

The State of San Francisco Bay: Water Quality

Jay Davis and Mike Connor
San Francisco Estuary Institute

Russ Flegal
UC Santa Cruz

Presented at National Water Quality Monitoring
Conference
May 21, 2008

Goals of This Talk

- Brief introduction to the Regional Monitoring Program
- Overview of water quality in the Bay
- Present a new way of summarizing water quality information

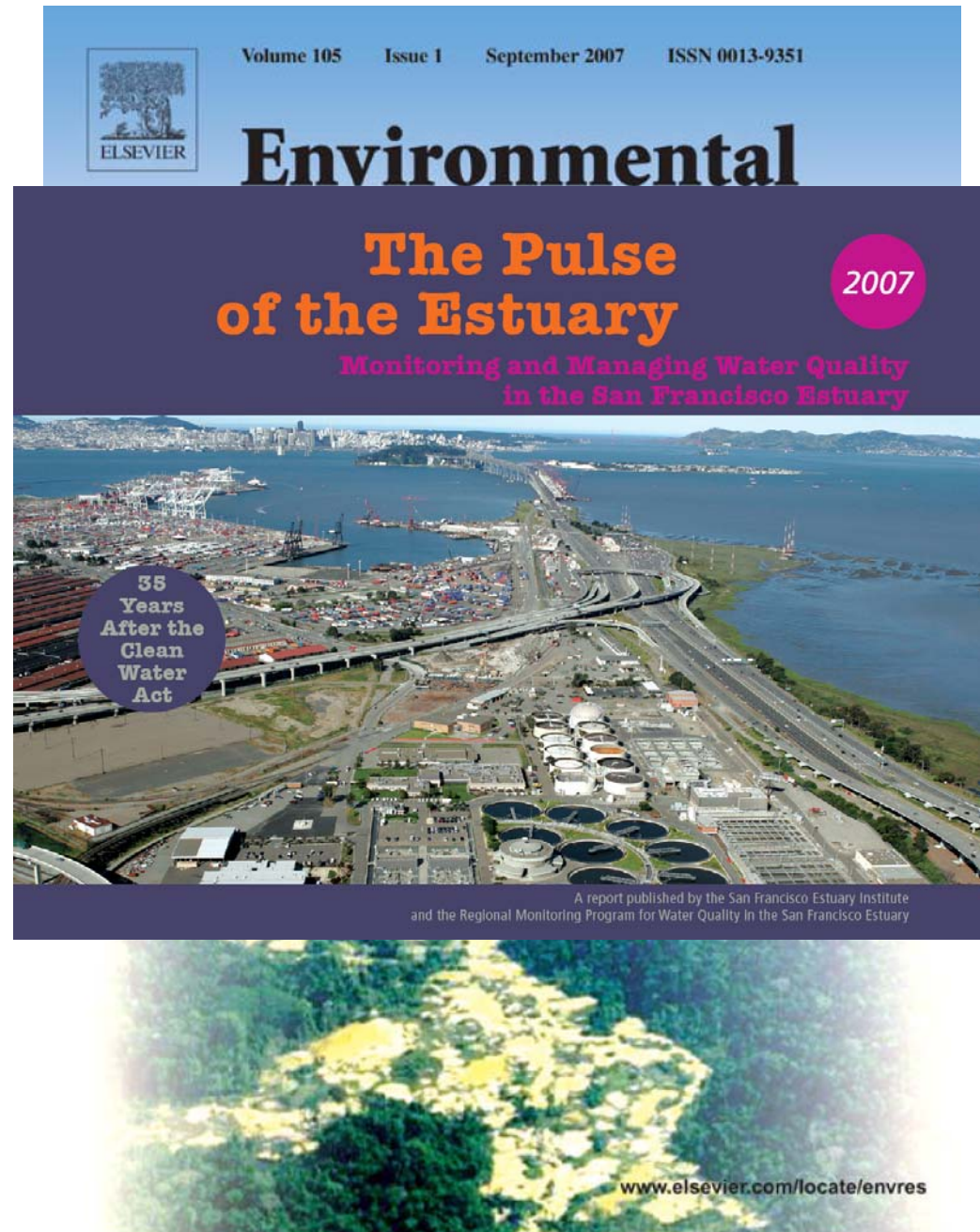


Regional Monitoring Program (RMP)

- Mature program - began in 1993
- \$3 million/year of stable funding
- Multi-faceted
- Continually adapting in response to information needs of managers

RMP Information Products

- Annual reports
- Technical reports
- Web site with access to raw data:
www.sfei.org/rmp
- Journal publications
- Annual meeting



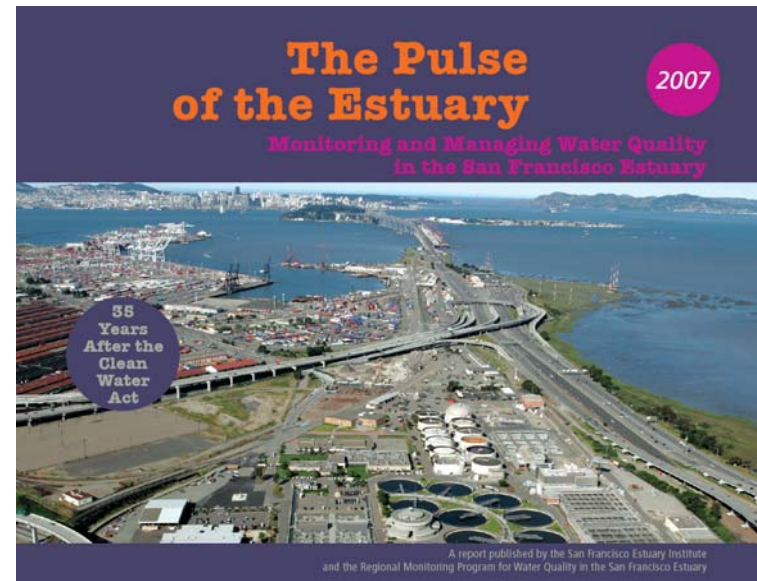
The background of the slide features a photograph of the Golden Gate Bridge. The bridge's red-orange steel structure is visible on the left side, extending from the bottom left towards the top left. The rest of the background is a clear, light blue sky.

“How is the Bay doing?”

- Need for a simple summary
- Does justice to the wealth of available information
- Not too simple

The Pulse Water Quality Summary

- Tailored to RMP
- Consistent with 303(d) List
- By pollutant
- Flexible
- Highlights information gaps
- Includes forecast
- Not overly boiled down



A Pictorial

Recovery T

Regulate



Largest Pathways

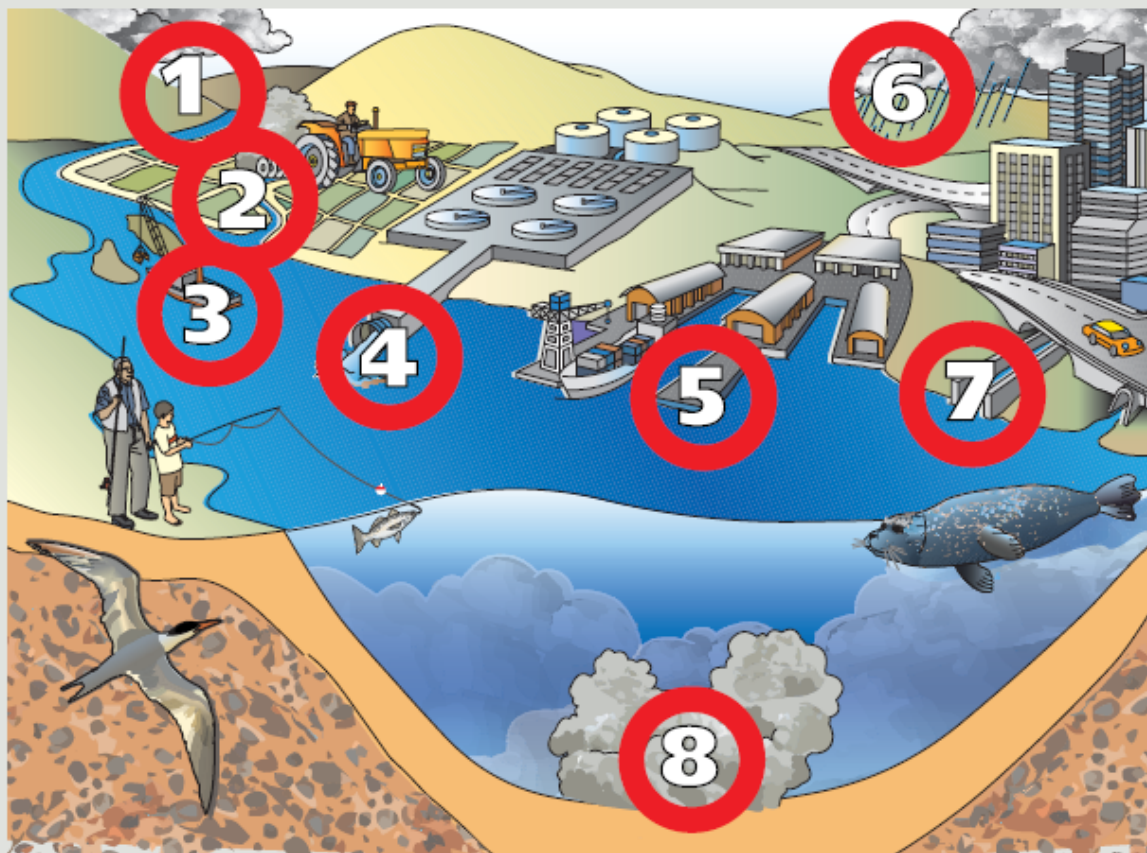
1 Delta outflow 2 nonurban runoff

3 dredging and dredged material disposal

4 wastewater effluent

5 in-Bay contaminated sites 6 atmospheric deposition

7 urban runoff 8 remobilization from sediment



Problems Solved

Status

Health
Risks

Pathways

Spatial
Pattern

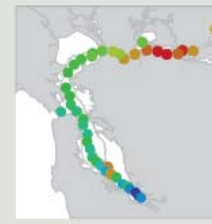
Trend

Forecast

Organic
Waste



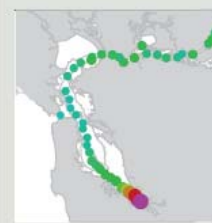
Effects not likely



Nutrients



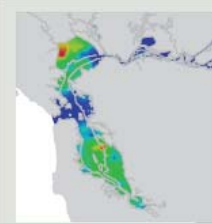
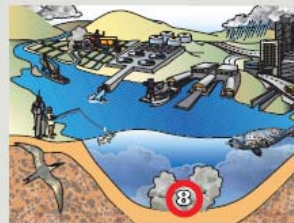
Effects not likely



Silver



Effects not likely



The Biggest Problems

Status

Health
Risks

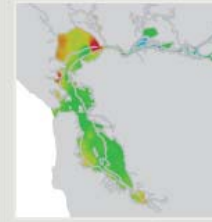
Pathways

Spatial
Pattern

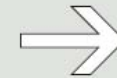
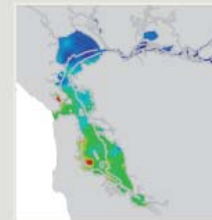
Trend

Forecast

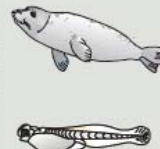
Total
Mercury



Methyl-
mercury



PCBs



The Biggest Problems

Status

Health
Risks

Pathways

Spatial
Pattern

Trend





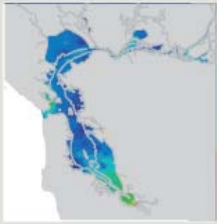







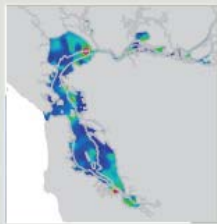









Forecast

Dioxins

	 				
	Major impacts on virtually all types of invertebrates and some fish; possible impacts on some birds. So far only minor human health problems.	Ship ballast water Ship and boat hull fouling Bait imports and transfers	Except near the mouth of the Bay, common and dominant on hard and soft substrates and common in the water column.		

Exotic
Species

Other Threats

	Status	Health Risks	Pathways	Spatial Pattern	Trend	Forecast
Selenium		 				
Legacy Pesticides		  				
PAHs		 				

Below Thresholds...

Status

Health
Risks

Pathways

Spatial
Pattern

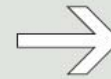
Trend

Forecast

Nickel



Effects not likely



Copper



Rising Concerns

Status

Health
Risks

Pathways

Spatial
Pattern

Trend

Forecast

PBDEs



Pyre-
throids



Sediment
Toxicity



Mixtures



**Reports and information
available at:**

www.sfei.org

jay@sfei.org

