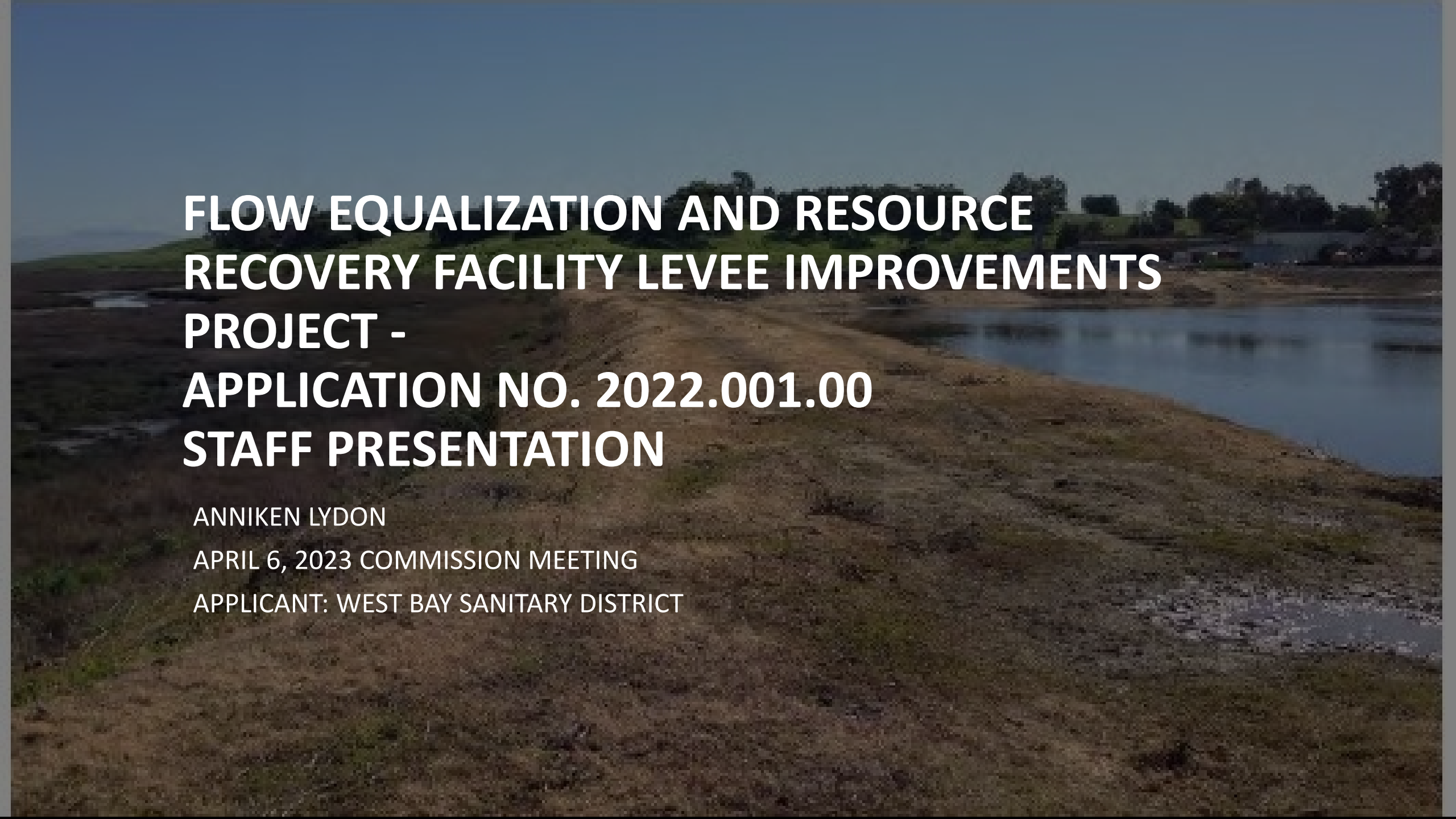


FLOW EQUALIZATION AND RESOURCE RECOVERY FACILITY LEVEE IMPROVEMENTS PROJECT - APPLICATION NO. 2022.001.00 STAFF PRESENTATION

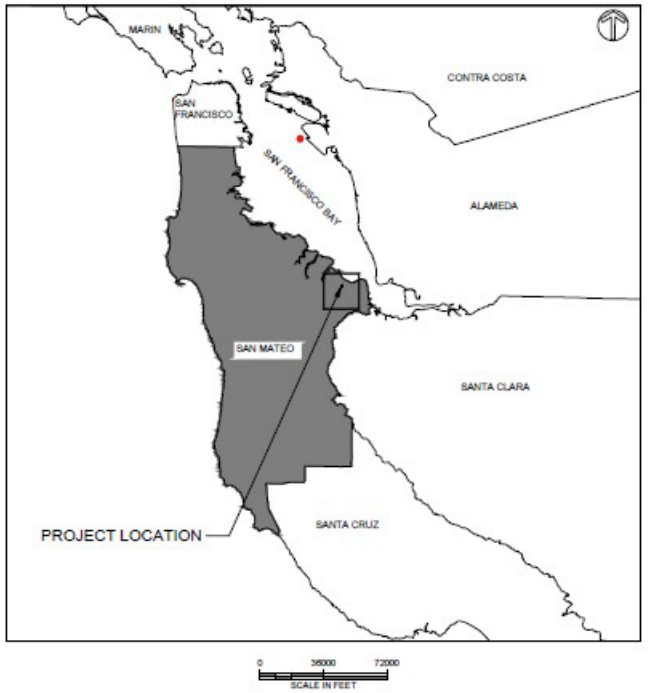
ANNIKEN LYDON

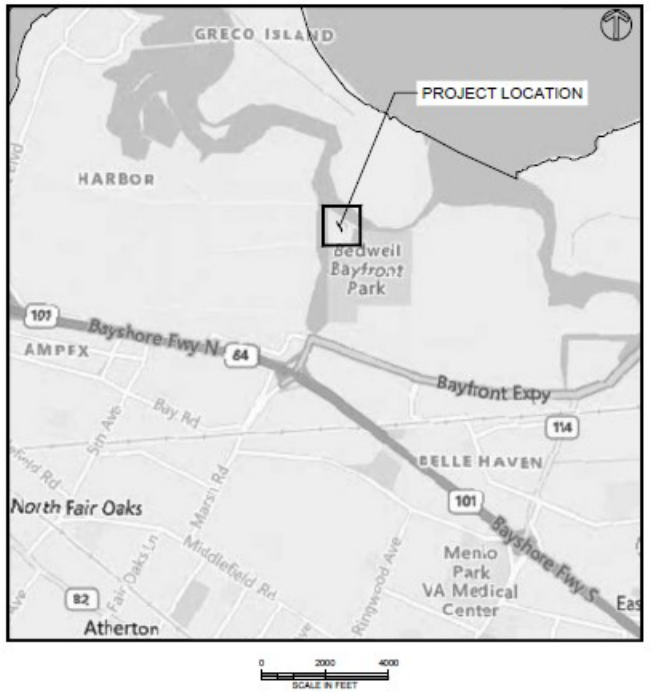
APRIL 6, 2023 COMMISSION MEETING

APPLICANT: WEST BAY SANITARY DISTRICT

PROJECT LOCATION

03/25/2022





ADDRESS:
1700 MARSH ROAD,
MENLO PARK, CA 94025
(055-400-010)

PROJECT LOCATION

BCDC JURISDICTION

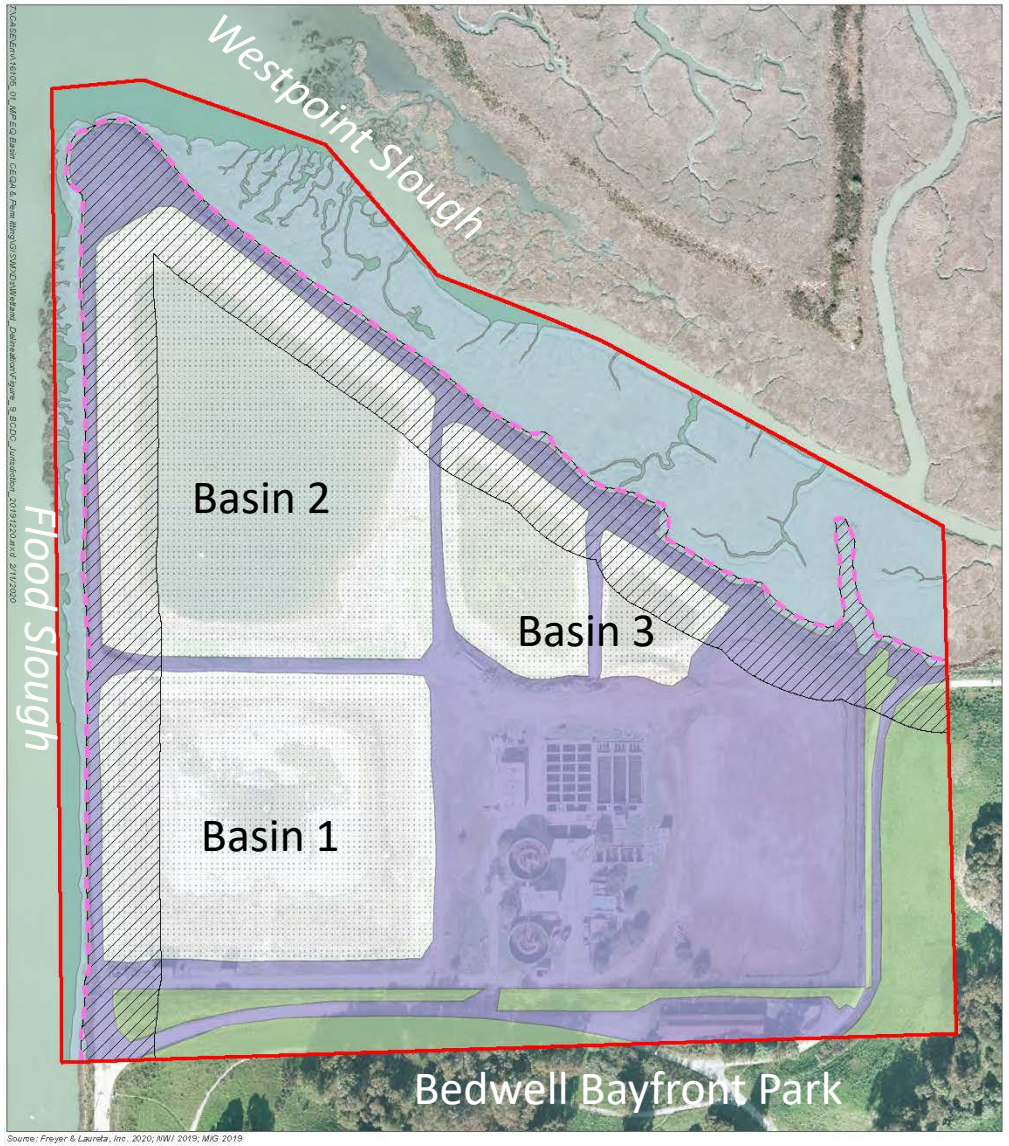
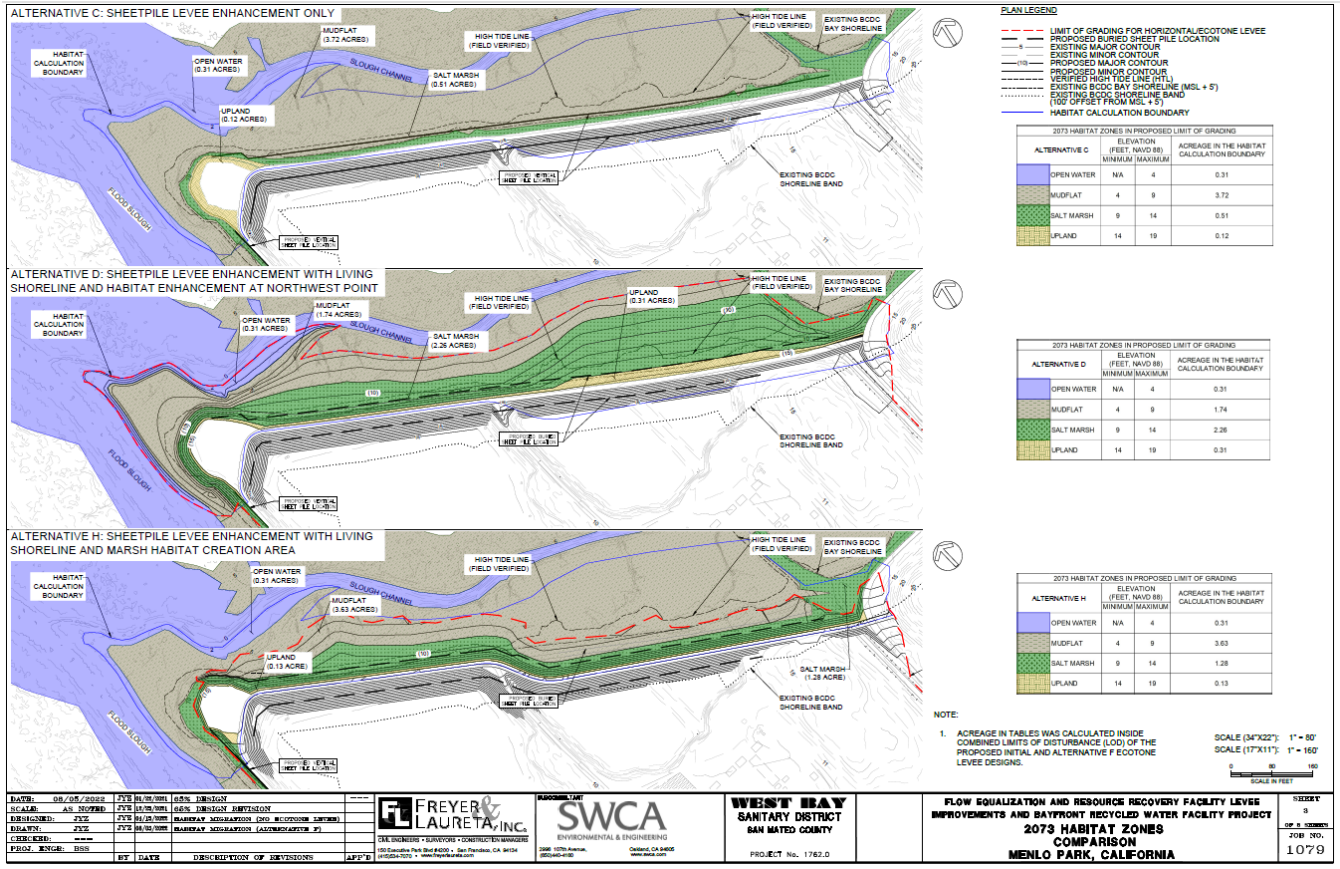


Figure 9 BCDC Jurisdiction

West Bay Sanitary District Flow Equalization and Resource Recovery Facility Flood Protection Project

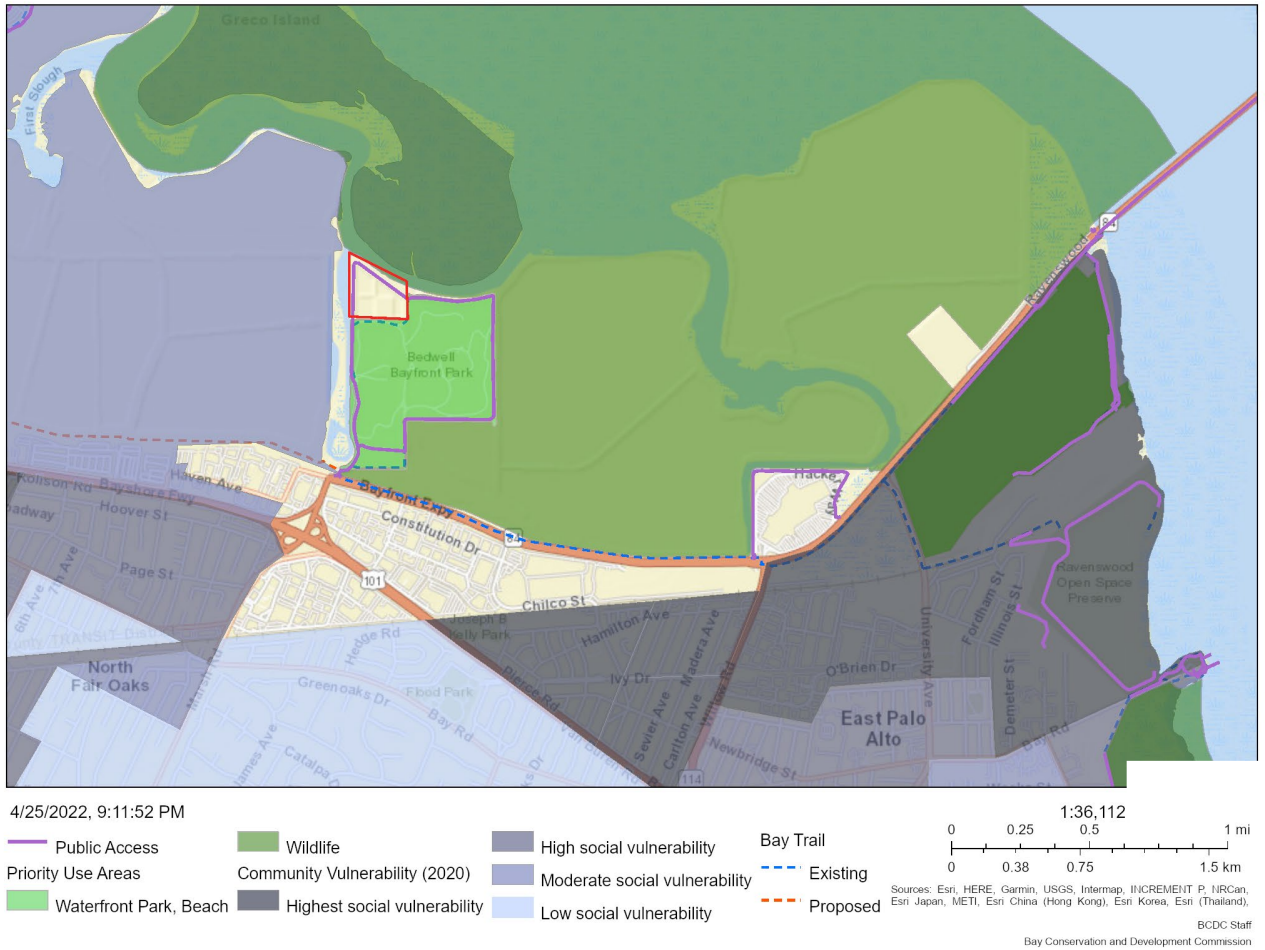
PRIOR COMMISSION-APPROVED PROJECTS AND THE EVOLUTION OF THIS PROJECT DESIGN



- This project is the first of its kind–
  - Nature-based shoreline protection with the habitat portion built into the Bay
- Prior ecotone slopes authorized in diked Baylands and salt ponds
- C2014.004.00 - Consistency Determination issued to the U.S. Fish and Wildlife Service for Sonoma Creek, included Construction of an ecotone transitional habitat with three percent slope onto existing marsh.
  - Main project purpose was for habitat restoration and enhancement

ENVIRONMENTAL JUSTICE

BCDC Webmap



Adjacent Communities – Menlo Park, Atherton, East Palo Alto

- No census block data for the area around the project
- Nearest residents over 0.8 miles from the project site
- However, adjacent areas are identified as having:
  - Social Vulnerability Category = Moderate, High, or Highest
  - Contamination Vulnerability = Generally Low, but two areas to the west are identified as High and Highest

SEA LEVEL RISE PROJECTIONS

West Bay Sanitary District Ecotone Levee Sea Level Projected Impacts

Ecotone Levee and Improved Shoreline Protection	15								
Current levee	10								
White cell shows freeboard in (##) feet	Curent Elevation in feet (NAVD88)			Projected Sea Level Rise (feet)	Year: *2050* Emissions *High Emissions* Risk Category: *Medium - High*		Projected Sea Level Rise (feet)	Year: *2070* Emissions *High Emissions* Risk Category: *Medium - High*	
Blue means asset is flooded by amount shown (-##) feet	Water	Ecotone	Current levee	1.9	Ecotone Levee	Current levee	3.5	Ecotone Levee	Current levee
Seasonal Water Level									
Mean lower low water (MLLW)	-1.18	16.18	11.18	0.72	14.28	9.28	2.32	12.68	7.68
Mean low water (MLW)	0.05	14.95	9.95	1.95	13.05	8.05	3.55	11.45	6.45
Mean tide level (MTL)	3.28	11.72	6.72	5.18	9.82	4.82	6.78	8.22	3.22
Mean sea level (MSL)	3.35	11.65	6.65	5.25	9.75	4.75	6.85	8.15	3.15
Mean high water (MHW)	6.51	8.49	3.49	8.41	6.59	1.59	10.01	4.99	-0.01
Mean higher high water (MHHW)	7.12	7.88	2.88	9.02	5.98	0.98	10.62	4.38	-0.62
Flood Event									
FEMA 1 year stillwater elevation (100%) (AKA King	8.40	6.60	1.60	10.30	4.70	-0.30	11.90	3.10	-1.90
FEMA 2 year stillwater elevation (50%)	8.75	6.25	1.25	10.65	4.35	-0.65	12.25	2.75	-2.25
FEMA 5 year stillwater elevation (20%)	9.10	5.90	0.90	11.00	4.00	-1.00	12.60	2.40	-2.60
FEMA 10 year stillwater elevation (10%)	9.39	5.61	0.61	11.29	3.71	-1.29	12.89	2.11	-2.89
FEMA 25 year stillwater elevation (4%)	9.83	5.17	0.17	11.73	3.27	-1.73	13.33	1.67	-3.33
FEMA 50 year stillwater elevation (2%)	10.23	4.77	-0.23	12.13	2.87	-2.13	13.73	1.27	-3.73
FEMA 100 year stillwater elevation (1%)	10.69	4.31	-0.69	12.59	2.41	-2.59	14.19	0.81	-4.19
FEMA 500 year stillwater elevation (0.2%)	12.10	2.90	-2.10	14.00	1.00	-4.00	15.60	-0.60	-5.60
FEMA Base Flood Elevation (1%)	12.00	3.00	-2.00	13.90	1.10	-3.90	15.50	-0.50	-5.50
FEMA/AECOM2016 Tidal Datum Location ID	757								

Water Depth Color/Value Range
< 0
< -0.5
< -1
< -1.5
< -2
< -2.5
< -3
< -3.5
< -4
< -4.5

2050 - 1.9 feet of sea level rise

- MHHW = +9.0 feet NAVD88
- 100-year (1% likelihood) still water = +12.6 feet NAVD88
- BFE = +13.9 feet NAVD88 (accounts for wave effects)

2070 - 3.5 feet of sea level rise

- MHHW = +10.6 feet NAVD88
- 100-year (1% likelihood) still water = +14.2 feet NAVD88
- BFE = +15.5 feet NAVD88 (accounts for wave effects)

RELEVANT BAY PLAN POLICIES

- Tidal Marshes and Tidal Flats
- Subtidal Areas
- Fish, Other Aquatic Organisms and Wildlife
- Water Quality
- Environmental Equity and Social Justice
- Climate Change
- Shoreline Protection
- Safety of Fills
- Public Access

ISSUES RAISED FOR COMMISSION CONSIDERATION

Consistency with McAteer-Petris Act and Bay Plan policies:

- Minimum fill necessary for the project
- Appropriate use of nature-based shoreline protection in the Bay for this project
- Near-term impacts versus the long-term benefits of the project
- Appropriate protections for Bay resources
- Resilience of the project to sea level rise
- Maximum feasible access

STAFF RECOMMENDATION

Approval with Conditions

Special Conditions Include:

- Protections for tidal marshes, fish and wildlife, and water quality.
- Requirement for a habitat mitigation area
- Preparation of a formal risk assessment and adaptive management plan
- Adherence to resource agency requirements
- Monitoring and reporting
- Additional public outreach on the design of some public access features