

The Bay Institute





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### Coastal Route

Explorers from East Asia may have paddled small boats to southern Beringia and down the western coast of the Americas starting as early as 16,000 years ago. The British Columbian coast was rid of ice by then, and migrants would have had access to a bounty of marine mammals and fish. The earliest known site near the coast, Monte Verde in Chile, dates to just 14,600 years ago; however, the thawing of the ice sheets during the last glacial period may have drowned the oldest sites along the ancient coastline.

### Land Route: Ice-Free Corridor

According to the Clovis First model, the Cordilleran and Laurentide ice sheets did not part ways until 13,000 years ago, thus barring a pre-Clovis overland migration into the Americas. But fresh geologic data indicate that the corridor opened by 15,000 years ago. Travelers along this route may have hunted birds and brought dogs with them to carry their gear. Trekking 16 kilometers a day, the migrants could have reached the end of the corridor in four months.







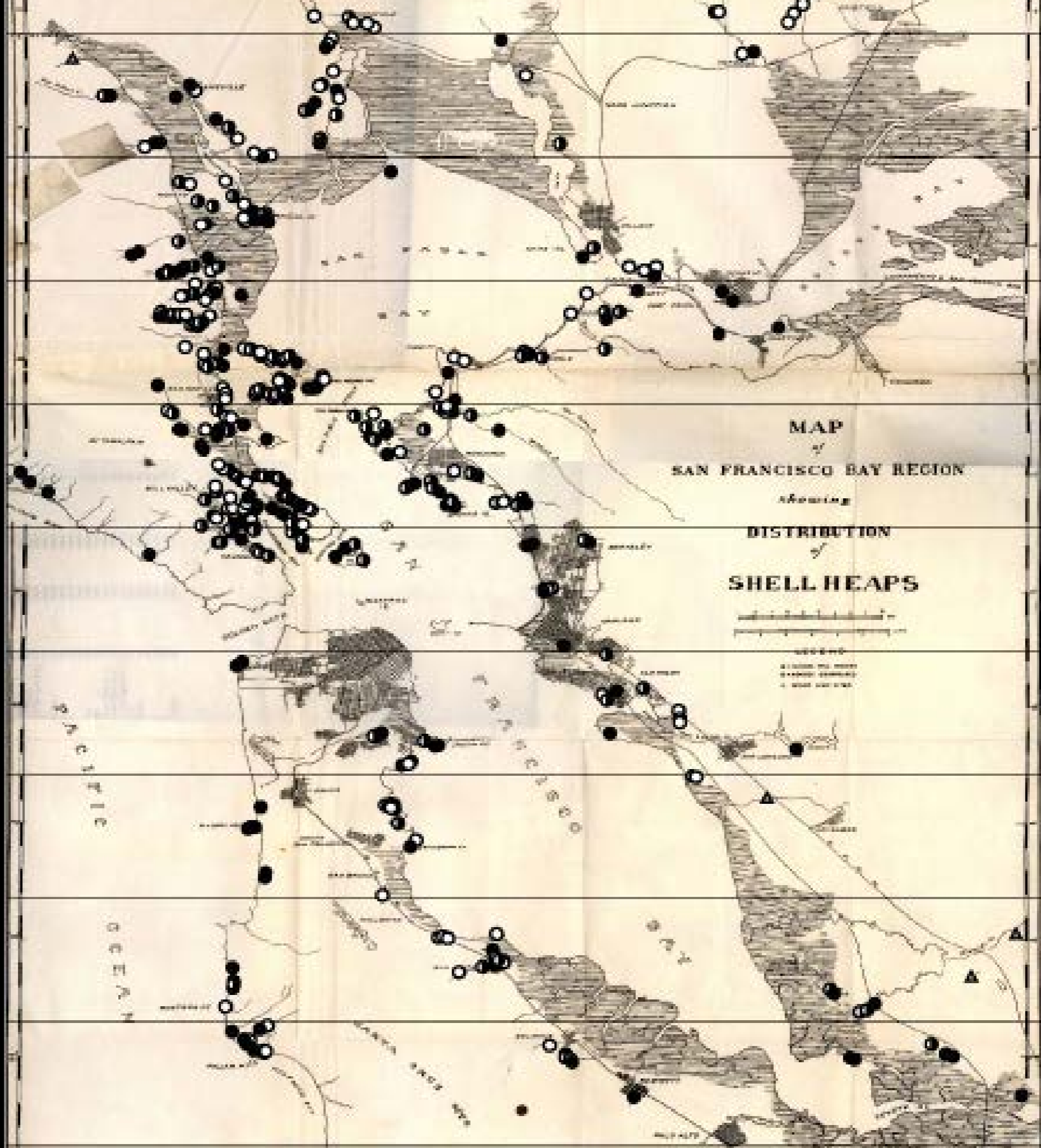








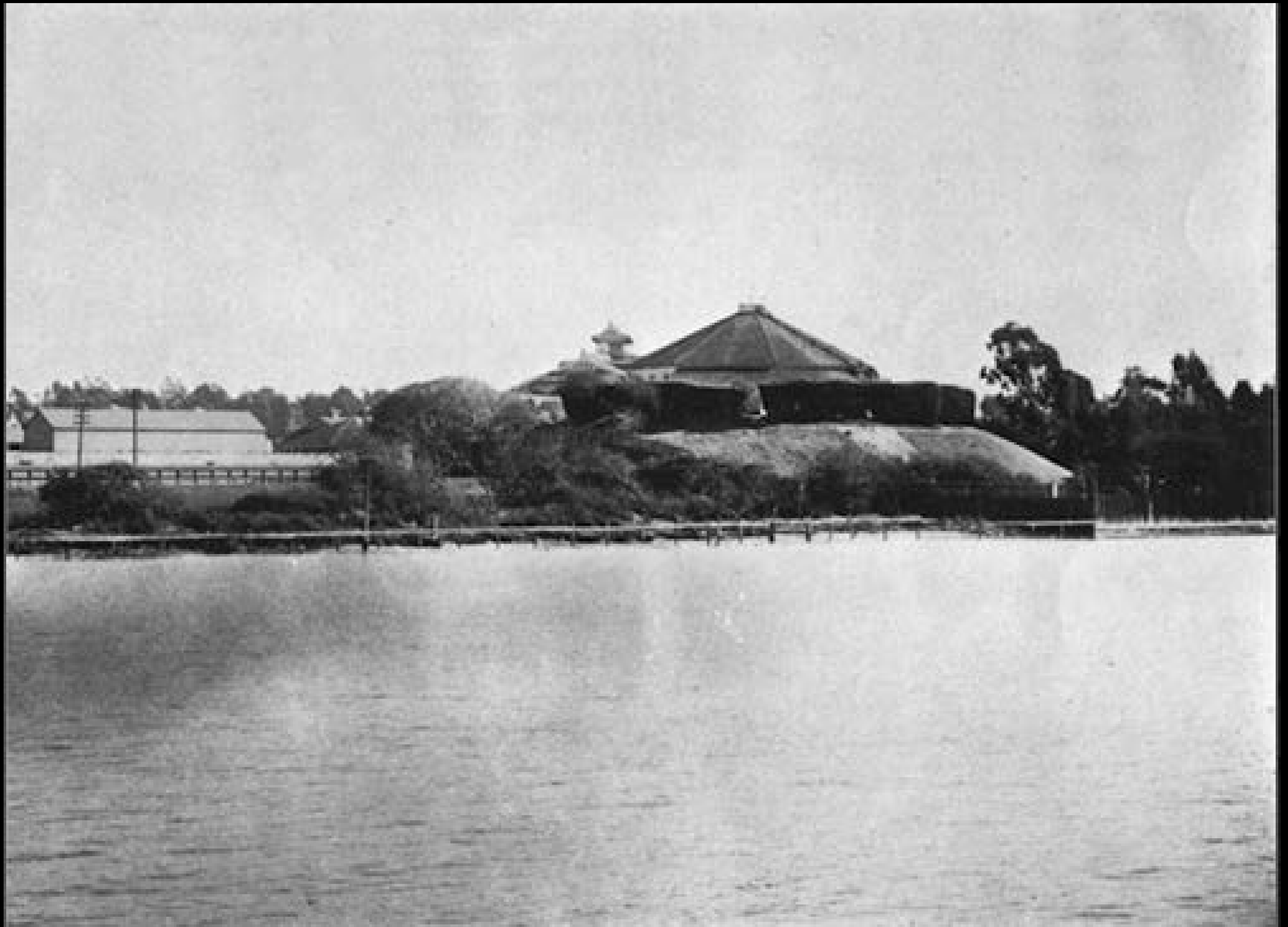




MAP  
of  
SAN FRANCISCO BAY REGION  
showing  
DISTRIBUTION  
of  
SHELL HEAPS

PACIFIC  
OCEAN

LEGEND  
● SHELL HEAP  
○ SHELL HEAP  
▲ SHELL HEAP



Courtesy: Oakland History Room





MAP

# SAN JOAQUIN, SACRAMENTO AND TULARE VALLEYS

STATE OF CALIFORNIA

prepared under the direction of the  
**BOARD OF COMMISSIONERS OF IRRIGATION**  
appointed under the Act of Congress approved  
March 3, 1892.

showing the country that may be irrigated, and a  
hydrographic system of irrigation  
Compiled from the maps of the  
GEOLOGICAL SURVEY OF CALIFORNIA  
and from  
Special Reports and Memoranda  
and such authentic  
data as were available  
1912.

Published by authority of the Hon. SECRETARY OF WAR  
in the Office of the CHIEF OF ENGINEERS U.S. Army

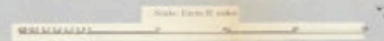
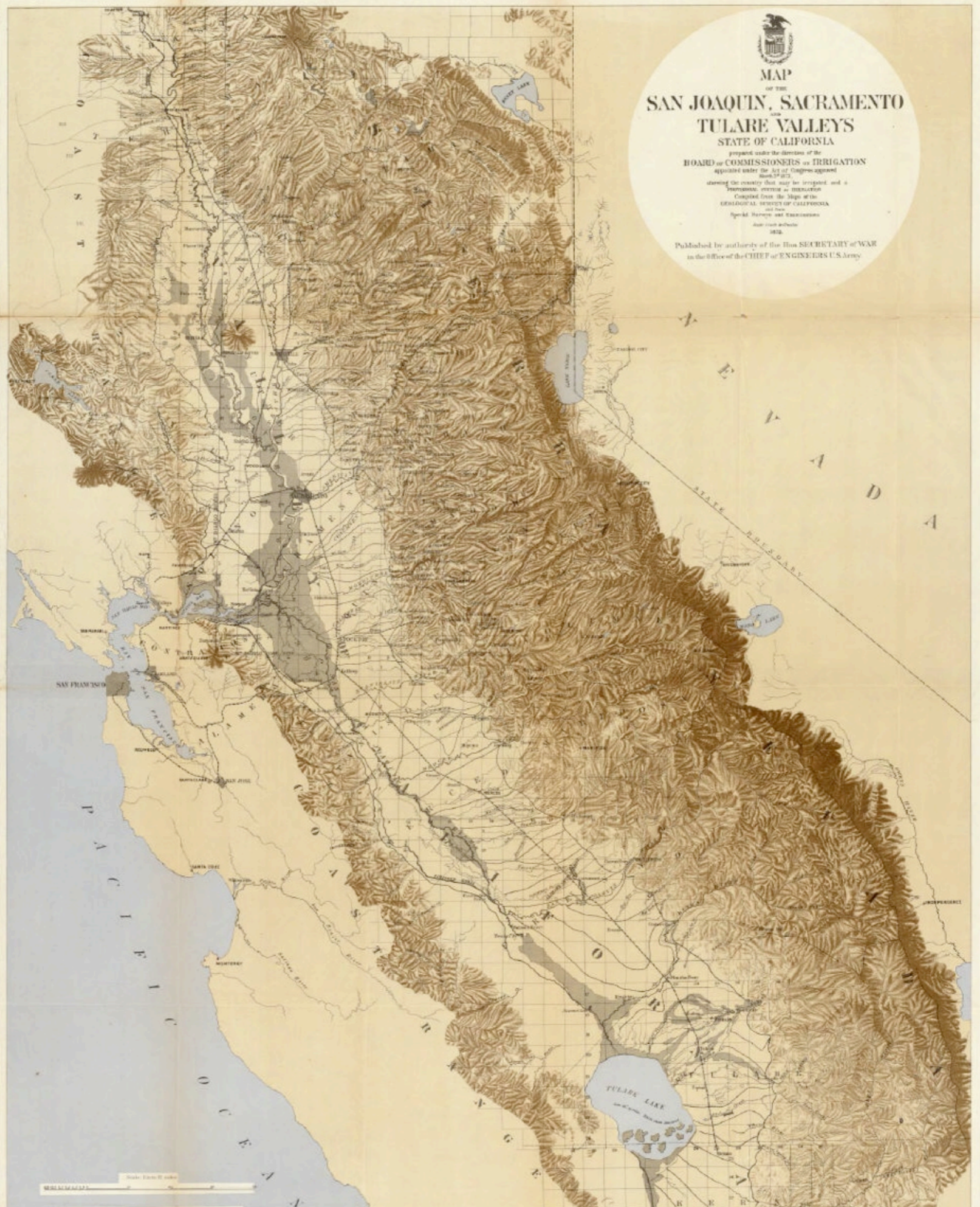
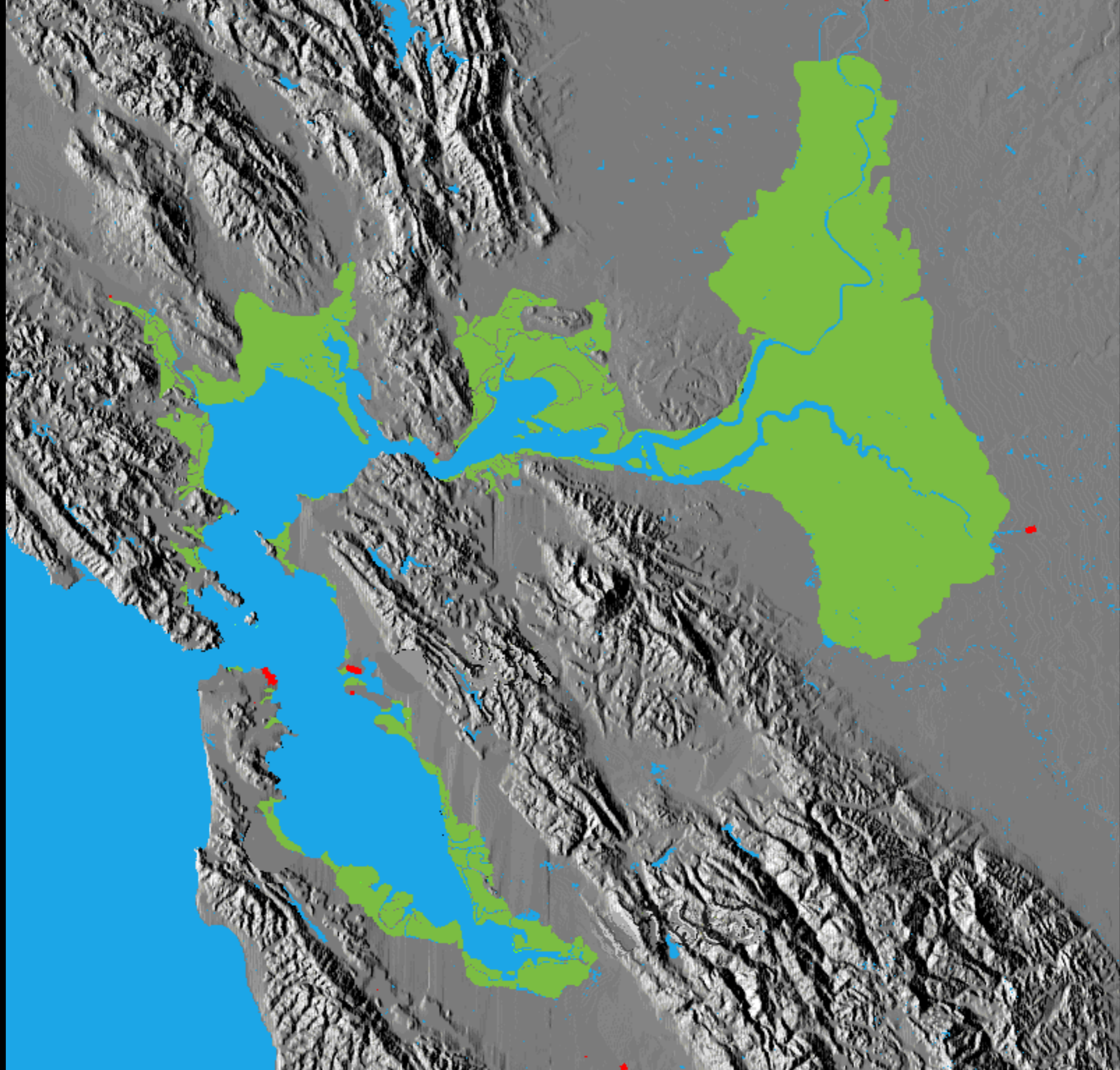


TABLE showing the area of land irrigated by the various systems of irrigation in the San Joaquin, Sacramento, and Tulare Valleys, California, in 1912.

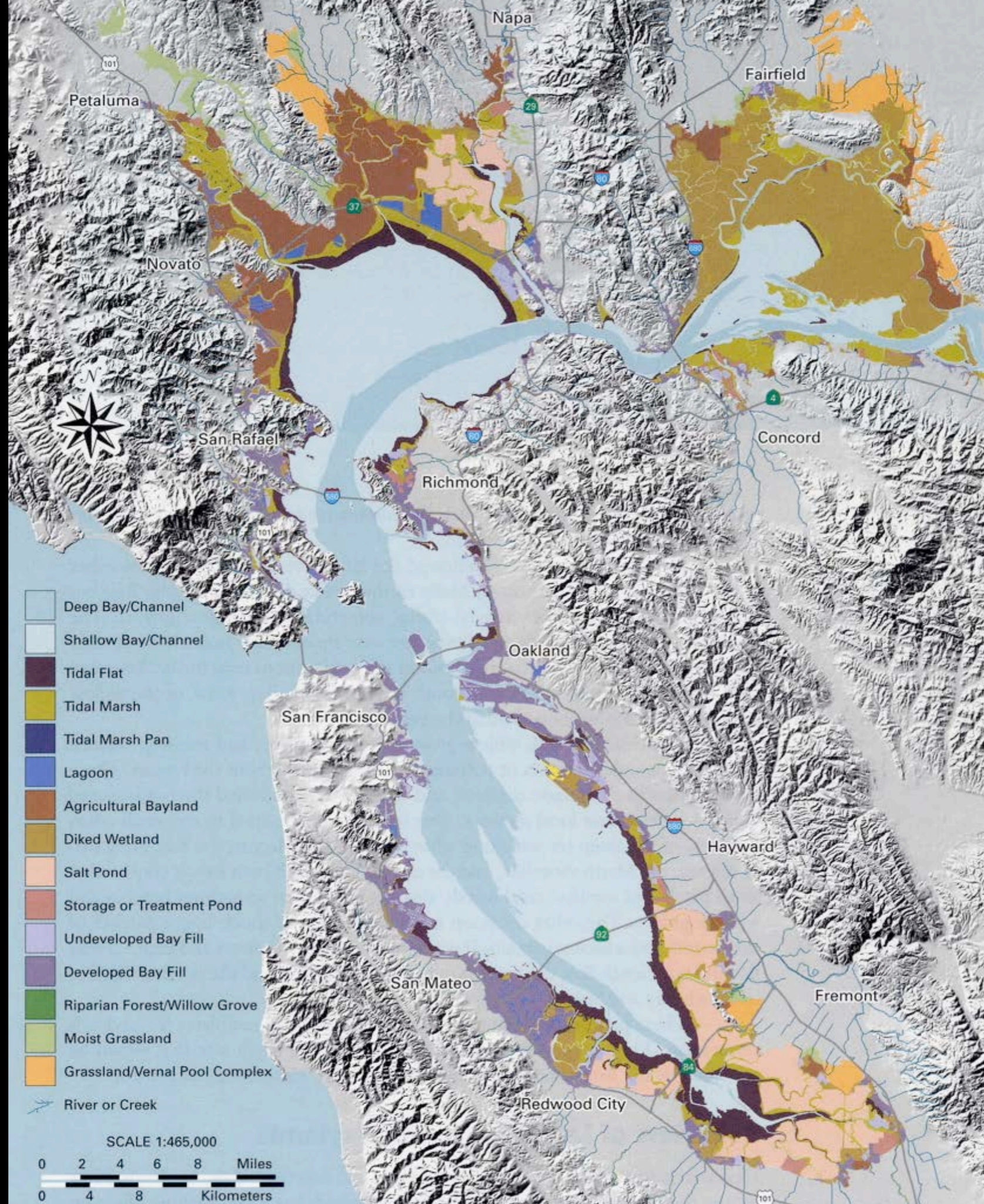










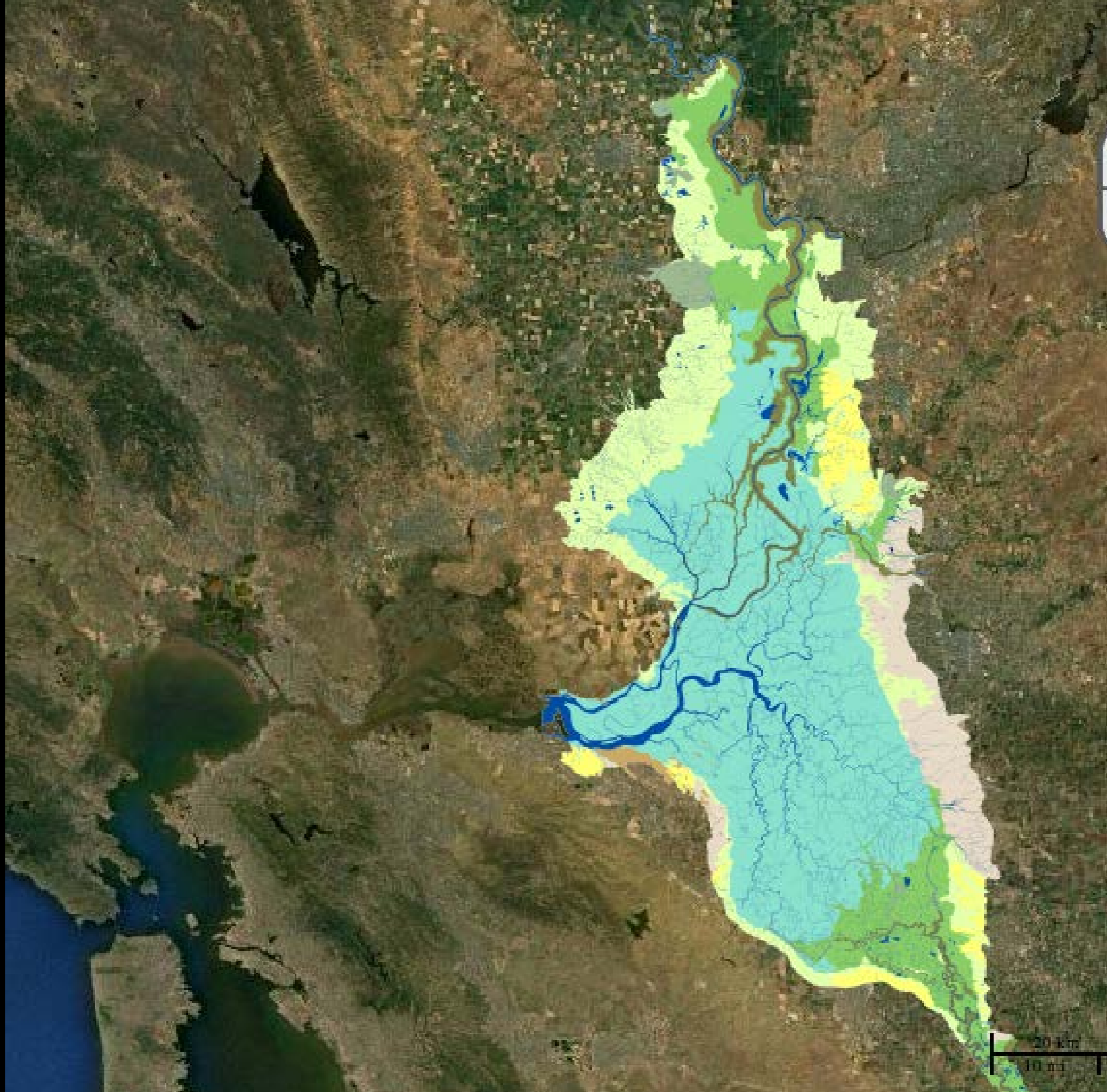


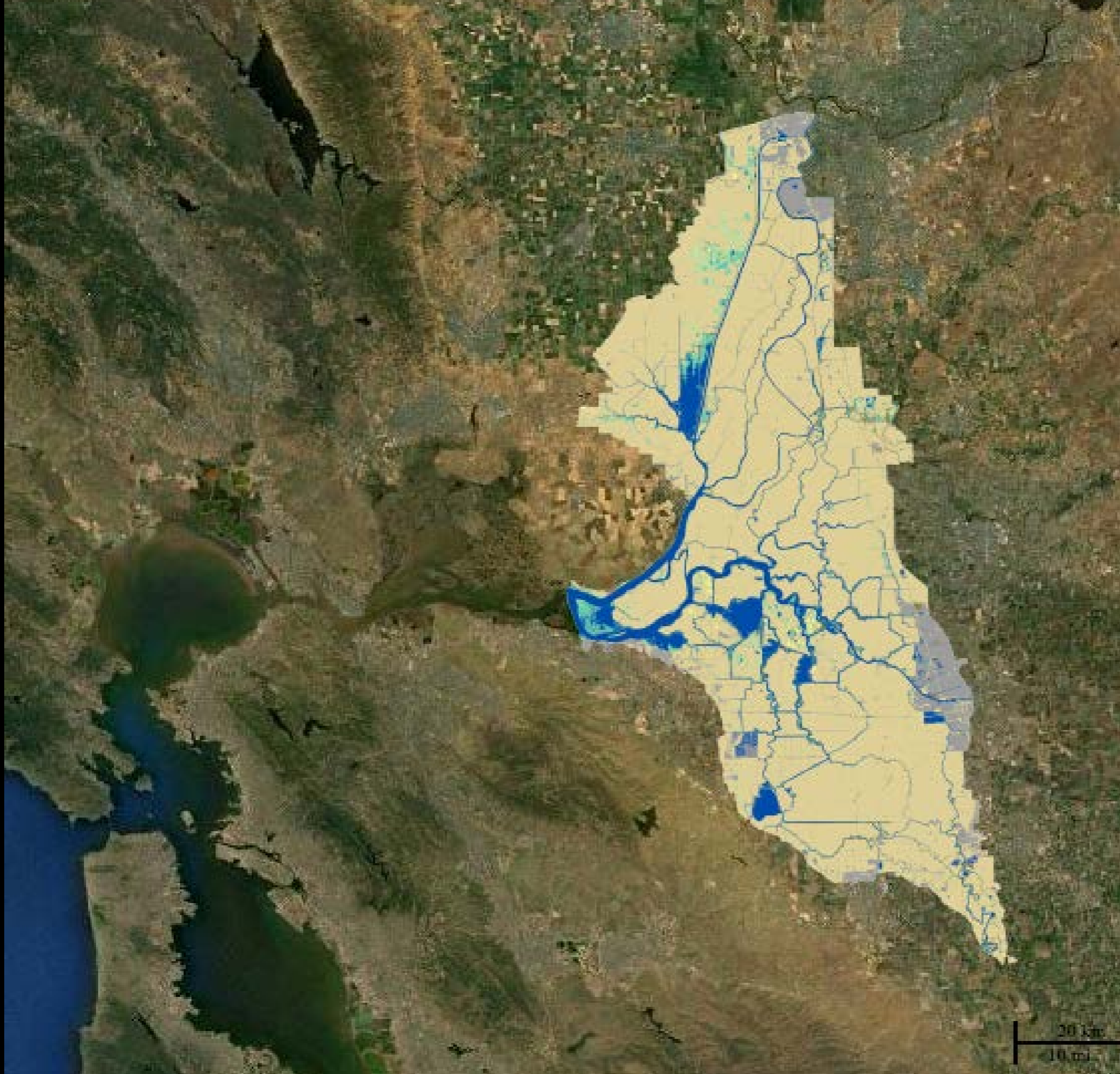
- Deep Bay/Channel
- Shallow Bay/Channel
- Tidal Flat
- Tidal Marsh
- Tidal Marsh Pan
- Lagoon
- Agricultural Bayland
- Diked Wetland
- Salt Pond
- Storage or Treatment Pond
- Undeveloped Bay Fill
- Developed Bay Fill
- Riparian Forest/Willow Grove
- Moist Grassland
- Grassland/Vernal Pool Complex
- River or Creek

SCALE 1:465,000

0 2 4 6 8 Miles

0 4 8 Kilometers











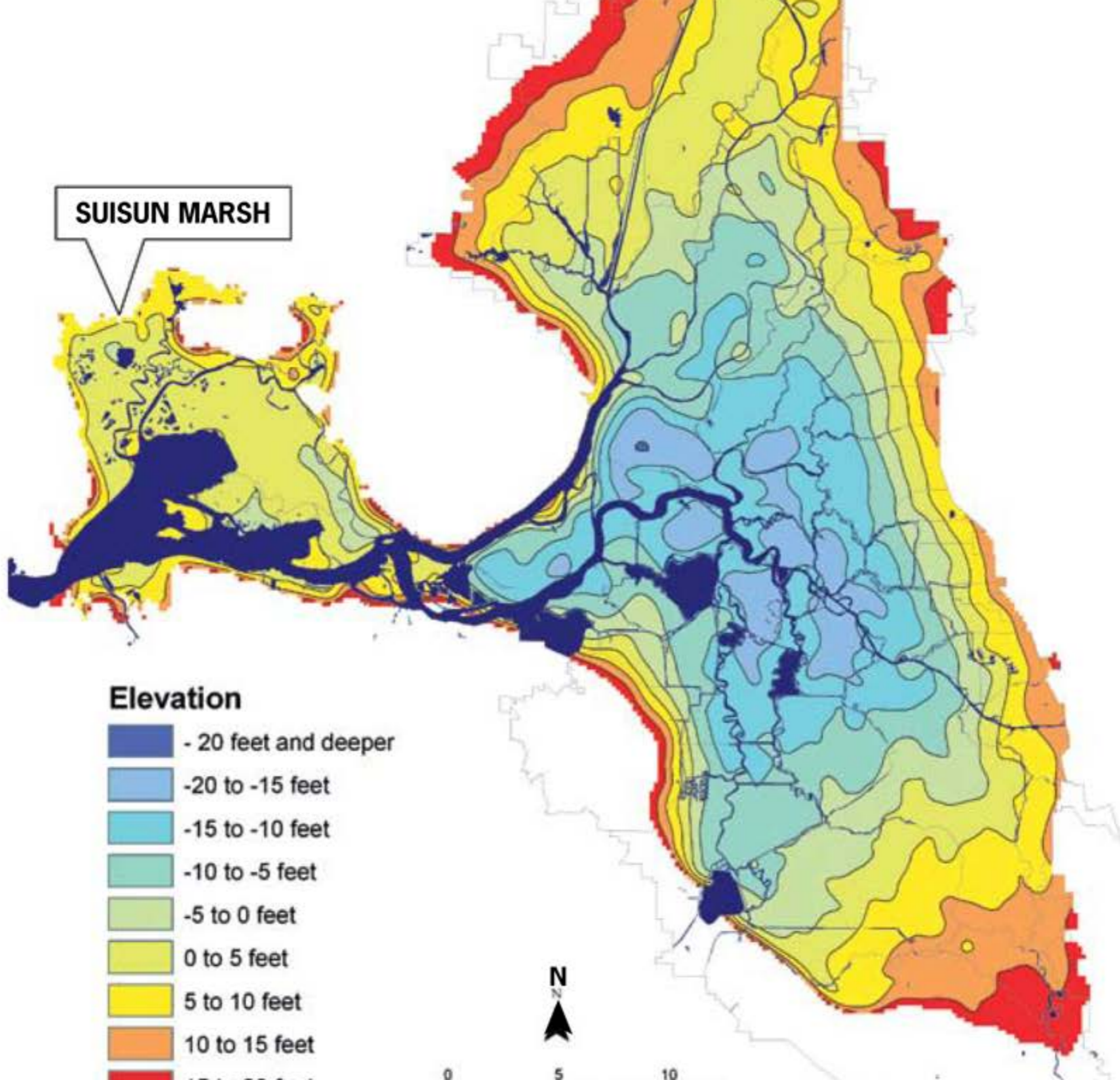








**SUISUN MARSH**





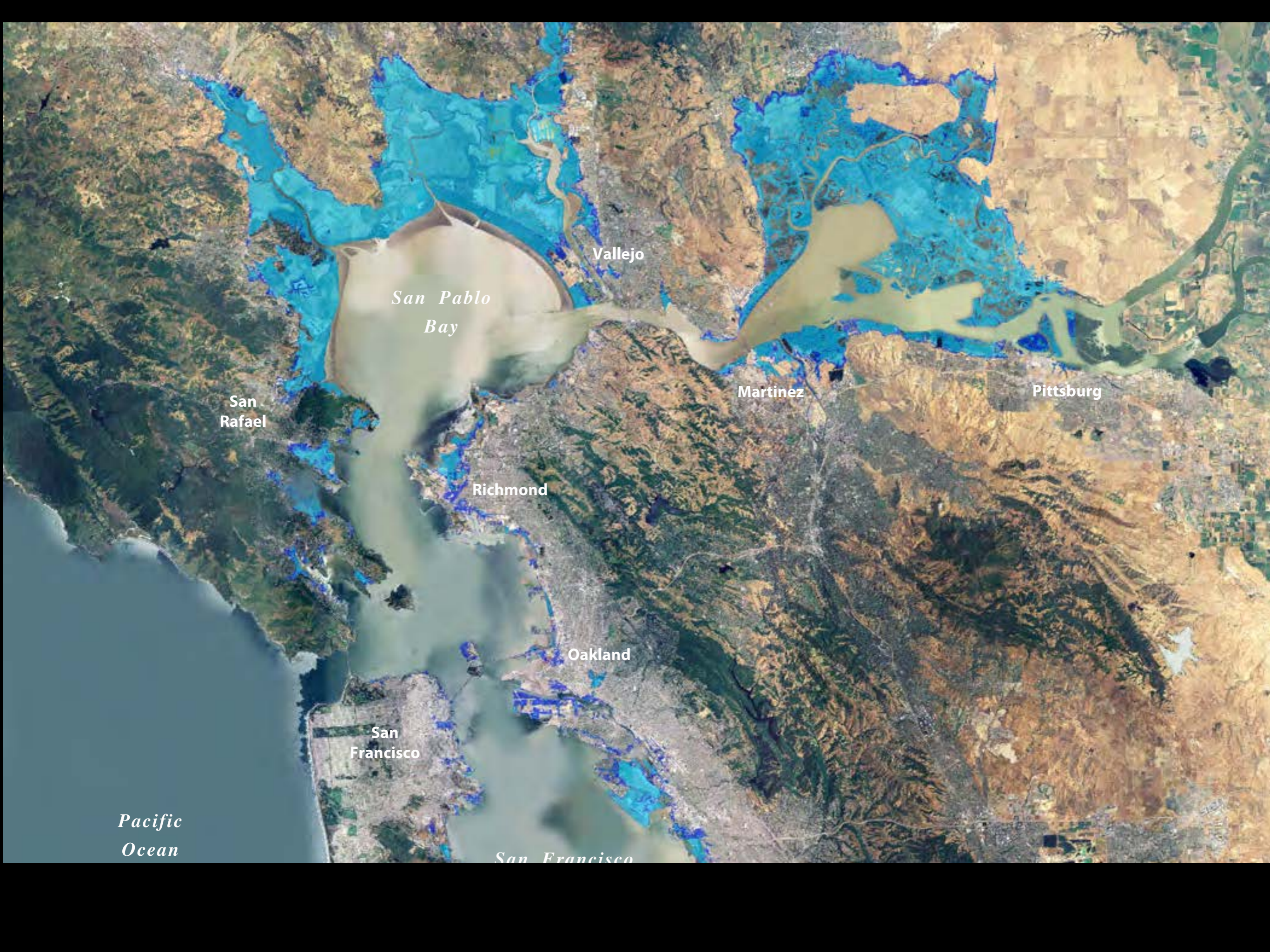












Vallejo

*San Pablo Bay*

Martinez

Pittsburg

San Rafael

Richmond

Oakland

San Francisco

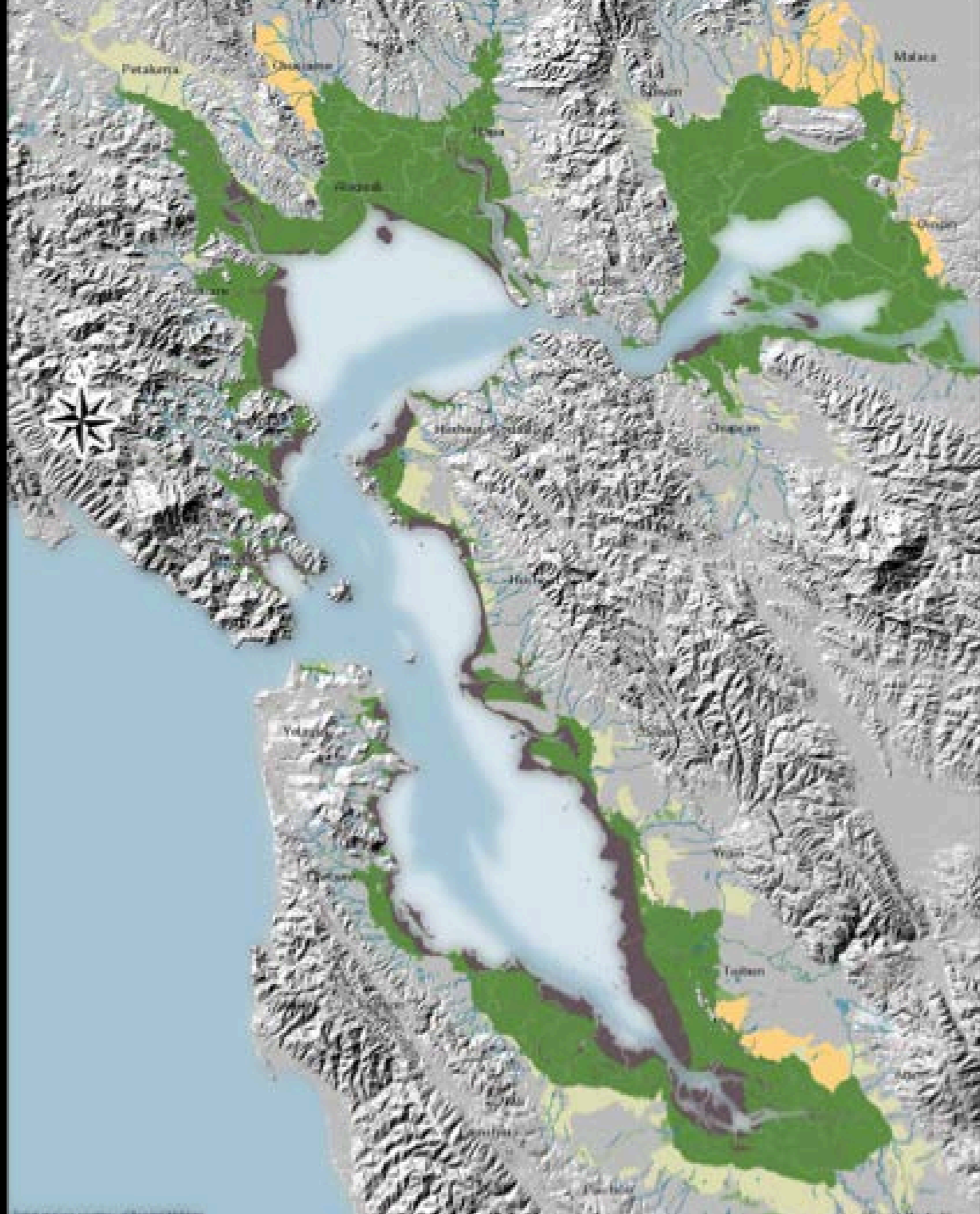
*Pacific Ocean*

*San Francisco*





# THE HORIZONTAL LEVEE





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