



Bay Area
Regional
Collaborative

375 Beale Street
Suite 700
San Francisco, California
94105

Meeting Agenda - Final

Bay Area Regional Collaborative

Chair, Jesse Arreguin, Mayor, City of Berkeley
Vice Chair, Vacant

Friday, March 17, 2023

10:00 AM

Hybrid (In-Person Option Available)

This meeting shall consist of a simultaneous teleconference call at the following location(s):

Napa County Administration Building, 1195 Third Street, Suite 310-Crystal Conference Room,
Napa, CA 94559

Contra Costa Board of Supervisors Building, 11780 San Pablo Ave., Suite D, El Cerrito, CA
94530

Scott Haggerty Heritage House, 4501 Pleasanton Ave, Pleasanton, CA 94566

A Zoom panelist link for meeting participants will be sent separately to Committee members.

Meeting attendees may opt to attend in person for public comment and observation at 375 Beale Street, Board Room (1st Floor). In-person attendees must adhere to posted public health protocols while in the building. The meeting webcast will be available at:

<https://barc.ca.gov/whats-happening/meetings/live-webcast>. Members of the public are encouraged to participate remotely via Zoom at the following link or phone number. Committee members and members of the public participating by Zoom wishing to speak should use the "raise hand" feature or dial "*9". In order to get the full Zoom experience, please make sure your application is up to date.

Attendee Link: <https://bayareametro.zoom.us/j/82642783666>

Or One tap mobile: US: +13462487799,,82642783666# or +14086380968,,82642783666#

Join by Telephone: (for higher quality, dial a number based on your current location):

US: 888 788 0099 (Toll Free) or 877 853 5247 (Toll Free)

Webinar ID: 826 4278 3666

International numbers available: <https://bayareametro.zoom.us/j/kborLDDAUo>

SIP: 82642783666@zoomcrc.com

Detailed instructions on participating via Zoom are available at:

<https://abag.ca.gov/zoom-information>

Members of the public may participate by phone or Zoom or may submit comments by email at info@bayareametro.gov by 5:00 p.m. the day before the scheduled meeting date. Please include the committee or board meeting name and agenda item in the subject line.

The BARC Governing Board may act on any item on the agenda.

The meeting is scheduled to begin at 10:00 a.m.

Agenda, roster, and webcast available at <https://barc.ca.gov>

For information, contact Clerk of the Board at (415) 778-5218.

Governing Board Members

ABAG—Jesse Arreguin, David Hudson, David Rabbitt, Belia Ramos

BAAQMD—David Haubert, John J. Bauters, Mark Ross

BCDC—John Gioia, Dave Pine, Zack Wasserman, Rebecca Eisen

MTC—Alfredo Pedroza, Jim Sperling

1. Call to Order / Roll Call / Confirm Quorum

2. Governing Board Member Announcements

3. Chair's Report

- 3.a [23-0331](#) Chair's Report for March 17, 2023

Action: Information

Presenter: Chair Arreguin

4. Consent Calendar

- 4.a [23-0332](#) Approving of the Minutes of the January 17, 2023 BARC Governing Board

Action: Information

Presenter: Clerk of the Board

Attachments: [BARC GB Minutes 20230120 Draft.pdf](#)

- 4.b [23-0491](#) Appointment of the Vice Chair to the BARC Governing Board for the term 2023-2025

Action: Approval

Presenter: Chair Arreguin

5. BARC Member Agency Executive Director Updates

- 5.a [23-0334](#) Bay Area Air Quality Management District report for March 17, 2023

Action: Information

Presenter: Phil Fine

- 5.b [23-0335](#) San Francisco Bay Regional Water Quality Control Board

Action: Information

Presenter: Eileen White

5.c [23-0336](#) Association of Bay Area Governments and Metropolitan Transportation

Action: Information

Presenter: Andrew Fremier

5.d [23-0338](#) San Francisco Bay Conservation and Development Commission

Action: Information

Presenter: Larry Goldzband

Attachments: [Item 5.d 03172023 BARC Task Force.pdf](#)

6. BARC Executive Directors Update**6.a** [23-0339](#) Report from the BARC Executive Director

Action: Information

Presenter: Allison Brooks

7. Presentation by ABAG/MTC & BCDC**7.a** [23-0340](#) Sea Level Rise Funding and Investment Framework Final Presentation

Action: Information

Presenter: Rachel Hartofelis, Association of Bay Area Governments/Metropolitan Transportation Commission
Dana Brechwald, San Francisco Bay Conservation and Development Commission

Attachments: [Item 7.a Framework Memo FinalFindingsBARC.pdf](#)
[Item 7.a Framework Slides FinalFindings.BARC - Read-Only.pdf](#)

8. Presentation by BAHFA**8.a** [23-0333](#) Overview of Bay Area Housing Finance Authority (BAHFA) and Regional Funding Measure

Action: Information

Presenter: Kate Hartley, BAHFA Director

Attachments: [Item 8.a 20230317 BARC BAHFA Introduction.pdf](#)

9. Public Comment**10. Adjournment/Next Meeting**

The next meeting of the BARC Governing Board will be on May 19, 2023 at 10:00 a.m.

The Governing Board may take action on any item listed in the agenda.

This meeting is scheduled to end promptly at 12:00 p.m. Agenda items not considered by that time may be deferred.

The public is encouraged to comment on agenda items by completing a request-to-speak card and giving it to BARC staff or the chairperson.

Although a quorum of the Governing Board may be in attendance at this meeting, the Governing Board may take action only on those matters delegated to it. The Governing Board may not take any action as the Bay Area Regional Collaborative Governing Board unless this meeting has been previously noticed as a Bay Area Regional Collaborative Governing Board meeting.



Legislation Details (With Text)

File #: 23-0331 **Version:** 1 **Name:**
Type: Report **Status:** Informational
File created: 2/3/2023 **In control:** Bay Area Regional Collaborative
On agenda: 3/17/2023 **Final action:**
Title: Chair's Report for March 17, 2023
Sponsors:
Indexes:
Code sections:
Attachments:

Date	Ver.	Action By	Action	Result
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Subject:
Chair's Report for March 17, 2023

Presenter:
Chair Arreguin

Recommended Action:
Information



Legislation Details (With Text)

File #: 23-0332 **Version:** 1 **Name:**

Type: Minutes **Status:** Consent

File created: 2/3/2023 **In control:** Bay Area Regional Collaborative

On agenda: 3/17/2023 **Final action:**

Title: Approving of the Minutes of the January 17, 2023 BARC Governing Board

Sponsors:

Indexes:

Code sections:

Attachments: [BARC GB Minutes 20230120 Draft.pdf](#)

Date	Ver.	Action By	Action	Result
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Subject:

Approving of the Minutes of the January 17, 2023 BARC Governing Board

Presenter:

Clerk of the Board

Recommended Action:

Information



375 Beale Street
Suite 700
San Francisco, California
94105

Meeting Minutes - Draft

Bay Area Regional Collaborative

Chair, Jesse Arreguin, Mayor, City of Berkeley
Vice Chair, Vacant

Friday, January 20, 2023

10:00 AM

REMOTE

In light of Governor Newsom's State of Emergency declaration regarding the COVID-19 and in accordance with the recently signed Assembly Bill 361's (Rivas) provisions allowing remote meetings, this meeting will be accessible via webcast, teleconference, and Zoom for all participants.

A Zoom panelist link for meeting participants will be sent separately to committee members.

The meeting webcast will be available at:
<https://barc.ca.gov/whats-happening/meetings/live-webcast>

Please click the link below to join the webinar:

<https://bayareametro.zoom.us/j/81392736041>

Or One tap mobile :

US: +13462487799,,81392736041# or +12532158782,,81392736041#

Or Telephone:

Dial(for higher quality, dial a number based on your current location):

US: +1 346 248 7799 or +1 253 215 8782 or +1 408 638 0968 or +1 669 444 9171 or +1 669 900 6833 or +1 719 359 4580 or +1 253 205 0468 or +1 689 278 1000 or +1 301 715 8592 or +1 305 224 1968 or +1 309 205 3325 or +1 312 626 6799 or +1 360 209 5623 or +1 386 347 5053 or +1 507 473 4847 or +1 564 217 2000 or +1 646 876 9923 or +1 646 931 3860 or 888 788 0099 (Toll Free) or 833 548 0276 (Toll Free) or 833 548 0282 (Toll Free) or 877 853 5247 (Toll Free)

Webinar ID: 813 9273 6041

International numbers available: <https://bayareametro.zoom.us/j/81392736041>

SIP: 81392736041@zoomcrc.com

Detailed instructions on participating via Zoom are available at:

<https://abag.ca.gov/zoom-information>

Committee members and members of the public participating by Zoom wishing to speak should use the "raise hand" feature or dial "*9". In order to get the full Zoom experience, please make sure your application is up to date.

The BARC Governing Board may act on any item on the agenda.

The meeting is scheduled to begin at 10:00 a.m.

Agenda, roster, and webcast available at <https://barc.ca.gov>

For information, contact Clerk of the Board at (415) 778-5218.

Governing Board Members

ABAG—Jesse Arreguin, David Hudson, David Rabbitt, Belia Ramos

BAAQMD—David Haubert, John J. Bauters, Mark Ross

BCDC—John Gioia, Dave Pine, Zack Wasserman, Rebecca Eisen

MTC—Alfredo Pedroza, Jim Spering

1. Call to Order / Roll Call / Confirm Quorum

Vice Chair Arreguin called the meeting to order at 10:00 a.m. Quorum was achieved at 10:04 a.m

Present: 9 - Arreguin, Gioia, Haubert, Pedroza, Pine, Rabbitt, Ramos, Spering, and Wasserman

Absent: 4 - Bauters, Hudson, Ross, and Eisen

2. Governing Board Member Announcements

There were no Governing Board Member Announcements.

3. Chair's Report

Vice Chair Arreguin Gave the report.

3.a [23-0057](#) Chair's Report for January 20, 2023

3.b [23-0113](#) Recognition of Service by BARC Board Members

3.c [23-0237](#) BARC Resolution No. 15. Resolution for Appreciation for Boardmember Teresa Barrett.

Upon the motion by Arreguin and second by Haubert, the BARC Resolution No. 15 of Appreciation for BARC Governing Board Member Teresa Barrett was approved. The motion passed by the following vote:

Aye: 8 - Arreguin, Gioia, Haubert, Pedroza, Rabbitt, Ramos, Spering and Wasserman

Absent: 5 - Bauters, Hudson, Pine, Ross and Eisen

3.d [23-0238](#) BARC Resolution No. 16. Resolution of Appreciation for Boardmember Brad Wagenknecht

Upon the motion by Arreguin and second by Ramos, the BARC Resolution No. 16 of Appreciation for BARC Governing Board Member Brad Wagenknecht was approved. The motion passed by the following vote:

Aye: 7 - Arreguin, Gioia, Haubert, Rabbitt, Ramos, Spering and Wasserman

Absent: 6 - Bauters, Hudson, Pedroza, Pine, Ross and Eisen

- 3.e** [23-0239](#) BARC Resolution No. 17. Resolution of Appreciation for Boardmember Amy Worth
- Upon the motion by Arreguin and second by Gioia, the BARC Resolution No. 17 of Appreciation for BARC Governing Board Member Amy Worth was approved. The motion passed by the following vote:**
- Aye:** 9 - Arreguin, Gioia, Haubert, Pedroza, Pine, Rabbitt, Ramos, Spering and Wasserman
- Absent:** 4 - Bauters, Hudson, Ross and Eisen

- 3.f** [23-0240](#) BARC Resolution No. 18. Resolution of Appreciation for Executive Director, Therese McMillan on the occasion of her retirement from MTC.
- Upon the motion by Arreguin and second by Ramos, the BARC Resolution No. 18 . in Appreciation for Executive Director, Therese McMillan on the occasion of her retirement from MTC was approved. The motion passed by the following vote:**
- Aye:** 9 - Arreguin, Gioia, Haubert, Pedroza, Pine, Rabbitt, Ramos, Spering and Wasserman
- Absent:** 4 - Bauters, Hudson, Ross and Eisen

4. Consent Calendar

- 4.a** [23-0058](#) Approval of the Minutes of the December 16 BARC GB Meeting
- Upon the motion by Wasserman and the second by Arreguin the Consent Calendar was approved. The motion passed by the following vote:**
- Aye:** 8 - Arreguin, Gioia, Haubert, Pedroza, Rabbitt, Ramos, Spering and Wasserman
- Absent:** 5 - Bauters, Hudson, Pine, Ross and Eisen

5. Appointing the BARC Governing Board Chair for 2023-25

- 5.a** [23-0059](#) The BARC Governing Board Chair Appointment for the 2023-25 term
- Upon the motion by Ramos and the second by Spering the appointment of Berkeley Mayor Jesse Arreguin to Chair of the BARC Governing Board was approved.. The motion passed by the following vote:**
- Aye:** 9 - Arreguin, Gioia, Haubert, Pedroza, Pine, Rabbitt, Ramos, Spering and Wasserman
- Absent:** 4 - Bauters, Hudson, Ross and Eisen

6. BARC Member Agency Executive Director Updates

- 6.a** [23-0060](#) San Francisco Bay Regional Water Quality Control Board report for January 20, 2023.
- Eileen White gave the report.**

- 6.b** [23-0061](#) Association of Bay Area Governments and Metropolitan Transportation Commission
Therese W. McMillan gave the report.
- 6.c** [23-0062](#) California State Coastal Conservancy
Amy Hutzel gave the report.
- 6.d** [23-0063](#) San Francisco Bay Conservation and Development Commission
Steve Goldbeck gave the report.
- 6.e** [23-0064](#) Bay Area Air Quality Management District
Sharon Landers gave the report.

7. BARC Executive Director's Update

- 7.a** [23-0065](#) Report from BARC Executive Director
Allison Brooks gave the report.
- 7.b** [23-0066](#) Overview of BARC Systems Thinking Analysis
Alison Nemirow and Matt Chadsey gave the presentation.

9. Public Comment

There was no public comment.

10. Adjournment/Next Meeting

The meeting was adjourned at 12:05 p.m.



Legislation Details (With Text)

File #: 23-0491 **Version:** 1 **Name:**

Type: Action Item **Status:** Consent

File created: 3/10/2023 **In control:** Bay Area Regional Collaborative

On agenda: 3/17/2023 **Final action:**

Title: Appointment of the Vice Chair to the BARC Governing Board for the term 2023-2025

Sponsors:

Indexes:

Code sections:

Attachments:

Date	Ver.	Action By	Action	Result
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Subject:
Appointment of the Vice Chair to the BARC Governing Board for the term 2023-2025

Presenter:
Chair Arreguin

Recommended Action:
Approval



Legislation Details (With Text)

File #: 23-0334 **Version:** 1 **Name:**

Type: Report **Status:** Informational

File created: 2/3/2023 **In control:** Bay Area Regional Collaborative

On agenda: 3/17/2023 **Final action:**

Title: Bay Area Air Quality Management District report for March 17, 2023

Sponsors:

Indexes:

Code sections:

Attachments:

Date	Ver.	Action By	Action	Result
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Subject:

Bay Area Air Quality Management District report for March 17, 2023

Presenter:

Phil Fine

Recommended Action:

Information



Legislation Details (With Text)

File #: 23-0335 **Version:** 1 **Name:**
Type: Report **Status:** Informational
File created: 2/3/2023 **In control:** Bay Area Regional Collaborative
On agenda: 3/17/2023 **Final action:**
Title: San Francisco Bay Regional Water Quality Control Board
Sponsors:
Indexes:
Code sections:
Attachments:

Date	Ver.	Action By	Action	Result
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Subject:
San Francisco Bay Regional Water Quality Control Board

Presenter:
Eileen White

Recommended Action:
Information



Legislation Details (With Text)

File #: 23-0336 **Version:** 1 **Name:**

Type: Report **Status:** Informational

File created: 2/3/2023 **In control:** Bay Area Regional Collaborative

On agenda: 3/17/2023 **Final action:**

Title: Association of Bay Area Governments and Metropolitan Transportation

Sponsors:

Indexes:

Code sections:

Attachments:

Date	Ver.	Action By	Action	Result
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Subject:

Association of Bay Area Governments and Metropolitan Transportation

Presenter:

Andrew Fremier

Recommended Action:

Information



Legislation Details (With Text)

File #: 23-0338 **Version:** 1 **Name:**
Type: Report **Status:** Informational
File created: 2/3/2023 **In control:** Bay Area Regional Collaborative
On agenda: 3/17/2023 **Final action:**
Title: San Francisco Bay Conservation and Development Commission
Sponsors:
Indexes:
Code sections:
Attachments: [Item 5.d 03172023_BARC_Task Force.pdf](#)

Date	Ver.	Action By	Action	Result
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Subject:

San Francisco Bay Conservation and Development Commission

Presenter:

Larry Goldzband

Recommended Action:

Information



Ana Chretien
Napa River Reclamation District



Kate Colin
City of San Rafael



Lisa Gauthier
City of East Palo Alto



John Gioia, Chair
Contra Costa County



Alma Hernandez
City of Suisun City



Sudhanshu 'Suds' Jain
City of Santa Clara



Mark Joseph
City of American Canyon



Janelle Kellman
City of Sausalito



Sandra Lowe
City of Sonoma



Sophie Maxwell
SF Public Utilities Commission



Dorriss Panduro
City of Fairfield



Aaron Peskin
City and County of San Francisco



Mark Salinas
City of Hayward



Linda Sell
City of Sunnyvale



Cecilia Taylor
City of Menlo Park



Janice Cader Thompson
City of Petaluma



Cesar Zepeda
City of Richmond



Brianne Zorn
City of Martinez



Legislation Details (With Text)

File #: 23-0339 **Version:** 1 **Name:**

Type: Report **Status:** Informational

File created: 2/3/2023 **In control:** Bay Area Regional Collaborative

On agenda: 3/17/2023 **Final action:**

Title: Report from the BARC Executive Director

Sponsors:

Indexes:

Code sections:

Attachments:

Date	Ver.	Action By	Action	Result
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Subject:
Report from the BARC Executive Director

Presenter:
Allison Brooks

Recommended Action:
Information



Legislation Details (With Text)

File #: 23-0340 **Version:** 1 **Name:**
Type: Report **Status:** Informational
File created: 2/3/2023 **In control:** Bay Area Regional Collaborative
On agenda: 3/17/2023 **Final action:**
Title: Sea Level Rise Funding and Investment Framework Final Presentation
Sponsors:
Indexes:
Code sections:
Attachments: [Item 7.a Framework Memo FinalFindingsBARC.pdf](#)
[Item 7.a Framework Slides FinalFindings.BARC - Read-Only.pdf](#)

Date	Ver.	Action By	Action	Result
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Subject:

Sea Level Rise Funding and Investment Framework Final Presentation

Presenter:

Rachel Hartofelis, Association of Bay Area Governments/Metropolitan Transportation Commission
Dana Brechwald, San Francisco Bay Conservation and Development
Commission

Recommended Action:

Information



METROPOLITAN
TRANSPORTATION
COMMISSION

Bay Area Metro Center
375 Beale Street, Suite 800
San Francisco, CA 94105
415.778.6700



Association of
Bay Area Governments

Bay Area Metro Center
375 Beale Street, Suite 700
San Francisco, CA 94105
415.820.7900



San Francisco Bay
Conservation and
Development
Commission

455 Golden Gate Avenue,
Suite 10600
San Francisco, CA 94102-7019
Phone: 415.352.3600

Sea Level Rise Adaptation Funding & Investment Framework: Project Conclusion

Subject:

Summarizing the conclusion of the Sea Level Rise Adaptation Funding and Investment Framework, including high level analysis outputs, key findings, and next steps.

Background:

In December 2021, MTC/ABAG and BCDC launched the Sea Level Rise Adaptation Funding and Investment Framework (Framework), a priority action identified by MTC/ABAG's Plan Bay Area 2050, BCDC's Bay Adapt Joint Platform, and the San Francisco Estuary Partnership's Estuary Blueprint. Working with a monthly Technical Advisory Group throughout 2022, this effort sought to (1) update and improve regional accounting of anticipated sea level rise adaptation projects, (2) study how revenues for sea level rise adaptation can be raised most equitably, and (3) explore how existing and future funding mechanisms can advance adaptation planning and implementation.

The Framework helps the region prepare for near-term state and federal funding opportunities, improve our advocacy for state and federal resources, and provide data-informed findings for local and regional leaders to weigh approaches to future funding decisions. In addition to several updates to relevant MTC/ABAG and BCDC committees, as well as to the BARC Board, during the project's development, staff are now sharing the final findings and potential next steps with each entity at this juncture in spring 2023.

Local Shoreline Project Inventory & Estimating the Cost of Adaptation:

The local shoreline project inventory catalogs all known sea level rise adaptation projects across the region. The inventory includes a range of project stages, from concept to more advanced planning, engineering, and implementation, and detects areas with no known projects that would benefit from capacity building. The inventory was developed to calculate a high-level regional cost estimate for sea level rise adaptation, building off of previous regional analysis in MTC/ABAG's Plan Bay Area 2050 and BCDC's Adaptation Funding White Paper. Where no known projects were identified, or where projects were considered not sufficiently protective through 2050, "placeholder" adaptation needs were determined by assuming the protection of the shoreline in place.

The inventory was sourced from local plans and project studies, as well as from project data tracked by BCDC's Shoreline Adaptation Project Mapping Program. Adaptation projects recorded in the inventory range from green to grey, including marsh restoration, ecotone levees, and seawalls, and they are in many different stages, from conceptual plans to design and construction. Local information was reviewed and updated from local outreach across all nine counties in fall 2022. The resulting inventory has 192 projects, over 75 percent of which were updated by the local outreach, with 47 new projects identified.

The Framework estimates that the regional cost of sea level rise adaptation through 2050 is **approximately \$110 billion** in year of expenditure (YOE) dollars. This estimate is a significant increase from Plan Bay Area 2050's \$19 billion estimate, primarily due to a higher planning assumption to

protect areas up to 4.9 feet of inundation rather than 2.0 feet¹, as well as the short- and long-term impacts of higher inflation. Importantly, there is a mix of green and grey projects in planning, with most of the region planning for hybrid, or multi-benefit projects. The level of local planning and the amount of local resources vary widely across the region, with over half of the estimated cost in San Mateo, Marin, and Alameda counties alone. Further breakdowns of the cost can be found in **Attachment A**.

However, it is not anticipated that this is the singular value that is needed by the region over the next three decades, but rather an order-of-magnitude estimate based on the best available information available today. The estimate assumes protection in place for all vulnerable shoreline, including low density areas and agricultural land. The estimate also does not account for alternative strategies such as managed retreat, which may change the cost estimate for adaptation in some areas, or for local policy and building code adjustments. Future analyses will work to prioritize investments more strategically, and will integrate new data when regionally available, such as riverine and groundwater adaptations, and adaptation plans identified by utilities.

Estimating Existing Revenues:

The Framework sea level rise adaptation revenue estimate through 2050 is **\$5.5 billion**, including projected public revenue from the local, regional, state and federal levels. The revenue has been updated from previous analysis in Plan Bay Area 2050 and the BCDC Adaptation Funding White Paper, which previously estimated \$3.2 billion in forecasted revenues. The Framework estimate includes updates from new revenue measures, particularly from new state and federal programs. . While the proposed 2023 Governor’s Budget indicates potential reductions in some of these areas, the proposed changes have not been integrated as they have yet to be approved by the Legislature.

There is a significant funding gap of **over \$104 billion** identified, which will require a number of strategies moving forward. These are likely to include including increasing revenues, discouraging new developments in highly vulnerable areas, facilitating faster permitting and construction of adaptation projects, and identifying alternative strategies for adaptation, such as identifying areas suitable for managed retreat. For additional information on forecasted revenue sources, please refer to **Attachment A**.

Exploring New Revenues:

To address this substantial funding gap, the region will need to increase available adaptation revenues. The region should of course advocate for additional federal and state funding, but it may also be beneficial to raise revenue locally or regionally to provide a match for state or federal funds. The Framework analyzed new revenues at a high, exploratory level to provide resources for future regional or local discussions on new revenue sources.

Staff analyzed three different types of revenue measures based on their overall feasibility and regional precedence: parcel taxes, ad-valorem property taxes/general obligation bonds, and assessment districts. The research was focused on revenue generation potential, bond issuance potential, and the initial equity implications for “who pays?”. Parcel and ad-valorem property taxes were analyzed at both the county and regional scales, whereas assessment districts were analyzed at the district scale using hypothetical case studies across the region.

While not surprising, the Framework did find that none of these potential revenue measures would be capable of addressing the funding gap alone. Rather, using multiple types of funding streams could help

¹ The planning height was adjusted to account for updated state guidance from the Ocean Protection Council to plan for a minimum of 3.5 feet of inundation. The 4.9 foot assumption is based on OPC’s 2018 5% projections for 2050, plus flooding from a 100 year storm.

to balance the tax burden across counties. Furthermore, parcel taxes were found to be less socially equitable than an ad-valorem tax at both the regional and county scales, as they placed a higher share of the tax burden on socially vulnerable areas.

Next Steps:

While the Framework effort wraps up this spring, MTC/ABAG and BCDC will continue to work together on sea level rise adaptation in the coming months. MTC/ABAG will advance Plan Bay Area 2050+ – including prioritization of sea level rise adaptation projects identified in the Framework – and explore strategic opportunities to integrate resilience into envisioned regional measures in 2024 and 2026. BCDC will continue the maintenance and development of the Shoreline Adaptation Map to ensure that the region has access to an updated regional project inventory going forward, while also advancing its Regional Shoreline Adaptation Plan leveraging Framework outputs. Lastly, BCDC and MTC/ABAG will work in partnership with other agencies, including BARC, to advocate for a higher proportion of funding at the state and federal level and to seek input from elected officials about identifying lead agency roles for sea level rise going forward.

Attachments:

- Attachment A: Presentation

Sea Level Rise Adaptation Funding and Investment Framework

BARC Governing Board

March 17, 2023

Rachael Hartofelis
Resilience Planner,
rhartofelis@bayareametro.gov

Dana Brechwald
Assistant Planning Director,
dana.brechwald@bcdca.gov



Sea Level Rise and the Bay Area

The Bay Area is defined by its relationship to water, with our communities and regional culture centered around the Bay, the Delta, and the Outer Coast. **So how do we define what's at stake with sea level rise (SLR)?**

While the Framework explores key financial estimates to tackle this challenge, **it's important to remember why we want to prioritize the needs of people & places we deeply care about.**



What's at Risk if We Don't Adapt?

Assets at risk of SLR flooding¹:

75,000
total households,
including **12,000**
in the most
socially vulnerable
communities³.

200,000
total jobs, and
15,000 total
businesses.

20,000
vulnerable acres
at risk, including
wetlands,
lagoons, and tidal
marshes.³



Photo credit: Ben Botkin, 2020

Estimates of a Subset of Assets at Risk:
(in 2022 dollars)

\$85 billion
Estimated *assessed value* of parcels at risk¹

\$151 billion
Estimated value of major roadways at risk²

¹ Assuming 4.9 feet of inundation by 2050.

² Calculated based on 230 miles of vulnerable major class roadways, using a median transportation adaptation cost of \$125,000 per foot. Adaptation assumes only elevation or realignment and not protection in place or multi-benefit solutions.

³ Social vulnerability defined by the high and highest levels of BCDC's Community Vulnerability Data.

⁴ From Adapting to Rising Tides Bay Area, 2020

Building on Past Efforts with the Framework: Quantifying Needs and Revenues for Adaptation

Focus Areas

1

Update and improve regional accounting of anticipated sea level rise adaptation projects.

Outcomes

- Update prior regional analyses with local projects from recent planning efforts.
- Estimate the regional sea level rise adaptation need through 2050.

2

Update and characterize existing revenue sources for sea level rise adaptation.

- Inventory and forecast revenues for new state and federal funding programs.
- Characterize how existing adaptation funds are dispersed and for what purpose.

3

Study how new revenues for sea level rise adaptation needs can be raised most equitably.

- Analyze a range of possible revenue measures at different scales, to understand equitable approaches to close the sea level rise funding gap.

Inventory of Adaptation Needs

Local Adaptation Projects and Study Areas¹

- Local Adaptation Projects
- Local Study Areas

192 projects in original inventory

132 projects updated with stakeholder input

Includes 47 new projects added

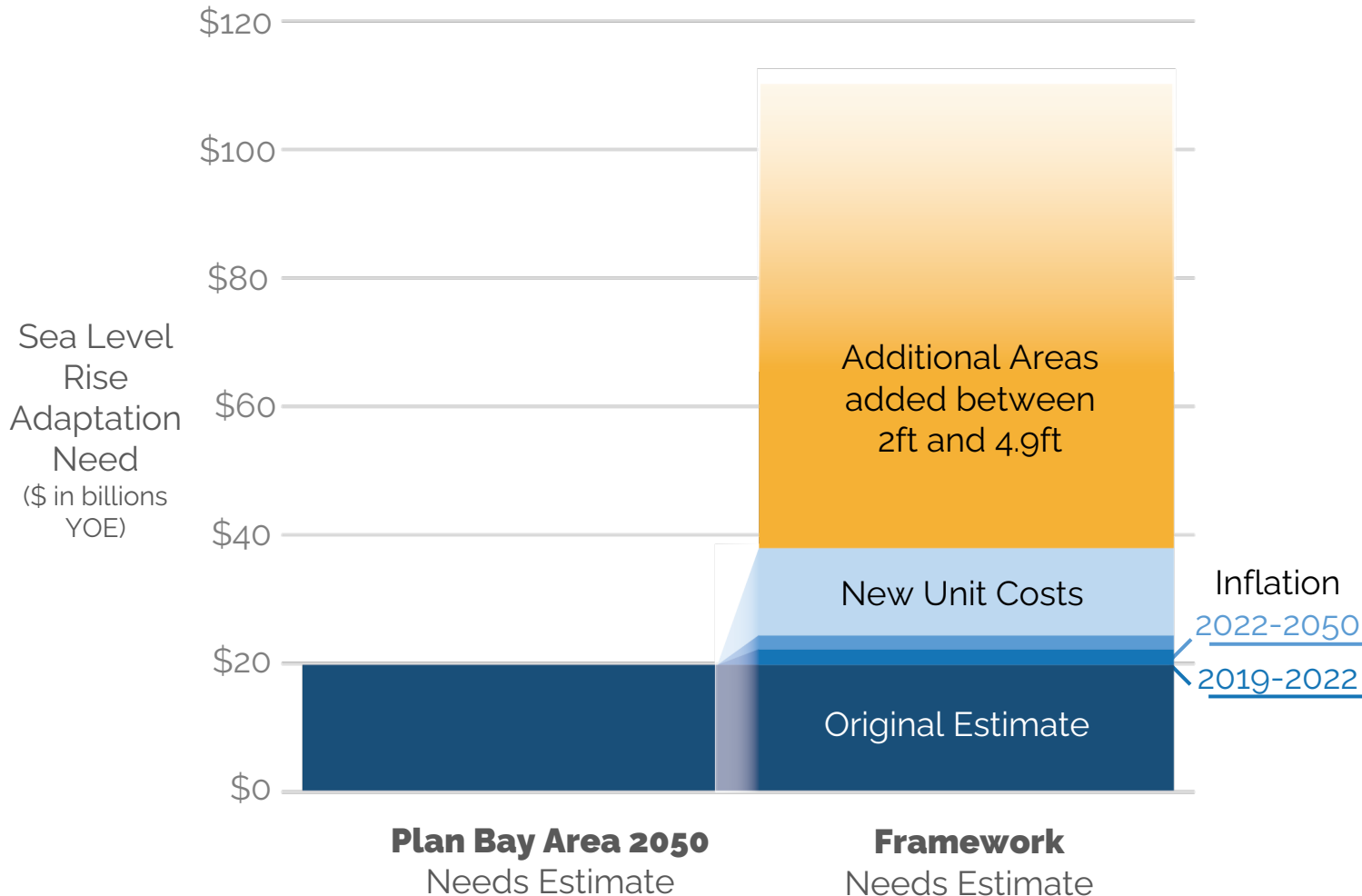
Potential Protective Infrastructure Needs²

- Placeholder Adaptation Needs

¹ Includes projects identified in BCDC's Shoreline Adaptation Project Map, a regional project inventory hosted through EcoAtlas: <https://www.ecoatlas.org/groups/303>

² Placeholder needs determined by assuming the protection of the shoreline in place.

Estimate of Adaptation Funding Needs



Key Assumptions

- Increased **sea level rise height** from 2-feet to 4.9-feet¹.
- Assumed **“protect in place” adaptation action for all vulnerable shoreline**, including areas without planning and those in need of augmented plans.
- Per-unit cost estimates** increased.
- Inflation** over the past three years has been higher than the 2.2% assumed in Plan Bay Area 2050. In addition, the Framework assumes a higher rate of 3.0% going forward.¹

¹ Increased planning height to exceed state recommendation of 3.5' and coincide with similar planning trajectories by many local efforts.

Inventory

Adaptation Needs

What is the regional estimate to fund adaptation?

\$110 billion

Estimated cost of sea level rise adaptation through 2050 (in Year of Expenditure dollars)

- **\$52 billion:** Estimated cost for known or planned projects
- **\$54 billion:** Estimated placeholder cost for areas with adaptation needs
- **\$3 billion:** Estimated additional sediment management needs¹

The estimate includes:

- Assumed “protect in place” adaptation action for all vulnerable shoreline, including low density areas and agricultural land
- Assumed areas vulnerable to up to 4.9 feet of inundation are protected

The estimate does not include:

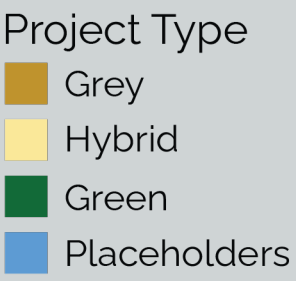
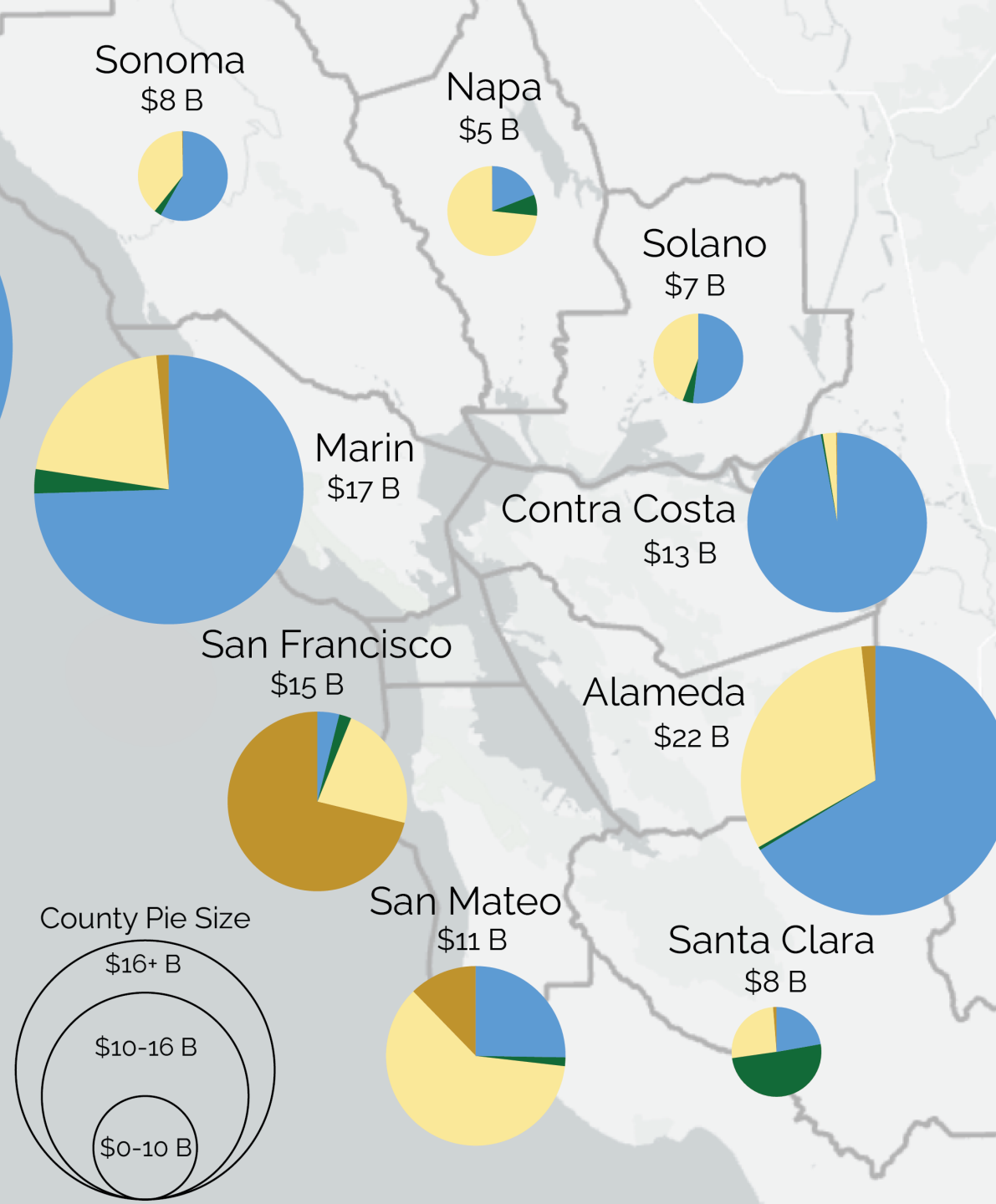
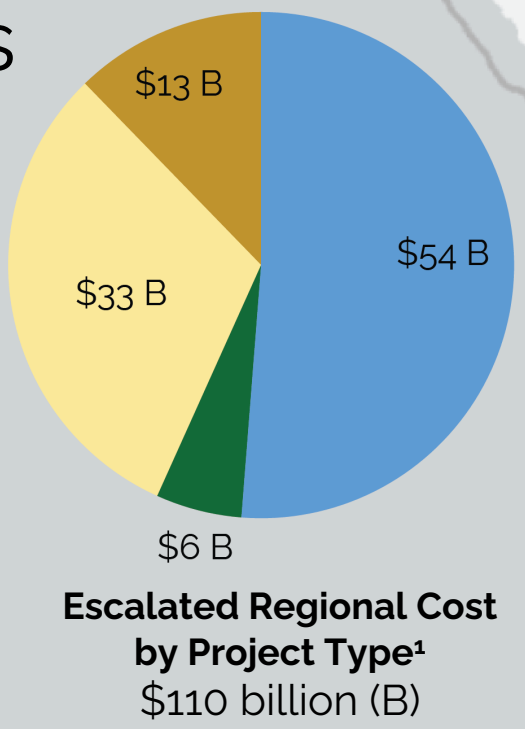
- Alternative approaches that do *not* protect in place, which could change the cost estimate for adaptation in some shoreline segments
- Building code or other local policy adjustments
- Riverine and groundwater adaptations
- Adaptation plans made by utilities

¹ Estimate developed by BCDC and SFEI analysis.

Adaptation Needs

Additional Findings

- Most planned projects are hybrid, representing a focus on multiple benefits.
- Alameda and Marin are estimated to have the highest adaptation costs.
- Significant implementation gaps are present across the region; the largest gaps are in Alameda, Contra Costa, and Marin².

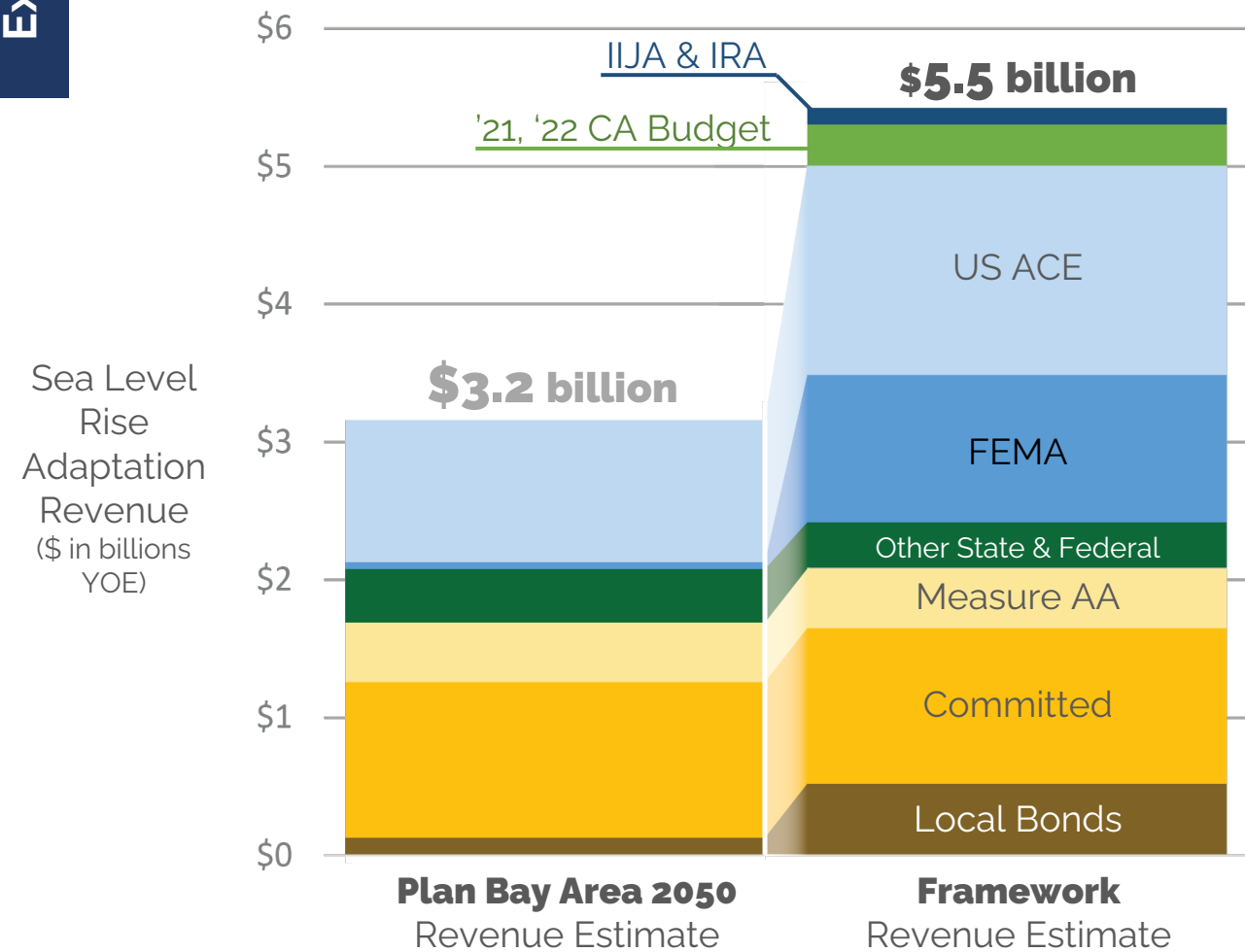


¹Values represented in Year of Expenditure dollars; Regional cost includes \$3B in additional sediment need.

²Locally identified projects do not account for studies or plans without defined interventions.

Forecasting Existing Public Revenues

Updated Revenue Forecast (2022-2050)



Key Updates

- Federal action by IIJA & IRA account for ~\$120 million in new revenues.¹
- 2021 and 2022 State budget line items account for ~\$800 million in new revenues.²
- Emergence of FEMA's BRIC program greatly increases anticipated FEMA revenue.
- Inclusion of \$425 million SF Prop A (2018)³ increases locally generated sources.

¹ US ACE's IIJA allocation increase is not yet accounted for. It may add between \$0.02-0.15 billion. Waiting for US ACE feedback.

² The Governor's proposed 2023 budget is estimated to reduce the regional estimate by \$200 million.

³ Prop A was not included in Plan Bay Area 2050 because the analysis focused on areas that flooded with only 2' of permanent rise.

Exploratory Funding Sources: Context

To fill this funding gap, the region may need multiple additional funding sources at multiple scales.

The Framework explored three possible new revenue measures at the local, county, and regional scales to understand:

- **Revenue generation potential:** how much funding can be raised annually?
- **Bond issuance potential:** how funding can different measures raise for near-term project implementation?
- **Initial equity implications:** who pays?

Note: This Framework research is high level and exploratory only, and it is intended to provide insight for further research and discussion in the years ahead.

Three measures were reviewed based on their overall feasibility and regional precedence.



¹ Including value capture mechanisms such as Community Facilities Districts and Tax Increment Financing.

Case Studies for Three Funding Measure Types

Key Finding: Regional and/or local measures will not be capable of closing the funding gap. Additional funding from federal and/or state sources will also be necessary.

Scale: County & Regional

Regional and county taxes distribute tax burden across wider base

Scale: District-based (sub-local)

Only parcels that directly benefit pay

Parcel Tax

- Typically a flat rate property tax: each parcel charged the same amount
- Does not account for value or size of the property

\$25 per parcel annual tax could support a ~\$750 million bond.

Ad Valorem Property Tax/GO Bond

- Property-related tax that *can* be progressive: higher assessed properties pay more
- Subject to Prop 13 limitations

\$55 annual tax could support a \$13 billion bond.
Based on regional median single-family home value.

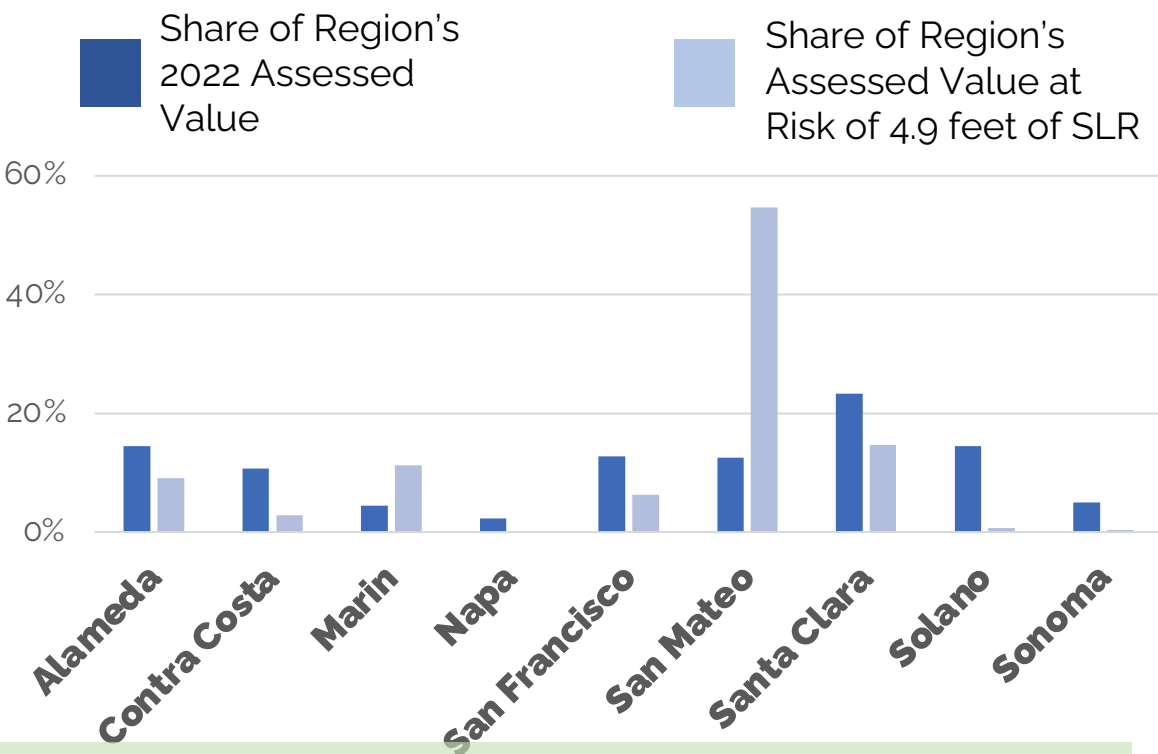
Assessment District

- Directly tied to specific benefits
- Most feasible in areas with greater resources and/or more direct impacts of SLR

\$90 annual tax could support a \$10 million *local project*.
Based on average regional single family home size in an 8000 parcel district.

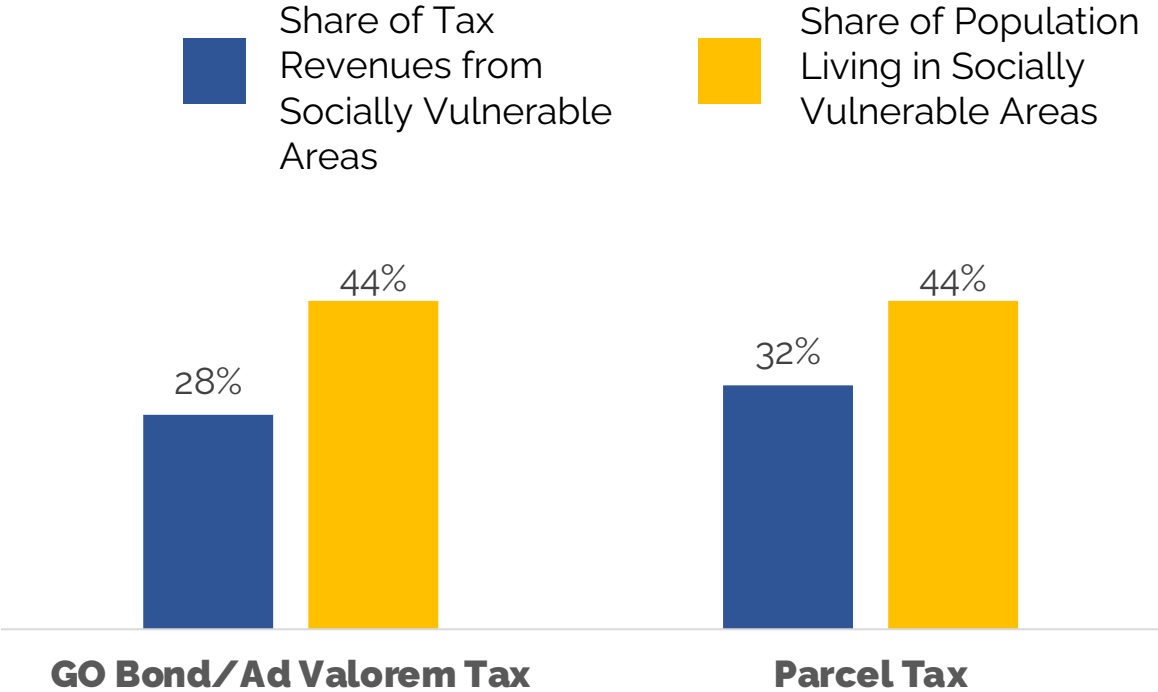
Exploring Potential Revenue Sources

Geographic Equity Lens



Key Findings: For geographic equity, using multiple types of funding measures would help to balance tax burden.

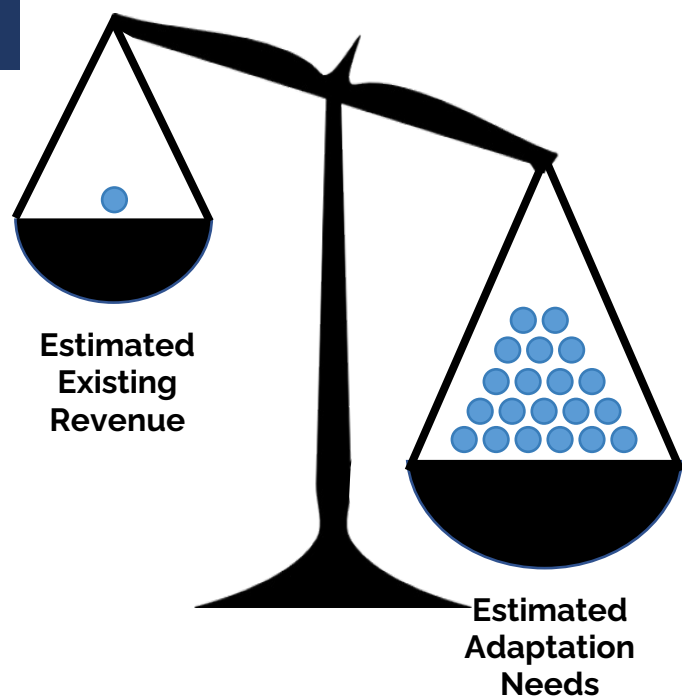
Social Equity Lens



Key Findings: Parcel taxes are less socially equitable than an ad-valorem tax, as they place a higher burden on socially vulnerable areas¹.

¹ Social vulnerability defined by medium, high and highest levels of BCDC's Community Vulnerability Data.

Recap of Key Learnings



1. **Mix of “Green” and “Gray”.** Roughly half of the known project costs are for green or hybrid projects, reflecting the region's shift towards multi-benefit adaptation.
2. **Significant Funding Gap.** Current revenues are inadequate to meet the need, leaving a funding gap of over \$100 billion. Increasing revenues, prioritizing or phasing shoreline protection, and discouraging new development in highly-vulnerable areas should all be considered.
3. **Key Differences between Counties.** The costs are inequitably distributed across the region – more than 50% of the costs are in only three counties – and the level of local planning for sea level rise varies widely as well due to resource constraints.
4. **Multiple Fund Sources Required.** Even with prioritizing and phasing adaptation projects, there is no single funding measure that will be able to fill the gap.
5. **Prioritizing Equity.** GO bonds/ad valorem property taxes place a lower burden on socially vulnerable areas, while providing a greater benefit to socially vulnerable areas than their regional share.

Adaptation in Progress

While there's much to be done ahead, major projects across the region are already underway.

SR-37 Corridor Adaptation

Transportation Project

Estimated Cost: \$8 billion

Status: Planning

North Richmond Shoreline Living Levee

Ecotone Levee

Estimated Cost: \$16 million

Status: Design

Foster City Levee Improvement

Levees and Restoration

Estimated Cost: \$90 million

Status: Construction

SR-37 Adaptation



North Richmond Shoreline Living Levee



Foster City Levee Improvement



What's Next After the Framework?

- 1. Prioritize SLR investments through upcoming plans to reduce the funding gap.** Plan Bay Area 2050+ and the Regional Shoreline Adaptation Plan are opportunities to explore which resilience projects require early action and which low-density areas might be more appropriate for lower-cost interventions. **[MTC/ABAG & BCDC]**
- 2. Explore how envisioned regional measures can make communities and transportation more resilient.** With no regional sea level rise measure on the horizon, it is critical to explore how planned measures for affordable housing and transportation could integrate policies or programs to advance more resilient outcomes. **[MTC/ABAG]**
- 3. Complete and maintain the development of the Shoreline Adaptation Project Mapping Program** to ensure that the region has access to the best possible inventory data. **[BCDC, others]**
- 4. Accelerate advocacy at the federal and state levels to secure more monies for the Bay Area.** Messaging the magnitude of the need here in the San Francisco Bay Area and competing for available funds will be key. **[MTC/ABAG, BCDC, BARC, others]**
- 5. Seek input from elected officials to identify lead agency roles for sea level rise efforts in the Bay Area.** While tackling sea level rise requires robust partnerships, the lack of a lead agency in this space to secure monies and distribute them equitably hinders the Bay Area's ability to mitigate climate impacts.



Legislation Details (With Text)

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Type: Report **Status:** Informational

File created: 2/3/2023 **In control:** Bay Area Regional Collaborative

On agenda: 3/17/2023 **Final action:**

Title: Overview of Bay Area Housing Finance Authority (BAHFA) and Regional Funding Measure

Sponsors:

Indexes:

Code sections:

Attachments: [Item 8.a 20230317 BARC BAHFA Introduction.pdf](#)

Date	Ver.	Action By	Action	Result
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Subject:

Overview of Bay Area Housing Finance Authority (BAHFA) and Regional Funding Measure

Presenter:

Kate Hartley, BAHFA Director

Recommended Action:

Information



Bay Area Housing Finance Authority (BAHFA)

Bay Area Regional Collaborative – March 17, 2023



ASSOCIATION OF BAY AREA GOVERNMENTS
METROPOLITAN TRANSPORTATION COMMISSION

A Regional Problem to Solve Together



At least **36,810 people experiencing homelessness** in 2022 in the region and as of 2019, **575,000 were at risk** of homelessness



The Bay Area has consistently fallen short of its housing targets: Between 2015-2020, **the region built only 25%** of the homes needed



The region needs to build **180,334 more affordable homes** to meet the number of homes required under the 2023-2031 Regional Housing Needs Allocation (RHNA)



Significant funding is needed: As of 2023, there are 32,944 affordable homes in predevelopment that **require financing**

BAHFA is a Key Part of the Solution

Our Mandate: BAHFA was created by state legislation in 2019 to address systemic challenges in affordable housing and housing stability across the 3Ps – **Production, Preservation, and Protections**

- BAHFA can **raise revenue for housing** through ballot measures such as general obligation bonds
- BAHFA works in **collaboration** with Bay Area cities and counties, and 50-80% of revenue generated returns to the county of origin

Governance: The ABAG and BAHFA boards work together: MTC Commissioners comprise the BAHFA Board, and a nine-member Advisory Committee, all with 3P experience, provides program guidance

Current Pilot Phase

- 1 Doorway Housing Portal:** an online affordable housing platform that makes searching for affordable housing easy region-wide
- 2 Affordable Housing Pipeline:** Database to track the production and preservation of affordable homes
- 3 Preservation:** Financing to help community-based organizations buy buildings, convert them to affordable housing and protect residents from displacement
- 4 Anti-Displacement:** Coordination and best practices to support tenant protections
- 5 Homelessness Prevention:** Coordinated support to help keep people housed

Funding at Scale: A Regional Funding Measure



Potential 2024 Measures

1

An advocate-led **statewide constitutional amendment** to enable affordable housing general obligation bonds be approved by a majority of voters instead of the current two thirds requirement

This also would allow bond proceeds to be used to protect tenants at affordable housing sites through rental assistance reserves, tenant services, and more.

2

A **BAHFA General Obligation Bond** to raise **\$10-\$20 billion** – which could provide between 35,000 and 80,000 new homes across the nine-county region.

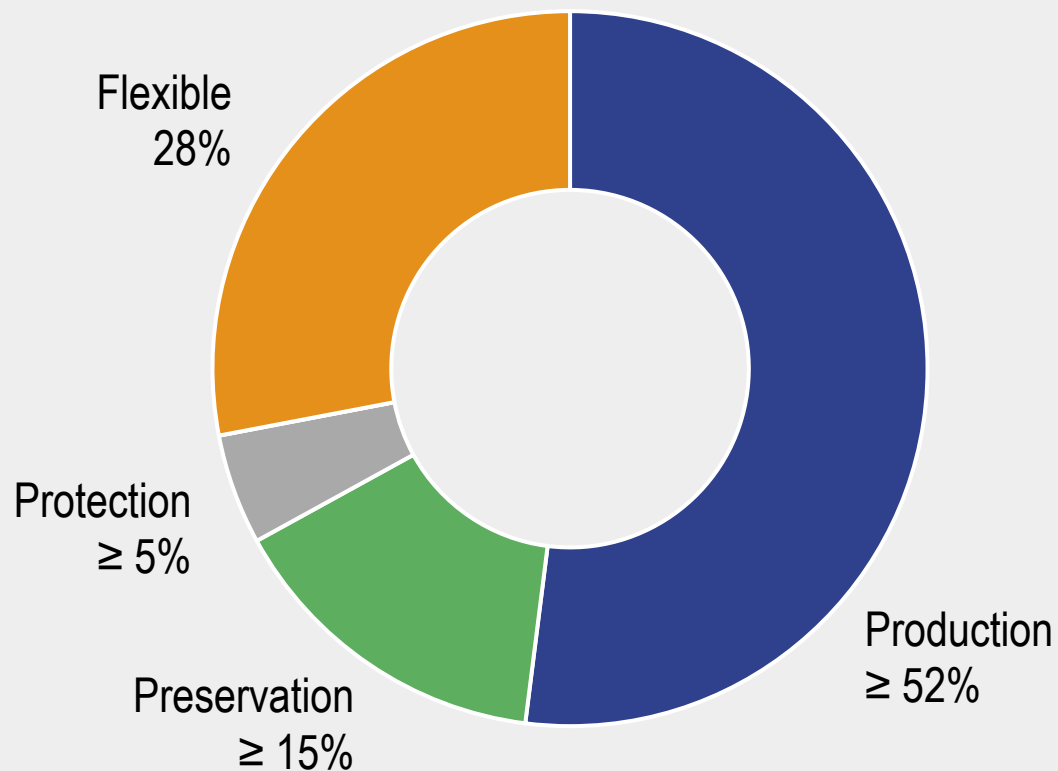
Significant funding to every community



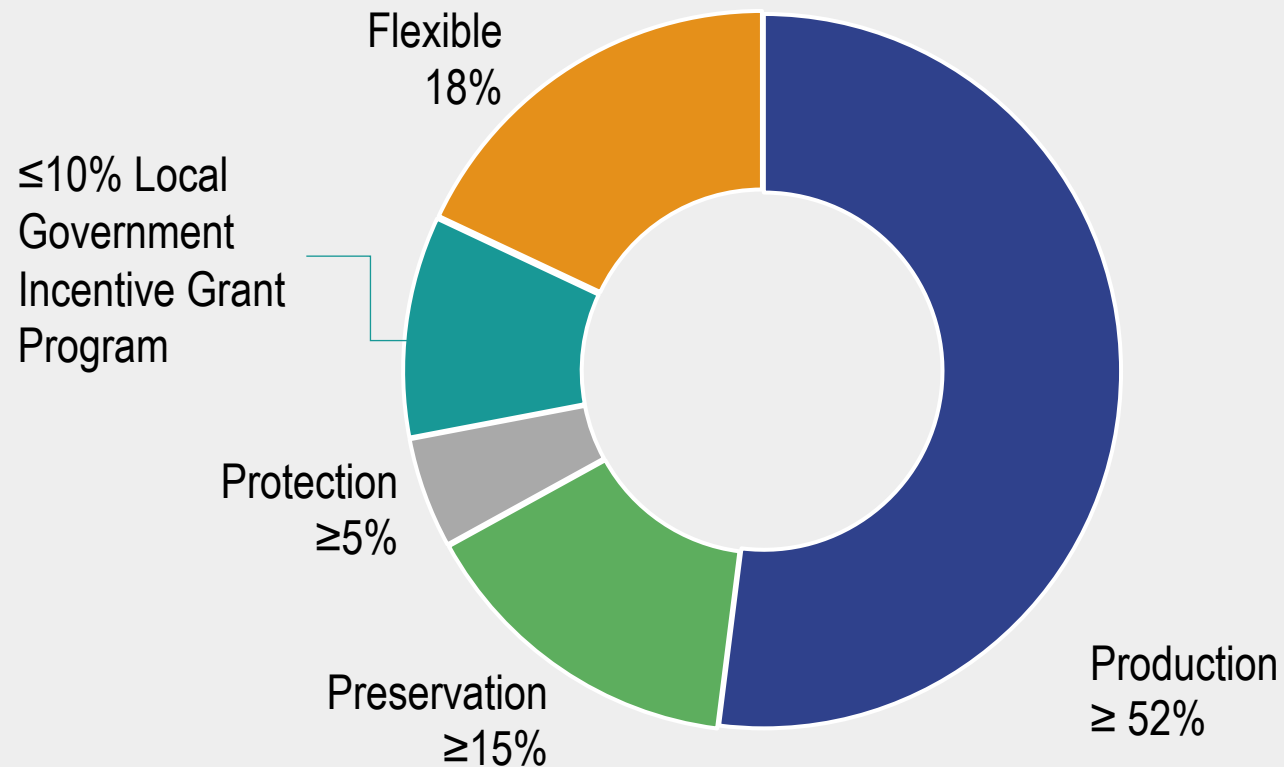
County & Direct City Allocations	\$10B GO Bond	\$20B GO Bond
Alameda County (excluding Oakland)	\$984 M	\$2.0 B
Oakland	\$383 M	\$765 M
Contra Costa County	\$925 M	\$1.9 B
Marin County	\$352 M	\$704 M
Napa County (excluding City of Napa)	\$100 M	\$200 M
City of Napa	\$79 M	\$158 M
San Francisco	\$1.2 B	\$2.4 B
San Mateo County	\$1.0 B	\$2.1 B
Santa Clara County (excluding San Jose)	\$1.2 B	\$2.4 B
San Jose	\$1.0 B	\$2.1 B
Solano County	\$248 M	\$497 M
Sonoma County (excluding Santa Rosa)	\$282 M	\$564 M
Santa Rosa	\$121 M	\$242 M
BAHFA	\$2.0 B	\$4.0 B

How Funds May be Spent

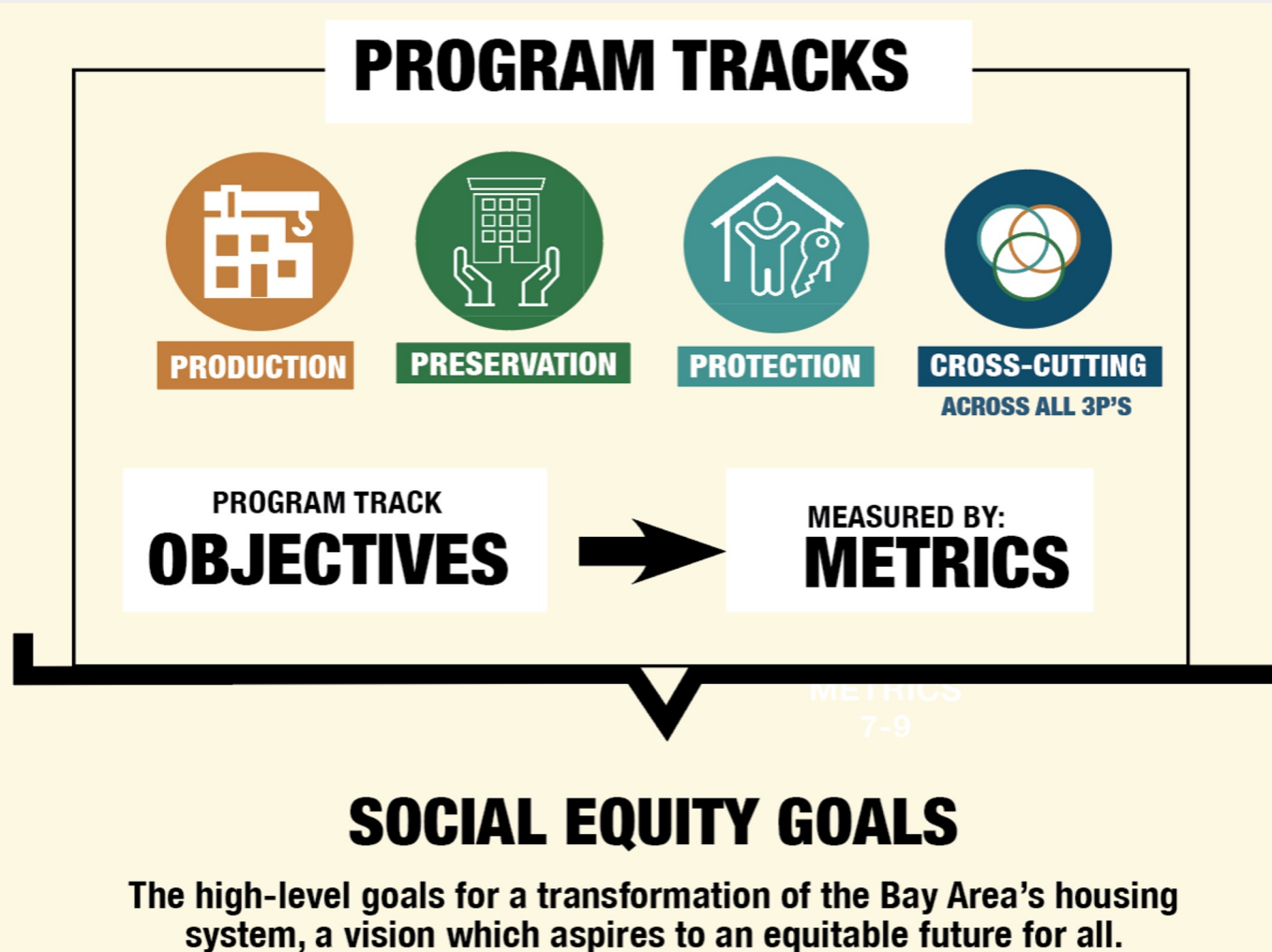
County and City: $\geq 80\%$



Regional Program $\leq 20\%$



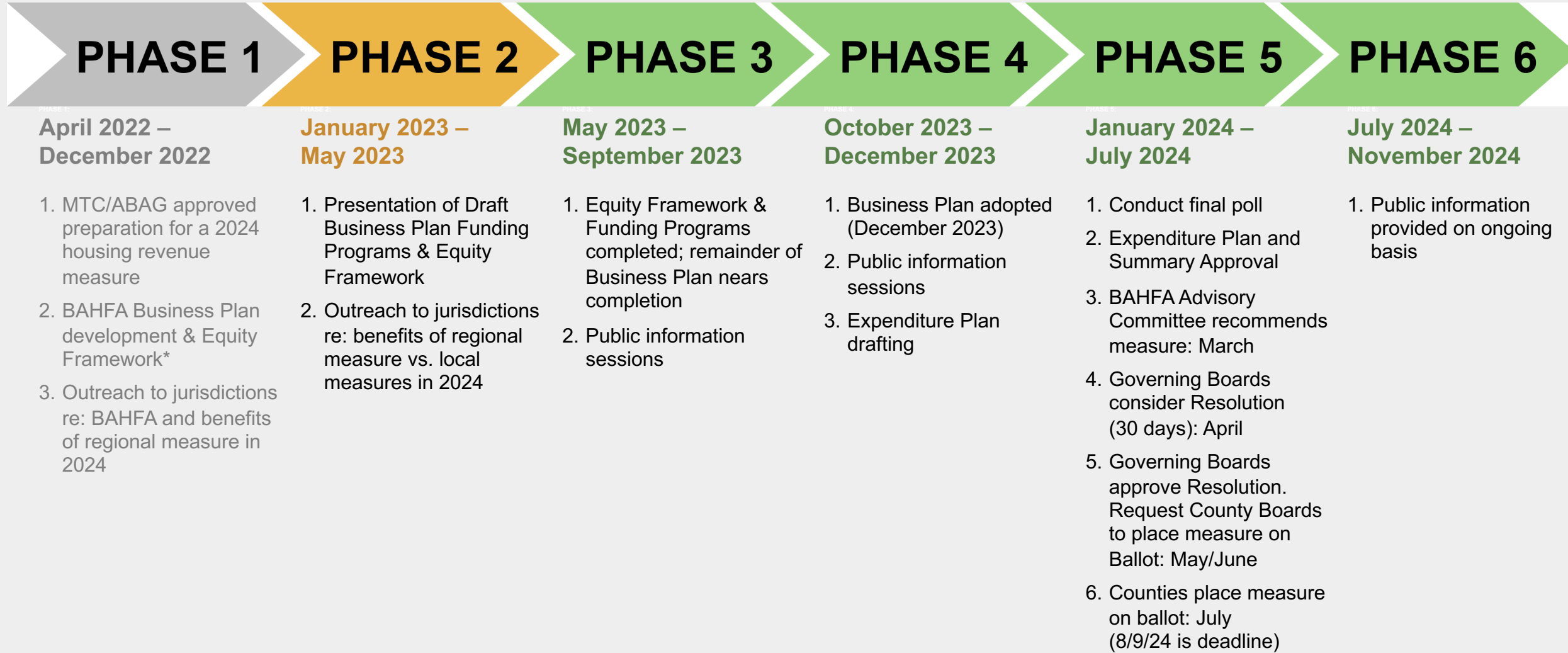
BAHFA's Business Plan & Equity Framework



Housing Production: Equity Objectives

1. Produce more affordable housing, especially for Extremely Low Income (ELI) households
2. Invest in historically disinvested areas
3. Create affordable housing opportunities in historically exclusionary areas
4. Create programs that address homelessness
5. **Achieve regional climate and environmental justice goals**

BAHFA Ballot Measure Milestones to November 2024



Thank You.



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