

THE CHALLENGE OF SEA LEVEL RISE IN SAN MATEO COUNTY



02/07/20

Dave Pine, San Mateo County Supervisor

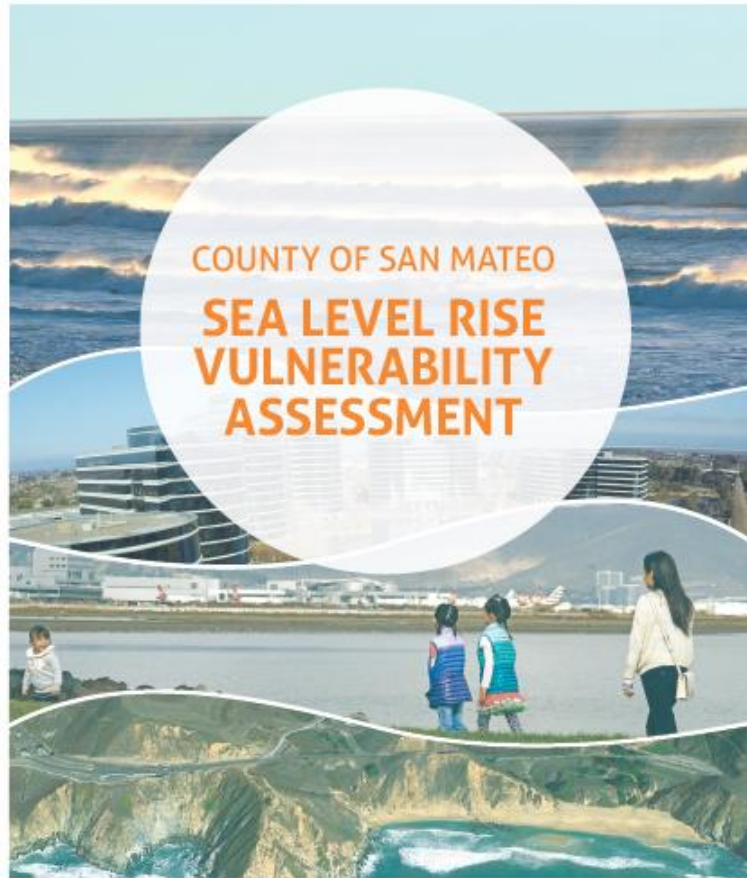
Rising Seas

Rising Seas in California: An Update on Sea-Level Rise Science Report

| Year | Full Range | Likely Range |
|----------------------|-----------------|----------------------|
| 2030 | 4 to 10 inches | 4 – 6 inches |
| 2050 | 7 to 23 inches | 7 inches – 13 inches |
| 2100 | 12 to 83 inches | 12 – 40 inches |
| 2100 high-end | 10 feet | |

Prepared by Ocean Protection Council (April 2017)

County Vulnerability Assessment



Provides comprehensive assessment of flooding, erosion and sea level rise impacts

Detailed assessment of 30 assets or infrastructure as case studies

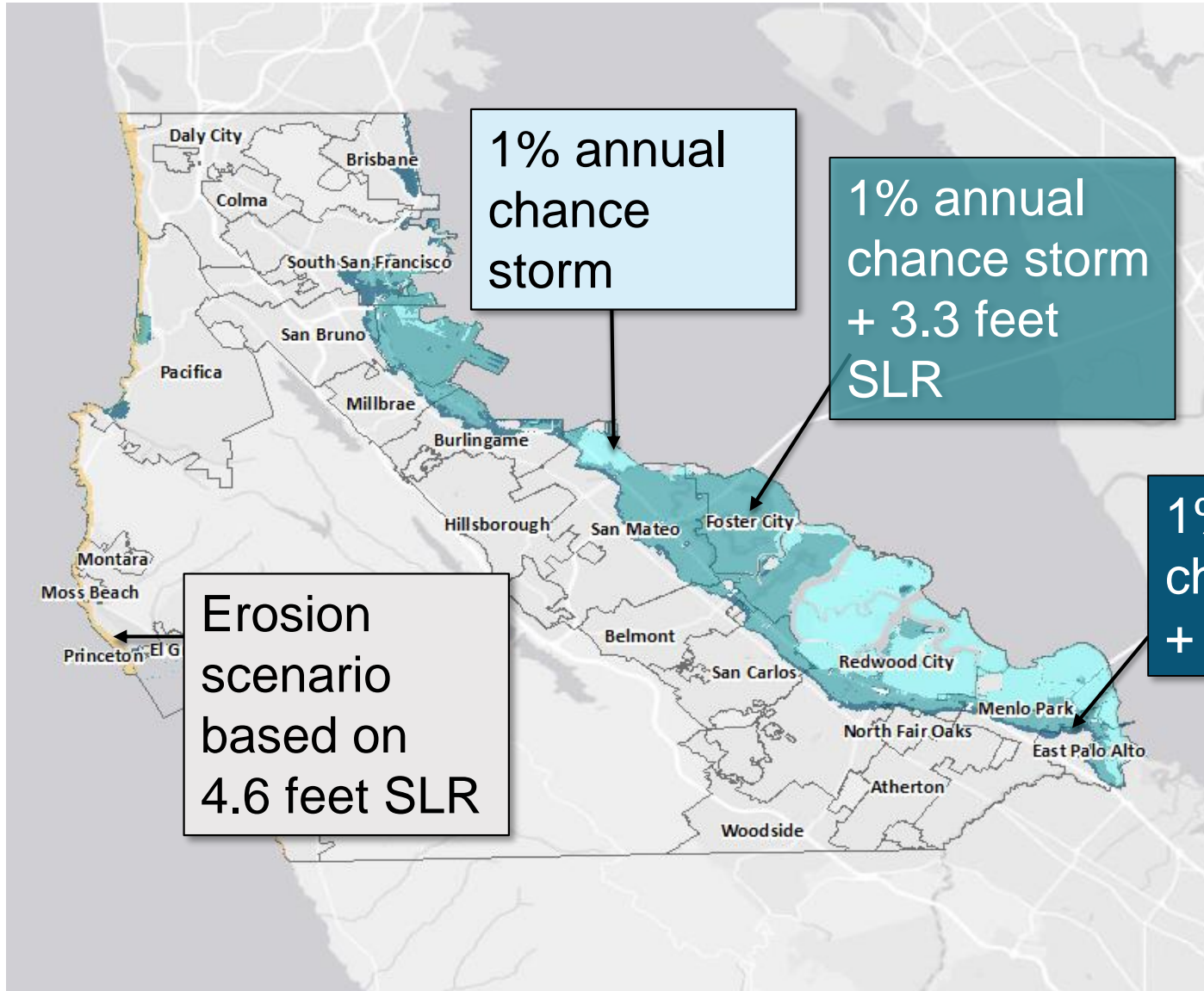


SEA-CHANGE
SAN MATEO COUNTY

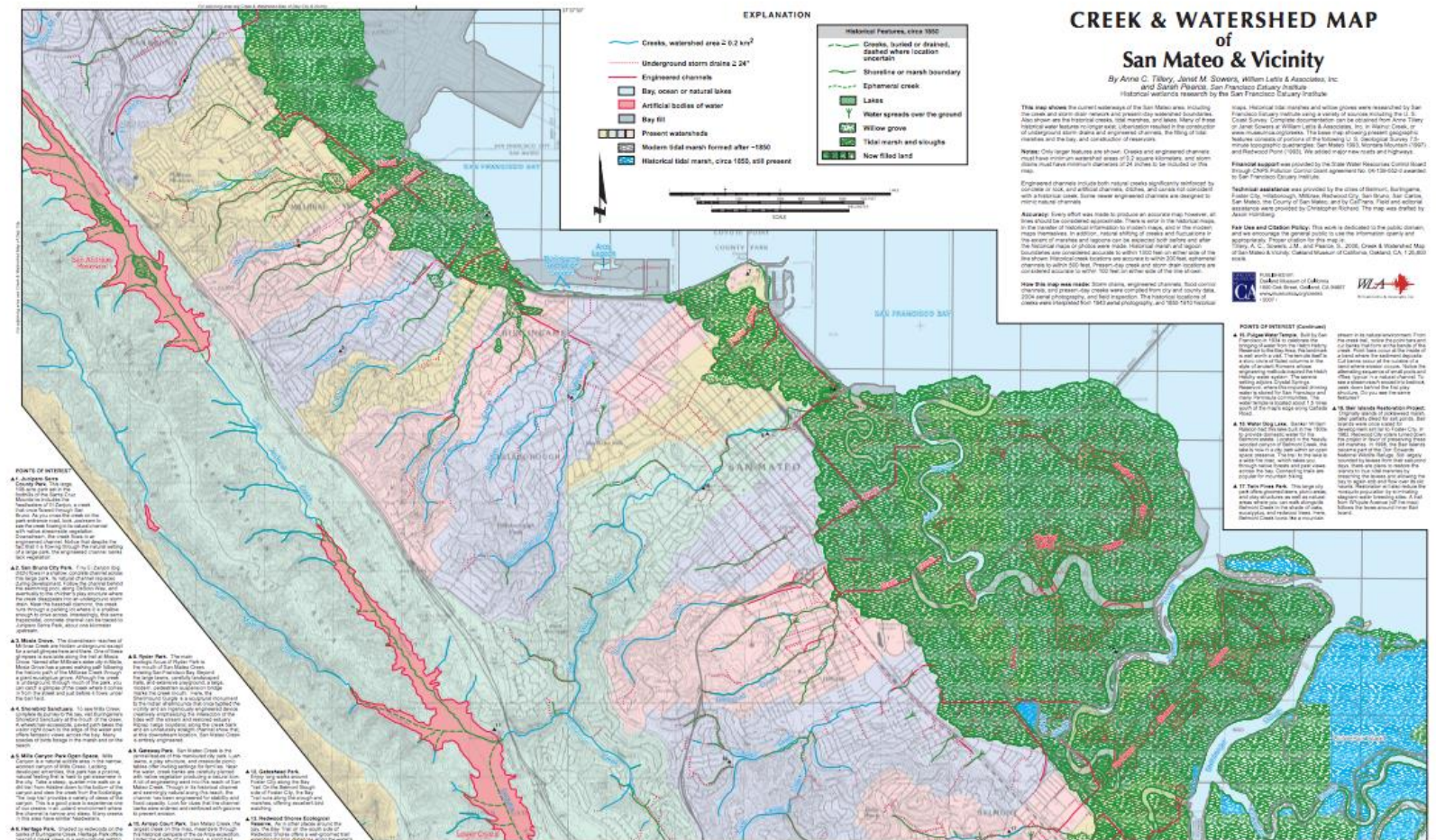


OFFICE OF
SUSTAINABILITY
COUNTY OF SAN MATEO

Assessment Scenarios



The Bay Circa 1850



Map by Oakland Museum, available

http://explore.museumca.org/creeks/WholeMaps/10_San%20Mateo%20Creek%20Map.pdf /

Countywide Findings



**7,000 acres
of wetlands**



**\$34 billion in
assessed value**



**380 miles of
roads**



**Over 100,000
people**

Based on 3.3 feet of sea level rise and a 1% annual chance storm

Preparing For Sea Level Rise



San Mateo County Flood and Sea Level Rise Projects

Colma, San Bruno Creek & Navigable Slough Watershed Resilience

San Francisco Airport Shoreline Resilience

Surfers Beach Sand Replenishment

Mirada Road Project

Butano Channel Restoration Project

San Mateo Levee + Wastewater Plant Upgrade

Foster City Levee project

Belmont Creek Watershed Resilience

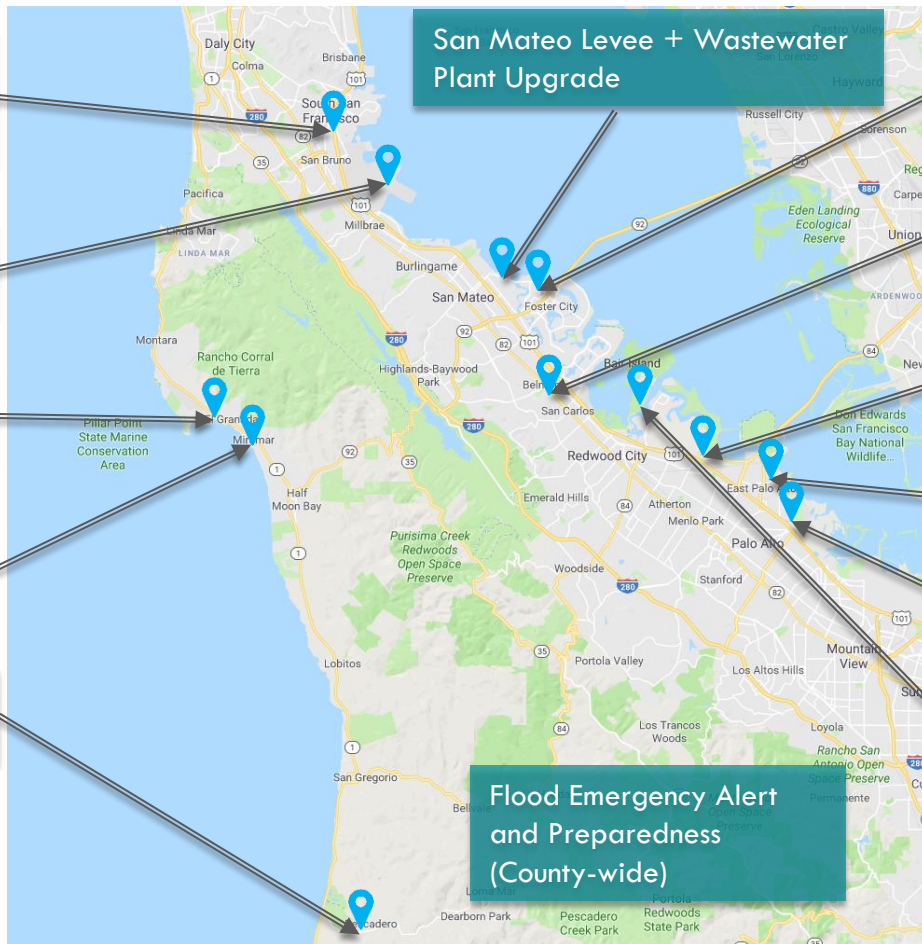
Bayfront/Atherton Watershed Resilience

SAFER Bay project

San Francisquito Creek Bay to Highway 101

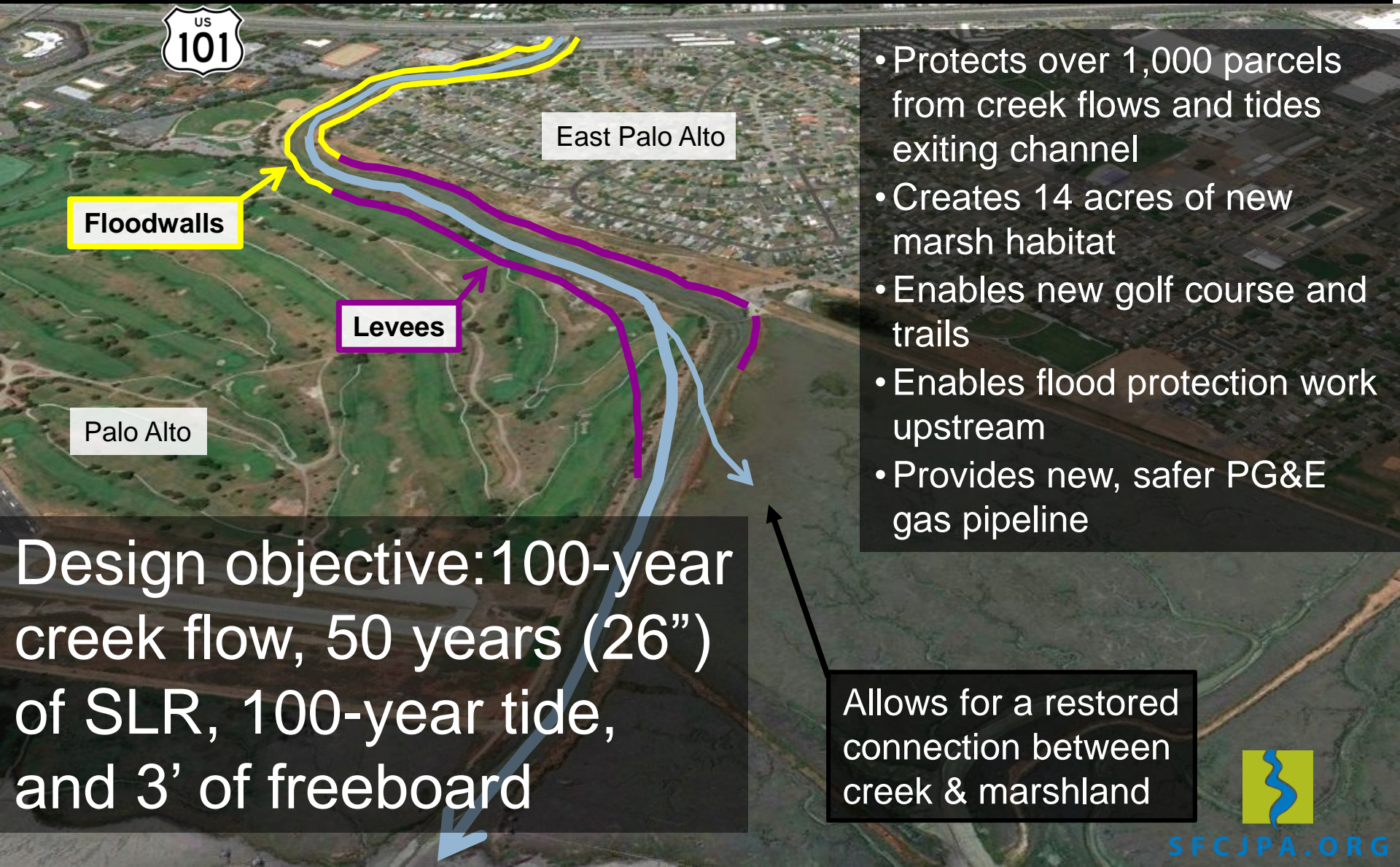
South Bay Salt Pond restoration

Flood Emergency Alert and Preparedness (County-wide)



San Francisquito Creek

San Francisco Bay to Highway 101



- Protects over 1,000 parcels from creek flows and tides exiting channel
- Creates 14 acres of new marsh habitat
- Enables new golf course and trails
- Enables flood protection work upstream
- Provides new, safer PG&E gas pipeline

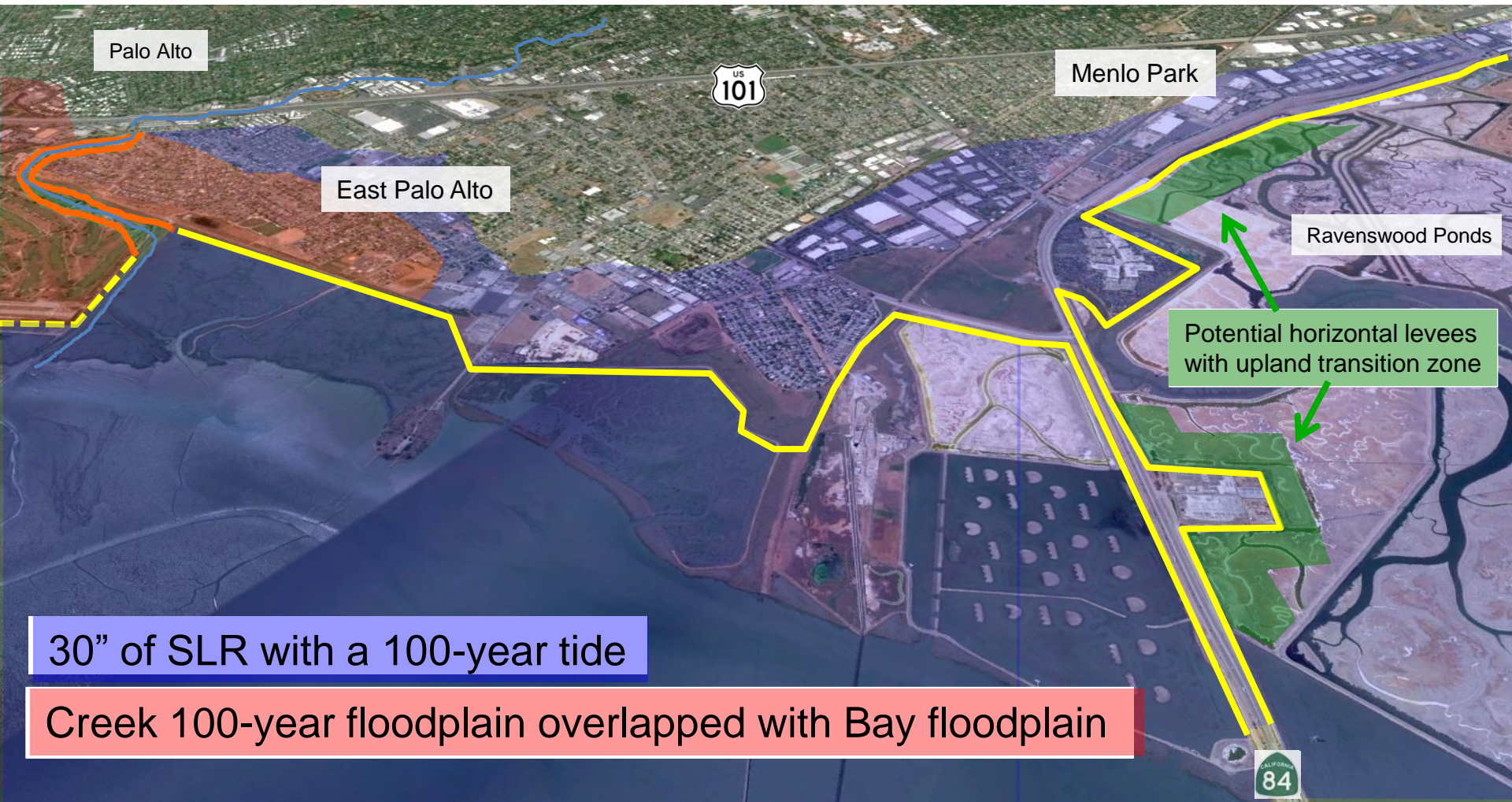
Design objective: 100-year creek flow, 50 years (26") of SLR, 100-year tide, and 3' of freeboard

Allows for a restored connection between creek & marshland

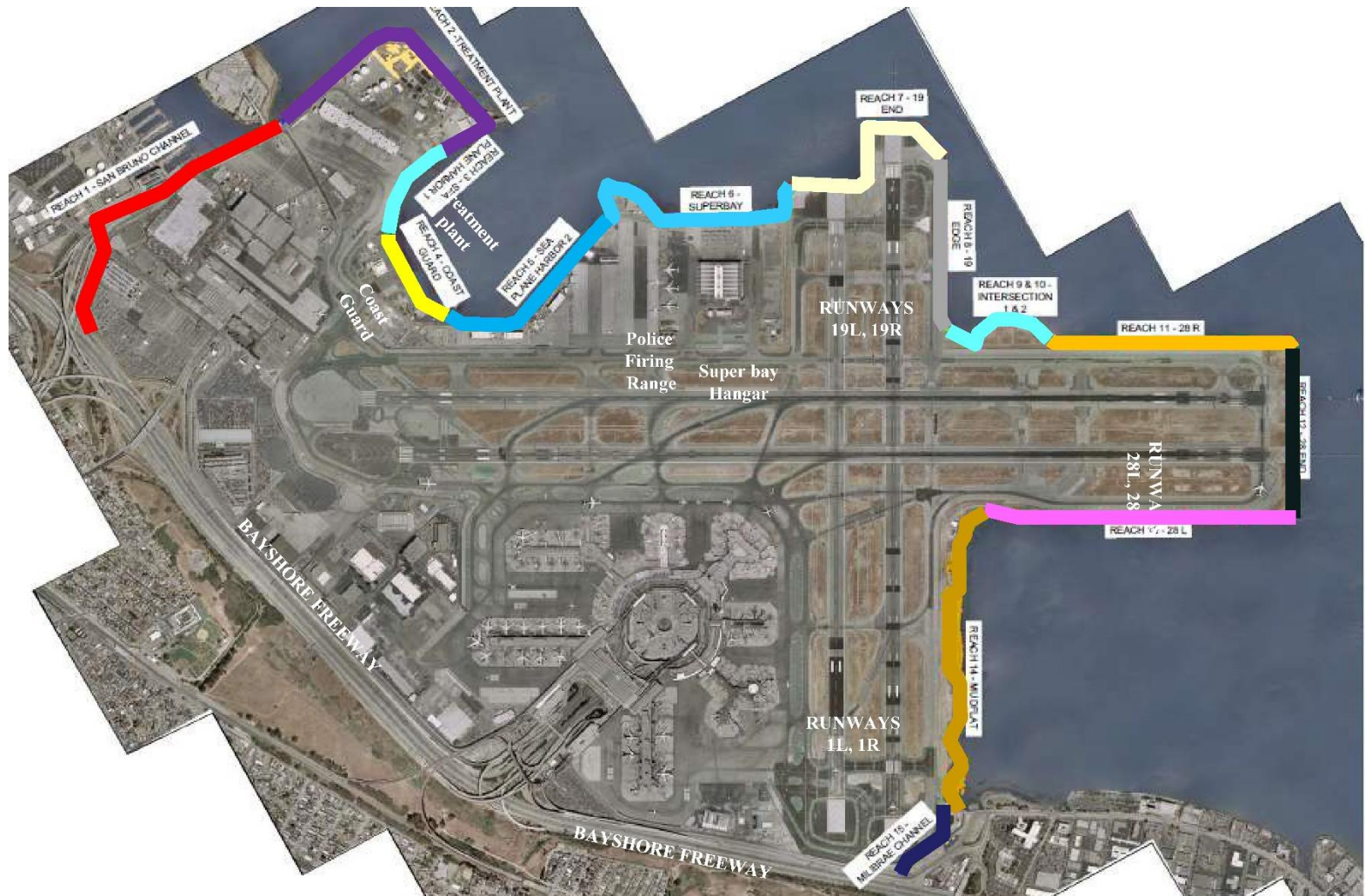


SAFER Bay

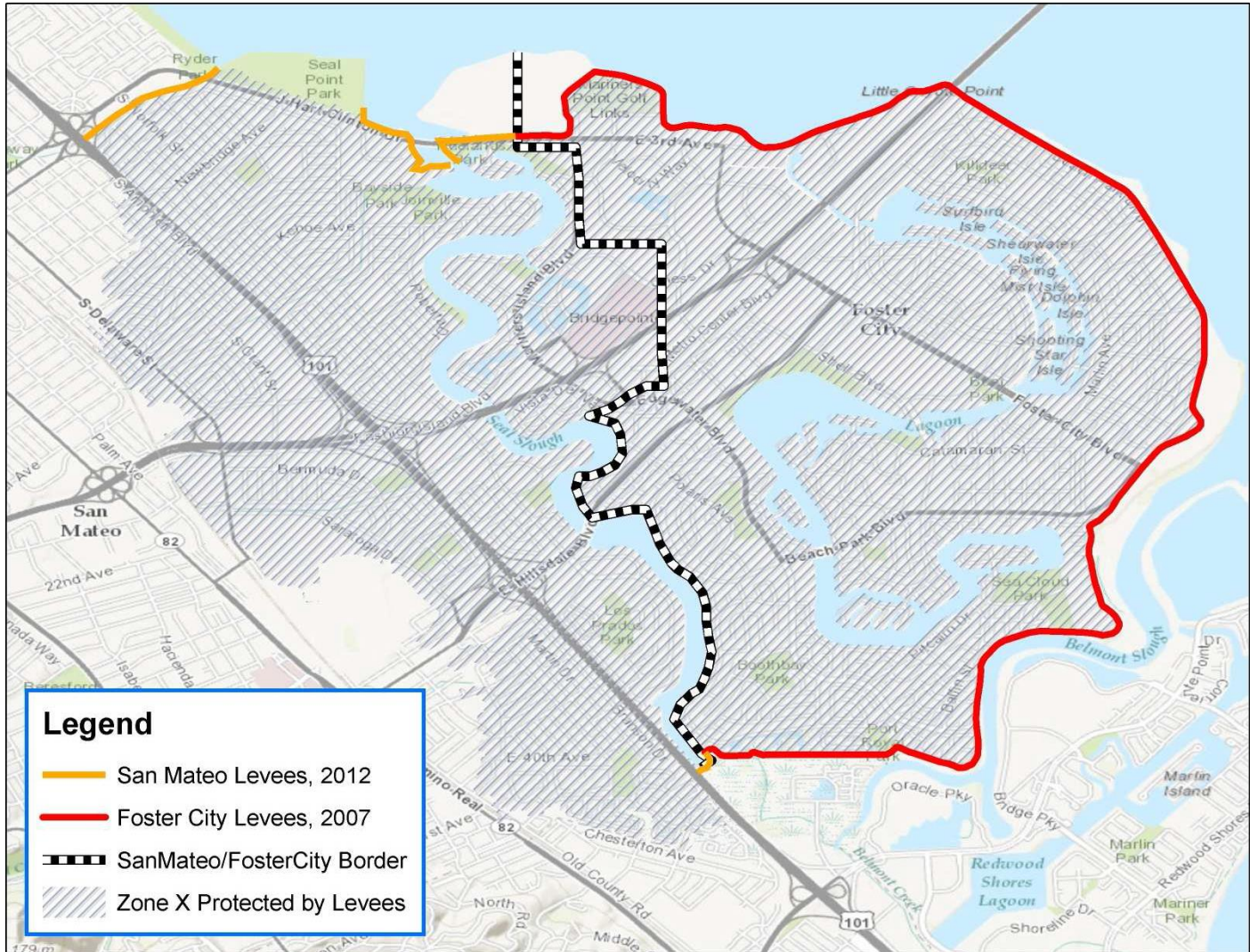
Strategy to Advance Flood protection, Ecosystems and Recreation along the Bay



San Francisco International Airport



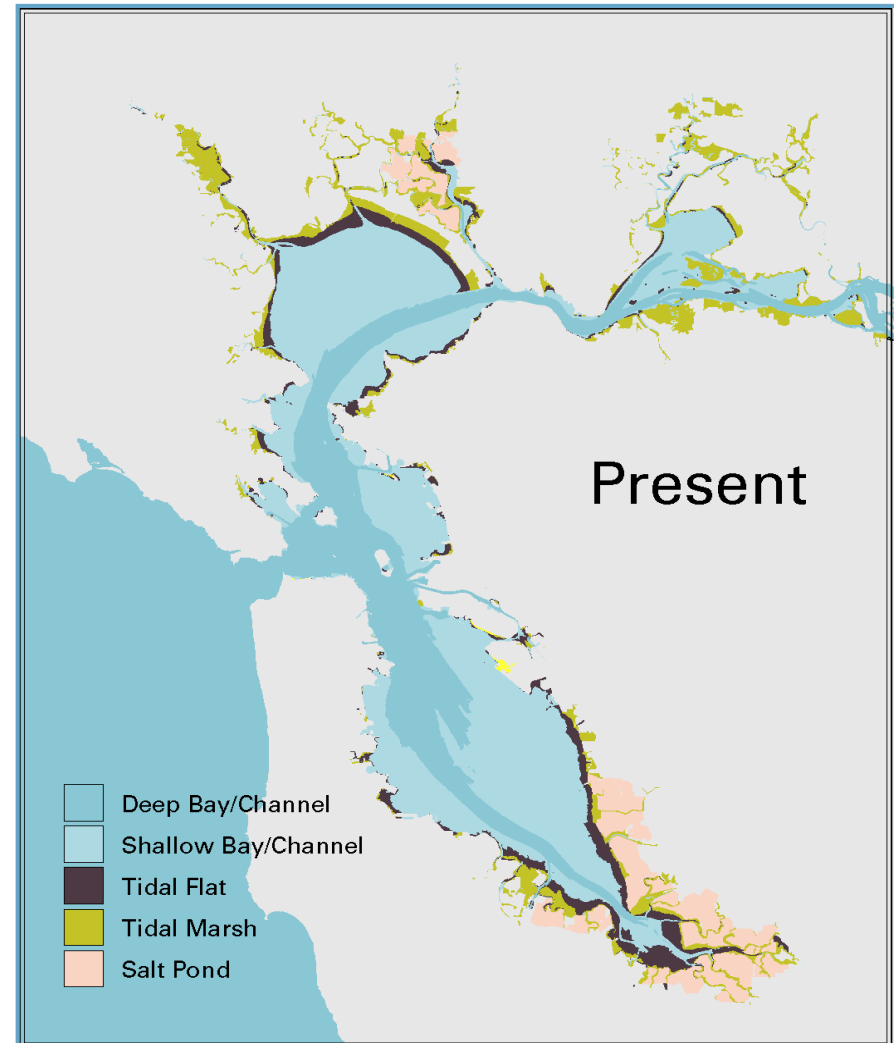
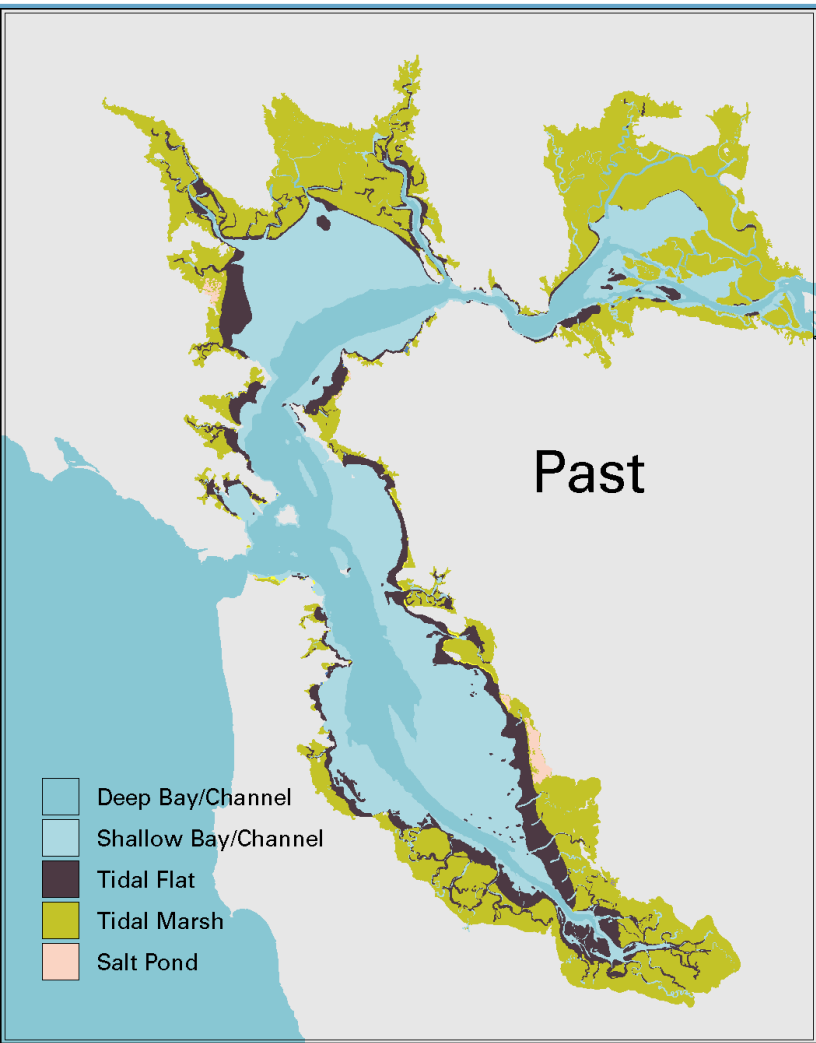
Foster City Levees



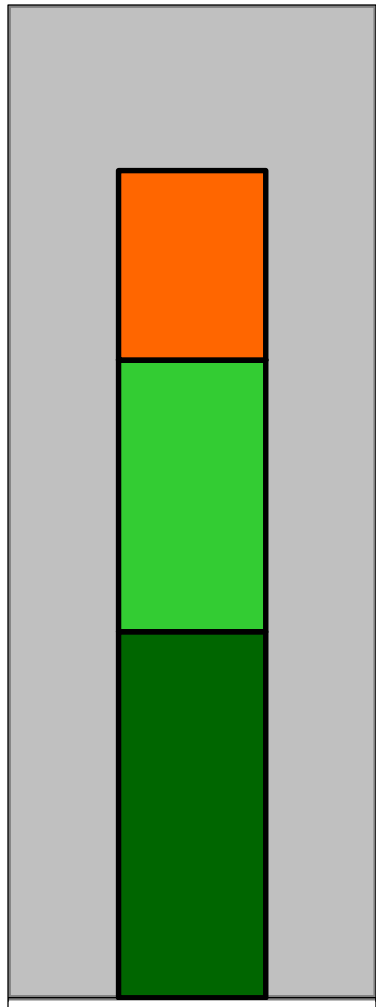
Bay Front Canal



Tidal Marsh Habitat Has Been Dramatically Reduced



100,000 Acres of Tidal Marsh Needed for a Healthy Bay



21,000 to be secured

35,000 secured for restoration

44,000 tidal acres today

SF Bay Restoration Authority

Mission: *To raise and allocate resources for the restoration, enhancement, protection, and enjoyment of wetlands and wildlife habitat in the San Francisco Bay and along its shoreline.*

- ❑ Created by Save the Bay by legislation in 2008
- ❑ Governed by 6 local elected officials
- ❑ Measure AA: \$12 parcel tax for 20 years (\$500M)



Ravenswood Ponds



Pacifica Bluff Erosion



Pacifica Bluff Erosion



Pacifica Bluff Erosion at Lands End (Before)



Pacifica Bluff Erosion at Lands End (After)



Mirada Road



Challenge: Build walls and lose the beach?



San Mateo County Flood and Sea level Rise Resiliency District

- ❑ Existing Flood Control District had limited scope
- ❑ Focus on flooding, sea level rise, coastal erosion and regional stormwater retention
- ❑ Address these issues across jurisdictional lines
- ❑ Develop staff expertise and focus which cannot be done on a city by city basis
- ❑ By prioritizing and coordinating projects countywide, the district will position the County to better compete for state and federal funding.

San Mateo County Flood and Sea level Rise Resiliency District

7 Member Governing Board

2 County Supervisors (1 from District 3 – Coast)

5 City Representatives (4 Geographic; 1 At Large)

The funding contribution by the County and by cites (allocated by population) would be as follows:

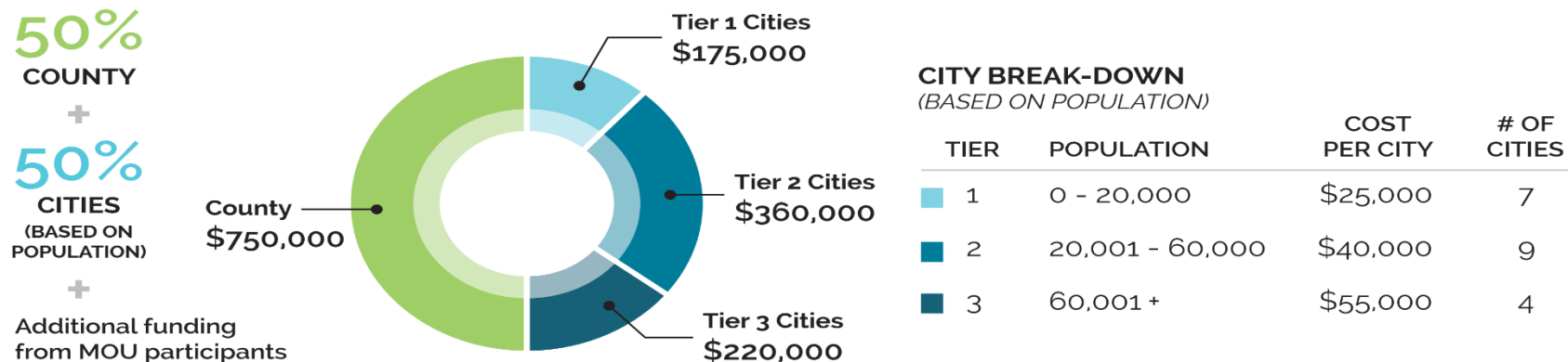


Figure 2. 50/50 Cost-Share Based on Population.