



# "Mussel Watch"

## A Sentinel for Safe, Healthy & Productive Coasts

### Quick Facts

*Program at a Glance*

Only Program of its kind; started in 1986

Broad Federal, State & Local Partnerships

300 sites nationwide

120 Chemicals monitored

Chemicals measured in Oysters, Mussels and Sediment

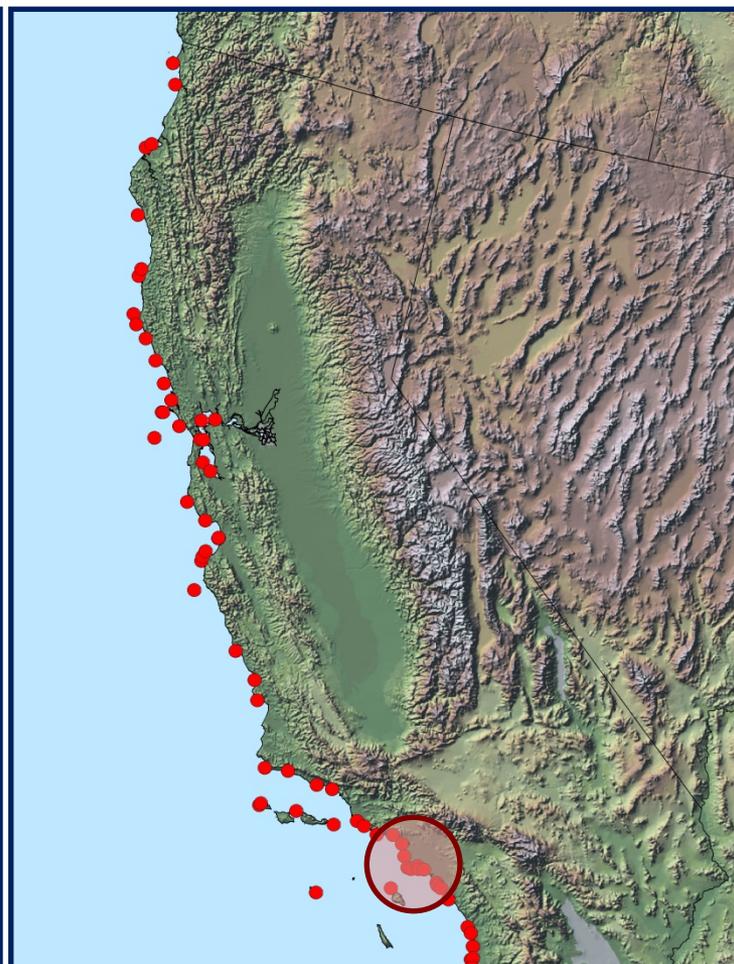
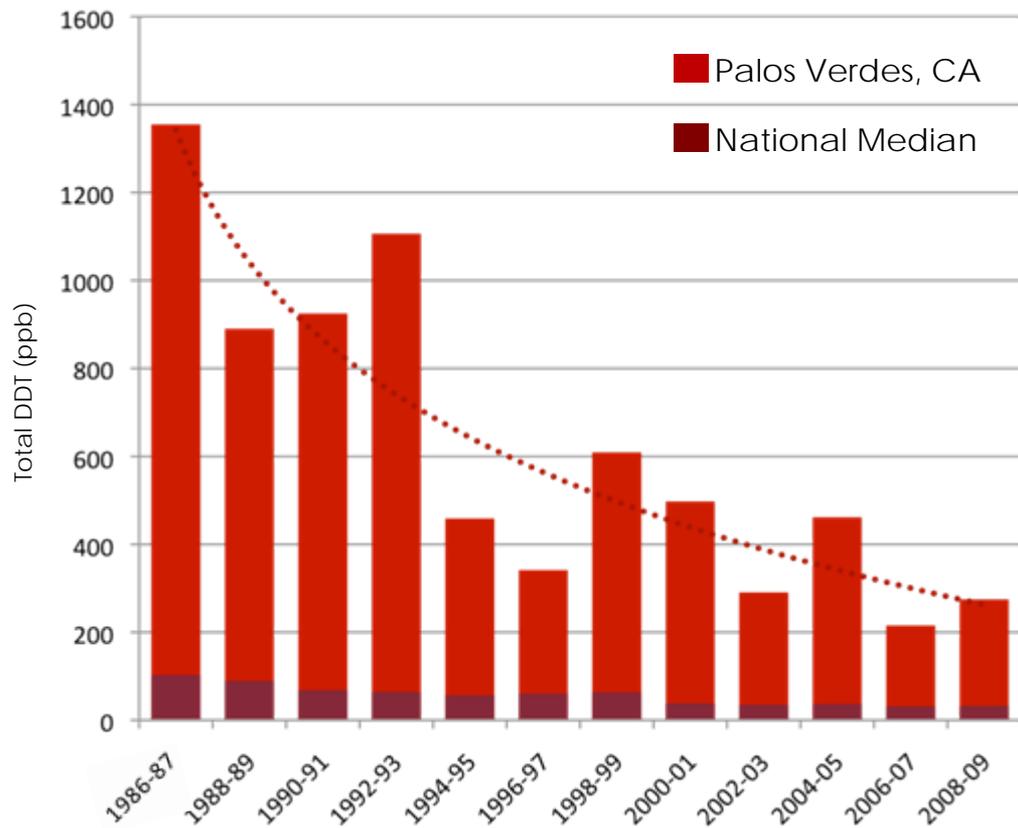




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### DDT – Banned (1972) but Persistent



State of our Shores



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### Moving Forward

*Re-engineering Mussel Watch*

Over 3000 new chemicals are engineered each year

Most will enter coastal environments

Many will impact these environments

Mussel Watch is changing to address new potential threats

An assessment of PBDE flame retardants was our first step

Others will follow



Pharmaceuticals

# California is the case study for a broader nation-wide effort to better assess CECs

## Partners:

NOAA and other Federal Agencies

Southern California Coastal Water Research Project

San Francisco Estuary Institute,

State of California Water Resources Control Board



- Up to 80 sites to be sampled
- Enhanced screening for priority CECs
- Identification of contaminated sites

# FUTURE WORK: INVESTIGATE EFFECTS OF CECs ON FISH HEALTH



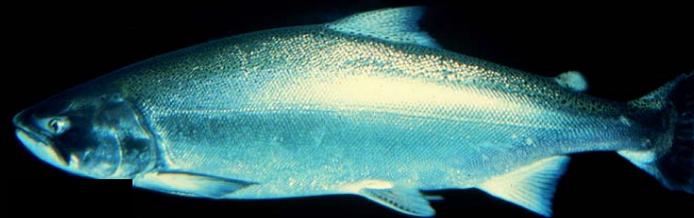
## Effects of Legacy Pollutant on Fish

Reduced growth

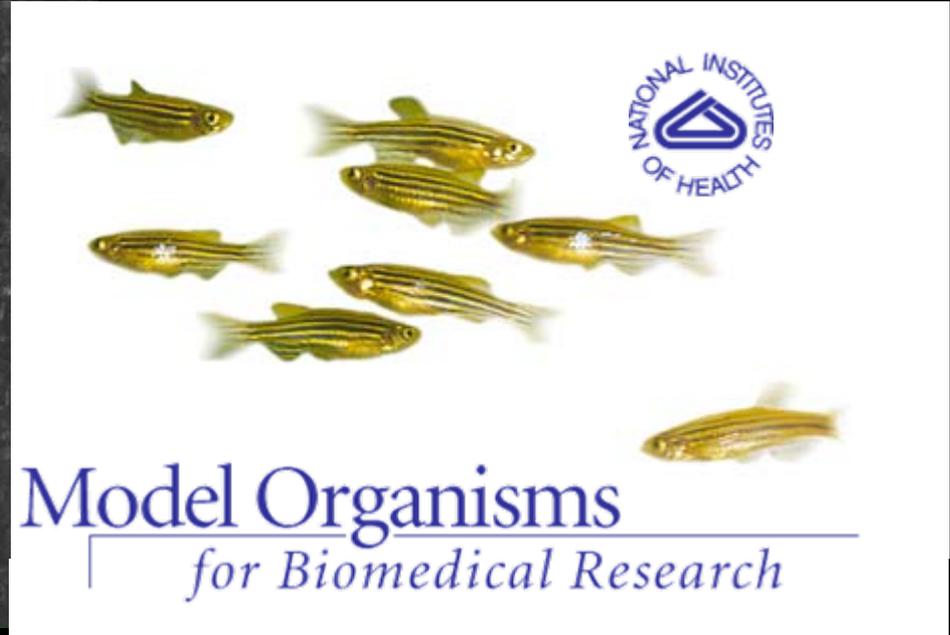
Reproductive Impairment

Increase susceptibility to disease

Modeled population declines



# Oceans and Human Health Initiative: The Oceans are a Sentinel for Human Health



toxic effects on  
fish/shellfish



reduced fisheries  
productivity

toxic compounds in  
fish/shellfish



threat to human  
consumers

toxic effects on  
fish/marine mammals



same toxic effects  
on humans