

Regional Climate Change Adaptation Systems Mapping



BARC Governing Board Meeting

May 19, 2023

AECOM and Nonlinear Ventures

Agenda

- 01 Project Objectives & Approach
- 02 Case Studies & Regional Maps
- 03 Emerging Observations
- 04 Next Steps & Discussion

Project Overview & Objectives

Climate Adaptation in the Bay Area

Climate Hazards

Major climate hazards already impacting the Bay Area include:



Drought



Inland flooding



Extreme heat



Coastal flooding



Wildfire



Water quality



Air quality

Climate Adaptation

“Adjustments in ecological, social or economic systems in response to actual or expected climatic stimuli and their effects. It refers to changes in processes, practices, and structures to moderate potential damages or to benefit from opportunities associated with climate change.”

Source: United Nations Framework Convention on Climate Change

Regionalism and Adaptation



*“The region is the one that has the big picture. We see the patterns, we see the commonalities, we see the things that go wrong when people don’t see the big picture. **We see the cascading impacts and the unintended consequences, and it’s our job to understand those, make those known, and set the standards that can prevent them from happening.**”*

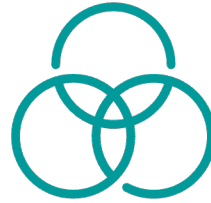
– BARC member agency interview with AECOM

Project Objectives



Map the Existing System

Delineate how **BARC member agencies** and **state and federal partners** currently address climate resilience and adaptation



Identify Challenges & Opportunities

Identify **gaps, overlaps, and areas for improvement** to support regional adaptation planning and implementation



Lay the Groundwork

Consider next steps to help **advance adaptation planning and technical assistance** in the region

Engagement Process – Regional Agencies & Stakeholders

BARC PMT Meetings

Overall project direction and feedback. PMT members are denoted with a star (*) below.

Interviews & Systems Maps Review

Discussions with staff including Program Directors, Program Managers, and Planners, about each agency's climate adaptation work:

MTC/ABAG

- Ashley Nguyen
- Caitlin Sweeney*
- Dave Vautin
- Georgia Dohrmann*
- Stefanie Hom*
- Jeanette Weisman
- Rachael Hartofelis*
- Heidi Nutters*
- Aleka Seville

BAAQMD

- Wendy Goodfriend
- Abby Young
- Jamesine Gibson Rogers*
- Judith Cutino
- Ranyee Chiang
- Arena Flores

SCC

- Jessica Davenport*
- Evyan Sloane

SF Bay WB

- Lisa Horowitz McCann*
- Xavier Melanson-Fernandez
- Setenay Bozkurt-Frucht

Caltrans D4

- Tanzeeba Kishwar
- Erik Alm*
- Vishal Ream-Rao*
- Ellen Doudna

BCDC

- Jessica Fain
- Dana Brechwald*
- Eric Buehmann
- Ethan Lavine
- Jackie Mandoske*
- Dan Hossfeld

BARC Executive Director and Governing Board Meetings

Guidance & input on process and findings.

Technical Assistance-Focused Stakeholder Engagement

Local gov't

CBOs

TA Providers

Survey to BayCAN members

Focus Group Discussions

BayCAN Quarterly Meeting

Engagement Process – Federal and State Agencies



Key Progress to Date

1 Documented climate adaptation actions being undertaken by regional, state, and federal agencies

2 Catalogued and diagrammed each BARC member agency's guiding strategies, research and planning, programs, and relationships on climate adaptation.

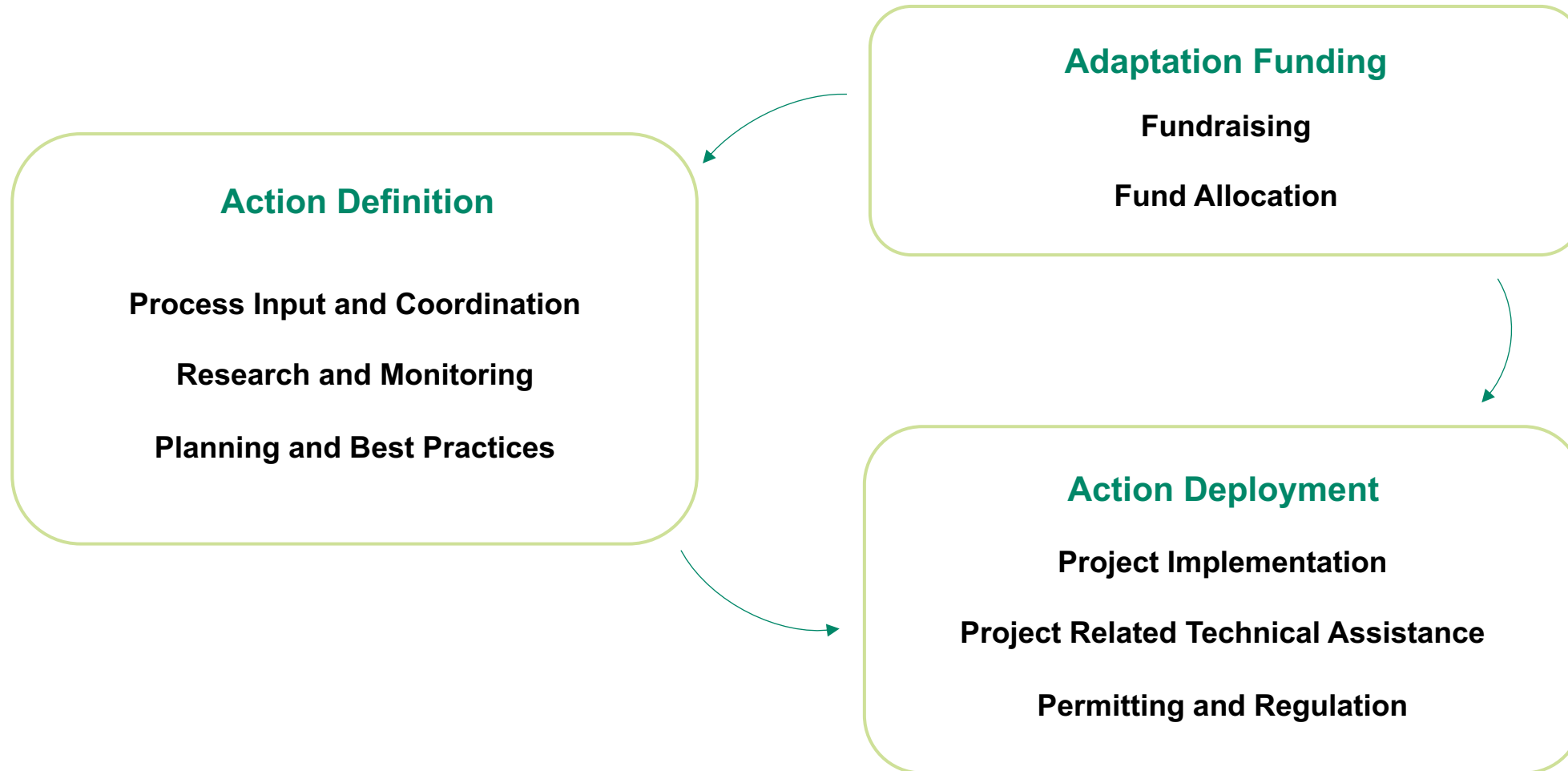
	Federal	State	Regional
Facilitate	67	167	81
Research	59	105	23
Plan	22	90	40
Finance	29	54	12
Formalize	23	49	16
Implement	11	35	19

Case Studies and Regional Maps

We will now move to Plectica to explore a selection of the systems maps developed for this project

Systems Mapping

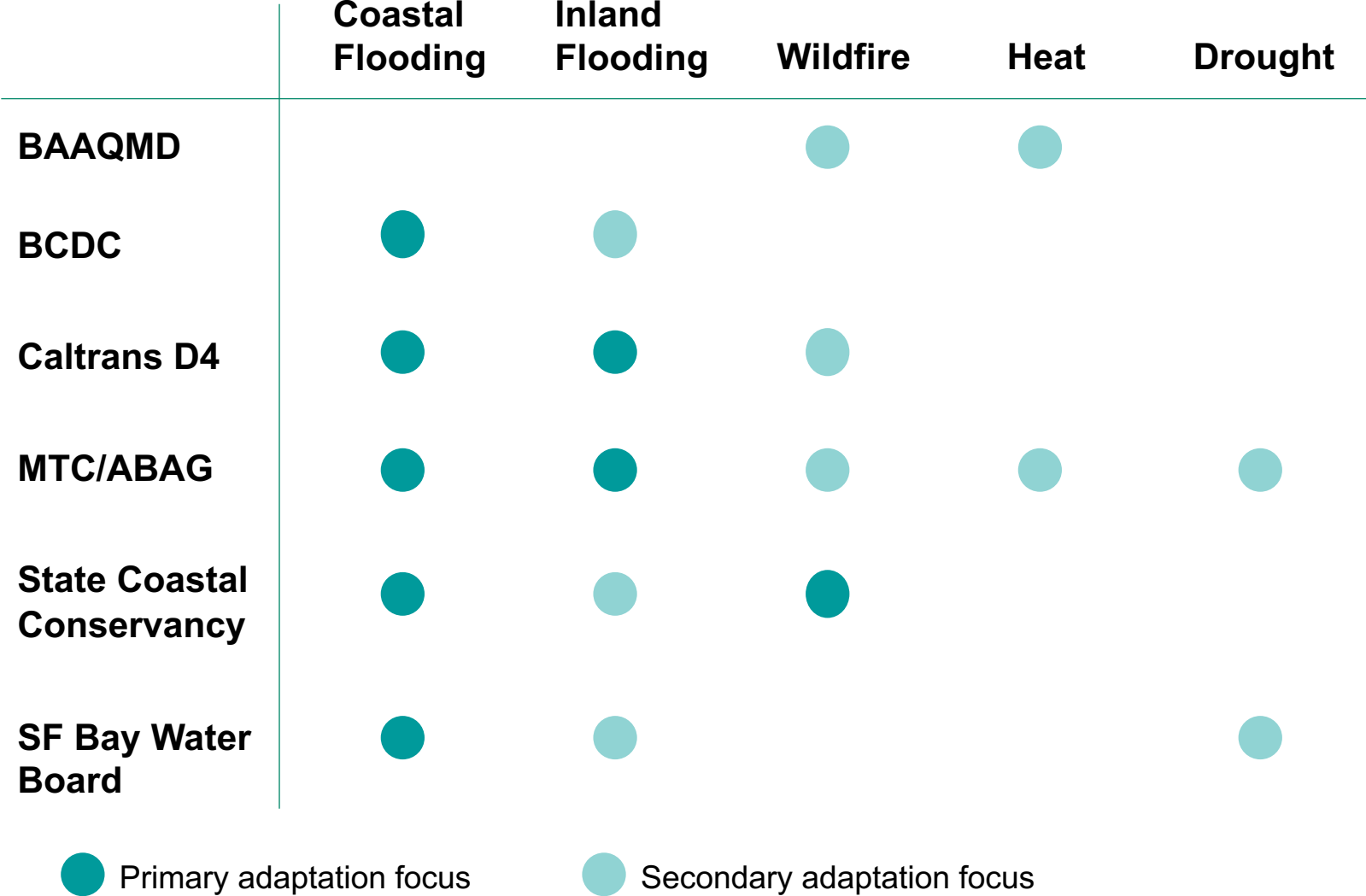
Understand in detail how adaptation is happening in the region today based on interviews and research.



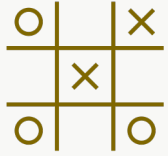


Observations

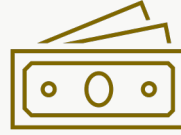
Regional adaptation activity **varies greatly** by climate hazard



Existing adaptation efforts are often **piecemeal**, despite substantial coordination



Agency adaptation efforts are limited by their **authorities** and **jurisdictional boundaries**.



Available resources, grant cycles, and funding drive much of current adaptation efforts – not strategic planning and needs on the ground.



With limited capacity and resources, agencies are often in **emergency management mode** in responding to climate hazards.

Barriers to **scaling up** adaptation planning and implementation



Inherent uncertainty about the scale and timing of climate impacts leads to uncertainty about the **sequencing, timing, and prioritization** of adaptation actions



Agencies, partners, communities face **a lack of capacity and expertise.**



The current adaptation funding system is not designed to deliver funding **equitably and effectively at the scale we need.**

Next Steps & Discussion

Next Steps



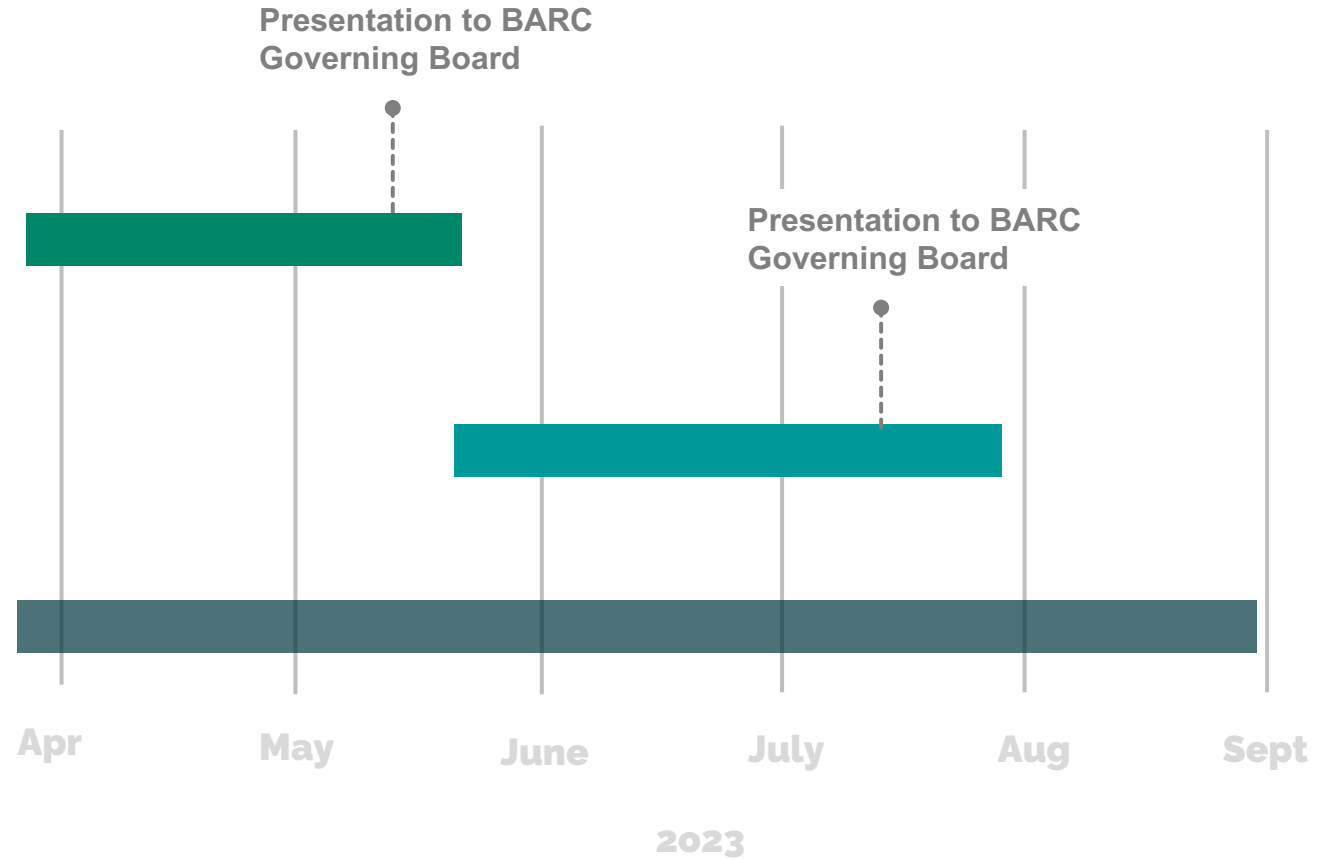
BARC member agency research
April – May 2023



Assessment report
May – July 2023



PMT meetings
Dec 2022 – Aug 2023



Questions to Consider for a Regional Multi-Hazard Adaptation Plan

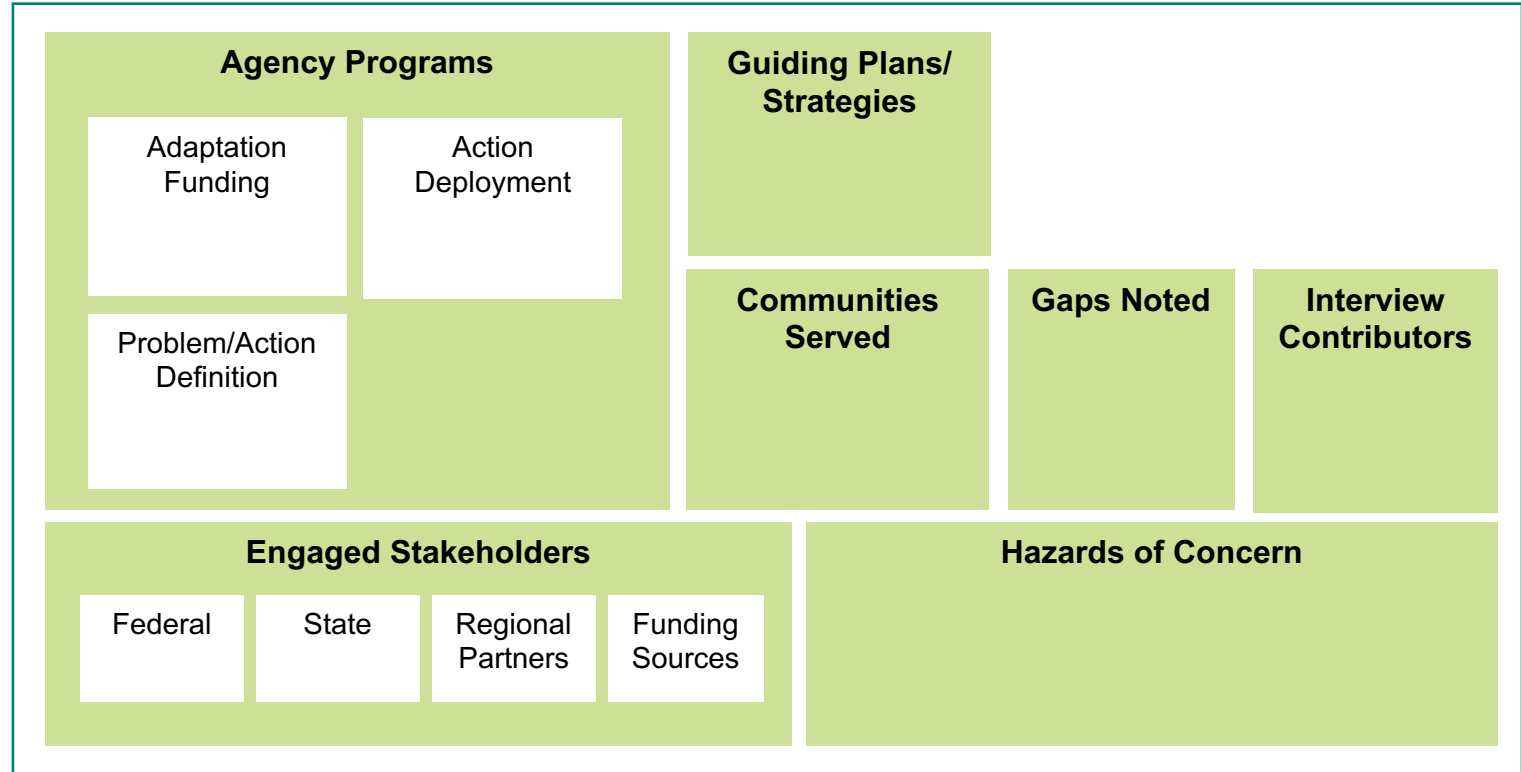
1. **Should there be regional coordination and leadership for every climate hazard?**
How can the region work together to address extreme heat, drought, or wildfire?
2. Where can **regional agencies bring the greatest value in advancing adaptation?**
3. How can we **balance the tension** between:
 - The need to rapidly increase the scale and speed of adaptation efforts; and
 - The time and resources necessary for an inclusive community-based planning process and the imperative to address equity?

Questions and Discussion

Appendix

Agency Map Layout

- ❑ **Agency Programs:** Only adaptation programs are included here, not mitigation programs or general operations.
- ❑ **Guiding Plans:** Key documents that inform adaptation strategy and implementation. The list is not intended to be comprehensive.
- ❑ **Communities Served:** Primary audiences of each program, with the understanding that most programs touch most audiences in some way.
- ❑ **Gaps:** Gaps raised during agency interviews.
- ❑ **Engaged Stakeholders:** An agency's relationships, including funders, collaborators, and regulators, etc. Specific links are illustrated with a colored dot when known. County/municipal stakeholders are generalized due to the number involved.
- ❑ **Hazards of Concern:** Primary hazards are indicated with a thick arrow. Other hazards considered have a thin arrow.



Regional Agency Systems Maps

System maps of each of the regional agencies are linked below. You do not need a Plectica account (free) to view.

- [BAAQMD](#)
- [BCDC](#)
- [Caltrans D4](#)
- [MTC-ABAG](#)
- [MTC-ABAG – SFEP](#)
- [SCC](#)
- [SF Bay Water Board](#)