RCP 8.5)" scenario from the Climate Adaptation Risk Analysis for the San Mateo Countywide Sustainable Streets Master Plan.[47]
    b. **Conveyance Infrastructure Sizing – Secondary Drainage Channels and Conduits.** Secondary drainage channels and conduits, as defined by [City/County] staff, shall be sized for at least a future 25-year design storm, using the "Median (RCP 8.5)" scenario from the Climate Adaptation Risk Analysis for the San Mateo Countywide Sustainable Streets Master Plan.[48]
    c. **Conveyance Infrastructure Sizing – Major Drainage Channels and Conduits.** Major drainage channels and conduits, as defined by [City/County] staff, shall be sized for the future 100-year design storm, using the "Median (RCP 8.5)" scenario from the Climate Adaptation Risk Analysis for the San Mateo Countywide Sustainable Streets Master Plan.[49]
    d. **Allowance for Tidal Action with Sea Level Rise.**[50] Where applicable, stormwater drainage facilities proposed in new and/or substantial private construction shall account for tidal action and sea level rise. Conveyance infrastructure should be designed (e.g., through elevations, backflow valves, tide gates) such that backflow is prevented during a Bay water level equivalent to the Base Flood Elevation (BFE) defined by FEMA plus 6 feet (Bay Protection Standard).
4. **Compensatory Storage.**[51] New and/or substantial private construction that displace floodwaters require certification from a licensed professional engineer retained by the applicant that compensatory storage is provided and that no reduction in floodway conveyance through the property or effect to adjacent properties will result. Compensatory storage can be provided either on-site or at a hydraulically connected offsite location. A floodplain hydraulic study prepared by a licensed professional engineer retained by the applicant may be required to verify compliance. In lieu of an engineering study, the applicant may be able to provide adequate information that demonstrates an understanding of floodplain conveyance and compliance with this provision.
5. **Incorporating Future Conditions into Design of Pump Stations.** Pump stations proposed in new and/or substantial private construction shall be designed to withstand flooding from future storms and sea level rise. Elevations of power supplies, motor starters, stand-by generation or any other electrical or mechanical equipment shall be above the Sea Level Rise Base Flood Elevation (SLR-BFE).

J. **Exceptions.** The [City Council/County Board of Supervisors] shall have the authority to allow exceptions to particular standards in this section, provided that the applicant provides a site plan by the Application Date demonstrating that their proposal does not inhibit the

[City/County's] ability to establish resilience to Future Conditions for this site and surrounding properties.

XX.XX.060 PERFORMANCE STANDARDS

A. **Bay Access Maintenance.** All areas improved for Public Access within the jurisdiction of the BCDC shall be maintained by the property owner and shall be available to the public in perpetuity, as determined by BCDC. Therefore, as existing access is impacted by Future Conditions, Public Access within BCDC jurisdiction should either be modified to remain viable, or equivalent access should be provided, consistent with BCDC direction.[52]

B. **Shoreline Infrastructure Maintenance.**[53] As a condition of project approval, the applicant shall execute an agreement with the [City/County] identifying the landowner's ongoing maintenance obligations for any shoreline infrastructure approved as part of the development and granting a maintenance easement to the [City/County] for maintenance of any additional shoreline infrastructure that is constructed by the [City/County] and/or OneShoreline later. Where applicable, this agreement shall be consistent with conditions outlined in BCDC's permit language.

C. **Determination of Compliance.**[54] Prior to issuance of a Building Permit, a licensed professional engineer retained by the applicant shall certify that the design, specifications, and plans for the construction of any shoreline infrastructure are in accordance with FEMA's requirements in Title 44, Section 65.10 of the Code of Federal Regulations (or a similar relevant Title and Section of the Code, if updated) as of the Application Date.

D. **Topographic Data Collection.**[55] Applicant shall submit two topographic surveys of the property, such as a LiDAR or field survey, prepared by a licensed professional land surveyor: one within 12 months of the Application Date and prior to construction, and one after completion of site grading, but prior to Certificate of Occupancy. Such surveys shall be at the landowner or applicant's expense and shall be conducted in consultation with [City/County] staff to be approved as compliant with [City/County] survey standards.

E. **Stormwater Conveyance Infrastructure.** Changes in hydrology due to climate change, including changes in extreme precipitation events like atmospheric rivers, shall be incorporated into the design of any new stormwater infrastructure.

F. **Real Estate Disclosure of Hazards.**[56] In any contract for the sale of real estate located in the Sea Level Rise Overlay District indicated on the current Sea Level Rise Overlay Map adopted by the [City/County], the seller shall include in the contract a real estate disclosure of all hazards associated with anticipated sea level rise, geologic hazards, groundwater inundation, or coastal and fluvial flooding. Any site-specific analyses related to sea level rise must also be disclosed in real estate transactions.[57]

XX.XX.070 ADDITIONAL FINDINGS

Prior to the decision-making body approving a [permit type—CUP/design permit/etc.], all of the following findings must be made with respect to the application, in addition to findings required by Chapter[s] [XX].

LIMITED AMENDMENT APPROACH

The findings shown in Section XX.XX.070 could also be incorporated into existing Use Permit or Design Permit Review Findings in-lieu of creating a new overlay zone.

A. The project is consistent with General Plan goals and policies [list specifics as applicable] regarding resilience to anticipated increases in flooding, sea level rise and shallow groundwater rise due to climate change.

B. The project building and site design will withstand anticipated increases in flooding, sea level rise, and shallow groundwater rise due to climate change during the life of the project – or provide a site plan by the Application Date demonstrating that their proposal does not inhibit the [City/County's] ability to establish resilience to these impacts for this site and surrounding properties – and will minimize on-site damage from these impacts while preventing an increase in these impacts to existing development on adjacent properties.

C. The project's landscaping, site design, and grading plan supports pedestrian connections and meets Americans with Disabilities Act (ADA) requirements.

D. The project enhances – or, at a minimum, demonstrates no adverse impact to – natural habitat, recreational, and Public Access opportunities within and adjacent to the site.

SHALLOW GROUNDWATER RISE OVERLAY DISTRICT

XX.XX.010 DEFINITIONS

A. **Application Date:** The Application Date is the date a complete application is accepted by the [City/County], which is distinct from the date the application is deemed complete.

B. **Adjacent:** Directly abutting, having a boundary or property line(s) in common or bordering directly, or contiguous to.

C. **Future Conditions:** Anticipated increases in flooding, sea level rise, and groundwater rise due to climate change. This definition intentionally does not specify a time horizon for "future" (e.g., "mid-century" or "end-of-century"), given the wide range of potential outcomes by the end of the century due to uncertainty in future greenhouse gas emissions and their geophysical effects.

D. **Resilience Infrastructure Project:** A Resilience Infrastructure Project is a sea level rise adaptation project along San Mateo County's San Francisco Bay Shoreline or along the tidally-influenced reaches of creeks and other waterbodies that is built to the Bay Protection Standard. The implementation of this Standard can in realized in phases, as long as buffer zones and easements are provided now through at the development approval process.

E. **Top of Creek Bank:** The line connecting all the points where there is substantial grade change between the creek bank and the property as determined by the applicant's engineer and subject to the review and approval of the [City/County] Engineer. Where a fully channelized waterway exists, Top of Creek Bank is the highest edge of the engineered channel.

XX.XX.020 PURPOSE AND INTENT

The Shallow Groundwater Rise Overlay District is intended to protect the community from existing and future subsurface threats from the response of shallow groundwater to sea level rise, including buoyancy, seepage, infiltration, liquefaction, corrosion, and contaminant mobilization hazards, by establishing regionally coordinated regulations addressing these

hazards. While the impacts of rising groundwater on our built and natural environments are emerging fields of study, it is clear that shallow groundwater rise is one of the most consequential impacts of sea level rise and the best available science indicates that low-lying communities located inland from the Bay could experience flooding impacts from rising shallow groundwater long before sea level rise overtops the Bay shoreline.[58] Therefore, incorporating resilience to groundwater rise into the siting and building of new development and substantial retrofit projects now will avoid the much more difficult and costly effort to modify these assets later. The specific purposes of the Shallow Groundwater Rise Overlay District are to:

A. Increase awareness and understanding of the impacts of shallow groundwater rise, which are anticipated to occur earlier and farther inland than coastal overland flooding;[59]
B. Minimize damage to and destruction of life and property;
C. Establish development standards that are aligned across jurisdictions to ensure synchronized resilience on a regional scale in San Mateo County;
D. Sustain the viability of built assets in the anticipated areas impacted by shallow groundwater rise over their proposed project life;
E. Incentivize the use of nature-based solutions in adapting to the impacts of shallow groundwater rise ; and
F. Establish standards consistent with the guiding principles and objectives of OneShoreline.

HAZARDS FROM SHALLOW GROUNDWATER RISE

While this overlay district does not capture all potential hazards resulting from rising groundwater, it seeks to address the following key hazard types including:

- **Buoyancy:** Rising groundwater can exert buoyant forces on foundations, buried utility lines, pipes, roads, and other infrastructure, causing these structures to float or shift.
- **Seepage/Infiltration:** Subsurface structures and utilities can be subject to flooding via groundwater seepage through permeable places in the walls/floor or infiltration through pipe cracks/joints.
- **Liquefaction:** Loose and saturated soils can behave like a liquid during an earthquake.
- **Corrosion:** An increase in groundwater salinity can worsen corrosive effects.
- **Contaminant Mobilization:** Sea level rise may change or accelerate the movement of contaminated groundwater plumes.

XX.XX.030 APPLICABILITY

A. **Geography.**
   1. **Shallow Groundwater Rise Overlay District Boundaries.** The provisions of this Section [XX] shall apply to all areas of the [City/County] within the Shallow Groundwater Rise Overlay District. The Shallow Groundwater Rise Overlay District includes the area identified in the Our Coast, Our Future Hazard Map[60] that may experience shallow (water table between 1-2m depth) to emergent (water table at surface) groundwater with 6.6 feet of sea level rise, assuming a moderate groundwater flow factor[61] (based on modeling results from the U.S. Geological Survey[62]).
   2. **Shallow Groundwater Rise Overlay District Map.** The [City/County] Shallow Groundwater Rise Overlay District Map (GW Map) was adopted by the [City

Council/County Board of Supervisors] based on the criteria in subsection (1) of this section to provide community resilience to shallow groundwater rise. The GW Map may be revised by the [City Council/County Board of Supervisors] based on updates to sea level rise and shallow groundwater rise science and monitoring results. The applicable GW Map to a development application shall be the GW Map currently in effect at the time of the Application Date.

3. **Parcel Applicability.** Any parcel with a portion of land located within the Shallow Groundwater Rise Overlay District, as defined in subsection (1) and illustrated by the GW Map in subsection (2), shall be considered to be within the Shallow Groundwater Rise Overlay District and the regulations of this section shall apply to the entirety of the parcel.
4. **Additional Areas.** In addition, the [City/County] Engineer or Community and Economic Development Director may require that standards of the Shallow Groundwater Rise Overlay District apply to properties outside the Overlay District based on maps and other studies, which document the existence of potential groundwater-related hazards (e.g., liquefaction) that warrant evaluation.
5. **Appeals.** The [City/County] Engineer or Community and Economic Development Director shall make interpretations, where needed, as to the exact boundaries of the Shallow Groundwater Rise Overlay District. If the groundwater-related hazard information on which the boundaries of the Overlay District are based does not reflect actual site conditions, the [City/County] Engineer or Community and Economic Development Director may determine that a location is within or outside the Overlay District, based on site-specific data provided by a licensed professional surveyor or licensed professional engineer. The [City/County]'s determination may be appealed to the [Board of Appeal] under the provisions of Section [Appeal Chapter/Section] of this Code.

B. **Project Type.** The provisions of this Section [XX] shall apply to the following project types within the Shallow Groundwater Rise Overlay District boundaries:

[Note to City/County staff: Two options are provided for consideration in this section, one of which relies upon a size threshold and the other of which relies upon wall demolition. Both options include retrofit thresholds based on improvement cost relative to building value, which is consistent with FEMA standards for the floodplain ordinance. City and County staff should consider this as a menu of options and select the most appropriate thresholds to harmonize with existing regulations.]

1. **Shoreline Development.** Any development within the San Francisco Bay 100-foot buffer zone requiring a BCDC Permit or any development within the creek 35-foot buffer zone.

[Size Threshold Option][63]

2. **New or Addition of Gross Floor Area.** New construction or expansion of one or more buildings that results in the addition of an aggregate gross floor area of [xx] or more square feet.
3. **Dwelling Units.** Any proposed project for the construction of [xx] or more Dwelling Units (but not including rehabilitation or alteration projects unless they result in a net increase of [xx] or more Dwelling Units).

4. **Change of Use.** The change of the permitted or conditionally permitted uses of a gross floor area of [xx] or more square feet.
5. **Substantial Retrofit.** The renovation, rehabilitation, or expansion of a building where the cost of work is greater than 50% of the appraised value of the building and that has, or will have after rehabilitation, a gross floor area of [xx] or more square feet.

[All Substantial Development Option]

6. **Substantial Construction.** Construction of a wholly new building, or removal or reconstruction of 50 % or more of the exterior walls of a building.
7. **Substantial Retrofit.** The renovation, rehabilitation, or expansion of a building where the cost of work is greater than 50% of the appraised value of the building.[64]

C. **Exemption for Low-Density Residential Land Uses.** Single-family homes, duplexes, and low-density multi-family residential housing with less than [insert City/County-selected threshold] units shall be exempt from the provisions within this Section.

XX.XX.040 DEVELOPMENT STANDARDS

A. **Future Conditions in Design Groundwater Levels.**[65] When geotechnical investigations are conducted, a design groundwater level is recommended based on historical maximum groundwater conditions. Given that historical conditions are no longer a reliable predictor of future groundwater levels, project design shall consider a higher design groundwater level that is representative of projected Future Conditions with 6.6 feet of sea level rise based on modeling results from the U.S. Geological Survey.[66] The design groundwater level shall assume a moderate groundwater flow factor[67] if local data on the groundwater or geology characteristics are unknown.

B. **Creek Buffer Zone**.[68] Preserving and creating open space adjacent to existing channels increases flexibility for future modifications to increase channel capacity for groundwater flows in addition to stormwater runoff. Therefore, a minimum buffer zone of 35 feet measured from the Top of Creek Bank is required to accommodate changing groundwater conditions, as well as accommodate and maintain built and natural infrastructure, habitat restoration, and Public Access.

1. **Exception Process.** Building encroachments may be accommodated within the 35-foot buffer zones when the buffer zone would preclude development on a parcel or when there is no other feasible alternative, provided that the applicant provides a site plan by the Application Date demonstrating that their proposal does not encroach upon areas of future emergent groundwater, does not encroach upon the space needed to construct a Resilience Infrastructure Project, and the [City/County] approves this determination.

C. **Natural Infrastructure**.[69] Measures incorporated into the project that will mitigate seasonal and permanent rising groundwater impacts shall evaluate the use or restoration of natural features and ecosystem processes – such as siting open spaces to allow more groundwater and stormwater detention – and incorporate these features to the greatest extent practicable to conserve ecosystem values and functions and provide a wide array of benefits to people and wildlife.

D. **Contaminated Sites.**[70] New and/or substantial construction on contaminated sites shall account for impacts of rising shallow groundwater on contaminant mobilization in project design and all steps of the site remediation process. This shall be documented in a vulnerability assessment and adaptation plan, which will also include a groundwater data monitoring plan. Groundwater data from the site should be used for the most accurate water level on-site; however, if groundwater wells are not present at the project site, databases such as GeoTracker[71] can be used to access water table elevations nearby, using U.S. Geological Survey, California Department of Water Resources, or other nearby cleanup site well observations.

ONGOING CHANGES TO REMEDIATION REGULATIONS

Many current remediation regulations from the State Water Resources Control Board (SWRCB), San Francisco Bay Regional Water Quality Control Board (SFBRWQCB), or Department of Toxic Substances Control (DTSC) do not account for a rising groundwater table and require updates that are currently underway. SFBRWQCB recently revised its waste discharge requirements to require Bayfront landfills to identify strategies for landfill protection from both sea level and groundwater rise (Order No. R2-2022-0031) and DTSC recently released its Sea Level Rise Guidance for Project Managers, which requires Responsible Parties to account for SLR across all phases of project cleanup.

E. **Liquefaction.** New and/or substantial construction sited in "High" or "Very High" Liquefaction Susceptibility areas in the Bay Area Liquefaction Susceptibility Map provided by the U.S. Geological Survey[72] shall account for liquefaction hazards and the impacts of rising shallow groundwater on liquefaction severity in project design. Sites most sensitive to increases in liquefaction intensity caused by sea level rise are artificial fill around the Bay Area margins where the water table is already shallow.

F. **Belowground Structures.**[73] Impacts from shallow groundwater rise shall be considered and mitigated in the design of subsurface parking structures, foundations, basements, and other underground structures, which can be subject to destabilization, corrosion, infiltration, and increased buoyancy with shallow groundwater.

G. **Subsurface Utilities and Stormwater.**[74] Impacts from shallow groundwater rise shall be considered and mitigated in the design of new subsurface utilities, including sewer and stormwater systems.

   1. **Pump Stations.** Pump station capacity shall account for anticipated increases in infiltration to the stormwater system from shallow groundwater rise over the pump station's anticipated service life.
   2. **Green Infrastructure.** Impacts from shallow groundwater rise shall be considered and mitigated in the design of green infrastructure, as projects designed to current groundwater levels may not function as well when groundwater rises nearer to the ground surface. Underdrains connected to the stormwater system can help ensure green infrastructure installations continue to function even if rising groundwater levels slow infiltration rates.

H. **Roadway Subgrades.**[75] To avoid roadway deterioration due to shallow groundwater rise, new and/or substantial construction involving roadway design shall incorporate mitigation

measures, such as pavement structural modifications to the base-layer materials and/or AC thickness modification, to avoid premature pavement failure.

I. **Exceptions.** The [City Council/County Board of Supervisors] shall have the authority to allow exceptions to particular standards in this section, provided that the applicant provides a site plan by the Application Date demonstrating that their proposal does not inhibit the [City/County's] ability to establish resilience to Future Conditions for this site and surrounding properties.

XX.XX.050 PERFORMANCE STANDARDS

A. **Geotechnical Data Collection.** Applicant shall submit representative, site-specific boring data and an associated geotechnical study, prepared by a licensed professional geotechnical engineer, within 12 months of the Application Date and prior to building permit issuance. This study shall be at the landowner or applicant's expense and shall be conducted in consultation with [City/County] staff to be approved as compliant with [City/County] standards.

B. **Topographic Data Collection.**[76] Applicant shall submit two topographic surveys of the property, such as a LiDAR or field survey, prepared by a licensed professional land surveyor: one within 12 months of the Application Date and prior to construction, and one after completion of site grading, but prior to Certificate of Occupancy. Such surveys shall be at the landowner or applicant's expense and shall be conducted in consultation with [City/County] staff to be approved as compliant with [City/County] survey standards.

C. **Vulnerability Assessment and Mitigation.** Based on the geotechnical data collected on-site, the applicant shall submit an assessment of the project's vulnerability to shallow groundwater rise along with a list of measures incorporated into the project that will monitor and mitigate seasonal and permanent rising groundwater impacts, including buoyancy, seepage, infiltration, liquefaction, corrosion, and contaminant mobilization hazards. Monitoring and mitigation measures shall include those required in XX.XX.040 Development Standards at a minimum.

D. **Real Estate Disclosure of Hazards.**[77] In any contract for the sale of real estate located in the Shallow Groundwater Rise Overlay District indicated on the current Shallow Groundwater Rise Overlay Map adopted by the [City/County], the seller shall include in the contract a real estate disclosure of all hazards associated with anticipated shallow groundwater rise, including buoyancy, seepage, infiltration, liquefaction, corrosion, and contaminant mobilization hazards. Any site-specific analyses related to shallow groundwater rise must also be disclosed in real estate transactions.[78]

CHAPTER IV | PROJECT REVIEW CHECKLIST

In the absence of or in addition to Sea Level Rise and Shallow Groundwater Rise Overlay District zoning regulations, OneShoreline development review comments are based on the criteria below.

1. If a regulated use, the proposed project meets the ingress/egress and elevation requirements for the Sea Level Rise Overlay District [if SLR Overlay adopted] OR the proposed project provides continual access under Future Conditions and meets building elevation requirements.
2. The lowest building finished floor elevation and critical mechanical and electrical infrastructure should be located at an elevation 3 feet above the Project site's Base Flood Elevation on the FEMA Flood Insurance Rate Map in effect at the time of the Application Date.
3. The development does not encroach into the San Francisco Bay 100-foot buffer zone or into the creek 35-foot buffer zone as measured from Top of Creek Bank.
4. If an encroachment (above or below grade) into the San Francisco Bay 100-foot buffer zone or creek 35-foot buffer zone are proposed, the encroachment does not interfere with a Resilience Infrastructure Project.
5. Public Access shall be developed and maintained within the San Francisco Bay 100-foot buffer zone or creek 35-foot buffer zone based on BCDC Policies and Design Guidelines and the requirements of the [City/County]. This includes connectivity improvements to the portion of the Bay Trail along the site.
6. Projects within 100 feet of the San Francisco Bay and [Bay shoreline water bodies other than SF Bay] can include shoreline infrastructure built to a top, post-settlement elevation equal to the Bay Protection Standard (the FEMA BFE + 6 feet) and certified by a licensed professional engineer retained by the applicant to be in accordance with FEMA's requirements for accreditation in Title 44, Section 65.10 of the Code of Federal Regulations (or a similar relevant Title and Section of the Code, if updated).
7. Projects within 100 feet of the San Francisco Bay and [Bay shoreline water bodies other than SF Bay] that do not meet the Bay Protection Standard shall:
    a. Provide a detailed plan to guide how the [City/County] and/or OneShoreline can build to the Bay Protection Standard later within the context of the proposed development site plan.
    b. Provide land rights/an easement to the [City/County] associated with the Bay and creek buffer zones that enables the [City/County] and/or OneShoreline to build to the Bay Protection Standard within the easement.
8. The Project should provide documentation demonstrating that changes in hydrology due to climate change, including changes in extreme precipitation events like atmospheric rivers, shall be incorporated into the design of any new stormwater infrastructure.

CHAPTER V | STANDARD CONDITIONS OF APPROVAL

GENERAL

1. All required elevations to meet Base Flood Elevation requirements of Chapter [XX] for finished floor and any shoreline infrastructure shall be certified by a professional land surveyor.
2. Any built or natural shoreline infrastructure shall be eligible to be accredited by FEMA and conforming to Title 44, Section 65.10 of the Code of Federal Regulations or a similar relevant Title and Section of the Code, if updated.
3. All areas improved for Public Access within the jurisdiction of BCDC shall be maintained by the property owner and shall be available to the public in perpetuity, as determined by the BCDC.
4. The areas and improvements within the [XX] square-foot Public Access shall be permanently maintained by and at the expense of the property owner or their assignees. Such maintenance shall include, but is not limited to: repairs to all path surfaces; replacement of any plant materials that die or become unkempt; repairs or replacement as needed of any Public Access amenities such as signs, benches, trash containers, and lights; periodic cleanup of litter and other materials deposited within the access areas; removal of any encroachments into the access areas; assurance that the Public Access signs remain in place and visible; and repairs to any Public Access areas or improvements that are damaged by future subsidence or uneven settlement, flooding, or inundation caused by sea level rise, including raising land elevations or redesigning Public Access features to protect and ensure the usability of the Public Access areas and improvements at all times. Within 30 days after notification by [City/County] and/or BCDC staff, the property owner shall correct any maintenance deficiency noted in a staff inspection of the site. The permittees shall obtain approval by or on behalf of the BCDC of any maintenance that involves more than in-kind repair and replacement.
5. Changes in hydrology due to climate change, including changes in extreme precipitation events like atmospheric rivers, shall be incorporated into the design of any new stormwater infrastructure.
6. The project shall incorporate native or drought-tolerant landscaping where possible.
7. Private and dedicated open space and trees shall be preserved and maintained by the owner/occupant per plans when approved by the [City/County].
8. Applicant shall submit a property maintenance and management plan for the entire property, which shall include but not be limited to:
    a. General cleaning of litter and debris on-site.
    b. Maintenance of all exterior building materials.
    c. Maintenance of all landscaping.

d. Maintenance of all shoreline infrastructure.
e. Maintenance of all public recreation areas.

9. The applicant shall consult with the [City/County] prior to making any modifications to landscaping, equipment, programming, or operation of the publicly accessible recreation facilities.
10. The applicant shall submit a Comprehensive Master Signage Plan with clear Public Access signage consistent with BCDC Policies and Design Guidelines.
11. Trail design, materials, dimensions, and markings shall be consistent with BCDC Policies and Design Guidelines.

PRIOR TO GRADING PERMIT ISSUANCE

12. A tree protection plan shall be submitted and approved prior to issuance of grading permits. To avoid and minimize damage to existing trees that are not proposed for direct impact by Project activities, the measures outlined on Plan Sheet [XX] shall be implemented during construction.
13. [If located in BCDC's jurisdiction] The project shall receive approval from BCDC prior to grading permit issuance.

PRIOR TO BUILDING PERMIT ISSUANCE

14. Prior to issuance of a Building Permit, a licensed professional engineer retained by the applicant shall certify that the design, specifications, and plans for the construction of shoreline infrastructure are in accordance with FEMA's requirements in Title 44, Section 65.10 of the Code of Federal Regulations (or a similar relevant Title and Section of the Code, if updated) as of the Application Date.
15. Prior to Building Permit Issuance, the Applicant shall execute a long-term maintenance agreement with the City/County, covering ownership and maintenance of the publicly accessible recreation areas, landscaping, and streetscaping.
16. Prior to Building Permit Issuance, the applicant shall execute an agreement with the [City/County] identifying the landowner's ongoing maintenance obligations for any shoreline infrastructure approved as part of the development, and granting a maintenance easement to the [City/County] for maintenance of any additional shoreline infrastructure that is constructed by the [City/County] and/or OneShoreline later, if required.
17. [For applicants that opt to meet an alternative set of requirements, in-lieu of the full Shoreline Infrastructure elevation requirement (defined as the FEMA Coastal BFE + 6 feet).] Prior to Building Permit Issuance, the applicant shall provide a detailed plan to guide how the [City/County] and/or OneShoreline can build to the Bay Protection Standard later within the context of the proposed development site plan; and provide land rights/an easement to the [City/County] associated with the Bay and creek buffer zones that enables the [City/County] and/or OneShoreline to build to the Bay Protection Standard within the easement.

18. Prior to Building Permit Issuance, the applicant shall dedicate a Public Access easement over any trails or parks included in the project to meet Municipal Code Requirements. The term of the easement shall be in perpetuity.
19. If the project is located within the Shallow Groundwater Rise Overlay District, prior to issuance of a Building Permit, the applicant shall submit a list of project measures that will monitor and mitigate seasonal and permanent emergent groundwater impacts, including liquefaction risk.
20. If the project is located within the Shallow Groundwater Rise Overlay District, the applicant shall submit current, representative, and site-specific boring data and an associated geotechnical study, prepared by a licensed professional geotechnical engineer, prior to Building Permit issuance. This study shall be at the landowner or applicant's expense and shall be conducted in consultation with [City/County] staff to be approved as compliant with [City/County] standards.

PRIOR TO CERTIFICATE OF OCCUPANCY

21. The applicant shall record a real estate disclosure of all hazards associated with anticipated flooding, sea level rise, and shallow groundwater rise with the San Mateo County Clerk. Any site-specific analyses related to these hazards must also be disclosed in real estate transactions.
22. Applicant shall submit a topographic survey of the property, such as a LiDAR or field survey, prepared by a licensed professional land surveyor after completion of site grading and prior to Certificate of Occupancy. Such survey shall be at the landowner or applicant's expense and shall be conducted in consultation with [City/County] staff to be approved as compliant with [City/County] survey standards.

GLOSSARY

Adaptation Pathway:[79] An adaptation pathway is a decision-making tool comprised of a sequence of manageable steps or decision points in response to climate change impacts over time. Each step on the adaptation pathway is triggered by some measurable, environmentally driven change (e.g., high tide rises beyond a certain elevation, more than 2 flood events in a 12-month period) and results in incremental progress toward resilience over the asset's project life.

Future Conditions: Anticipated increases in flooding, sea level rise, and shallow groundwater rise due to climate change. This definition intentionally does not specify a time horizon for "future" (e.g., "mid-century" or "end-of-century"), given the wide range of potential outcomes by the end of the century due to uncertainty in future greenhouse gas emissions and their geophysical effects.

NAVD88: The North American Vertical Datum of 1988 (NAVD88) is the vertical datum for orthometric heights established for vertical control surveying in the United States of America based upon the General Adjustment of the North American Datum of 1988. A vertical datum is a reference system used by surveyors, engineers, and mapping professionals to measure and relate elevations to the Earth's surface. Using a fixed reference point as a baseline (i.e., a zero-elevation point), elevation values can be consistently measured and compared among various maps and surveys.

Public Access.[80] Public Access includes both physical access, such as trails, as well as additional public services and amenities that are designed and built to encourage diverse Bay-related activities and movement to and along the shoreline, including recreation opportunities and viewshed access to the Bay shoreline.

Substantial Construction: Construction of a wholly new building, or removal or reconstruction of 50 percent or more of the exterior walls of a building; change to accessory structures is not included in this definition.

Substantial Retrofit: The renovation, rehabilitation, or expansion of a building where the cost of work is greater than 50% of the appraised value of the building.

Vulnerable Community: Vulnerable communities experience heightened risk and increased sensitivity to climate change and have less capacity and fewer resources to cope with, adapt to, or recover from climate impacts. These disproportionate effects are caused by physical (built and environmental), social, political, and/ or economic factor(s), which are exacerbated by climate impacts. These factors include, but are not limited to, race, class, sexual orientation and identification, national origin, and income inequality.[81]

Zone VE: Zone VE is the FEMA flood insurance rate zone that corresponds to the 1% annual chance (or 100-year) coastal floodplain that have additional hazards associated with storm waves. Base flood elevations derived from detailed analyses are shown at selected intervals within these zones.

Zone AE: Zone AE is the FEMA flood insurance rate zone that corresponds to the 1% annual chance (or 100-year) floodplains. Base flood elevations derived from detailed hydraulic analyses are shown at selected intervals within these zones.

ENDNOTES

[1]Adapted from California Coastal Commission Sea Level Rise Policy Guidance: Interpretive Guidelines for Addressing Sea Level Rise in Local Coastal Programs and Coastal Development Permits. November 2018, page 5 – How to Use this Document. https://documents.coastal.ca.gov/assets/slr/guidance/2018/0_Full_2018AdoptedSLRGuidanceUpdate.pdf

[2] California Coastal Commission Sea Level Rise Webpage. https://www.coastal.ca.gov/climate/slr/.

[3] Perrin-Martinez, J.M. March 2022. Adaptation Roadmap: A Practitioner's Guide to Plan and Implement a Collaborative, Equitable, Integrative, and Flexible Approach for Sea Level Rise Adaptation. San Francisco Bay Conservation and Development Commission. Section 4.3.2, page 132. Accessed online at http://www.adaptingtorisingtides.org/project/adaptation-roadmap.

[4] Guidance for Flood Risk Analysis and Mapping: Mapping Base Flood Elevations on Flood Insurance Rate Maps. November 2022. Section 2 – Background. https://www.fema.gov/sites/default/files/documents/fema_mapping-base-flood-elevation-flood-insurance-rate-maps_112022.pdf

[5] Guidance for Flood Risk Analysis and Mapping: Coastal Floodplain Mapping. November 2022. Section 2 – Identification of Special Flood Hazard Areas. https://www.fema.gov/sites/default/files/documents/fema_coastal-floodplain-mapping_112022.pdf; Guidance for Flood Risk Analysis and Mapping: Coastal Water Levels. May 2016. Section 1 – Topic Overview. https://www.fema.gov/sites/default/files/2020-02/Coastal_Water_Levels_Guidance_May_2016.pdf

[6] Perrin-Martinez, J.M. March 2022. Adaptation Roadmap: A Practitioner's Guide to Plan and Implement a Collaborative, Equitable, Integrative, and Flexible Approach for Sea Level Rise Adaptation. San Francisco Bay Conservation and Development Commission. Section 4.3.2, page 133. Accessed online at http://www.adaptingtorisingtides.org/project/adaptation-roadmap.

[7] Prepared by U.S. Army Corps of Engineers for FEMA. December 1989. Technical Report CERC-89-15: Criteria for Evaluating Coastal Flood-Protection Structures. https://erdc-library.erdc.dren.mil/jspui/bitstream/11681/12445/1/TR-CERC-89-15.pdf.

[8] BCDC Adapting to Rising Tides Planning Support Webpage. https://explorer.adaptingtorisingtides.org/about.

[9] FEMA's definition of "freeboard." https://www.fema.gov/glossary/freeboard.

[10] Guidance for Flood Risk Analysis and Mapping - Levee Guidance. Section 4.1.3 – Coastal Freeboard, page 28. https://www.fema.gov/sites/default/files/2020-02/Levee_Guidance_Nov_2019_v2.pdf.

[11] BCDC Adapting to Rising Tides Bay Shoreline Flood Explorer, MHHW + 108" Scenario Table. https://explorer.adaptingtorisingtides.org/explorer.

[12] Adapted from California Coastal Commission Residential Adaptation Policy Guidance: Interpretive Guidelines for Addressing Sea Level Rise in Local Coastal Programs. March 2018. Section G.1.c – Management of Sea Level Rise Hazards. https://documents.coastal.ca.gov/assets/climate/slr/vulnerability/residential/RevisedDraftResidentialAdaptationGuidance.pdf

[13] County of San Mateo Office of Sustainability. County of San Mateo Sea Level Rise Vulnerability Assessment. 2018. https://seachangesmc.org/wp-content/uploads/2018/03/2018-03-12_SLR_VA_Report_2.2018_WEB_FINAL.pdf

[14] Adapted from California Coastal Commission Residential Adaptation Policy Guidance: Interpretive Guidelines for Addressing Sea Level Rise in Local Coastal Programs. March 2018. Section F.2 – Prioritization of Types of Shoreline Protection. https://documents.coastal.ca.gov/assets/climate/slr/vulnerability/residential/RevisedDraftResidentialAdaptationGuidance.pdf

[15] https://oneshoreline.org/projects/flood-ews/

[16] BCDC Public Access Policy 10.

[17] Metropolitan Transportation Commission. Bay Trail Interactive Map. https://mtc.ca.gov/operations/regional-trails-parks/san-francisco-bay-trail/bay-trail-interactive-map.

[18] BCDC Bay Adapt Joint Platform Action 2.

[19] BCDC's Environmental Justice and Social Equity Finding C.
[20] Adapted from City of South San Francisco. Shape SSF: 2040 General Plan. Policy CR-1.1. https://shapessf.com/community-resilience/
[21] BCDC Bay Plan Public Access Policy 8.
[22] The McAteer-Petris Act Webpage. https://bcdc.ca.gov/plans/mcateer_petris.html.
[23] County Drainage Manual. PDF page 46.
[24] USGS and Point Blue Conservation Science. Our Coast Our Future Hazard Map. https://ourcoastourfuture.org/hazard-map/.
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[28] FEMA, 44 CFR 59.1. Substantial improvement definition.
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[32] Redwood City Municipal Code, Sidewalk, Setback, and Landscaping Regulations by Sub-District, Supplemental Development Standards for the MUC-RC Sub-District, Section 53.5(A)(2): https://library.municode.com/ca/redwood_city/codes/zoning_code?nodeId=ART53MIECOZODI_53.5SISELARE; San Carlos Municipal Code, Stream Development and Maintenance (SDM) Overlay District, Stream Setback Requirements, Section 18.14.030(A): https://www.codepublishing.com/CA/SanCarlos/#!/SanCarlos18/SanCarlos1814.html#18.14.030; San Mateo Downtown Area Plan, Policy I.6 San Mateo Creek Flood Protection: https://www.cityofsanmateo.org/DocumentCenter/View/55327/2009-Downtown-Area-Plan?bidId=; Burlingame Municipal Code, Public Access, Flood and Sea Level Rise Performance Guidelines, Creek Access – Buffer Zones, Section 25.12.050(G): https://library.qcode.us/lib/burlingame_ca/pub/municipal_code/item/title_25-article_2-chapter_25_12-25_12_050; City of South San Francisco. Zoning Code, Section 20.180.004. http://shapessf.com/wp-content/uploads/2022/11/LWC_SSF_Code-Update_October-2022.pdf
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[38] Climate Adaptation Risk Analysis for the San Mateo Countywide Sustainable Streets Master Plan. C/CAG. https://ccag.ca.gov/wp-content/uploads/2021/02/Appendix-A-SSMP-Climate-Change-Report-FINAL.pdf. Table 1-5 on PDF page 14.

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[48] Climate Adaptation Risk Analysis for the San Mateo Countywide Sustainable Streets Master Plan. C/CAG. https://ccag.ca.gov/wp-content/uploads/2021/02/Appendix-A-SSMP-Climate-Change-Report-FINAL.pdf. Table 1-5 on PDF page 14.

[49] Climate Adaptation Risk Analysis for the San Mateo Countywide Sustainable Streets Master Plan. C/CAG. https://ccag.ca.gov/wp-content/uploads/2021/02/Appendix-A-SSMP-Climate-Change-Report-FINAL.pdf. Table 1-5 on PDF page 14.

[50] Adapted from the City of San Carlos. Municipal Code Section 17.36.050 – Drainage Facilities and Requirements. https://www.codepublishing.com/CA/SanCarlos/#!/SanCarlos17/SanCarlos1736.html.

[51] Adapted from the City of Issaquah. Flood Hazard Permit Submittal Requirements. https://issaquahwa.gov/DocumentCenter/View/1566/Flood-Hazard-Submittal-Requirements?bidId=.

[52] Acceptable flood thresholds may be different along different locations of the Bay, and BCDC will evaluate this threshold on a project-by-project basis in accordance with the San Francisco Bay Plan Climate Change Policy Guidance Document. Recent permits that set forth public access flood thresholds include the Foster City Levee Project, the Treasure Island Redevelopment Project (BCDC Permit No. 2016.005.00), or the Oyster Point Redevelopment Project (BCDC Permit No. 2017.007.00). The following threshold was defined by BCDC in their Alameda Landing permit

(2018.004): existing access is deemed to be impacted by Future Conditions when annual king tides prevent access more than 2 times in a 12-month period.
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[57] Note that Civil Code Section 1103.4(c)(2) specifies certain exemptions from liability for transfers of residential property where a licensed engineer, land surveyor, geologist or expert in natural hazard discovery delivers a report which provides notice that the property is within BCDC's jurisdiction, including subject to its regulatory authority.
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[60] USGS and Point Blue Conservation Science. Our Coast Our Future Hazard Map. https://ourcoastourfuture.org/hazard-map/
[61] USGS and Point Blue Conservation Science. How does subsurface geology affect groundwater levels? https://data.pointblue.org/apps/ocof2_flood_map/images/infographics/groundwater_geology.png.
[62] Befus, K.M., Barnard, P.L., Hoover, D.J., Finzi Hart, J.A., and C.I. Voss. 2020. Increasing threat of coastal groundwater hazards from sea-level rise in California. Nat. Clim. Chang. 10, 946–952. https://doi.org/10.1038/s41558-020-0874-1
[63] Adapted from City of Boston. Zoning Code, Coastal Flood Resilience Overlay District. Article 25A - 4 Applicability. https://library.municode.com/ma/boston/codes/redevelopment_authority?nodeId=ART25ACOFLREOVDI
[64] FEMA, 44 CFR 59.1. Substantial improvement definition.
[65] San Francisco Estuary Institute, with technical review by ESA & Pathways Climate Institute. Sea-level Rise Impacts on Shallow Groundwater in Moffett Park: A technical addendum to the Moffett Park Specific Plan. November 2021, page 25. https://static1.squarespace.com/static/5e38a3dd6f9db304821e8e5e/t/61a7b37743ec4b770e11ee73/1638380421678/Moffett+Park+Specific+Plan+Groundwater+Addendum.pdf
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Estate Disclosure of Hazards. https://documents.coastal.ca.gov/assets/climate/slr/vulnerability/residential/RevisedDraftResidentialAdaptationGuidance.pdf; Adapted from Broward County. Broward County Code of Ordinances Section 39-408 – Required disclosure in contracts for sale of real estate. bit.ly/37K9hmF.

[78] Note that Civil Code section 1103.4(c)(2) specifies certain exemptions from liability for transfers of residential property where a licensed engineer, land surveyor, geologist or expert in natural hazard discovery delivers a report which provides notice that the property is within BCDC's jurisdiction, including subject to its regulatory authority.

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San Mateo County Flood and Sea Level Rise Resiliency District
Agenda Report

Date: April 24, 2023

To: San Mateo County Flood and Sea Level Rise Resiliency District Board of Directors

From: Len Materman, CEO

Subject: Second Amended and Restated Joint Powers Agreement for the San Francisquito Creek Joint Powers Authority ("SFCJPA")

Recommendation

That the San Mateo County Flood and Sea Level Rise Resiliency District ("District") Board of Directors ("Board") approve the Second Amended and Restated Joint Powers Agreement for the San Francisquito Creek Joint Powers Authority ("Second Amended SFCJPA Agreement").

Background and Discussion

Effective May 18, 1999, five public entities organized and operated under the laws of the State of California – the cities of East Palo Alto, Menlo Park, Palo Alto, the Santa Clara Valley Water District, and the San Mateo County Flood Control District ("Member Entities") – formed the San Francisquito Creek Joint Powers Authority ("SFCJPA") under a Joint Powers Agreement ("SFCJPA Agreement").

The SFCJPA Agreement was first amended effective January 1, 2020 to reflect the fact that State legislation enacted in 2019 had caused the San Mateo County Flood Control District to no longer exist and simultaneously established the San Mateo County Flood and Sea Level Rise Resiliency District as an independent special district. Aside from that change, the SFCJPA Agreement had not been revised since it was approved almost 24 years ago despite the fact that there have been updates to laws, guidelines, and standards and changes in the SFCJPA's practices.

Over the course of the past two years, staff from the Member Entities reviewed drafts, provided multiple rounds of analysis, edits, and comments, and agreed to the Second Amended SFCJPA Agreement, a copy of which is enclosed with this agenda packet. The Second Amended SFCJPA Agreement must be approved by all Member Entities, including our Board, in order to take effect.

Revisions in the Second Amended SFCJPA Agreement include:

- Text that reflects the current nature of SFCJPA activities, including that the SFCJPA:
  - secures and administers funds for its operations and projects rather than relies on Member Entity funds,
  - develops and maintains projects rather than simply plans them,
  - creates recreational opportunities in addition to restoring the environment, and
  - enhances the ability of emergency response agencies to respond to flooding.
- Text that reflects the current nature of SFCJPA administrative practices (such as hiring staff and board roles);
- Clarification of SFCJPA authority regarding land acquisition, explicitly allowing for eminent domain if the Member Entity where the eminent domain would occur adopts a resolution consenting to the Authority's exercise of eminent domain within its jurisdiction;
- Clarification of language regarding authorization of SFCJPA budget and capital projects;
- Deletion of text stating that legal counsel of a Member Entity may be designated legal counsel for SFCJPA;
- Modernization and simplification of language for clarity;
- Addition of now-standard clauses common to local government agreements; and
- Format reconciliation.

Impact on District Resources: There is no impact on District resources associated with approval of the Second Amended and Restated Joint Powers Agreement for the SFCJPA.

Attachment: Second Amended and Restated Joint Powers Agreement for the SFCJPA

SECOND AMENDED AND RESTATED JOINT POWERS AGREEMENT

FOR THE

SAN FRANCISQUITO CREEK JOINT POWERS AUTHORITY

AMENDED AND RESTATED

as of

_____, 2023

SECOND AMENDED AND RESTATED JOINT POWERS AGREEMENT FOR THE SAN FRANCISQUITO CREEK JOINT POWERS AUTHORITY

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SECOND AMENDED AND RESTATED JOINT POWERS AGREEMENT FOR THE SAN FRANCISQUITO CREEK JOINT POWERS AUTHORITY

This Second Amended and Restated Agreement Joint Powers Agreement for the San Francisquito Creek Joint Powers Authority (Agreement) is made by and among the City of East Palo Alto, the City of Menlo Park, the City of Palo Alto, the San Mateo County Flood and Sea Level Rise Resiliency District, and the Santa Clara Valley Water District (each a Member Entity and collectively, the Member Entities), all of which are public entities organized and operating under the laws of the State of California, and each of which is a public agency as defined in California Government Code section 6500. This Agreement is effective upon full execution by all Member Entities (Effective Date).

RECITALS

A. The Joint Exercise of Powers Act, Government Code sections 6500 et seq. (JPA Law), permits two or more local public entities by agreement to jointly exercise any power common to them.

B. Following years of effort to address environmental and flooding concerns related to the watershed and floodplain of San Francisquito Creek (encompassing approximately 50 square miles from the Santa Cruz Mountains to San Francisco Bay), and soon after the flood of record in 1998 damaged approximately 1,700 properties, the Member Entities established the San Francisquito Creek Joint Powers Authority (Authority) pursuant to that certain "Joint Powers Agreement Creating the San Francisquito Creek Joint Powers Authority," dated as of May 18, 1999, to collectively contribute resources and implement policies and projects of mutual interest relating to the primary natural features that unite them, including the San Francisquito Creek.

C. The Joint Powers Agreement Creating the San Francisquito Creek Joint Powers Authority, dated as of May 18, 1999, was thereafter revised pursuant to the Joint Powers Agreement for the San Francisquito Creek Joint Powers Authority, Amended and Restated as of January 1, 2020.

D. Each Member Entity agrees to contribute resources and funding towards implementation of projects of mutual interest and benefit relating to San Francisquito Creek and San Francisco Bay shoreline.

E. The governing body of each Member Entity has determined that it is in the Member Entity's best interest and the public interest that this Second Amended and Restated Joint Powers Agreement for the San Francisquito Creek Joint Powers Authority be executed.

NOW, THEREFORE, the Member Entities, by, between and among themselves, in consideration of the mutual benefits, promises, and agreements set forth below, hereby agree as follows:

1. Creation of the San Francisquito Creek Joint Powers Authority

Pursuant to the JPA Law, the Member Entities create a public agency, separate and apart from the Member Entities to be known as the San Francisquito Creek Joint Powers Authority (Authority). Pursuant to Government Code section 6508.1, the debts, liabilities,

and obligations of the Authority shall not constitute debts, liabilities, or obligations of any party to this Agreement. A Member Entity may separately contract for or assume responsibility for specific debts, liabilities, or obligations of the Authority. For purposes of, and to the extent required by, Government Code section 6509, in exercising its powers, the Authority shall be subject to the restrictions upon the manner of exercising the powers of the City of Menlo Park, except as otherwise authorized or permitted by the JPA Law.

2. Purposes

This Agreement is entered into by Member Entities under the JPA Law for the following purposes:

a. Develop and maintain projects to reduce the risk of flooding in and around San Francisquito Creek.

b. Develop and maintain projects to reduce the risk of coastal flooding from along the San Francisco Bay shoreline.

c. Maintain, restore, enhance the environment, and create recreational opportunities, where possible, in implementing the other purposes stated herein.

d. Provide regional information related to flood preparedness and emergency response agencies and others to enhance their ability to communicate about and respond to flood risks.

e. Secure and administer funding for the benefit of the Authority's operations, capital projects, and related work.

3. Parties to Agreement

Withdrawal or expulsion of any Member Entity from this Agreement does not affect this Agreement nor each Member Entity's intent to contract with the Member Entities then remaining. Pursuant to Assembly Bill 825 (Chapter 292, Statutes of 2019), which amended the San Mateo County Flood Control District Act to provide for the San Mateo County Flood and Sea Level Rise Resiliency District, the Member Entities agree that the San Mateo County Flood and Sea Level Rise Resiliency District (OneShoreline) is the entity formerly known as the San Mateo County Flood Control District, and as such is subject to the terms and conditions of this Agreement.

4. Term of Agreement

This Agreement continues in full force until terminated in accordance with paragraph 17. Termination and Distribution.

5. Powers of the Authority

The Authority shall have all powers common to the Member Entities, and such additional powers granted to it by law, necessary to fulfill the purposes of this Agreement. The Authority, through its Board of Directors, is authorized to do all acts necessary to fulfill

the purposes of this Agreement referred to in paragraph 2. Purposes including, but not limited to, each of the following:

a. Make and enter into contracts;

b. Incur debts, liabilities, and obligations, provided that no debt, liability, or obligation of the Authority shall be a debt, liability, or obligation of a Member Entity except as separately agreed to by a Member Entity;

c. Receive contributions and donations of property, funds, services, and other forms of assistance from any source;

d. Acquire, hold, and dispose of real property, including, without limitation, the power to convey real property to a Member Entity, as deemed appropriate by the Authority's Board of Directors, and as accepted by the Member Entity, provided, however, that the Authority shall not exercise the power of eminent domain in the jurisdiction of a Member Entity unless the Member Entity adopts a resolution consenting to the Authority's exercise of eminent domain within its jurisdiction.

e. Sue and be sued in its own name;

f. Contract with independent consultants and contractors;

g. Receive, collect, and disburse monies;

h. Hire staff in conformance with an approved operating budget;

i. Assign, delegate, or contract with a Member Entity or third party to perform any of the Authority's duties including, but not limited to, acting as administrator for the Authority; and

j. Exercise all other powers and carry out other duties as necessary and proper to fulfill the provisions of this Agreement.

6. Member Entity Approvals and Responsibilities

Each Member Entity has the approval authority, obligations, and responsibilities set forth in this Agreement. The Member Entities retain the following powers:

a. The designation of each Member Entity's Director and alternate as specified in paragraph 9. Board of Directors;

b. Approval of an amendment to this Agreement as specified in paragraph 19. Amendments;

c. Approval of the Member Entity's funding or other contribution for a capital project as specified in paragraph 7. Capital Project Participation; and

d. Approval of the Member Entity's contribution to the annual budget of the Authority as specified in paragraph 12. Operating Budget.

7. Capital Project Participation

The Authority may approve a contract for a capital project or any discrete phase of a capital project in accordance with the following conditions:

a. The Authority's Board of Directors has determined that the Authority will have the funds necessary to pay for that capital project or that discrete phase of the project being approved; and

b. Any funding or other contribution from a Member Entity to that capital project or to that discrete phase of the capital project has been approved by the Member Entity's governing body or designee. Each Member Entity shall have the right to determine independently whether to participate in any capital project.

8. Membership

Member Entities may be added to the Authority by amending this Agreement, as described in paragraph 19. Amendments, and Member Entities may withdraw or be expelled, as described in paragraph 15. Withdrawal and paragraph 16. Expulsion.

9. Board of Directors

a. **Directors**. There shall be a Board of Directors to govern the Authority. The Board of Directors shall be comprised of one Director designated by each Member Entity. Each Director shall have one vote on the Board of Directors. Each Director shall have an alternate designated by the governing body of each Member Entity. No two Directors and no two Alternate Directors shall be from the same governing body of any Member Entity.

b. **Alternates**. All references in this Agreement to a Director refer to and include the Director's alternate, when acting in place of a Director.

c. **Compensation**. Directors are not entitled to compensation by the Authority. The Board of Directors may authorize reimbursement of expenses incurred by Directors in connection with serving as a Director.

d. **Term**. The term of office of a Director shall terminate when such person ceases to be a member of the governing body of the Member Entity or the Member Entity designates another Director and/or alternate to serve.

e. **Powers**. The powers of the Board of Directors are each of the powers of the Authority not specifically reserved to the Member Entities by this Agreement. No Action of the Authority shall be effective or binding unless and until such action has been authorized by the Board of Directors and either 1) is consistent with the budget approved by the Board of Directors pursuant to paragraph 12. Operating Budget, or 2) complies with paragraph 7. Capital Project Participation.

f. **Meetings**. The Board of Directors shall hold at least one regular meeting each year, at which time the Board of Directors shall elect its officers pursuant to paragraph 10. Officers. The Board of Directors shall fix the date, hour, and place at which each regular meeting is to be held. To the extent practicable, each Board of Directors meeting shall be held in Northern Santa Clara County or Southern San Mateo County. The Chair presides at all meetings. A special

meeting may be called upon written request by the Chair or at least two Directors.

g. **Brown Act**. Each regular, adjourned regular, or special meeting of the Board of Directors shall be called, noticed, held, and conducted in accordance with the Ralph M. Brown Act (Government Code §54950, et seq.).

h. **Notices, Agendas, Minutes**. The Board of Directors shall appoint or hire a Clerk of the Board of Directors who shall be responsible for preparing minutes of each regular and special meeting of the Board of Directors, and issuing notices and agendas in accordance with the law.

i. **Quorum**. No business may be transacted by the Board of Directors without a quorum of members of the Board of Directors being present except that less than a quorum may adjourn from time to time. A quorum consists of a majority of the members of the Board of Directors.

j. **Action of the Board of Directors**. Except as otherwise specified in this Agreement, or required by law, any action of the Board of Directors shall require a vote of a majority of the Directors.

10. Officers

a. The officers of the Authority are the Chair, and Vice-Chair.

b. The officers shall be elected or appointed by the Board of Directors at its first meeting of the calendar year unless delayed by an action of the Board of Directors.

c. The term of office for Chair and Vice Chair shall be determined by a vote of the Board of Directors. The officers shall assume the duties of their offices upon being elected or appointed, as appropriate.

d. If the Chair or Vice Chair ceases to be a member of the Board of Directors, the Board of Directors shall elect or appoint a new officer at the next regular meeting of the Board of Directors held after the vacancy occurs.

11. Fiscal Year

Each fiscal year of the Authority shall begin on July 1 of a calendar year and end on June 30 of the next following calendar year.

12. Operating Budget

a. The Board of Directors shall adopt an annual operating budget, which shall be separate from the budget for any capital project of the Authority. The operating budget shall include the proposed contribution from each Member Entity and other sources of income for the fiscal year.

b. The operating budget shall not be effective unless and until the governing body of each Member Entity approves that Member Entity's contribution to the operating budget.

c. A Member Entity's contribution shall become due and payable to the Authority upon adoption of the annual operating budget by the Board of Directors and

approval of the Member Entity's contribution to the budget by that Member Entity's governing body.

13. Annual Audit and Audit Reports

The Board of Directors shall cause an annual financial audit to be made by an independent certified public accountant with respect to all Authority receipts, disbursements, other transactions, and entries into the books. A report of the financial audit shall be filed as a public record with each Member Entity. The audit shall be filed no later than as required by State law. The Authority shall pay the cost of the financial audit from its annual operating budget in the same manner as other administrative costs.

14. Establishment and Administration of Funds

a. **Accountability**. The Authority is responsible for the strict accountability of all funds and reports of all receipts and disbursements. It shall comply with every provision of law relating to the establishment and administration of funds, in particular, Government Code §6505. The funds shall be accounted for on a full accrual basis.

b. **Investment/Disbursement**. The Authority shall receive and disburse funds only in accordance with policies and procedures established by the Board of Directors and in conformity with applicable law.

c. **Insurance/Bonds**. The Authority shall procure, carry and maintain, in full force and effect, at all times during the term of this Agreement, such insurance and bonds to protect the Authority and the Board of Directors, officers, employees, agents, and Member Entities, as deemed appropriate by the Board of Directors.

d. **Depository and Auditor Controller**. The Board of Directors shall designate one of its officers, employees or a third party to perform all acts required by Government Code §6505 (regarding an annual audit), §6505.1 (regarding charge of and access to property), §6505.5 (regarding the depository and custodian of money), and §6505.6 (regarding independent audit where an officer or employee acts as treasurer, auditor, or both), as such laws are amended from time to time.

15. Withdrawal

a. Member Entities may withdraw from the Authority for subsequent fiscal years by providing written notice to the Authority and each Member Entity on or before May 1 of any fiscal year. Withdrawal shall be effective on July 1 of the next fiscal year. This shall be the exclusive means by which a Member Entity may withdraw from the Authority.

b. Any Member Entity that withdraws shall remain liable for any budget contributions or capital project participation approved before withdrawal.

c. Any Member Entity that withdraws shall remain liable for any and all demands, claims, or liabilities of any nature, including death or injury to any person, property damage, or any other loss caused by or arising out of that Member Entity's performance or failure to perform the obligations assumed before the Member Entity withdraws from this Agreement. Any Member Entity that withdraws shall remain subject to the provisions of paragraph 21. Indemnification

with respect to any event or occurrence taking place before the Member Entity withdraws.

16. Expulsion

a. The Authority may expel a Member Entity from the Authority by a four-fifths (4/5) vote of the Authority Board of Directors for a breach of this Agreement determined by the Board of Directors to be a material breach.

b. Any Member Entity that has been expelled pursuant to this paragraph shall have no further liability or obligation pursuant to this Agreement after the effective date of such expulsion; except such Member Entity shall remain liable for any and all demands, claims, or liabilities of any nature, including death or injury to any person, property damage, or any other loss caused by or arising out of that party's performance or failure to perform the obligations assumed before the Member Entity was expelled, including any budget contributions or capital project participation approved before expulsion.

c. Any Member Entity that has been expelled shall remain subject to the provisions of paragraph 21. Indemnification with respect to any event or occurrence taking place before the Member Entity was expelled.

17. Termination and Distribution

a. **Termination**. This Agreement shall continue until terminated. This Agreement may be terminated by the written consent of four-fifths (4/5) of the Member Entities. The Agreement may only be terminated after disposing of all claims, distribution of assets, and performance of all other functions necessary to conclude the obligations and affairs of the Authority.

b. **Concluding Affairs**. The Board of Directors is vested with all powers of the Authority for the purpose of concluding and dissolving the business affairs of the Authority, including for the disposition, division, or distribution of any property acquired as a result of the joint exercise of powers.

c. **Surplus**. In the event that the Authority is terminated, any surplus money on deposit in any fund or account of the Authority shall be returned to Member Entities in proportion to the contributions made to that fund or account, as required by Government Code §6512.

d. **Property**. All real property and any improvements thereon, that were owned by a Member Entity and contributed to the Authority shall be returned to the Member Entity, upon its approval, that contributed such property.

e. **Member Entity Obligations**. In no event shall any funds or assets be distributed, divided or returned to a Member Entity until such Member Entity has either paid their share of all outstanding debts and obligations that were incurred while they were a Member Entity, or executed a contract with the Authority to pay for all outstanding debts and obligations that were incurred while they were a Member Entity.

18. Prohibition Against Assignment

No Member Entity may assign a right, claim, or interest it may have under this Agreement, and any such assignment shall be void. No creditor, assignee, or third-party beneficiary of a Member Entity has a right, claim, or title to any part, share, interest, fund, or asset of the Authority.

19. Amendments

This Agreement may only be amended by approval by the governing body for each and every Member Entity. A proposed amendment must be submitted to each Member Entity at least thirty (30) days in advance of the date on which it will be considered. An amendment is effective upon full execution by all Member Entities.

20. Severability

If a court of competent jurisdiction holds any provision of this Agreement to be illegal, unenforceable, or invalid in whole or in part for any reason, the validity and enforceability of the remaining provisions, or portions of them, will not be affected, unless an essential purpose of this Agreement would be defeated by the loss of the illegal, unenforceable, or invalid provision.

21. Indemnification

a. Funds of the Authority may be used to defend, indemnify, and hold harmless the Authority, any Member Entity, any member of the Board of Directors, and each officer, employee and agent of the Authority or Member Entities, for their actions taken within the scope of their duties while acting on behalf of the Authority.

b. In lieu of and notwithstanding the pro rata risk allocation, which might otherwise be imposed between the Member Entities pursuant to Government Code Section 895.6, the Member Entities agree that all losses or liabilities incurred by a Member Entity shall not be shared pro rata but, instead, the Member Entities agree that, pursuant to Government Code Section 895.4, each Member Entity hereto shall fully indemnify and hold each of the other Member Entities, their officers, board members, employees, and agents, harmless from any claim, expense or cost, damage or liability imposed for injury (as defined in Government Code 810.8) occurring by reason of the negligent acts or omissions or willful misconduct of the indemnifying Member Entity, its officers, employees, or agents, under or in connection with or arising out of any work, authority, or jurisdiction delegated to such Member Entity pursuant to this Agreement. No Member Entity, nor any officer, board member, employees, or agent thereof shall be responsible for any damage or liability occurring by reason of the negligent acts or omissions or willful misconduct of the other Member Entity hereto, its officers, board members, employees, or agents, under or in connection with or arising out of any work, authority, or jurisdiction delegated to such other Member Entity pursuant to this Agreement. The rights, duties, and obligations of the Member Entities as set forth above in this paragraph 21. Indemnification, survive completion, termination, expiration, and suspension of this Agreement.

22. Choice of Law and Venue

The Parties agree that this Agreement is to be governed, construed, and enforced in accordance with the laws of the State of California. The Parties also agree that the

venue of any litigation arising out of or connected with this Agreement will lie exclusively in the state trial court or Federal District Court located in Santa Clara County or San Mateo County in the State of California. The Parties consent to jurisdiction over their persons and over the subject matter of any such litigation in such courts, and consent to service of process issued by such courts.

23. Counterparts

This Agreement may be executed in counterparts, each of which shall be an original, but all of which shall constitute one instrument.

24. Agreement Complete

The foregoing constitutes the full and complete Agreement of the Member Entities. There are no oral understandings or agreements not set forth in writing herein.

25. No Third-Party Beneficiaries

Nothing in this Agreement, whether express or implied, shall be construed to give any person or entity, other than the Parties hereto, any legal or equitable right, remedy, or claim under or in respect of this Agreement or any covenants, conditions, or provisions contained herein.

26. Nonwaiver of Rights

The failure of either Party to this Agreement to object to or to take affirmative action with respect to any conduct of the other Party that is in violation of the terms of this Agreement will not be construed as a waiver thereof, or as waiver of any future breach or subsequent wrongful conduct.

27. Agreement Execution

Unless otherwise prohibited by law or policy of any Member Entity, the Member Entities agree that an electronic copy of a signed agreement, or an electronically signed agreement, has the same force and legal effect as an agreement executed with an original ink signature. The term “electronic copy of a signed agreement” refers to a transmission by facsimile, electronic mail, or other electronic means of a copy of an original signed agreement in a portable document format. The term “electronically signed agreement” means an agreement that is executed by applying an electronic signature using technology in compliance with the Electronic Signature Act (California Civil Code §1633).

28. Equal Opportunity

a. Equal Opportunity Employer

Each of the Member Entities is an equal opportunity employer and requires their contractors to have and adhere to a policy of equal opportunity and non-discrimination, including that such contractors will comply with all applicable federal, state, local laws and regulations, and will not discriminate against any subcontractor, employee, or applicant for employment in the recruitment, hiring, employment, utilization, promotion, classification or reclassification, transfer, recruitment advertising, evaluation, treatment, demotion, layoff, termination, rates of pay or other forms of compensation, and selection for professional

development training (including apprenticeship), or against any other person, on the basis of sex (which includes pregnancy, childbirth, breastfeeding and medical conditions related to pregnancy, childbirth or breastfeeding), race, religion, color, national origin (including language use restrictions), ancestry, religious creed (including religious dress and grooming practices), political affiliation, disability (mental and physical, including HIV or AIDS), medical condition (cancer and genetic characteristics), genetic information, marital status, parental status, gender, age (40 and over), pregnancy, military and veteran status, sexual orientation, gender identity and gender expression, the exercise of family and medical care leave, the exercise of pregnancy disability leave, or the request, exercise, or need for reasonable accommodation.

b. Compliance with Applicable Equal Opportunity Laws

All equal opportunity and non-discrimination policies of Member Entity contractors must be in conformance with applicable state and federal guidelines including the Federal Equal Opportunity Clause, 41 Code of Federal Regulations, Part 60-1, §60-1.4; Title VII of the Civil Rights Act of 1964 as amended; the Americans with Disabilities Act of 1990; the Rehabilitation Act of 1973 (§503 and §504); the Age Discrimination Act of 1975 (42 U.S.C. §6101 et seq.); the California Fair Employment and Housing Act (Government Code §12900 et. seq.); and California Labor Code §1101 and §1102.

c. Investigation of Claims

Member Entity contractors must designate a specific position within its organization to be responsible for investigating allegations of non-compliance with the anti-discrimination and anti-harassment provisions of this Section 28. Contractors must conduct a fair, prompt, and thorough investigation of all allegations directed to the contractor by any Member Entity. In cases where such investigation results in a finding of discrimination, harassment, or hostile work environment, the contractor must take prompt, effective action against the offender.

29. Notices

Unless otherwise specified in this Agreement, all requests for written approval or legal notices must be sent to the representatives' addresses on file with the Authority. All notices are deemed to have been given when made in writing and when delivered or mailed to the representatives at their respective addresses.

IN WITNESS WHEREOF, the Member Entities hereto have executed this Agreement on the dates as set for the below.

(SIGNATURES TO FOLLOW ON SEPARATE PAGES)

(REMAINDER OF PAGE INTENTIONALLY LEFT BLANK)

DATED: _____, 2023

CITY OF MENLO PARK

By: _____
Name
Mayor

ATTEST:

By: _____
Name
City Clerk

APPROVE AS TO FORM:

_____
City Attorney

(REMAINDER OF PAGE INTENTIONALLY LEFT BLANK)

DATED: _____, 2023

CITY OF PALO ALTO

By: _____
Name
Mayor

ATTEST:

By: _____
Name
City Clerk

APPROVE AS TO FORM:

_____
City Attorney

(REMAINDER OF PAGE INTENTIONALLY LEFT BLANK)

DATED: _____, 2023

CITY OF EAST PALO ALTO

By: _____
Name
Mayor

ATTEST:

By: _____
Name
City Clerk

APPROVE AS TO FORM:

_____
City Attorney

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DATED: _____, 2023

SANTA CLARA VALLEY WATER DISTRICT

By: _____
John L. Varela
Chair, Board of Directors

ATTEST:

By: _____
Michele L. King, CMC
Clerk, Board of Directors

APPROVE AS TO FORM:

_____
District Counsel
J. Carlos Orellana

(REMAINDER OF PAGE INTENTIONALLY LEFT BLANK)

DATED: _____, 2023

SAN MATEO COUNTY FLOOD AND SEA LEVEL RISE RESILIENCY DISTRICT

By: _____
Name
Chair, Board of Directors

ATTEST:

By: _____
Name
Clerk, Board of Directors

APPROVE AS TO FORM:

_____
Brian Kulich
Lead Deputy County Counsel
General Counsel

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