

BCDC INTERN PRESENTATION 2024

BEN WITECK

GABRIELLA CHAO

JASMINE CASSIDY

OLIVIA LAMB

ATESSA ANOSHIRAVANI

AUGUST 15, 2024



BEN WITECK

Adapting to Rising Tides – Data & Science

Cory Copeland and Katie Fallon

Major: Conservation & Resource Studies

Minor: Geospatial Information Science & Technology

Interests: natural resource management, environmental planning, economics

Hobbies: jazz piano, guitar, DJing, hiking, camping



SEA LEVEL RISE POLICY INVENTORY

Analyzed General Plans of 55 cities/towns and all 9 Bay Area counties

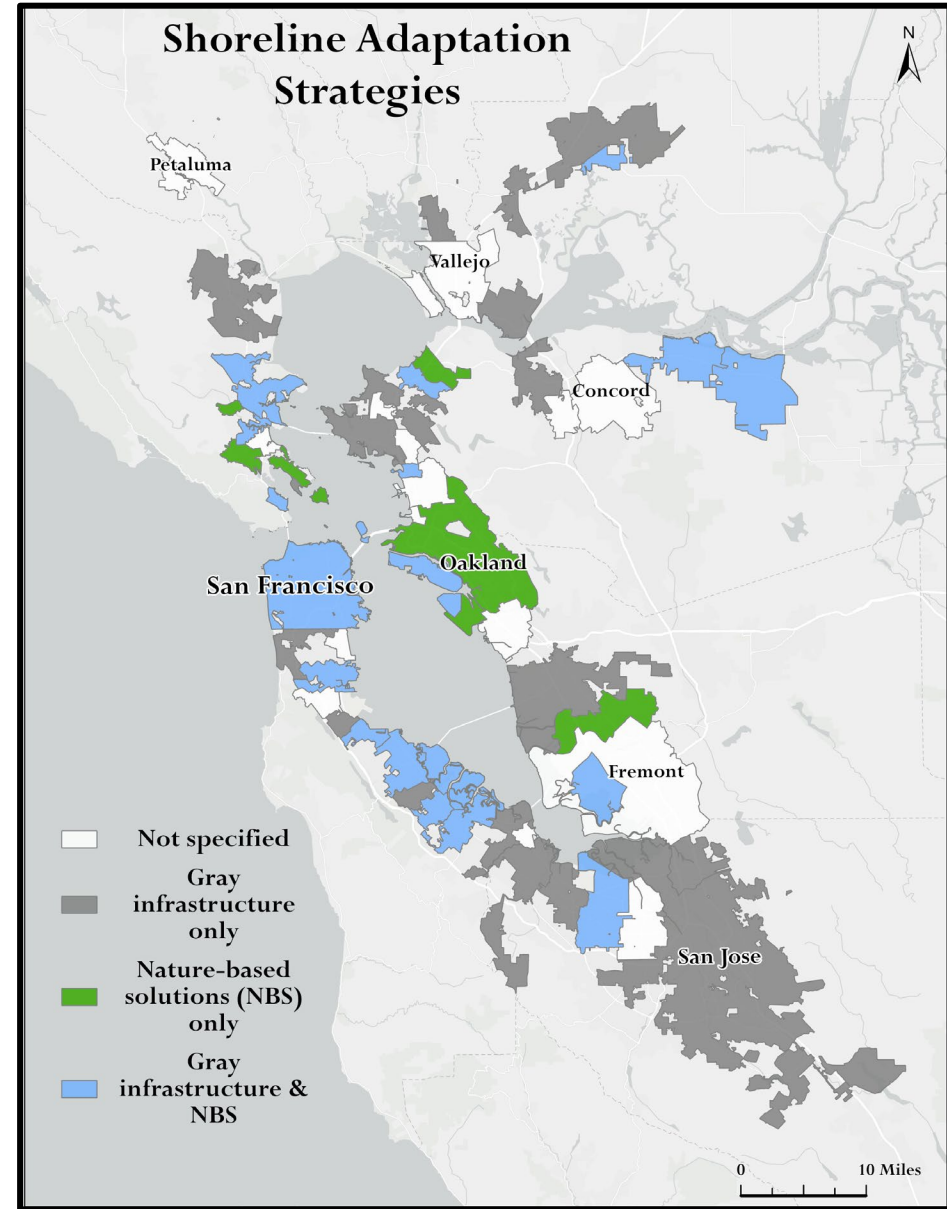
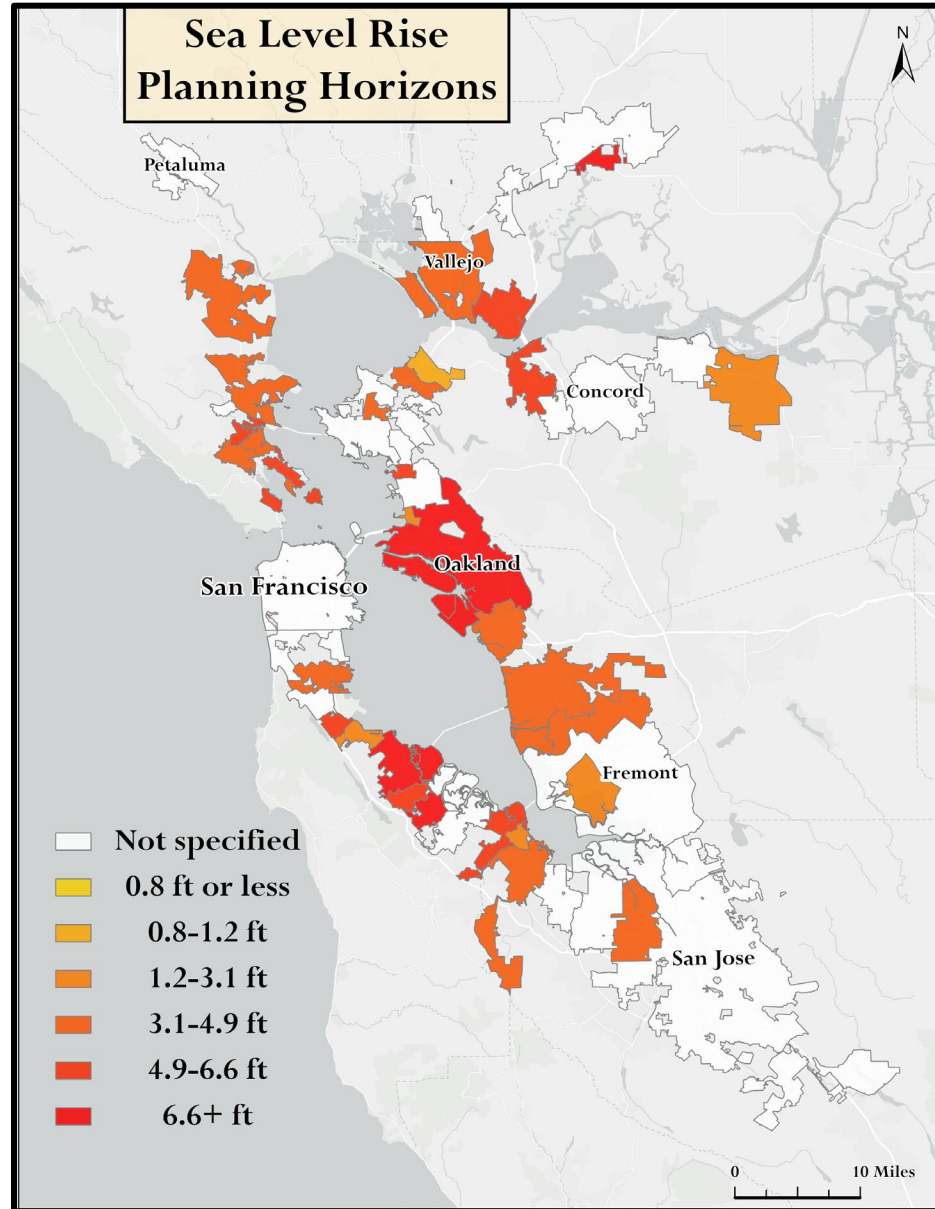
- Past inventories have considered Vulnerability Assessments, other planning documents
- Created inventory of individual policies, as well as SLR outcomes being planned for
- Based off work from UC Davis and UCSB research teams

Sorted each policy into 1+ policy categories, if applicable

- Developed from the One Bay Vision
- Generating Bay Adapt metrics to be added to dashboard, along with data visualizations

Emphasis on Equity	Community Engagement	Critical Infrastructure	Ecosystem Health	Regional Collaboration	Housing/ Development	Public Space/ Access	Contamination	Transportation	Shoreline Hardening	Nature Based	Funding	Science/ Data
					X							
		X										X
							X					X
		X										
X												X

SEA LEVEL RISE POLICY INVENTORY (CONTINUED)



GABRIELLA CHAO

Bay Resources

Ashley Tomerlin and Julie Garren

Major: Conservation & Resource Studies

Interests: Indigenous justice and forestry

Hobbies: Reading, painting, hiking, reptiles



SPECIAL STATUS SPECIES REPORTS

- 24 species status species
- Template for future species to be added
- Highlighting conservation concerns and work windows, mitigation efforts, etc.
- Increased efficiency for permit analysts to see the potential impacts of permits

Delta Smelt *Hypomesus transpacificus*.

Range and Habitat

Delta smelt are endemic to California; however, their range has been reduced to only the San Francisco Estuary and parts of the Sacramento San-Joaquin Delta Estuary. They thrive in well-oxygenated waters between 6-28°C, with access to small crustaceans and plankton to feed on. They are prey for larger fish, especially introduced species such as the striped bass and largemouth bass. To avoid predation, Delta smelt do best in waters with high turbidity. They can tolerate a range of salinities but prefer lower salinities for rearing and maturation.

Threats

Delta smelt are threatened by toxins, disease and competition, water diversion, reduction in freshwater outflows, pollution. The most detrimental pollutants are the pesticides atrazine, alachlor, and 2,4-D.

Conservation Efforts

The USFWS and CDFW are working together to monitor the distribution and abundance of Delta smelt and requiring limits on entrainment and protection of 8,000 acres of habitat. The Smelt Working Group further advises on pumping operations throughout the Delta. There is also a Delta Smelt Resiliency strategy which highlights actions to reduce population loss. The IEP and Bureau of Reclamation collaborated in 2011 to create the Fall Low-Salinity Zone Project, further exploring the ecological role of Delta smelt habitat and the value of fall flows.

Relevant BCDC Policies

Bay Plan:

- Fish, Other Aquatic Organisms and Wildlife Finding h (SF Bay is critical habitat for Delta Smelt and plays a role in their life cycles; the National Marine Fisheries Service should provide conservation recommendations if a proposed project will have a negative impact on their habitat)
- Water Quality Finding d and l (pesticides in the bay can impair aquatic organisms and runoff and construction can increase levels of pesticide in the bay)

Suisun Marsh Plan:

- Land Use and Marsh Management Policy 3 (Pesticide usage for mosquitoes is a last resort)

Sources:

<https://wildlife.ca.gov/Conservation/Fishes/Delta-Smelt>
https://www.biologicaldiversity.org/species/fish/Delta_smelt/
[California Fish Species - California Fish Website \(ucdavis.edu\)](https://www.californiafish.org/species/fish/Delta-smelt/)
[Delta Smelt - Final Critical Habitat - USFWS \[ds249\] | Data Basin](#)
[Delta Smelt Biology and Management 101 \(ca.gov\)](#)



Delta Smelt
USFWS



Delta Smelt Range
Data Basin

Status: Federally threatened and state endangered

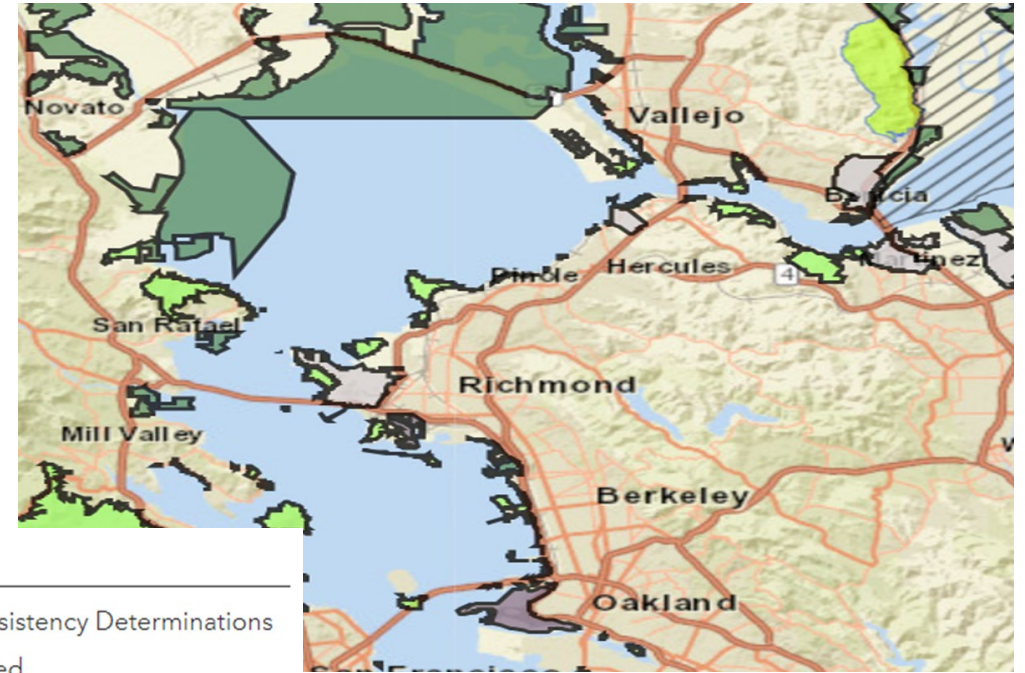
Appearance: The Delta smelt is a slender bodied, nearly translucent fish in the Osmeridae family. It has large eyes, a small mouth, and an adipose fin between the dorsal fin and tail. The average size is between 2.4 and 28 inches.

Life history: Delta smelt are semelparous and live one year. They spawn in freshwater during spring and migrate to a low-salinity zone during summer to rear, maturing in fall, and ultimately migrating upstream for winter. During breeding, they lay their eggs in firm sediment of 14.8-16.5°C and after 9-13 days, the eggs hatch. The larvae feed on unicellular algae, plankton, and small crustaceans in food-rich nurseries.

Prepared by: Gabriella Chao
Date: June 2024

BAYRAT UPDATES

- Used by staff to access permit information
- Input permits and amendments to keep map accurate
- Updated missing permit types, locations, URLs, etc.
- Familiarized myself with permit structure



C2010.005.00

Permit Type	Consistency Determinations
Permit Status	Issued
Permit	C2010.005.00
Permittee	U.S. Fish and Wildlife Service
Location	In the Bay and within the shoreline band, at the San Pablo Bay Refuge located along the northern edge of San Francisco Bay in Sonoma, Napa, and Solano Counties.
Date of Issuance	
Description	Development of a comprehensive management plan for the

[Zoom to](#)

...

JASMINE CASSIDY

CSU COAST Internship Program
Adapting to Rising Tides Team
Todd Hallenbeck and Kate Lyons

Major: Environmental Management and Protection

Minor: Sustainable Environments

Interests: Environmental planning and urban resilience

Hobbies: Hiking, traveling, volunteering, geography



SHORELINE ADAPTATION PROJECT MAP (SAPMAP)

- EcoAtlas Project Tracker data entry for new and existing projects
- Managed spreadsheet to track progress & questions
- Facilitated communication with other entities (SFBJV, SFBRA, Caltrans, Water Board)
- Data is central input for the RSAP and Funding & Investment Strategy



Project ID: 12253 Created By: Jasmine Cassidy (San Francisco Bay Conservation and Development Commission)

Last Updated: July 31, 2024 Updated By: Jasmine Cassidy (San Francisco Bay Conservation and Development Commission)

Project Name *
Redwood City Ferry Terminal Project

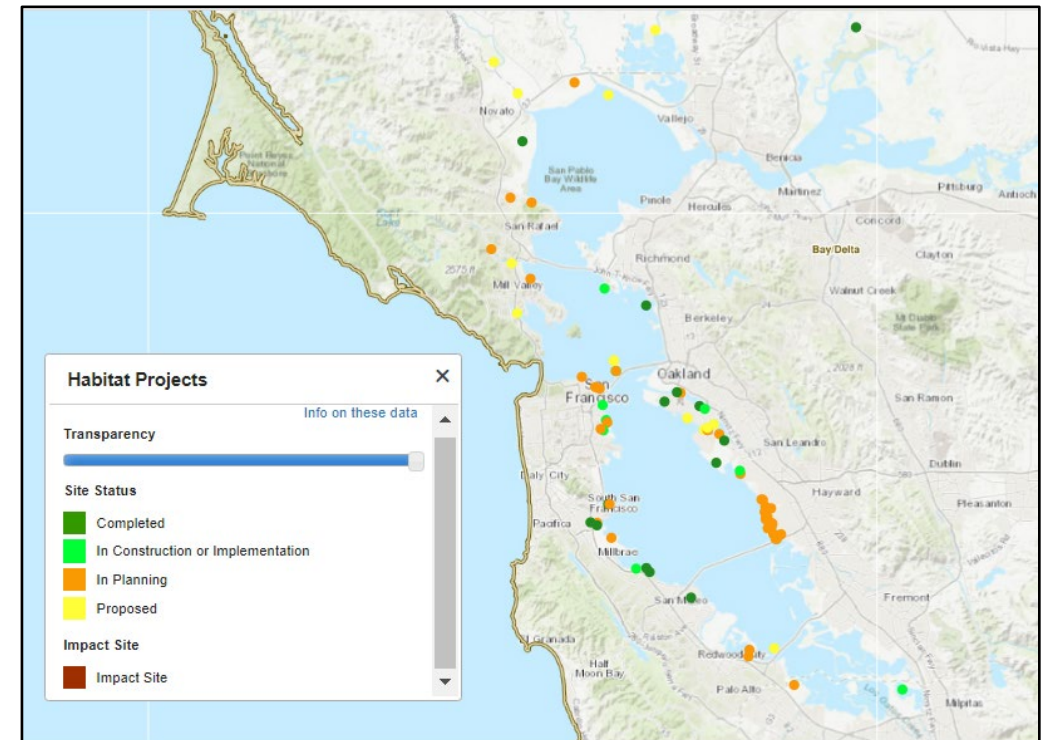
Public Status * [i](#) **Administrative Region *** [i](#) **Project Type *** [i](#)

Public San Francisco Bay Adaptation Unknown/Unspecified

Project Short Name * [i](#)
RWC Ferry

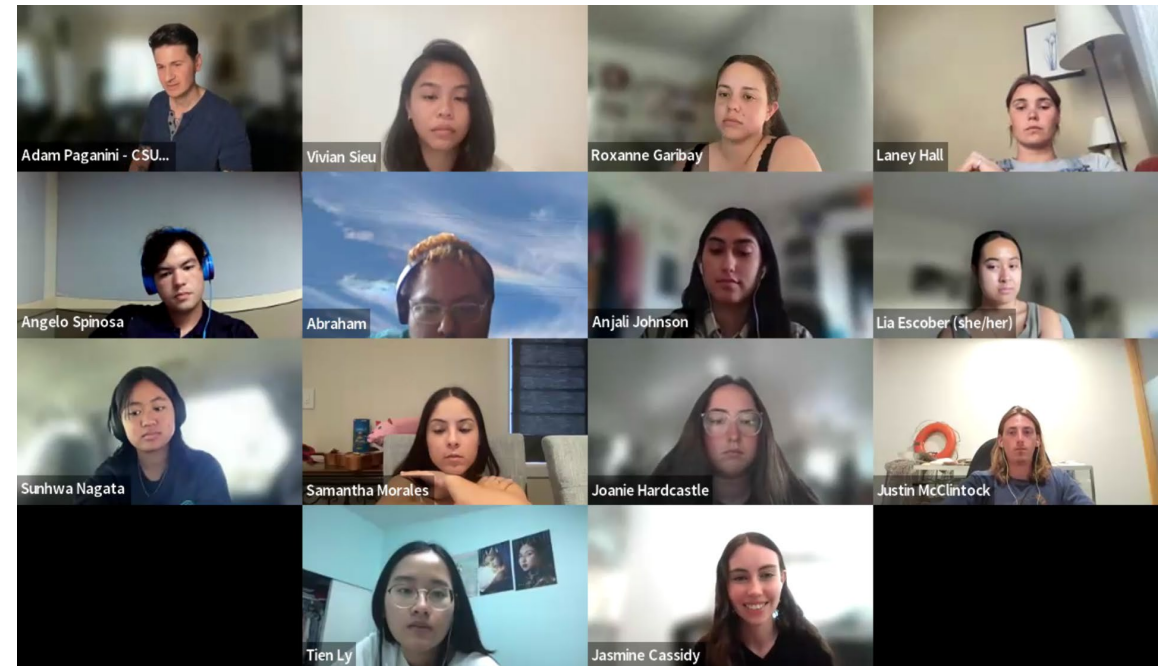
Project Description [i](#)
The project has plans to construct a ferry terminal on the east end of the Port of Redwood City's property with access to the San Francisco Bay via the shipping channel. Waterside improvements include a passenger float, piles, a fixed pier, and an accessible gangway.

Project Abstract * [i](#)
The project has plans to construct a ferry terminal on the east end of the Port of Redwood City's property with access to the San Francisco Bay via the shipping channel. Waterside improvements include a passenger float, piles, a fixed pier, and an accessible gangway.



OTHER PROJECTS AND HIGHLIGHTS

- Bay Model Field Trip
 - Learned about the Bay's history
- EcoAtlas/Project Tracker Data Administrators and Users Workshop
 - Helped the 3hr+ workshop run smoothly
- COAST Professional Development Workshops
 - Networked with panelists from NOAA, Cal State Agencies, NGOs, and grad students
 - Presented at the 2nd Annual COAST Symposium



OLIVIA LAMB

Public Access - Shoreline Development Intern

Ashley Tomerlin and Viktoria Kuehn

Major: Environmental Studies and Political Science

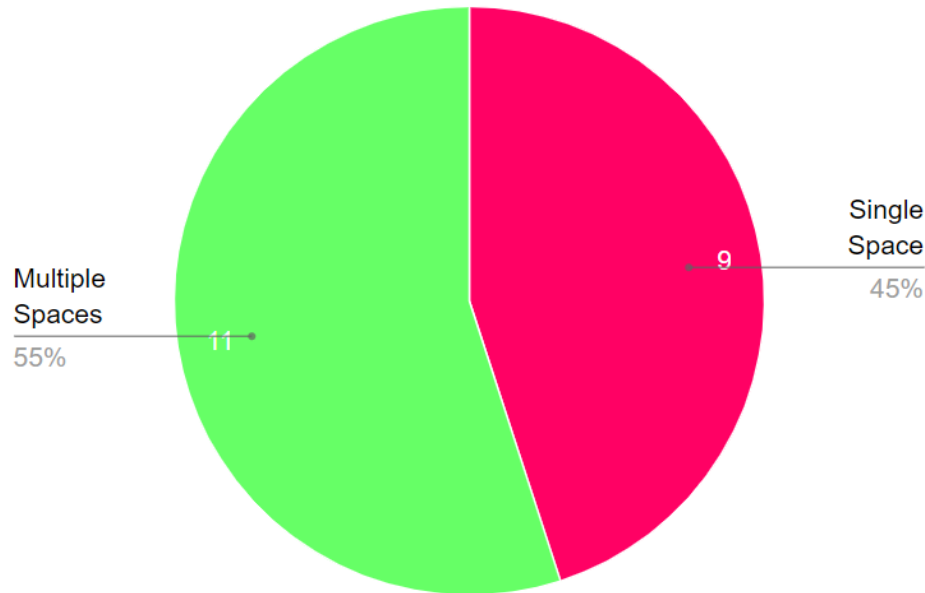
Interests: Intersection between policy and environment, Environmental Justice, & Sustainable Development

Hobbies: Travelling, Singing, Cooking, Reading, Photography



SPECIAL EVENTS PERMIT COMPARISON

Single Spaces vs. Multiple Spaces

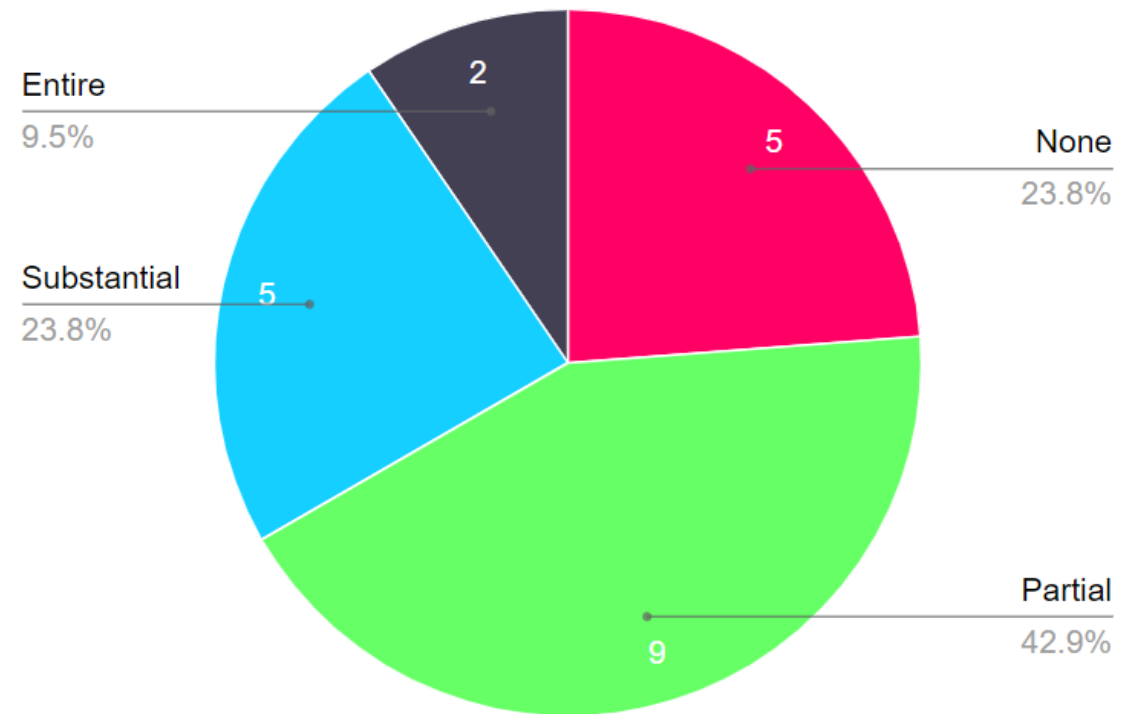


- Analyzed set of permits with special event provisions to note any trends to consider when permitting other public access spaces
- Multiple spaces for events ensures the same public access spaces are not continuously shut down; when authorizing permits, try finding additional spaces for events
 - Constant closures may deter public from utilizing and circulating within public access spaces

SPECIAL EVENTS PERMIT COMPARISON (CONTINUED)

- 33% of permittees have permissions for higher level of public impact during special events but on average are smaller properties -- less public access space, closures are less detrimental to public circulation*
- For future consideration, use the size of property to determine the level of impact they should be authorized to have

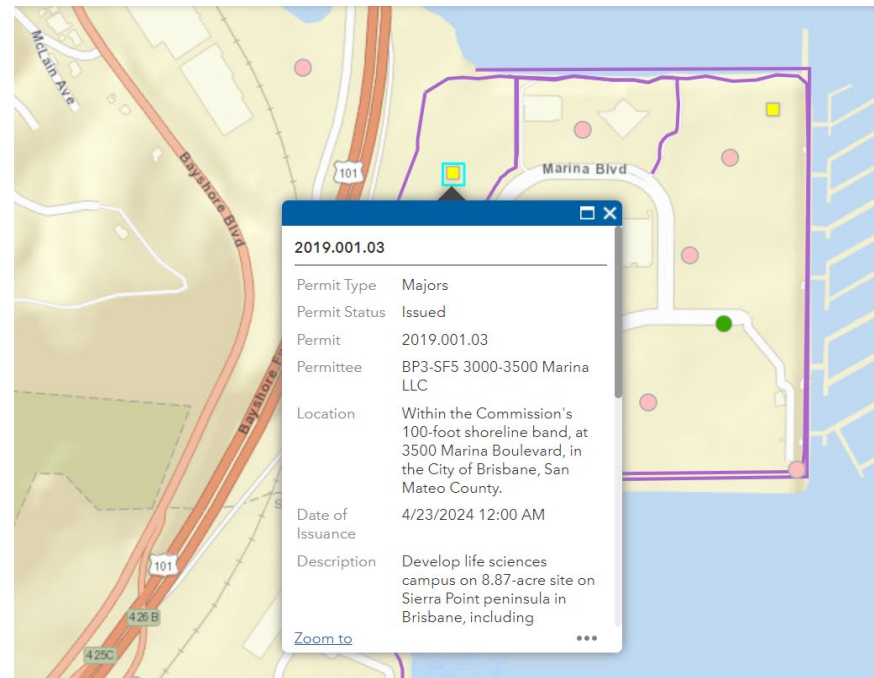
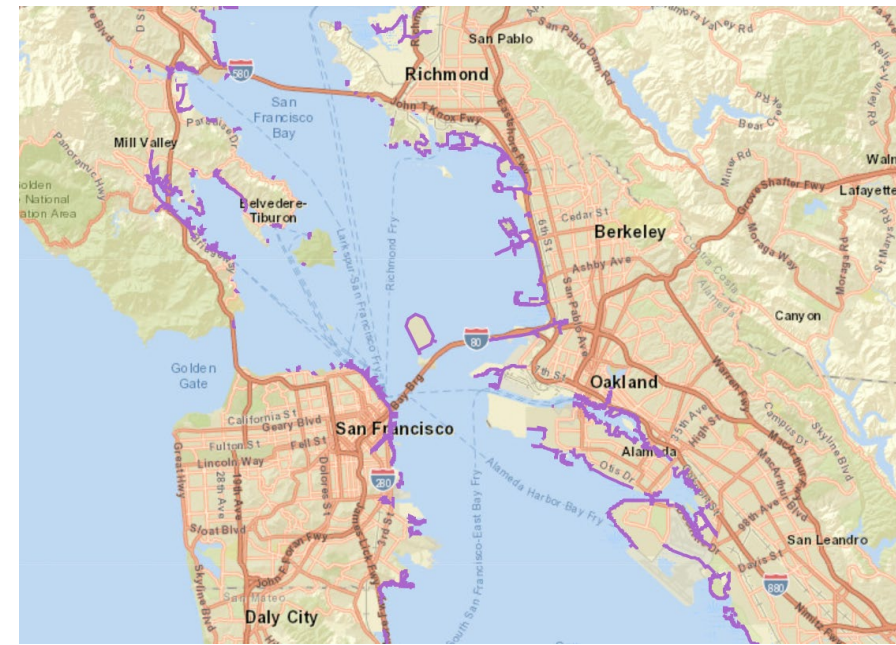
Maximum Allowed Public Impact



13 *both permits with entire impact are older permits, meaning site conditions and public access goals may be different from the present-day

BAYRAT

- Update and fill in information gaps to keep BayRAT as up to date as possible
- Mapping public access associated with existing permits and adding new and missing permits related to public access
- Makes permit information more accessible to BCDC staff



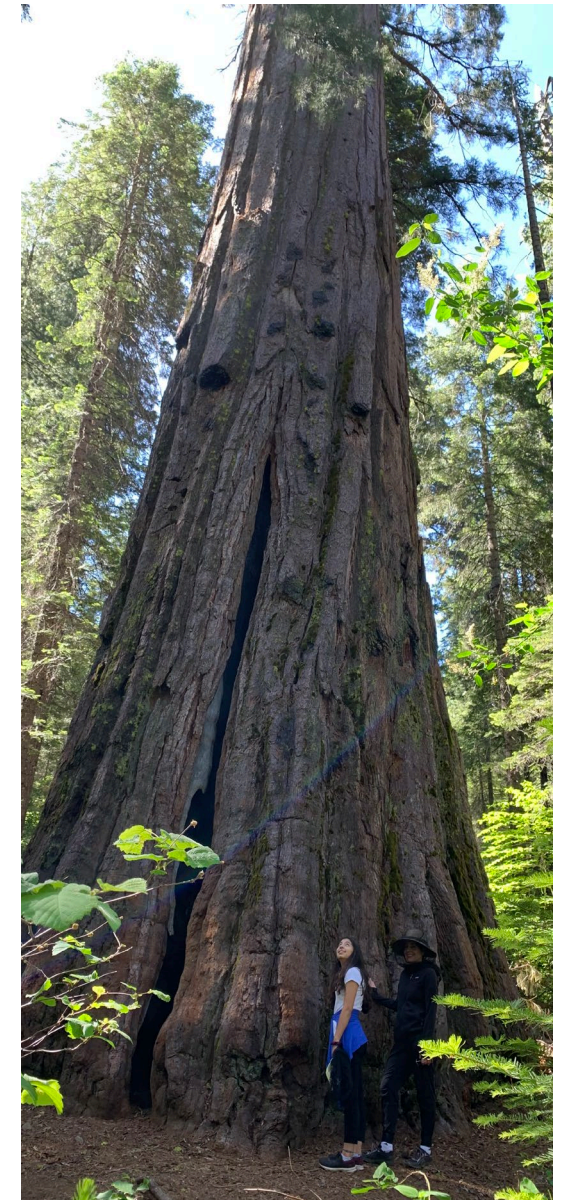
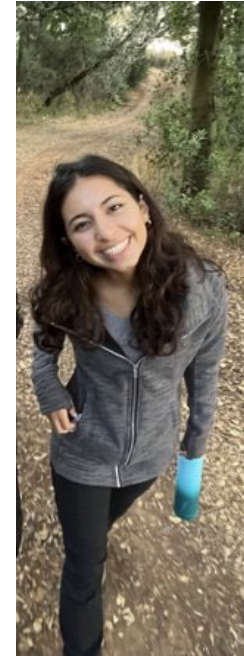
ATESSA ANOSHIRAVANI

**Environmental Justice &
Community Engagement Team**
Phoenix Armenta

Major: Earth Systems

Interests: climate justice, health equity & environmental / social determinants of health, water management, climate communication

Hobbies: hiking, photography, swimming, running, reading, paddleboarding

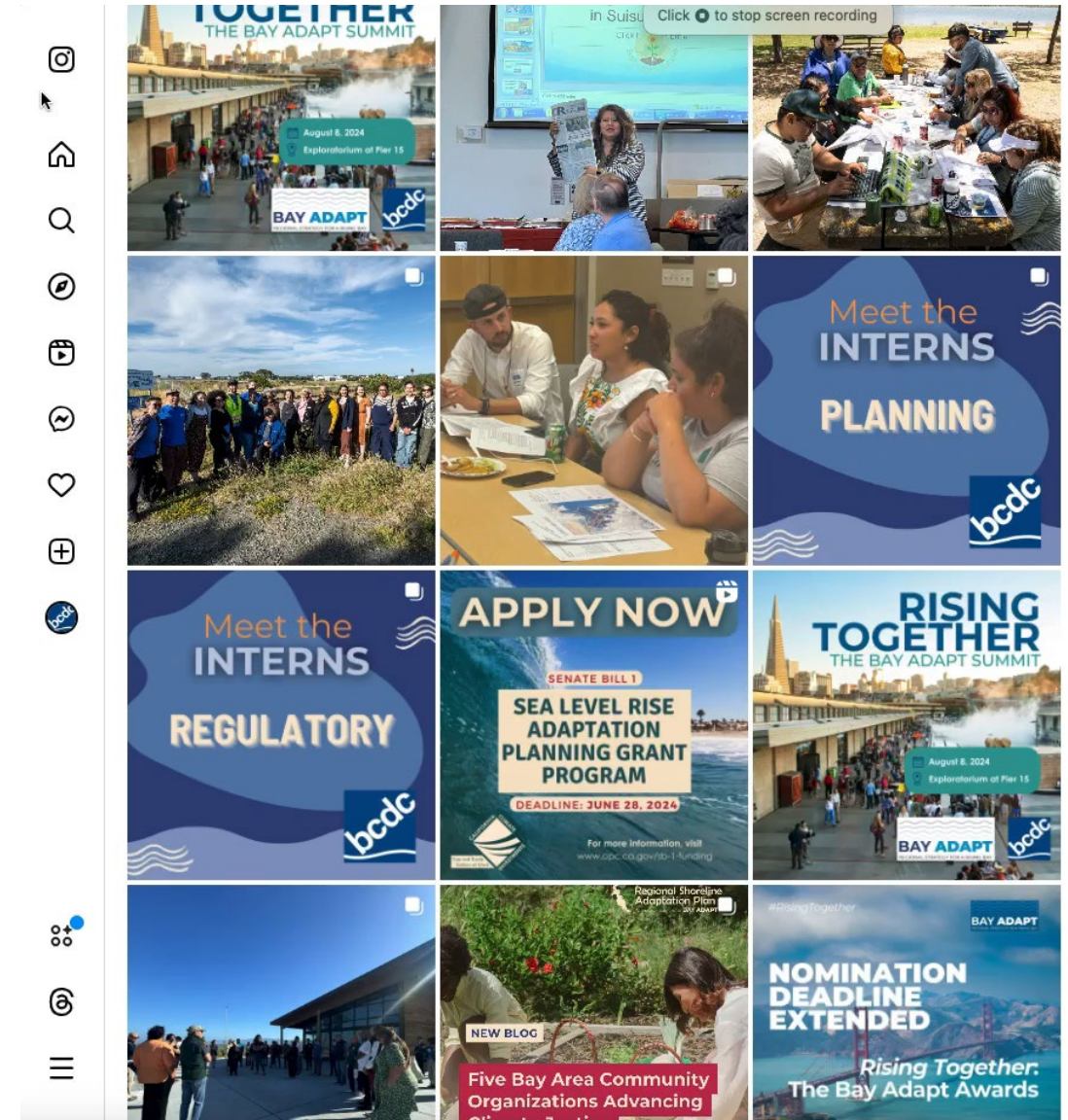


BCDC'S INSTAGRAM

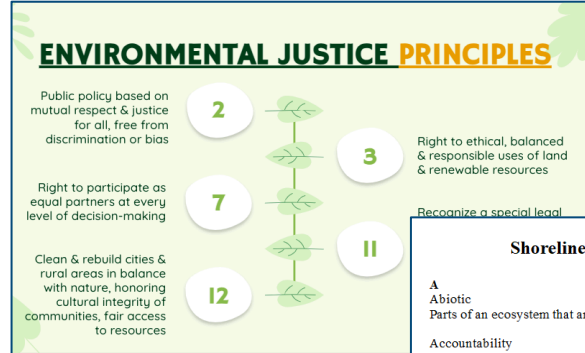
Communication & Education

>30 posts, grew following 50%

- **Educational posts:** EJ, permit activities, social vulnerability mapping, etc.
- **Intro to new staff:** reached out to new staff for photos & introductions
- **Miscellaneous:** reels about happenings at BCDC, highlights from site visits, day in the life



SMALLER PROJECTS



Shoreline Leadership Academy Glossary

A
Abiotic
 Parts of an ecosystem that are not alive (such as rocks, light, water)

Accountability
 "refers to creating processes and systems that are designed to help individuals and groups to be held in check for their decisions and actions and for whether the work being done reflects and embodies racial justice principles." ([Racial Equity Tools](#))

Ambient air pollution
 Outdoor air pollution, often from various sources such as cars and industry, that can cause harm to both humans and the environment

B
Bayfill
 Artificial land created by pouring sediment (dirt, rocks, sand, mud, soil) into a bay

Bioremediation
 Use of biological processes done by living organisms such as bacteria, fungi, plants and algae to break down environmental pollutants, contaminants, or toxins

Bioswale
 Water drainage system with plants and mulch that filters stormwater runoff before recharging groundwater, in a linear path

Breakwaters

Module 1 | Jul. 24 Understanding the shoreline

Overview of the Climate Crisis Mapping the issues

OSLA | Class 1, video ...
 Teron McGrew
 Climate Reality Project
 Download presentation deck

OSLA | Class 1, video ...
 Phoenix Armenta
 OSLA
 Download presentation deck

Shoreline solutions Elements of a plan

OSLA | Class 1, video ...
 Prescott Reavis
 OSLA, Kulima Design
 Download presentation deck

OSLA | Class 1, video ...
 Just Transition
 Keta Price
 OSLA, East Oakland Collective
 Download presentation deck

Interviews & site Visits with EJ Advisors

Staff Training on History of Environmental Justice

Supported Regional Shoreline Adaptation Plan & Racial Equity Action Plan

Shoreline Leadership Academy: outreach, trainings, dictionary

PROGRAM RECOMMENDATIONS

1. Stronger onboarding process with acronym definitions

2. Communication about meeting goals and bigger picture purposes of projects

3. Guidance on how to read policy materials & time to ask questions

4. More relevant site visits and with ALL interns

PROGRAM STRENGTHS

1. Willingness of staff to meet and talk about their work

2. Professional development with Larry Goldzband

3. Flexible scheduling of workdays to allow for events, site visits, etc.

PROGRAM HIGHLIGHTS



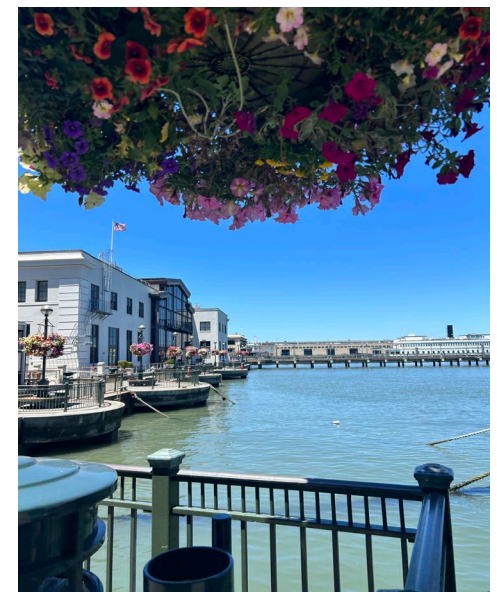
Commissioner Eddie Ahn
Book Talk



Site Visits



Bay Adapt Summit



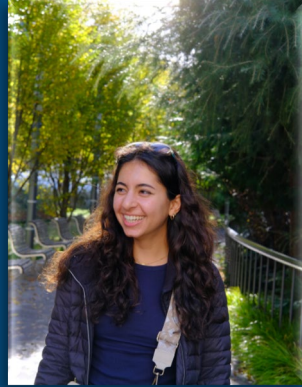
THANK YOU!

August 15, 2024



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