

# Delta Graphics File

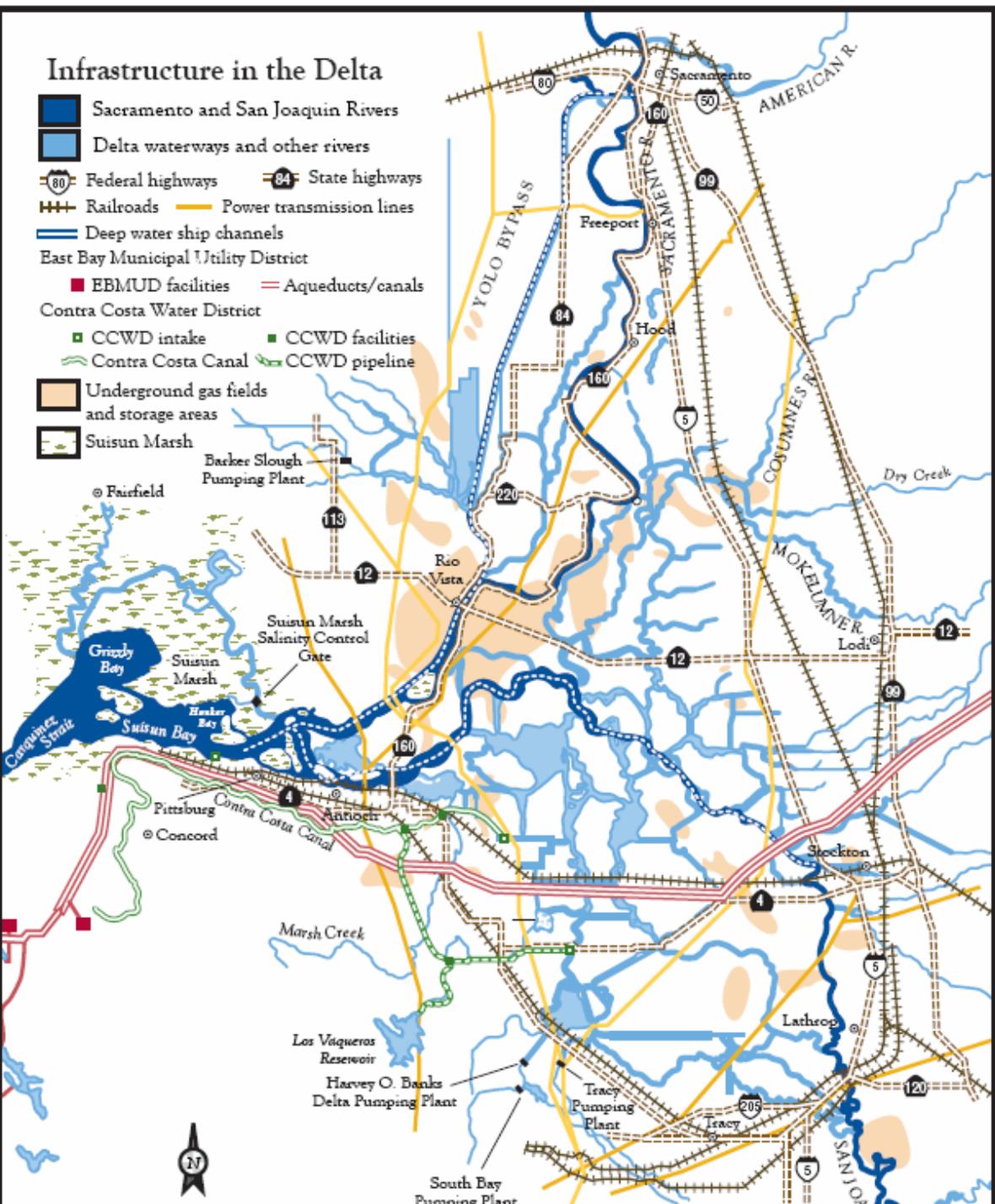


August 2008

# Delta Infrastructure

## Infrastructure in the Delta

-  Sacramento and San Joaquin Rivers
-  Delta waterways and other rivers
-  Federal highways     State highways
-  Railroads     Power transmission lines
-  Deep water ship channels
- East Bay Municipal Utility District
  -  EBMUD facilities
  -  Aqueducts/canals
- Contra Costa Water District
  -  CCWD intake
  -  CCWD facilities
  -  Contra Costa Canal
  -  CCWD pipeline
-  Underground gas fields and storage areas
-  Suisun Marsh

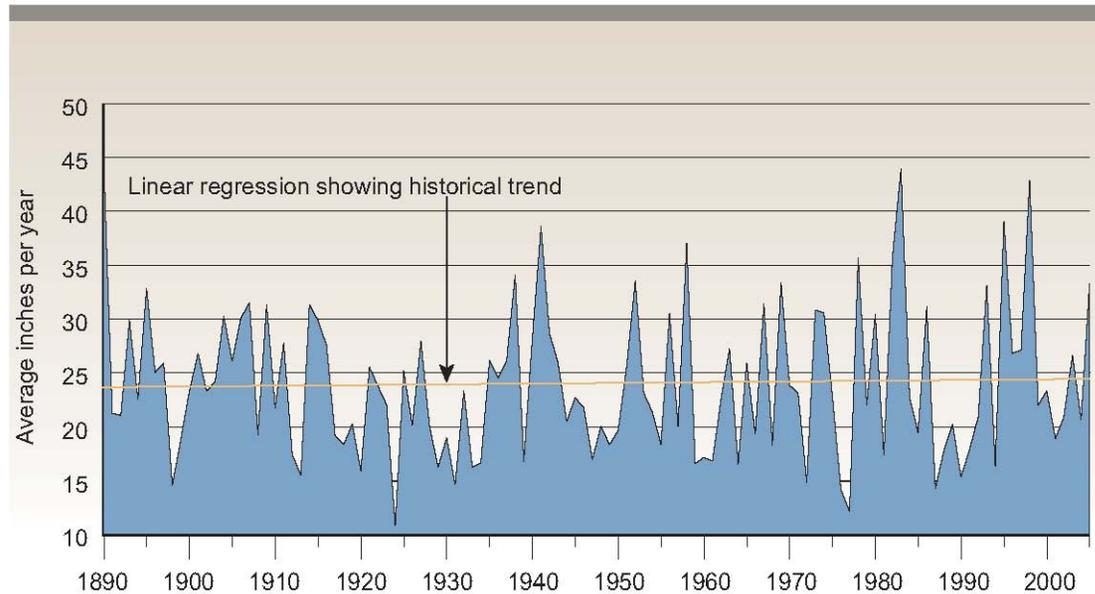


- Hundreds of gas lines
- 6 highways
- 5 high-voltage lines
- 3 railroads
- 9 towns and villages in primary zone, 16 in whole or part in the secondary zone

Map courtesy of PPIC

# Precipitation Levels in California Static for 115 Years

Figure 5. California Precipitation History



116 year average: 23.88 inches

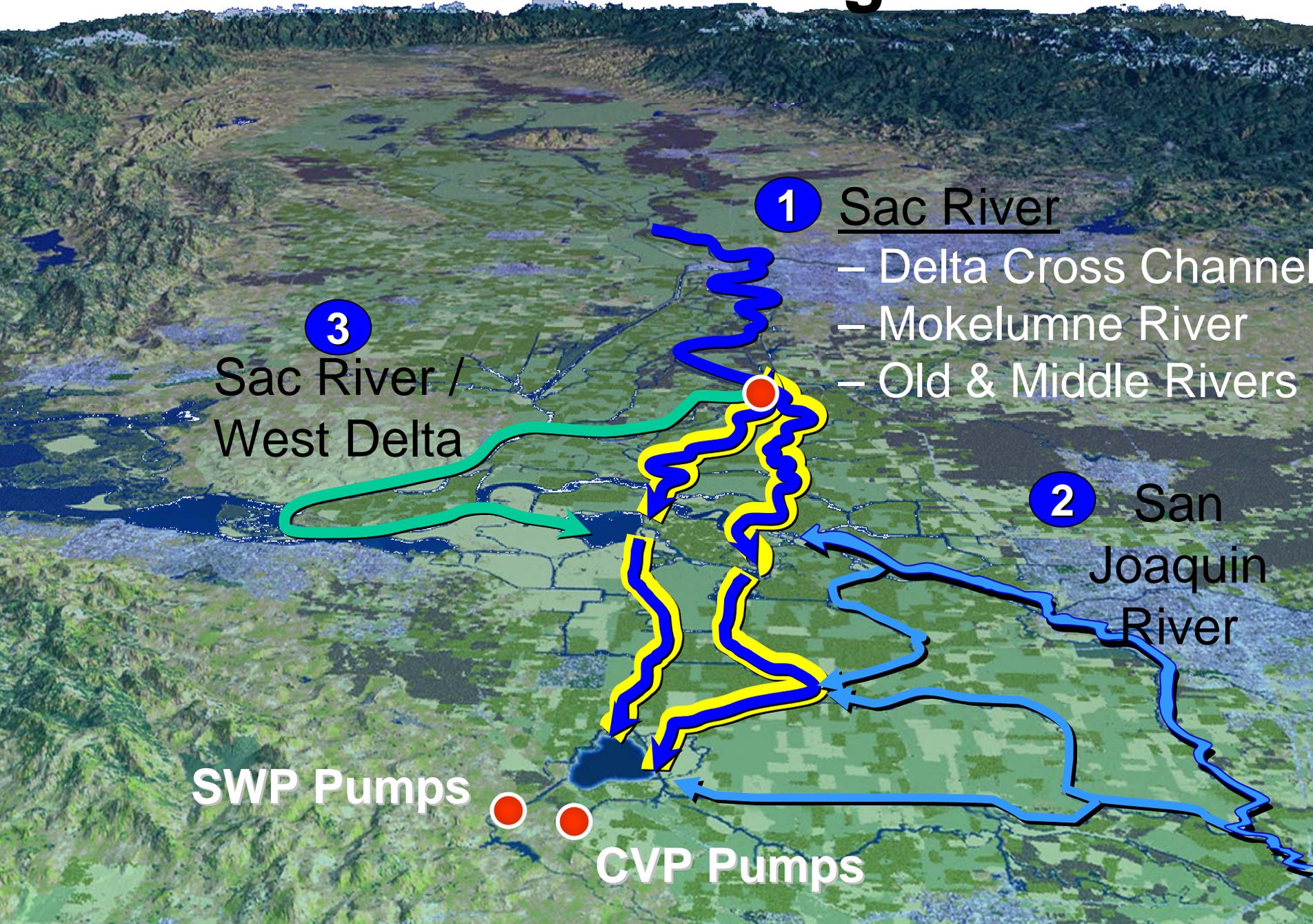
Driest 30 years (1908-1937): 21.28 inches

Wettest 30 years (1977-2006): 24.88 inches

Yearly precipitation calculated from average of 95 stations spread across California. Data collected by Jim Goodridge, state climatologist formerly with DWR.

Source: California Department of Water Resources

# How Water Gets Through the Delta



- 1** Sac River
- Delta Cross Channel
  - Mokelumne River
  - Old & Middle Rivers

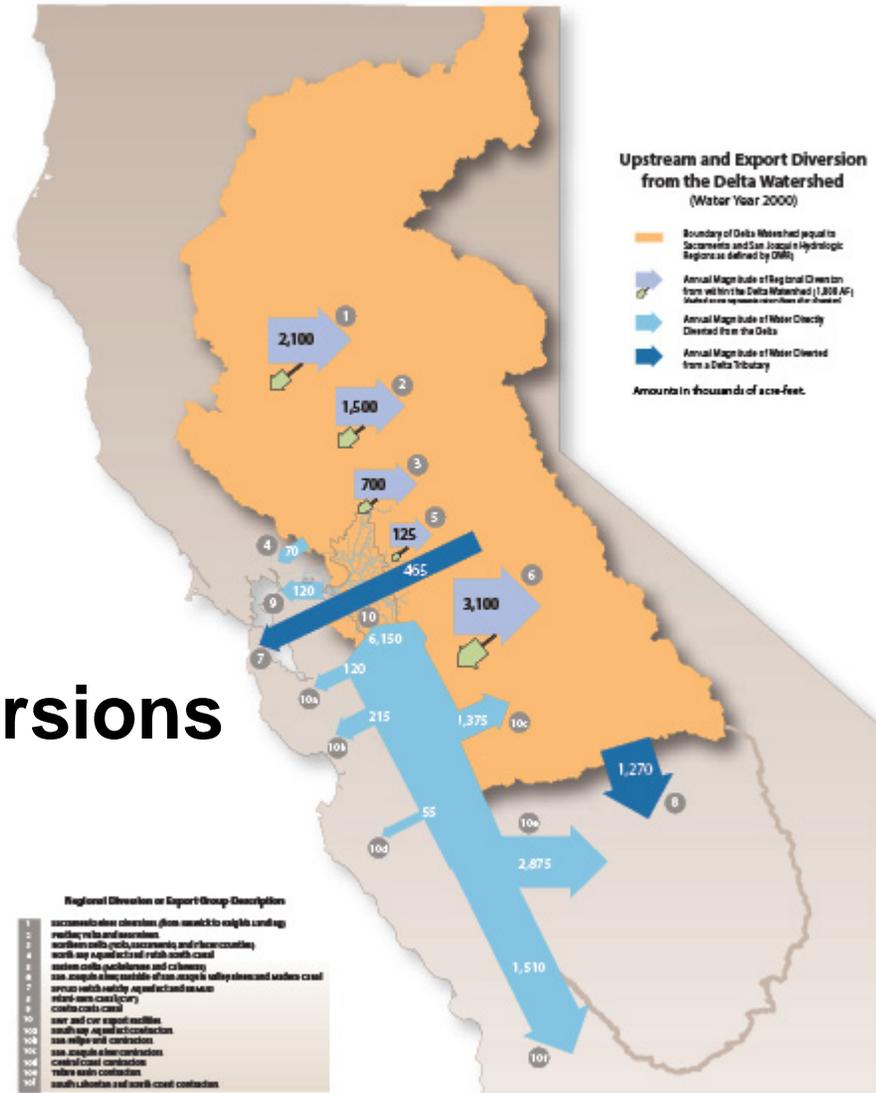
**3** Sac River /  
West Delta

**2** San  
Joaquin  
River

SWP Pumps

CVP Pumps

Figure 8. Upstream and Export Diversions from the Delta Watershed

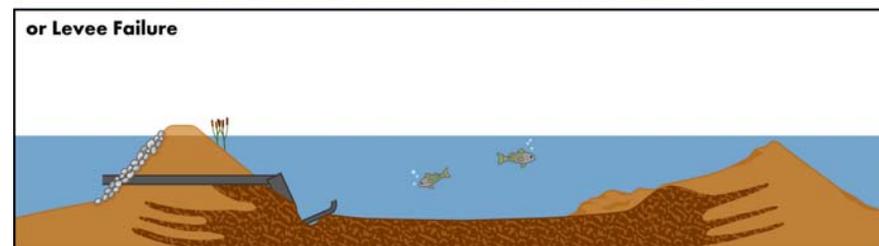
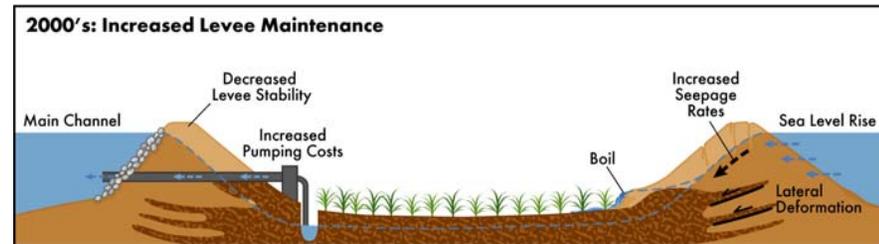
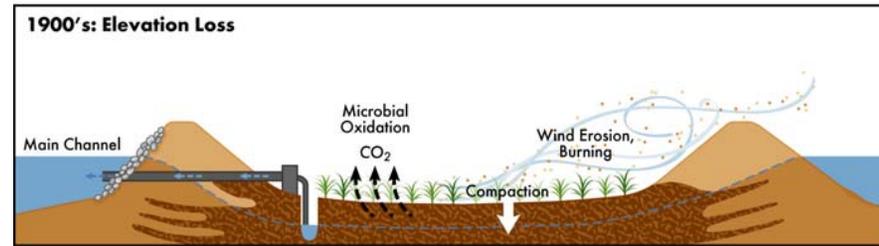
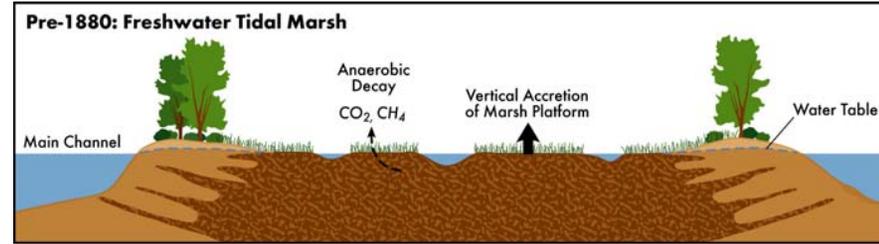
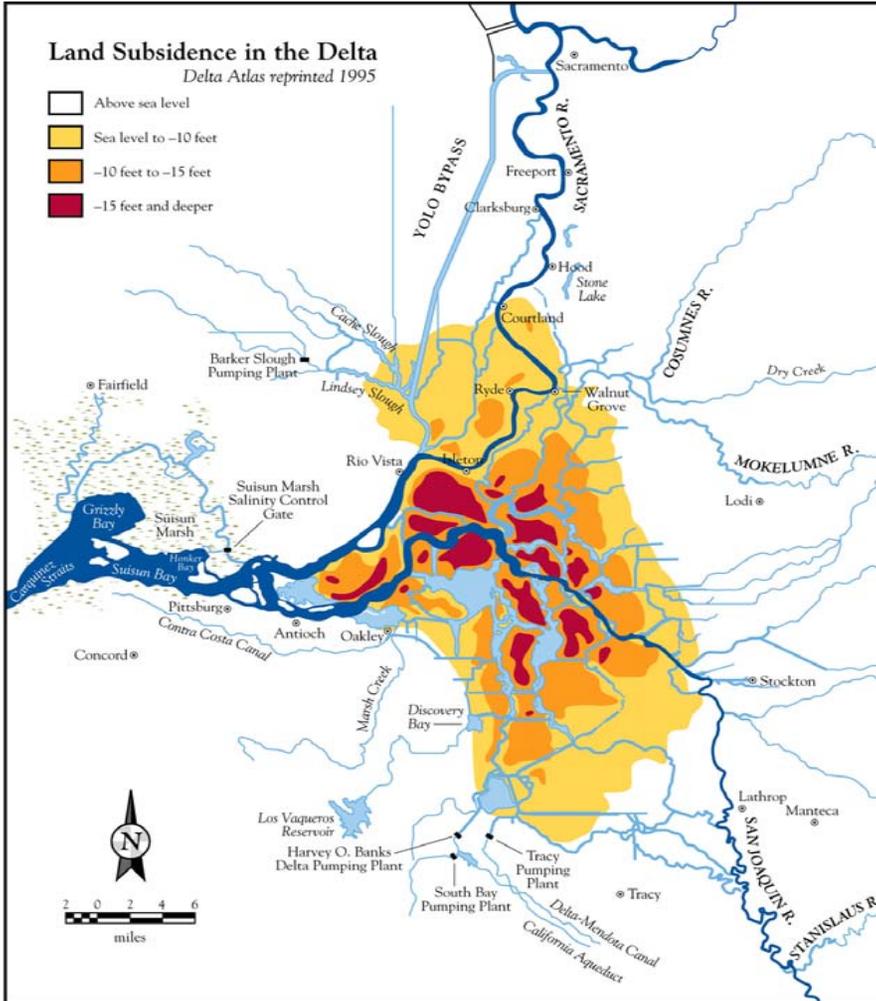


# California Water Diversions

Source: Our Vision for the California Delta

Source: Greg Young, Tully & Young, Inc.

# Land Subsidence in the Delta



# Land Subsidence

Due to farming, erosion & peat soil oxidation

- 25 ft.

- 20 ft.

- 15 ft.

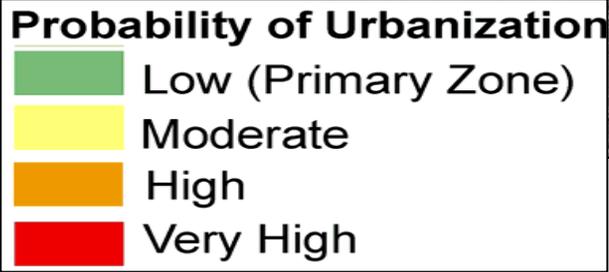
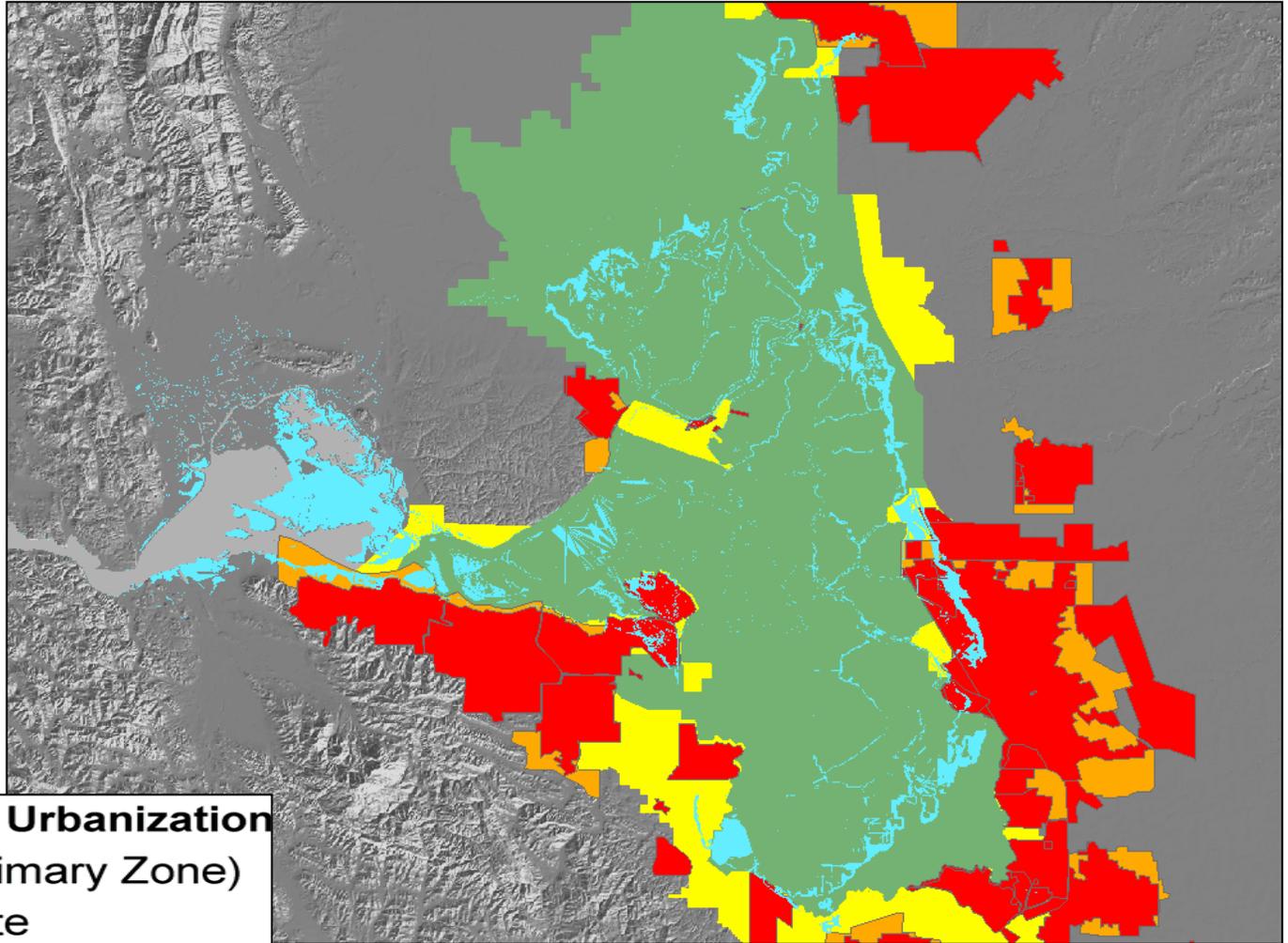
- 5 ft.

**Below Sea Level**

-30 -20 -10 -5 ft



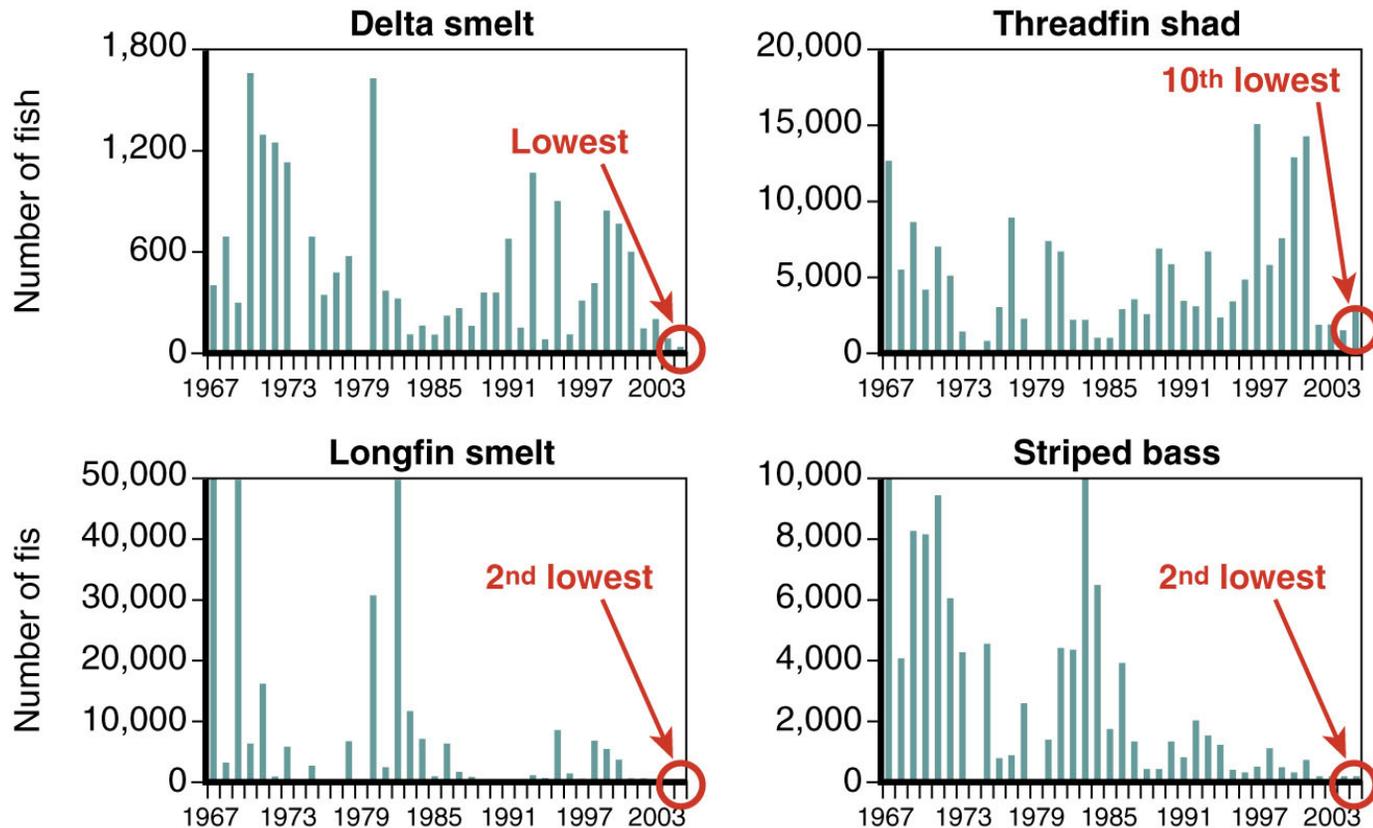
# Areas of the Delta Most Likely to Urbanize



# The South Delta Community of Discovery Bay



# Declines of Four Important Delta Species



SOURCE: California Department of Fish and Game.

NOTES: Graphs report the indices for the fall midwater trawl. Circles indicate the rank of indices in 2005. For delta smelt, longfin smelt, and striped bass, the recent indices represent low points in long-term declines of their populations.

# Differences in Juvenile Salmon Growth

Figure 3. Better Habitat Equals Greater Growth

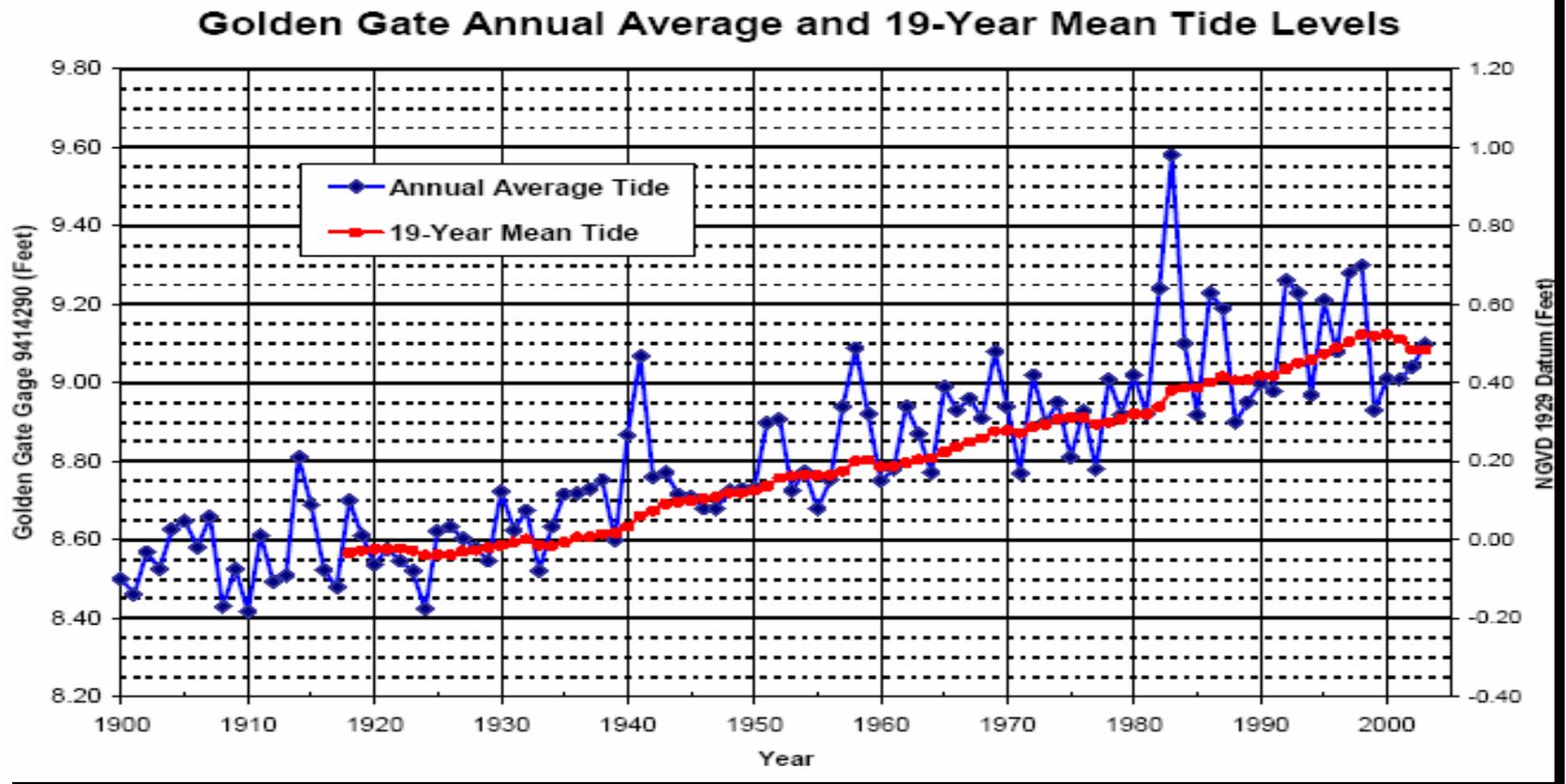
Source: Our Vision for the California Delta



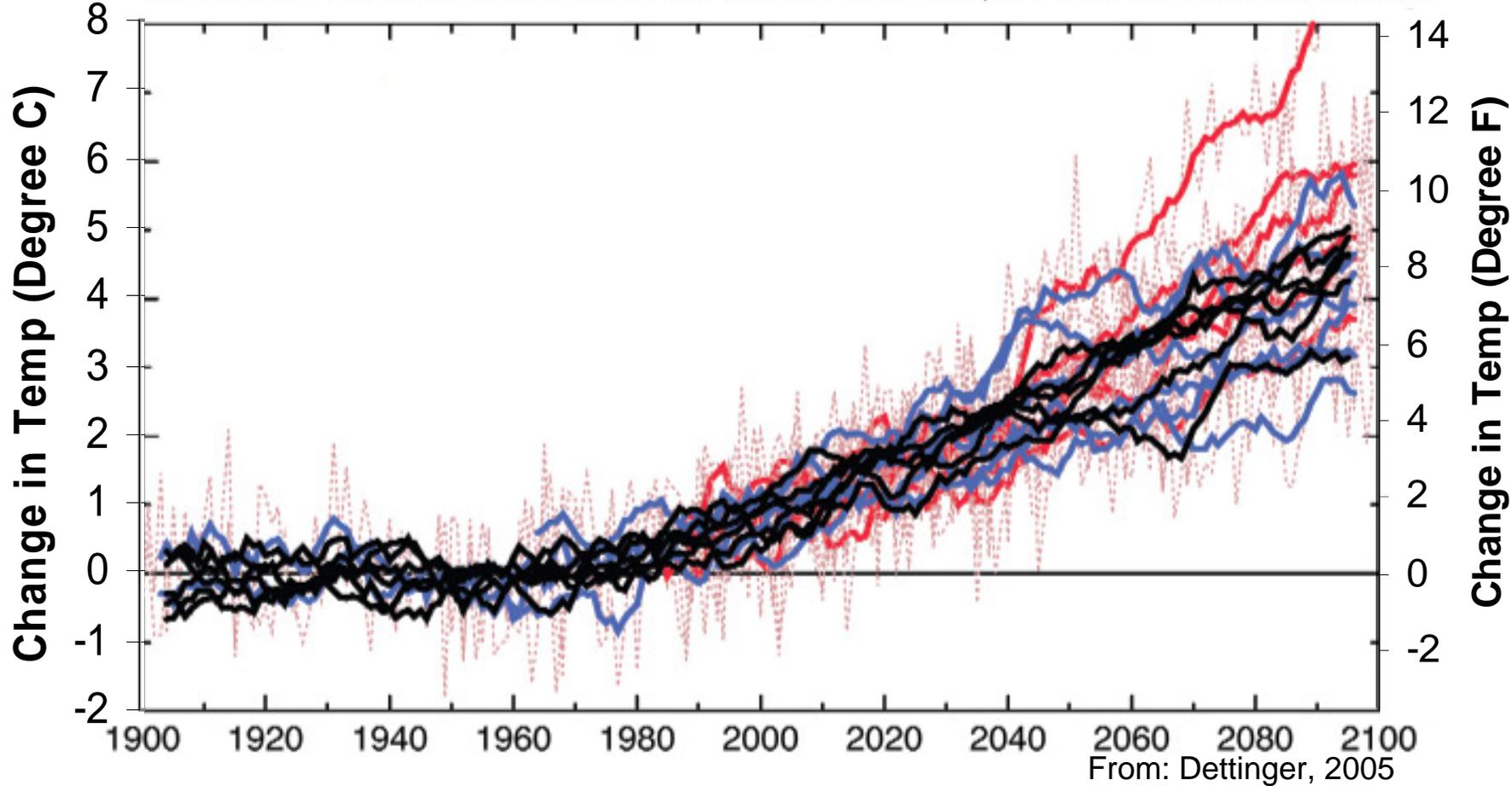
Juvenile salmon that grow up in a floodplain (right) grow faster and larger than those from the main channel (left).

Photo by Jeff Opperman; from Cosumnes River field study by Carson Jeffres.

# Historic Sea Level Rise at the Golden Gate Bridge



# PROJECTED CHANGES IN ANNUAL TEMPERATURE, NORTHERN CALIFORNIA

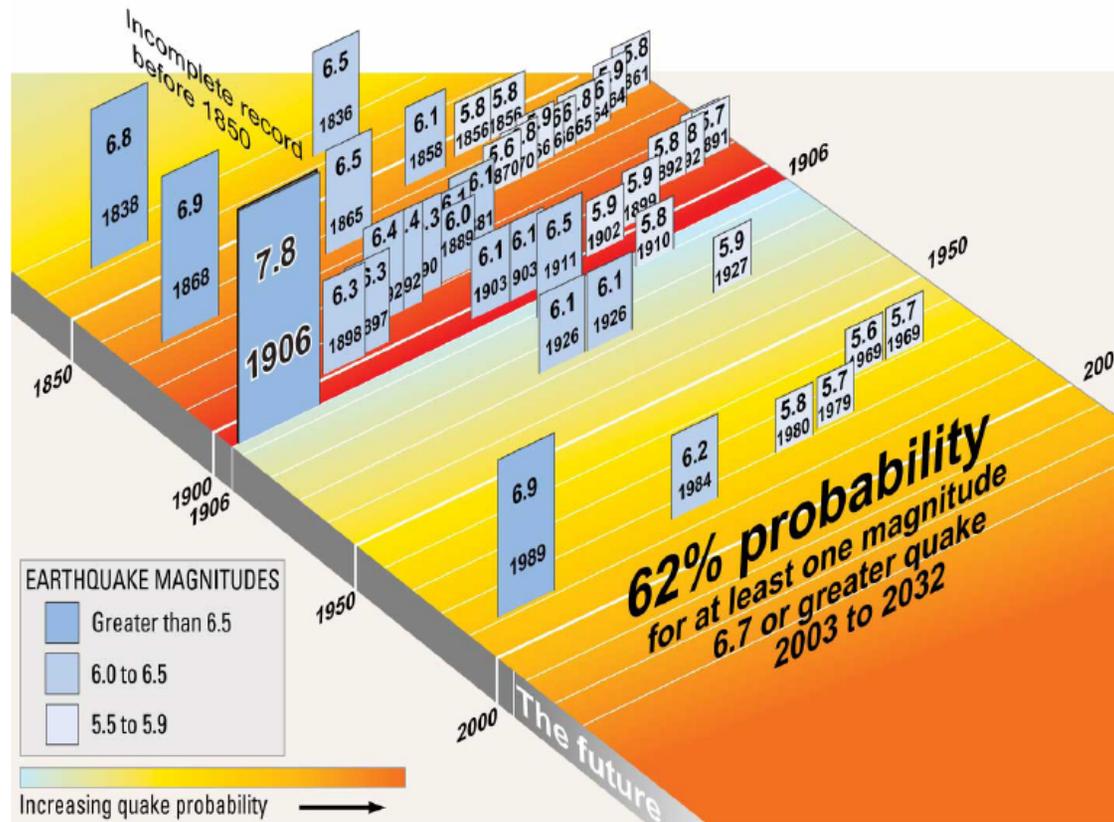


# Seismic Vulnerability



# Seismic Risk Increases with Time

## Bay Area Historical Seismicity



Source: WGCEP, 2003

