

Risks Associated With the Delta



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DELTA IMPORTANT FACTS

- ▶ Delta Supplies Water to Large Areas of California
- ▶ Its Water Significantly Impacts CA Economy



AREAS OF CA SERVED BY DELTA WATER



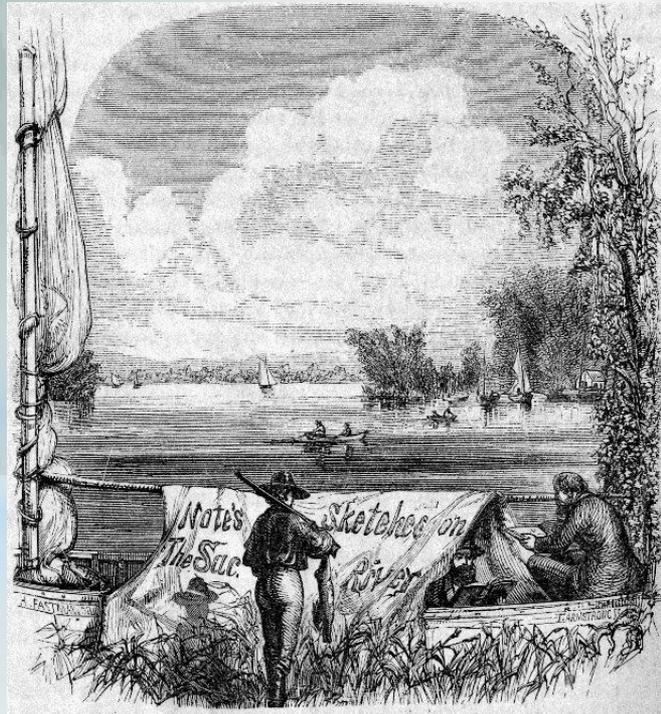
DELTA IMPORTANT FACTS

- ▶ **47% CA Runoff Passes Through Delta**
- ▶ **Private Ownership of Levees that Support Public Interests**
- ▶ **Loss of Habitat and Exotic Species in Delta**



1849 RIVER SYSTEM

Wetland Habitat
Along the Rivers



* 2015 River System

Federal Central Valley Project

20 Reservoirs

11 Hydro-electric power plants

500 miles of canals, siphons, & tunnels

11MAF total storage capacity

Sacramento-San Joaquin Delta

State Water Project

21 Reservoirs

17 Pumping Plants

3 Pumping-generating plants

5 Hydro-electric power plants

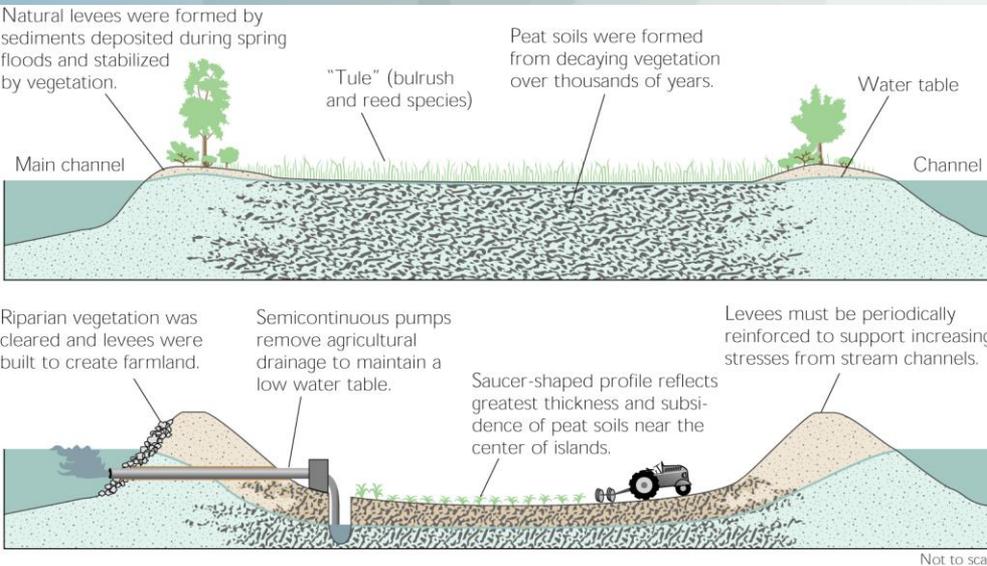
660 miles of canals, siphons, & tunnels

5.8 MAF total storage capacity



* California's Delta, Today

Subsidence – Makes this a unique place

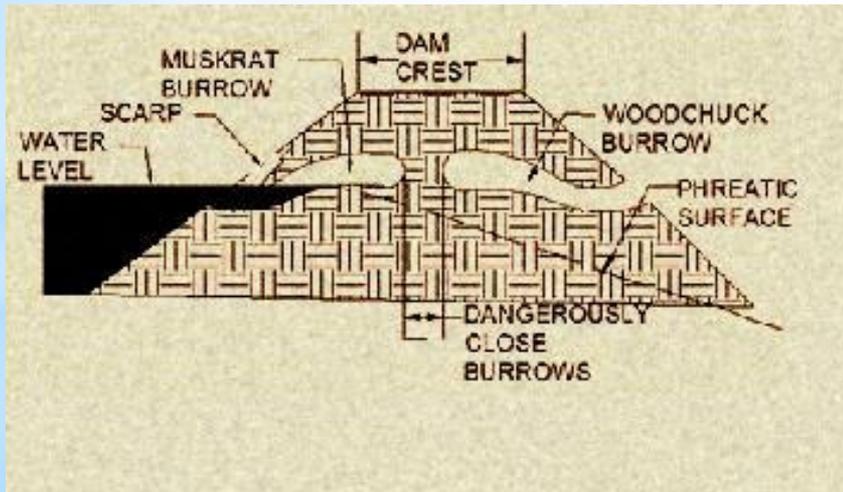


Delta Islands are now Bowls



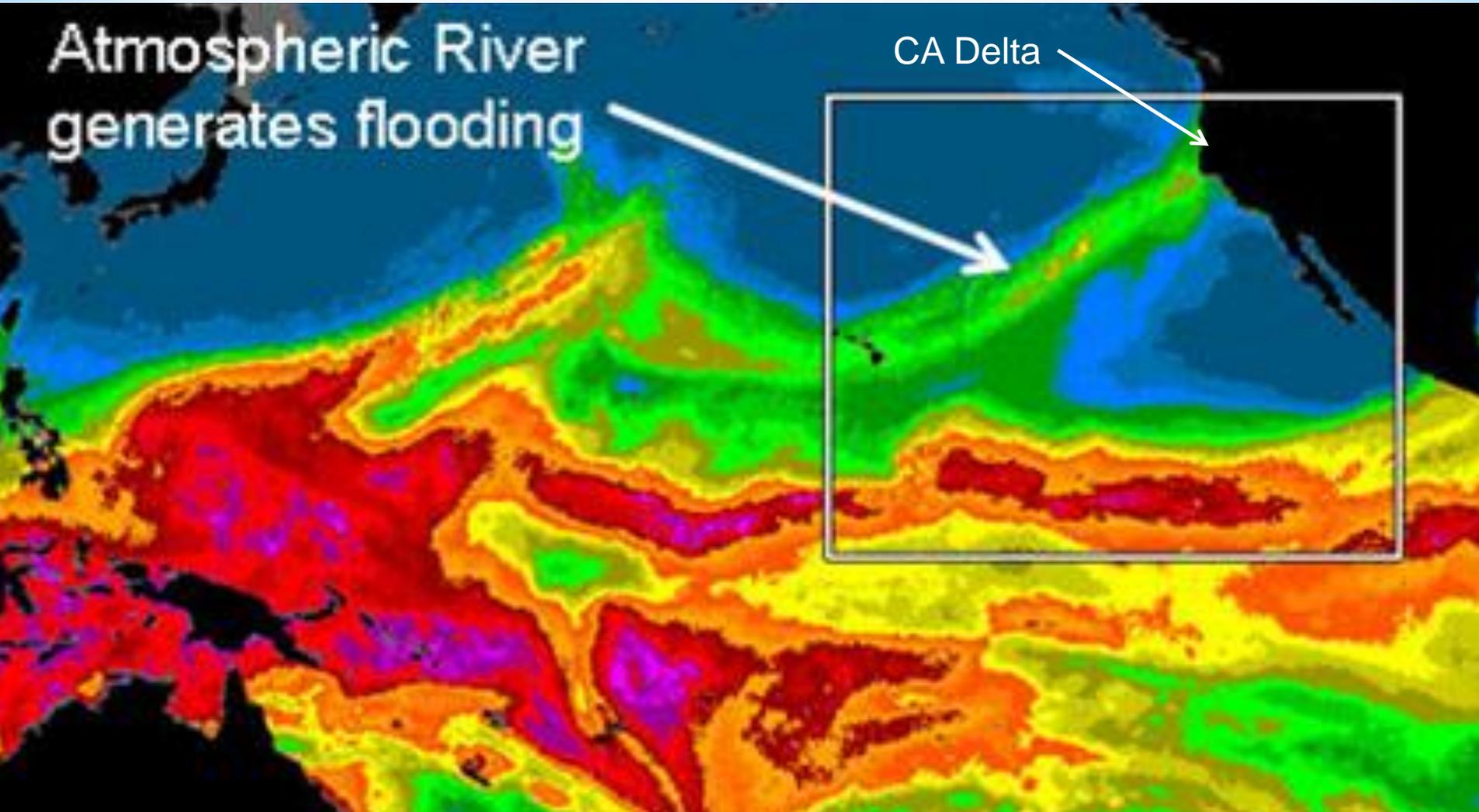
Delta Levee – Hazards

Delta Soils



Environmental Hazards

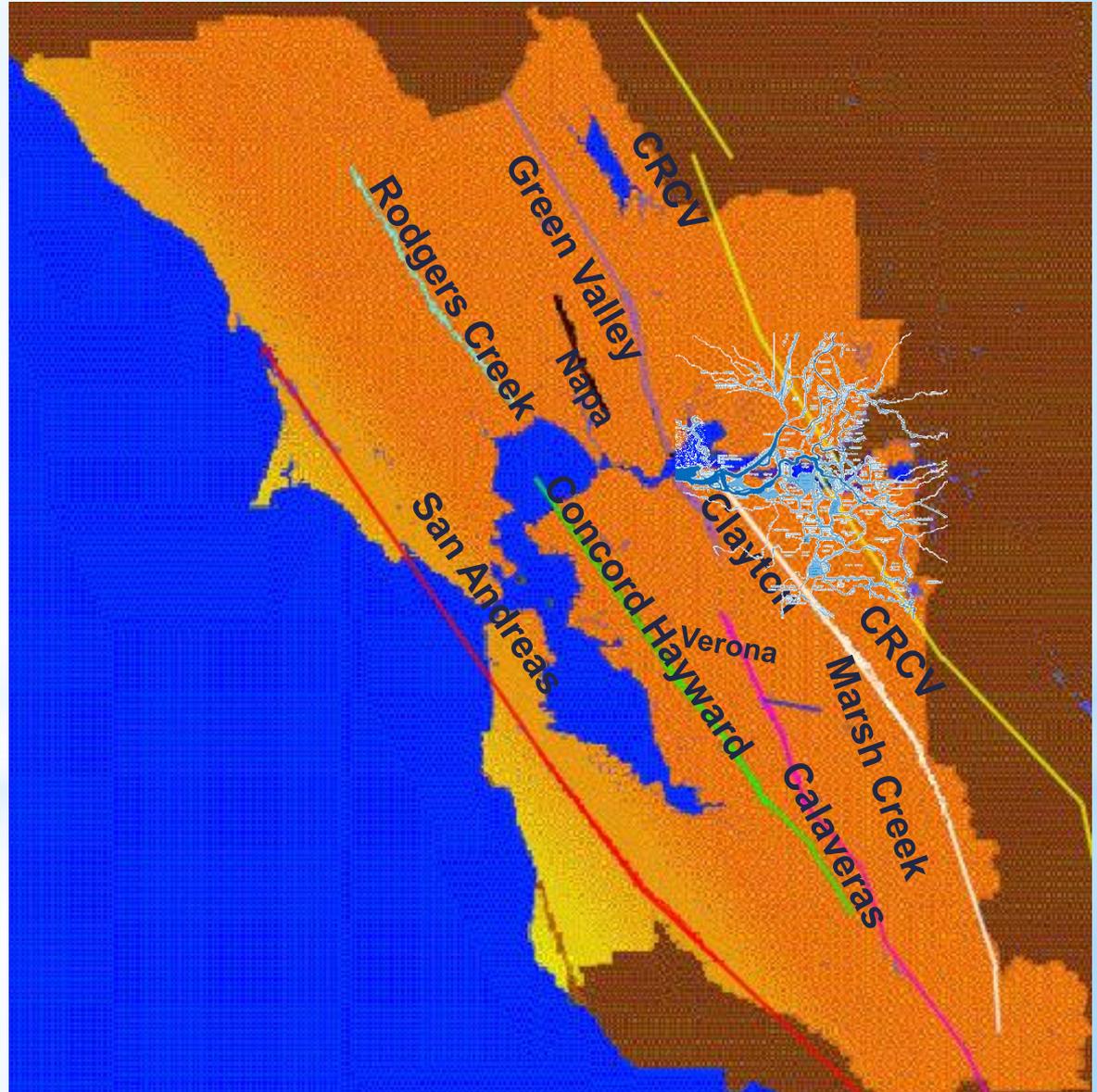
Delta L levee Hazards - Hydrologic Floods



Delta Seismic Hazard

Seismic Environment

- Delta lies east of numerous active earthquake faults
- Loss of assets and life from flooding due to earthquake



Delta Levee – Seismic Hazard

Initial Impacts

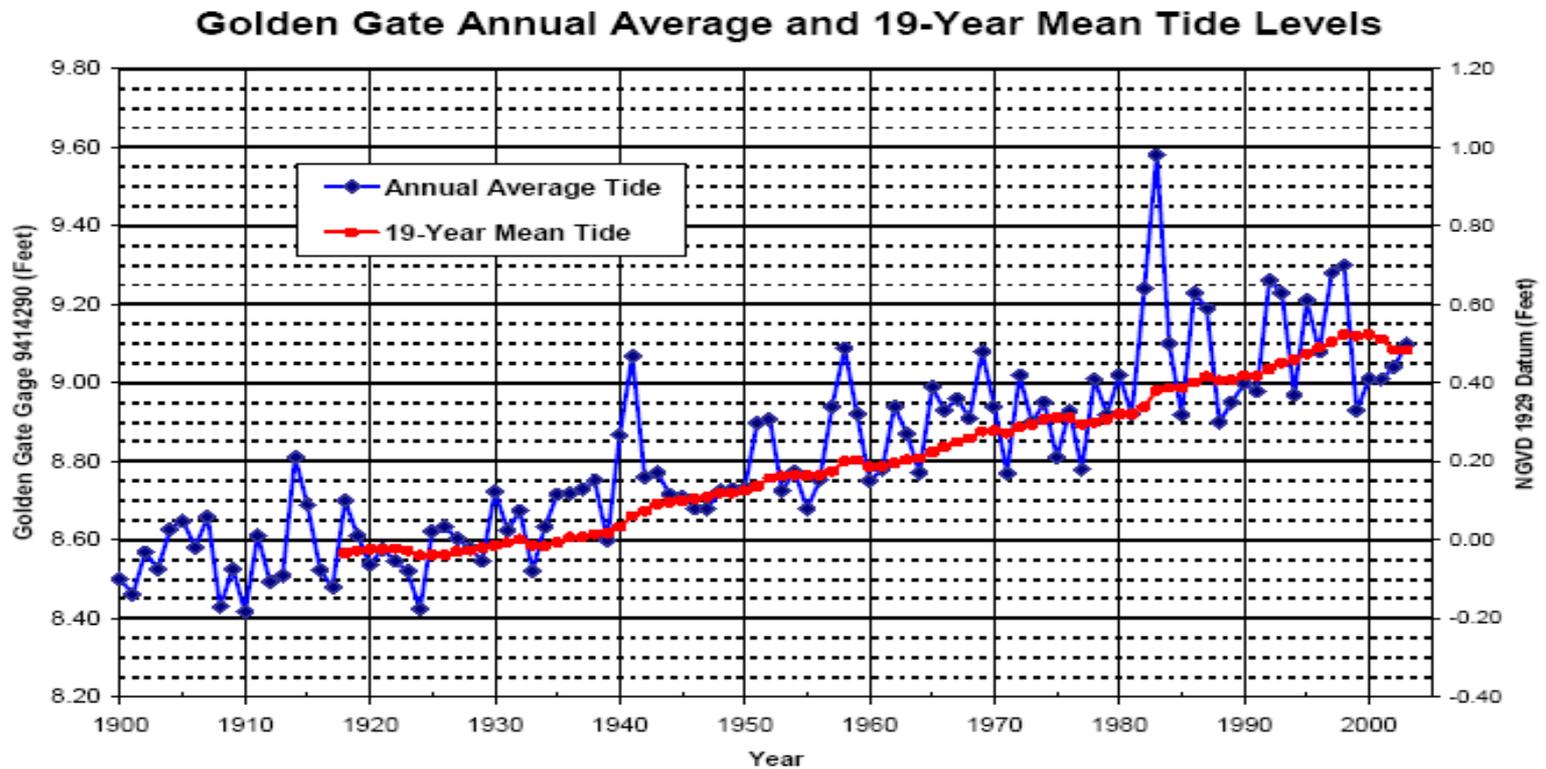
- In addition to multiple levee breaches, many miles of levees are weakened by slumping, cracking and increased seepage
- Without repairs these damages will lead to additional levee failures



Delta Levee Hazards - Sea Level Rise



Historical
Evidence



Source: Roos, 2003

* Delta Levee - Failure Mechanisms

Overtopping

