

# Delta Levees Standards Conference

*Sponsored by* Delta Protection Commission  
Water Education Foundation

*With Support From:*

- ATKINS
- Central Delta Water Agency
- Contra Costa Water District
- Kjeldsen, Sinnock & Neudeck, Inc.
- MBK Engineers
- South Delta Water Agency
- The Dutra Group
- The Nature Conservancy

*Additional Assistance:*

*Planning and Conservation League  
Natural Resources Defense Council  
American Rivers*

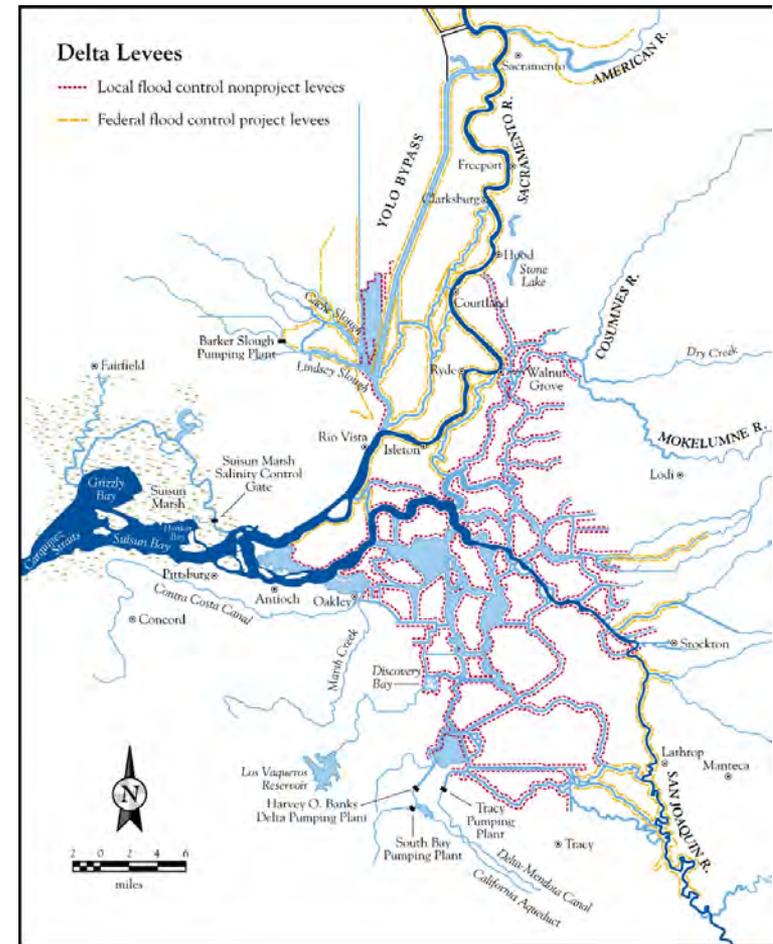


WATER EDUCATION  
FOUNDATION



# The Sacramento-San Joaquin Delta

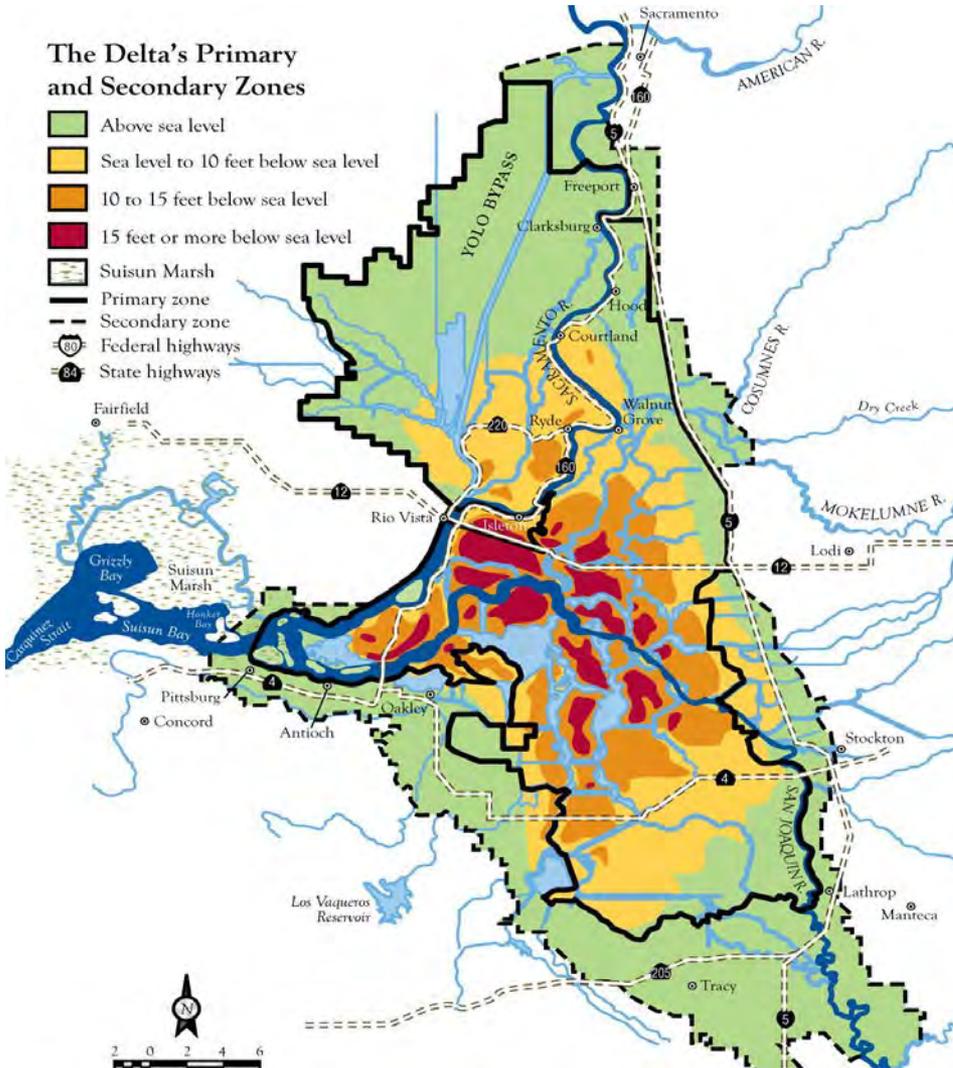
- A reclaimed freshwater tidal estuary
- Configured in its current form by the 1930's
- Soil loss led to the formation of deep polders and a levee arms race
- Became a federal and state water supply hub by 1980's
- Late 1990's through today a multiply stressed ecosystem



# The Sacramento-San Joaquin Delta Today

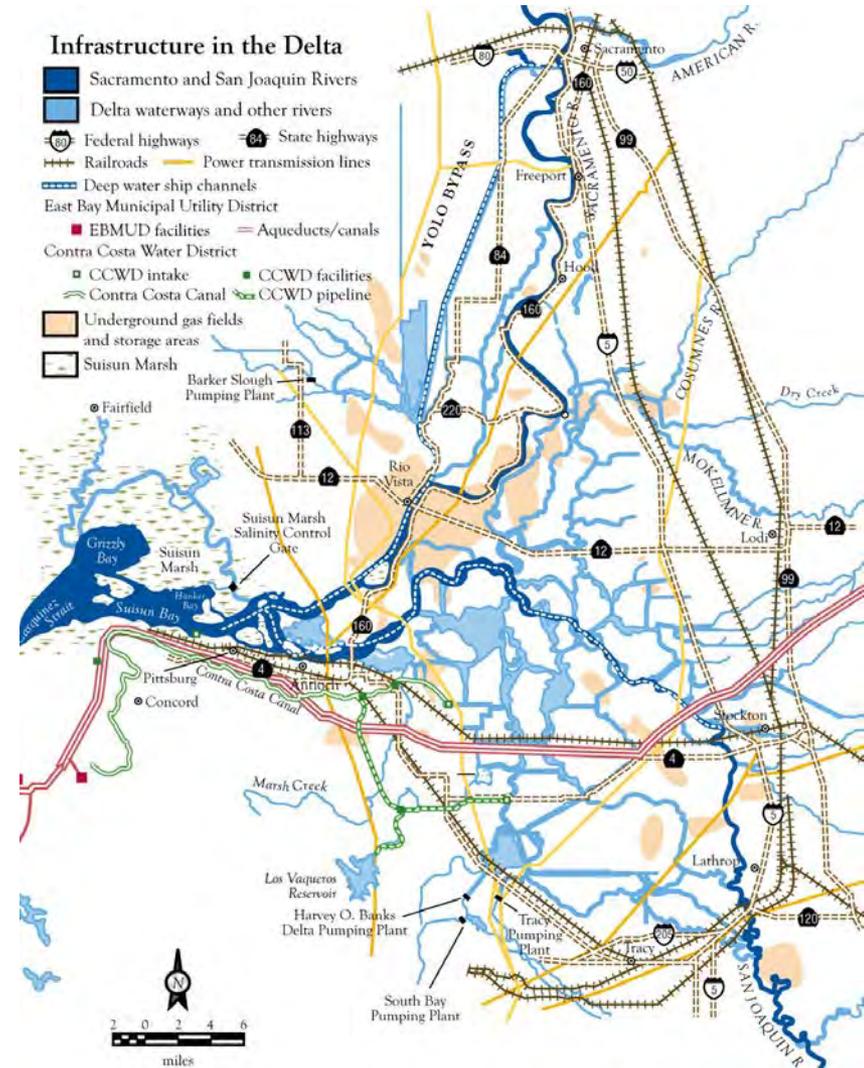
## The Delta's Primary and Secondary Zones

- Above sea level
- Sea level to 10 feet below sea level
- 10 to 15 feet below sea level
- 15 feet or more below sea level
- Suisun Marsh
- Primary zone
- Secondary zone
- Federal highways
- State highways



## 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



Federal, State and  
Local agencies are  
not paddling  
together

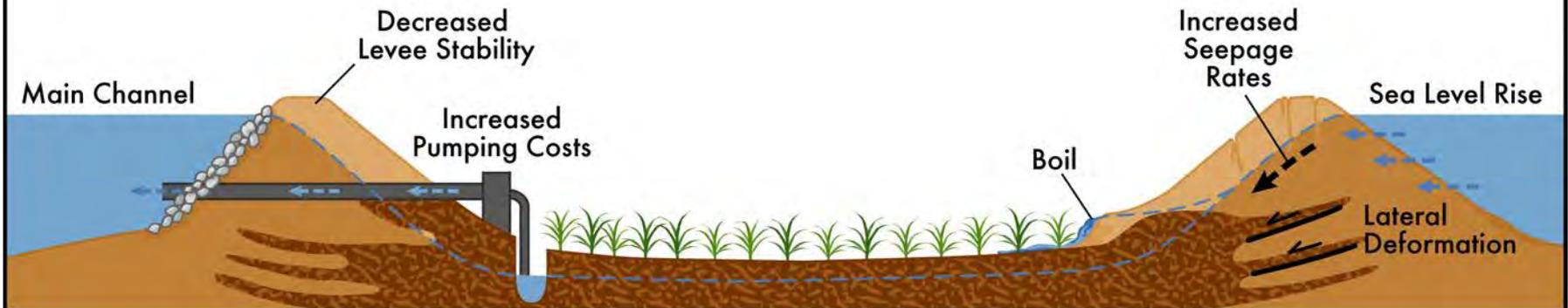


# Why Levee Standards?

- Reduction in risk
- Expectation of performance
- Discourages cost externalization
- A clear, measurable policy instrument

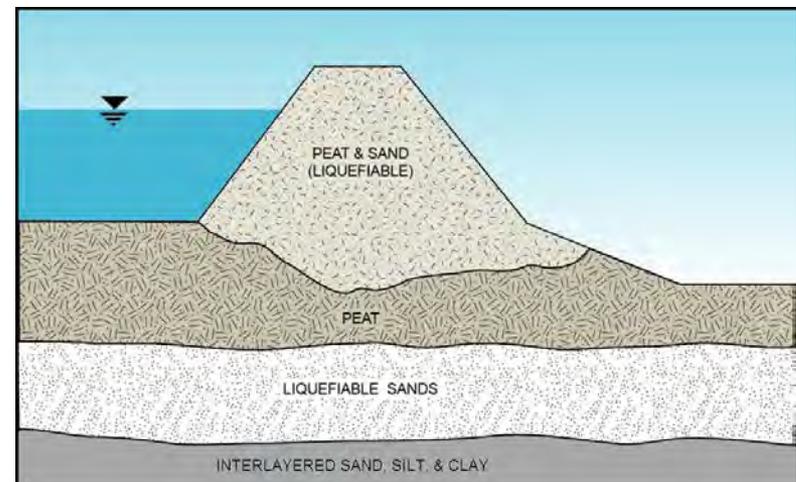
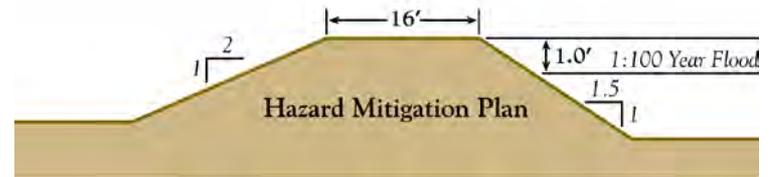
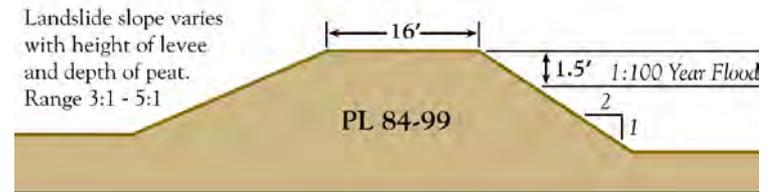


## 2000's: Increased Levee Maintenance



# Today's Levee Standards

- Public Law (PL) 84-99 Standards
  - Set by USACOE
  - Qualifies districts for federal assistance and rehabilitation
- Hazard Mitigation Plan (HMP)
  - Set by State and Fed
  - Minimum standard to qualify for FEMA aid



# Today's Perspectives

## Levee Standards

Dante Nomellini

Dave Mraz

## Delta Levees and Conveyance

John Herrick

Jerry Meral

## Delta Levees and Habitat

John Cain

Cindy Tejeda

## Delta Levees and Public Safety

Bill Croyle

Ron Baldwin



# ...and the Responses

Jason Peltier

Randall Neudeck

Steve Mello

Chris Neudeck

Jonas Minton

Gail Newton

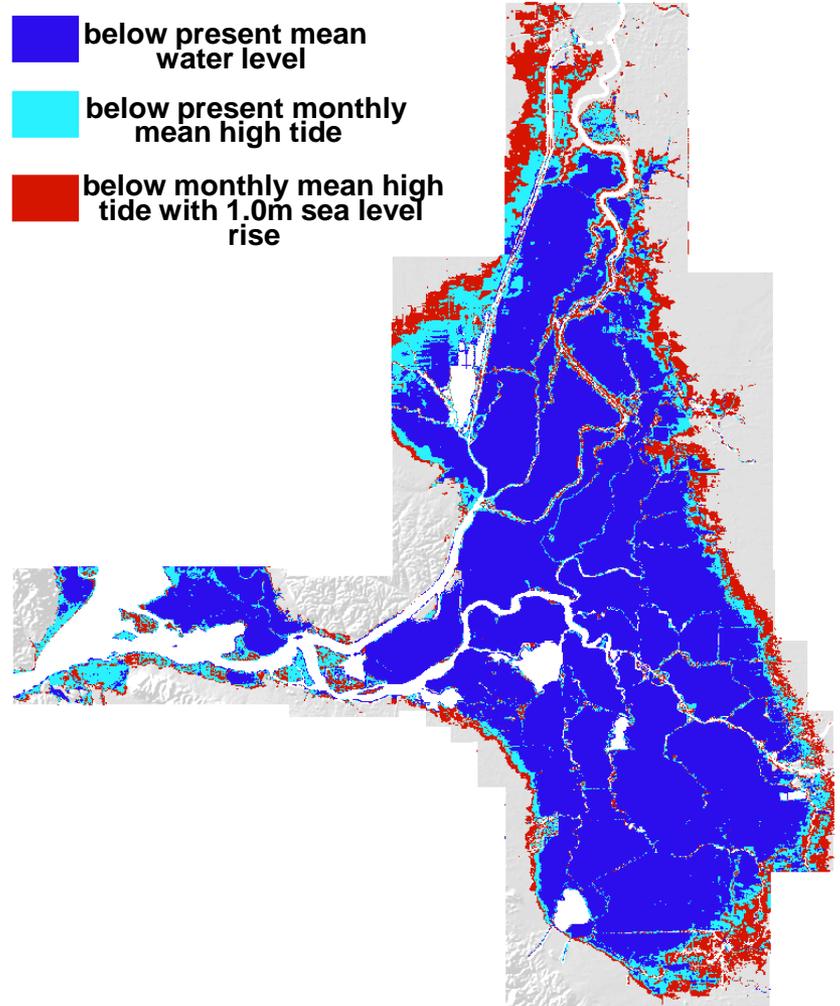
Rick Poeppelman



# Perspectives on Standards



-  below present mean water level
-  below present monthly mean high tide
-  below monthly mean high tide with 1.0m sea level rise



Courtesy: Noah Knowles, USGS