Autumn-winter blooms appear in 1999.
Autumn-winter blooms appear in 1999

Interquartile Ranges Show Overall Trends of Increasing Chla during autumn-winter
Estimated Primary Production
g C/m²-y

Not associated with nutrient increases!!
Why is phytoplankton increasing in San Francisco Bay?

Four Hypotheses

1. Growth
   - Resources
     - Light
     - Nutrients
   - Impairments
     - Herbicides
     - Metals

2. Transport

3. Mortality

4. Impairments
   - Herbicides
   - Metals
“sediment yield of the Sacramento River decreased by about half from 1957-2001” (Wright & Schoellhamer 2004)

Recent trends of decreasing turbidity In San Pablo Bay

Dave Schoellhamer, USGS
City of San Jose, Environmental Services (2006)
Mortality

Bivalve Biomass (g AFDW m\(^{-2}\))

Janet Thompson, USGS
Potential bivalve predators (mean catch/hectare)
Kathy Hieb, CADFG
The Bay ecosystem has changed significantly in the past decade

Opposite trends in the Delta and San Francisco Bay

The Bay is strongly influenced by its connectivity to Sierra runoff, urban watersheds, and the Pacific

We cannot forecast future trajectories

Thanks to SFEI & RMP, Tara Schraga, Kate Dallas, Alan Jassby, Jan Thompson, Francis Parchaso, Dave Schoellhamer, Kathy Hieb, Neal Van Keuren, Bob Wandro, Alo Kauravila