Joint SAC Meeting

GFNMS / MBNMS

Water Quality Protection Program and the Northern Management Area

February 18, 2010

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NATIONAL MARINE SANCTUARIES

Presentation Overview

- What is the Water Quality Protection Program?
- Current WQPP Efforts
- What's happening in the NMA?
- Water quality monitoring programs and results

Watersheds: Linking Land & Sea

Counties that border the Sanctuary

- Marin
- Monterey
- San Mateo
- Santa Cruz
- Santa Clara
- San Benito
- San Luis Obispo

7 million people live within 25 miles of the coast

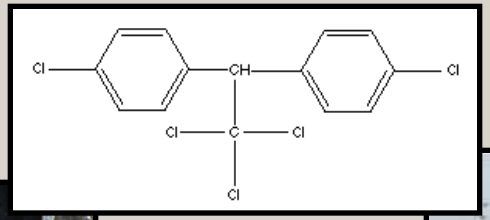
Water Quality Protection Program

GOALS:

1) Protect the physical, chemical and biological conditions in the Sanctuary and its adjacent watersheds
2) Establish collaborative efforts among agencies, landowners, businesses and public for comprehensive marine and watershed protection
3) Coordinate and integrate existing water quality programs

Water Quality Pollutants

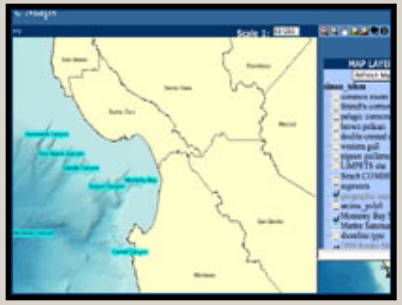
- Sediments
- Nutrients
- Pesticides
- Pathogens
- Metals
- Detergents



WQPP Action Plans

Implementing Solutions to Urban Runoff

Regional Monitoring, Data Access, and Interagency Coordination (SAM)



Marinas and Boating

Agriculture and Rural Lands

Beach Closures and Microbial Contamination

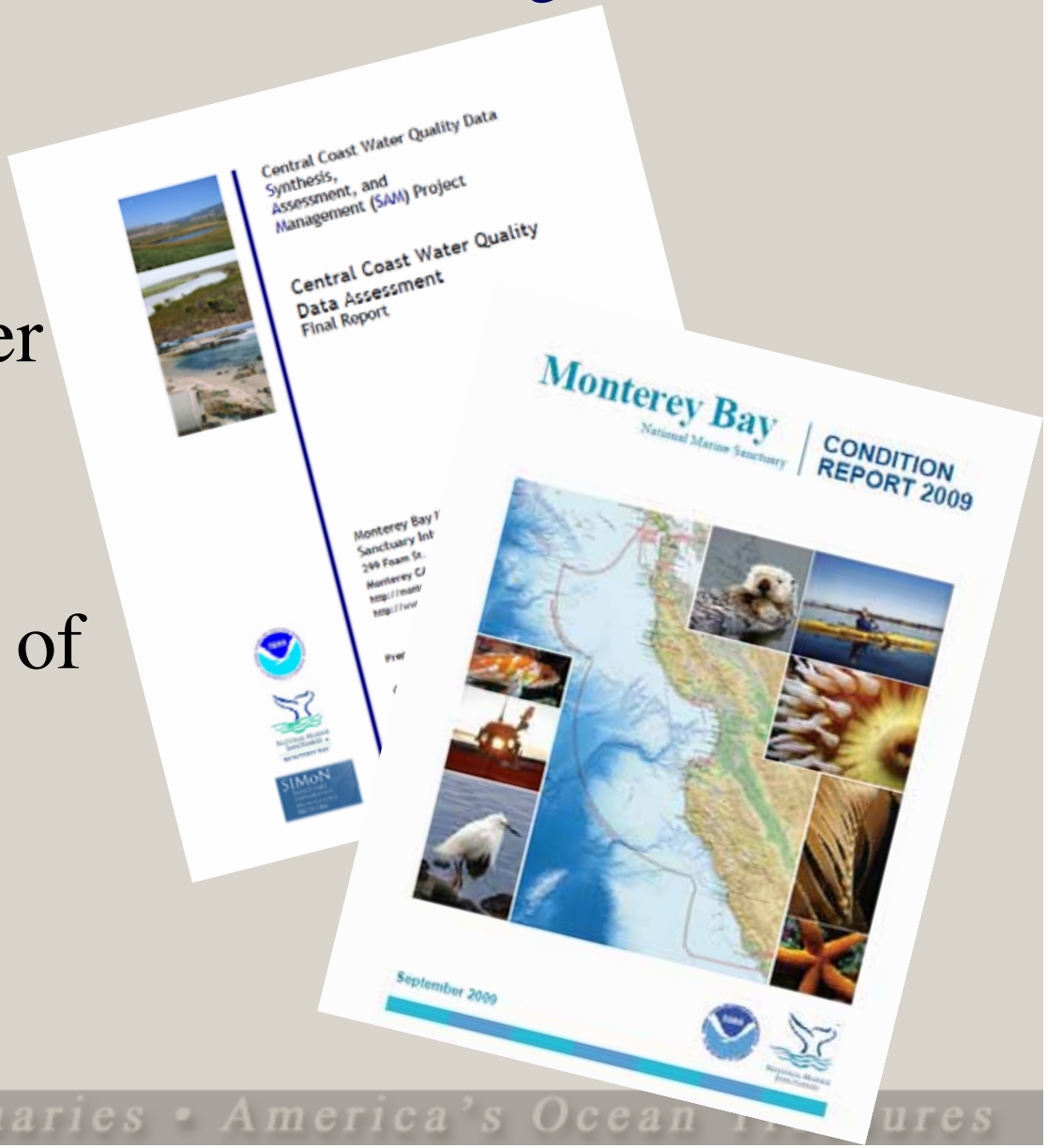
WQPP Outreach

- Educational Programs
  - Citizens, businesses, agencies, farmers, boaters.
- Management Activities
  - Urban runoff programs, industry-led agricultural water quality efforts.
- Monitoring
  - Site-specific to whole watershed monitoring, hundreds of volunteers, targeted source identification efforts.

SAM Project

(Synthesis, Assessment and Management)

- Conducted preliminary assessment of water quality flowing to MBNMS.
- Statistical analysis of existing data.



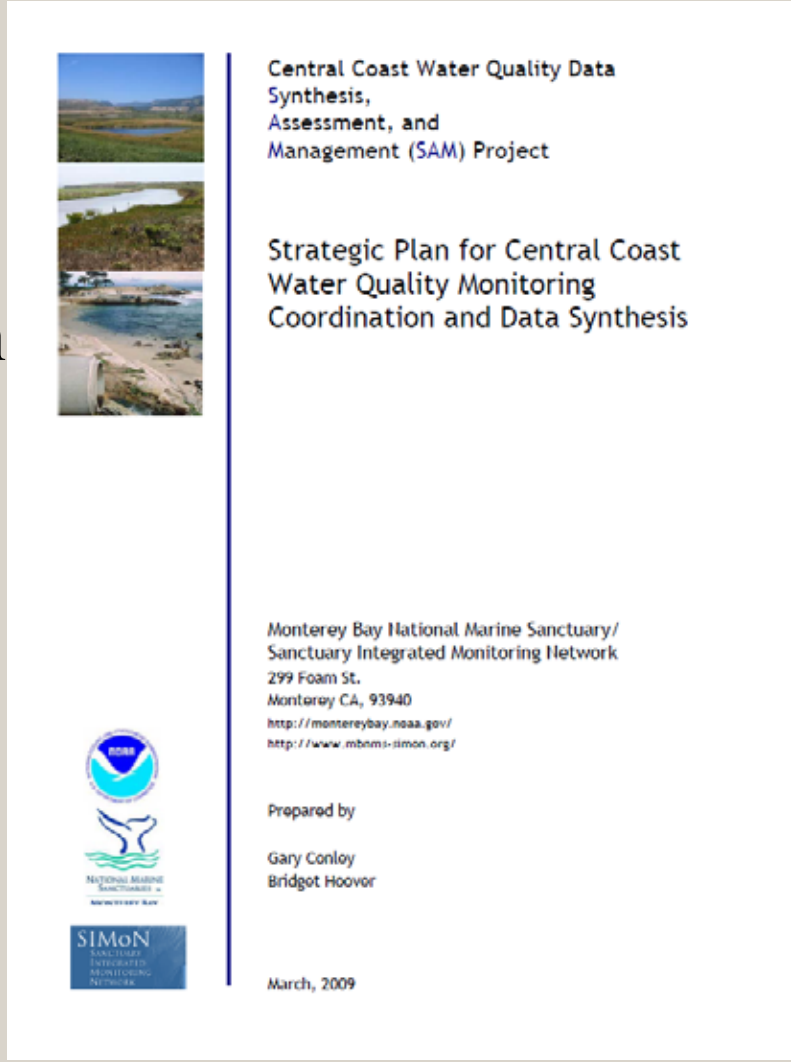
Sanctuary Condition Report

- **Offshore environment**-Water quality is good to fair
  - Conditions declining due to elevated contaminants and water temperature
- **Nearshore environment**-Water quality is good to poor
  - Conditions declining due to elevated POPs, metals, pathogens, nutrients
- **Estuarine**- Water quality is fair to poor
  - Conditions declining due to pollutants from agriculture and urban sources. Waterbodies impaired due to pesticides and pathogens.

http://sanctuaries.noaa.gov/science/condition/mbnms/

A **SAM** with a Plan

- Objectives
- Components
  - WQ Data Integration and Access
  - WQ Monitoring Coordination
  - Regional Reporting
  - Tracking Land-use Management
- Implementation
  - Partners identified for tasks
  - Timeframes defined for priority tasks



Central Coast Water Quality Data Synthesis, Assessment, and Management (SAM) Project

Strategic Plan for Central Coast Water Quality Monitoring Coordination and Data Synthesis

Monterey Bay National Marine Sanctuary/
Sanctuary Integrated Monitoring Network
299 Foam St.
Monterey CA, 93940
http://montereybay.noaa.gov/
http://www.mbnms-simon.org/

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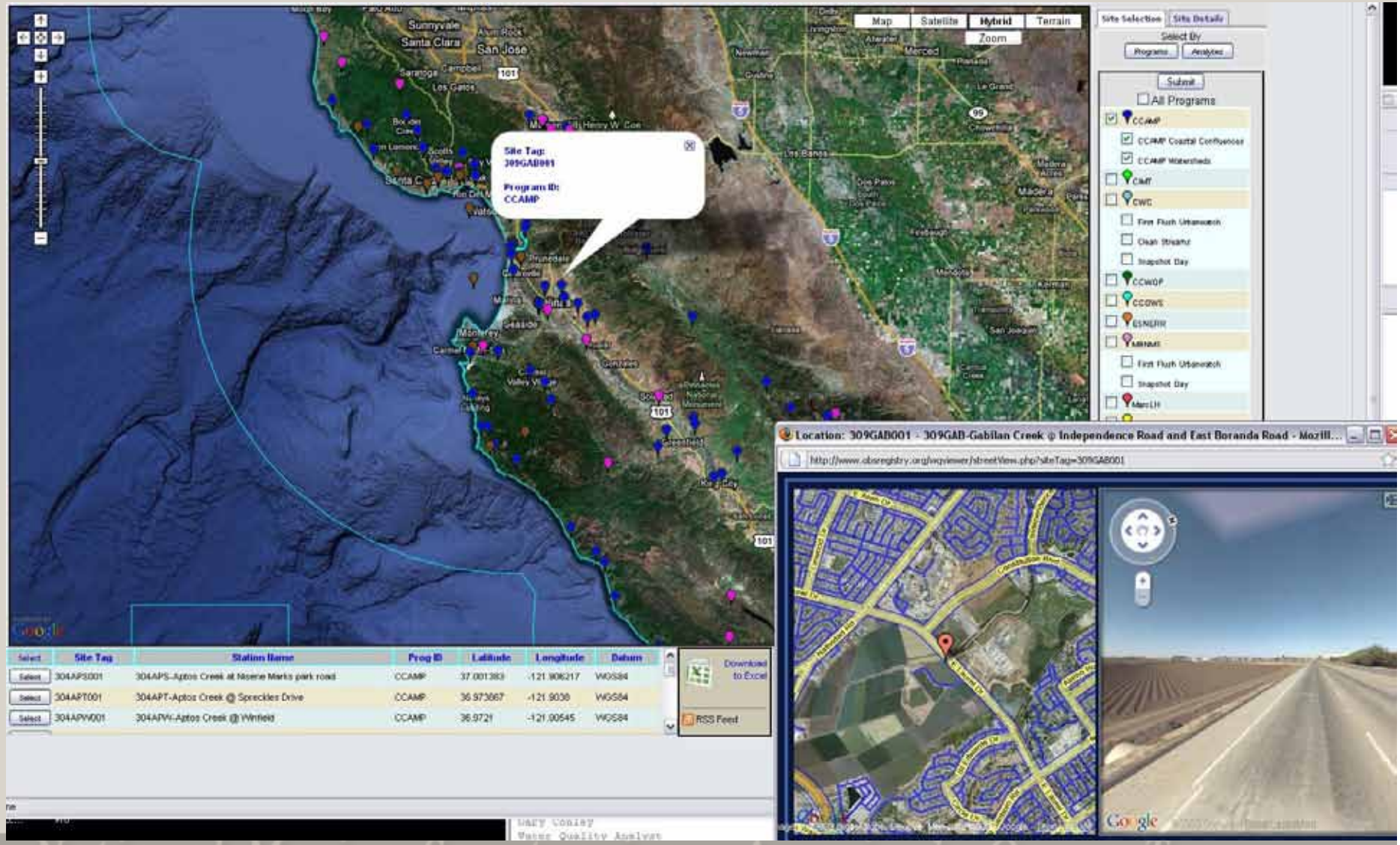
March, 2009

WQ Viewer

http://www.sanctuarysimon.org/regional_sections/maps/wqviewer/index.php

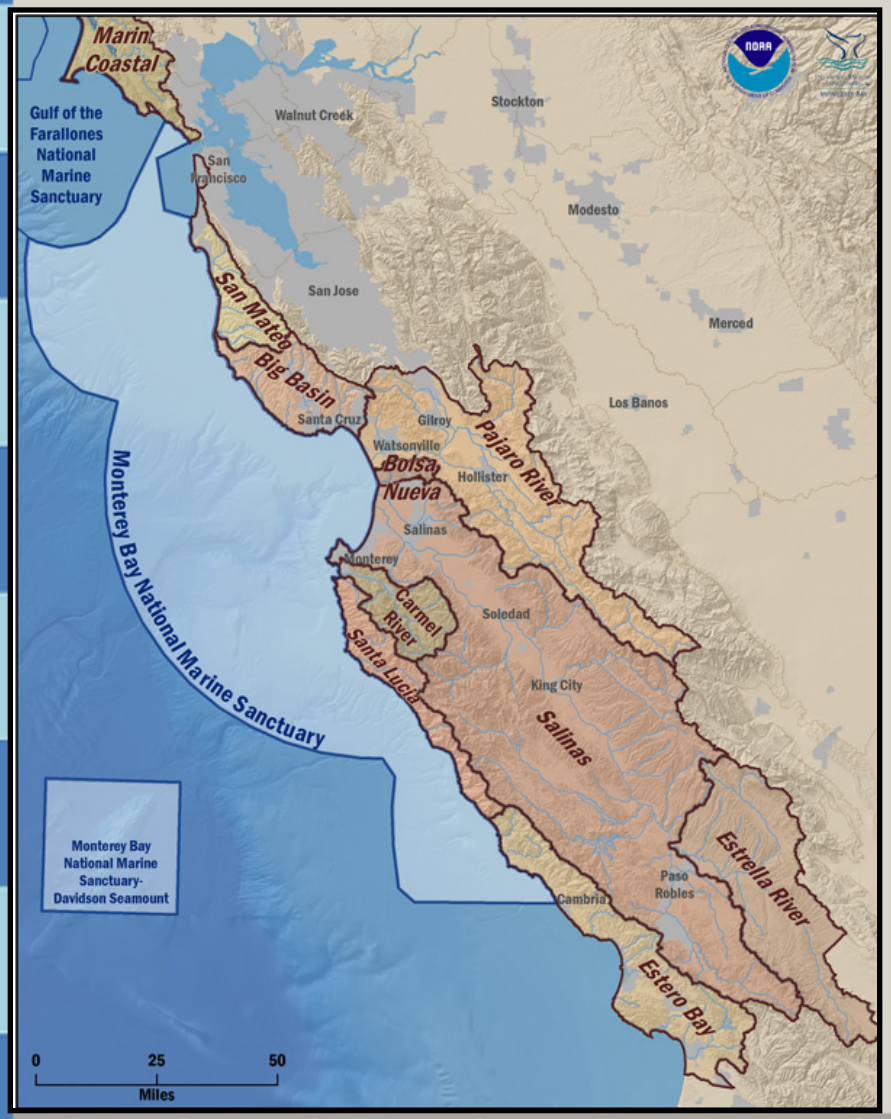


Agriculture & Rural Lands

- Agricultural Diversity
- Education and Outreach
- Management and Implementation
- Monitoring & Research

AWQA

A history of conservation through collaboration



AWQA

Agriculture Water Quality Alliance

RESOURCE CONSERVATION DISTRICT

UCCE University of California Cooperative Extension

NRCS Natural Resources Conservation Service

National Marine Sanctuaries Monterey Bay

Central Coast Agricultural Water Quality Coalition

AWQA in NMA

- Irrigation Nutrient Management Program
  - Agriculture Water Enhancement Program
  - EQUIP (San Mateo FB)
  - Prop 84 (proposed)
- RCD has stimulus funds for WQ and water conservation projects on 20 farms.
- RCD rural roads program
- April-May AWQA meeting will be in San Mateo

Other NMA Efforts

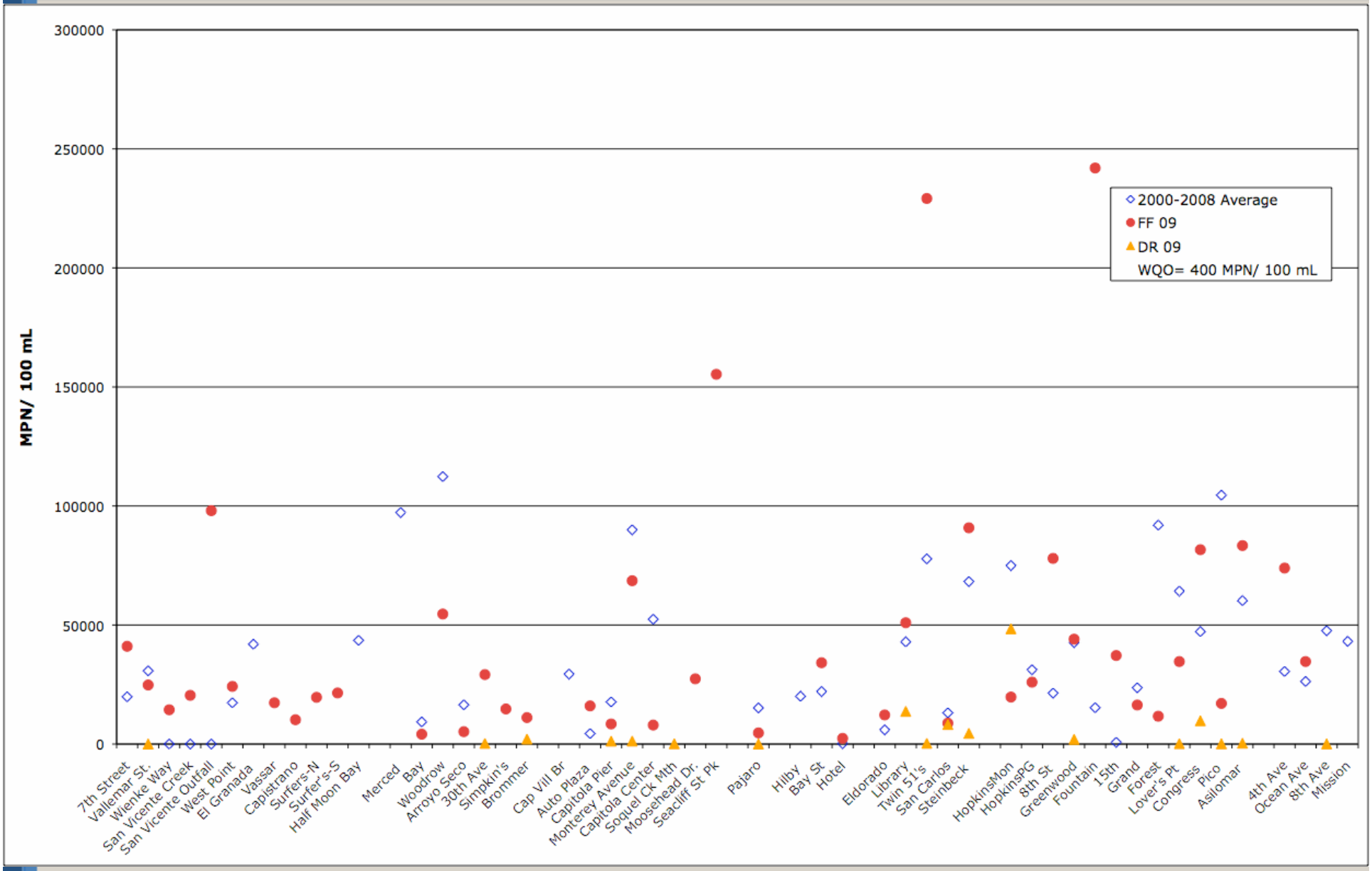
- Fitzgerald Marine Reserve Critical Coastal Area
  - Helped with development of the NPS Watershed Assessment

- Partnerships with the San Mateo RCD and the newly formed Watershed Discovery Foundation
  - Pillar Point FIB Harbor Study
  - B-WET grant to monitor 6 streams flowing to Fitzgerald Marine Reserve (Walk ‘n Talk)
  - Pescadero TMDL development

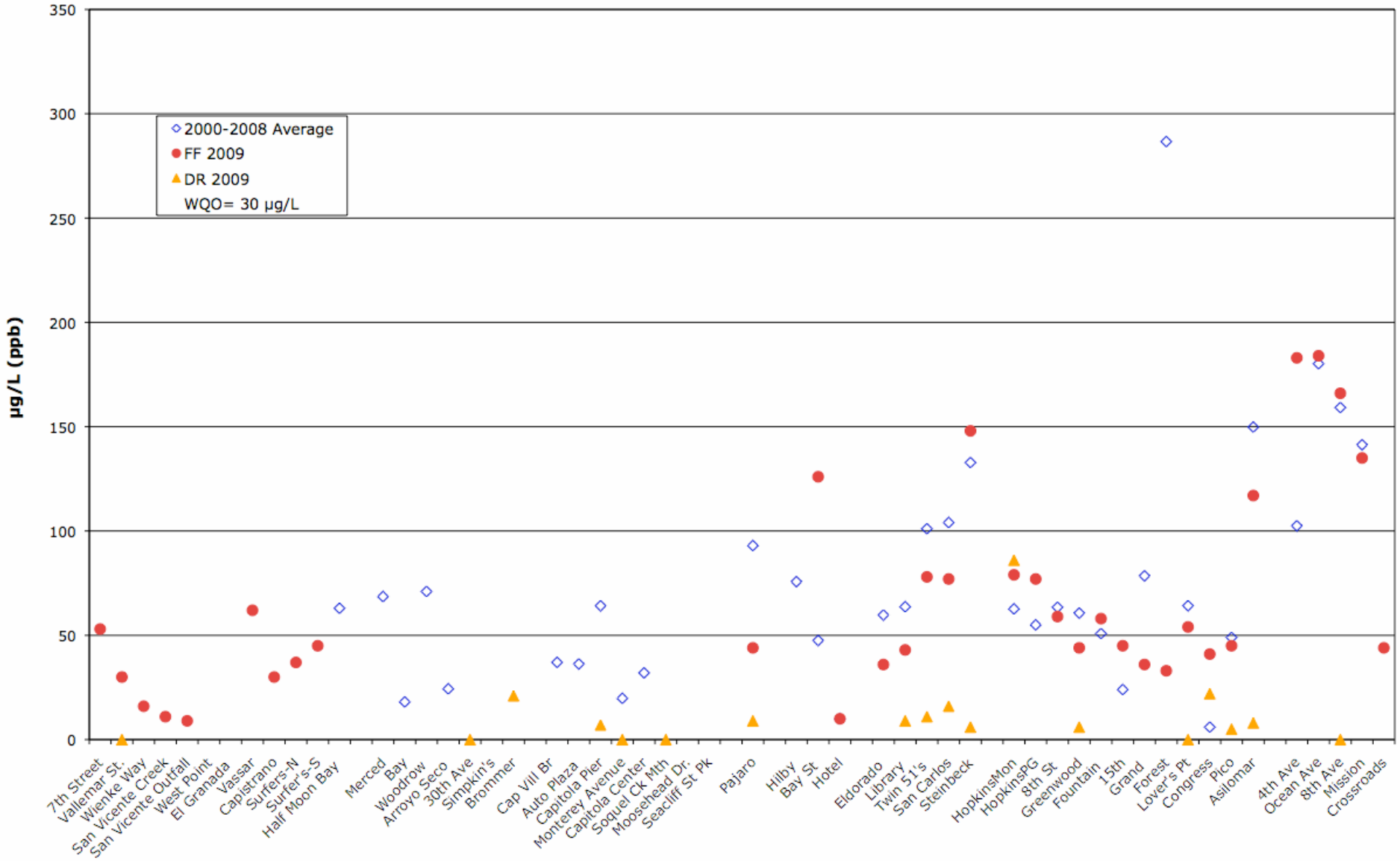
First Flush

- Began in 2000
- Urban outfalls from Montara (San Mateo County) to Carmel Valley (Monterey County)
- 47 storm drain outfalls in 10 cities
- Samples are analyzed for:
  - Metals: zinc, copper, lead
  - Nutrients: nitrate, urea, phosphate
  - Bacteria: *E. coli*, enterococcus
  - Total suspended solids
  - Field measurements

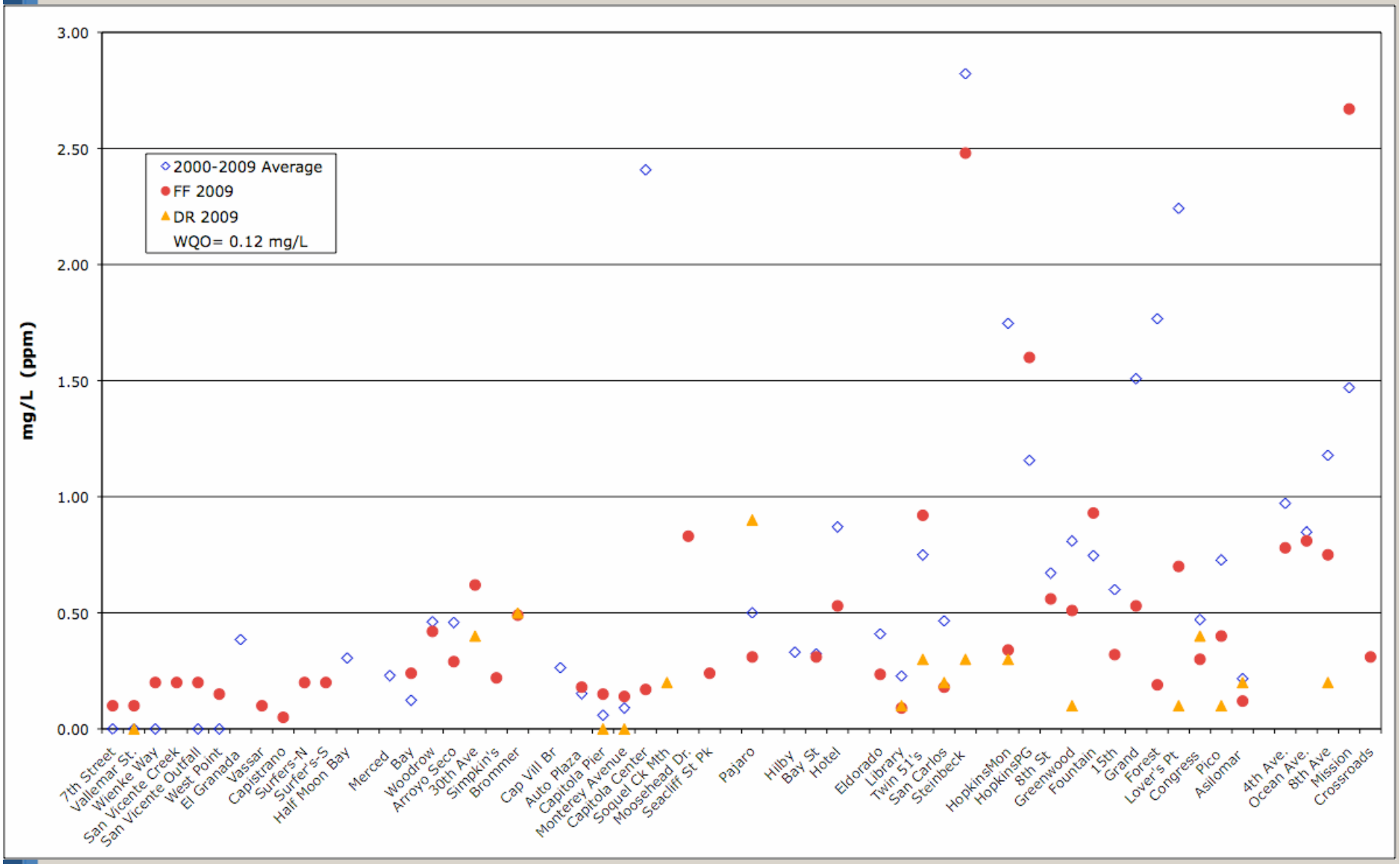
First Flush- *E. coli*



First Flush- Copper



First Flush- Orthophosphate

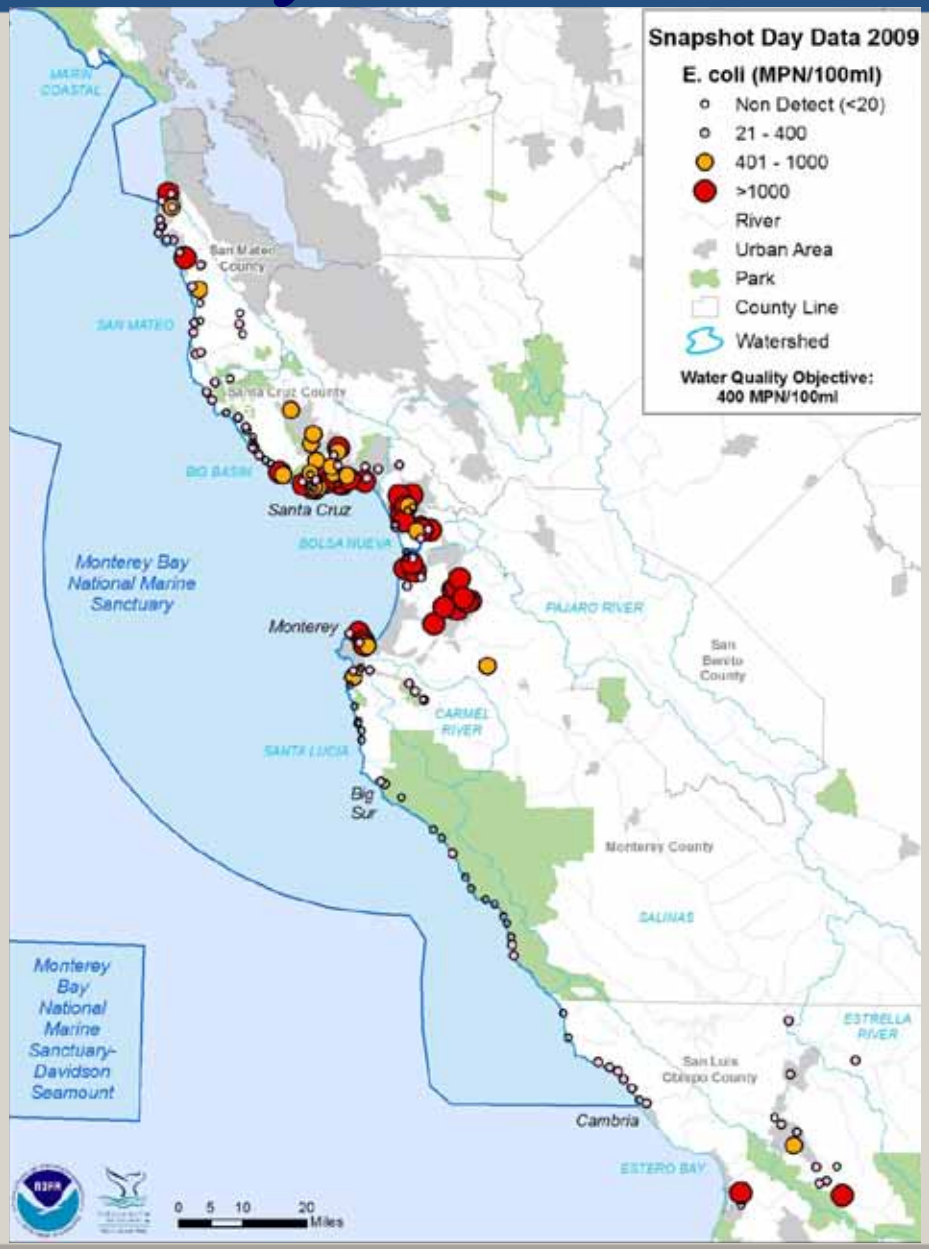


Snapshot Day

- Since 2001
- First Saturday in May
- Monitor 100+ streams
- Parameters
  - H_20 temperature
  - transparency/turbidity
  - conductivity
  - pH
  - dissolved oxygen
  - nitrate, orthophosphate
  - *E. coli*

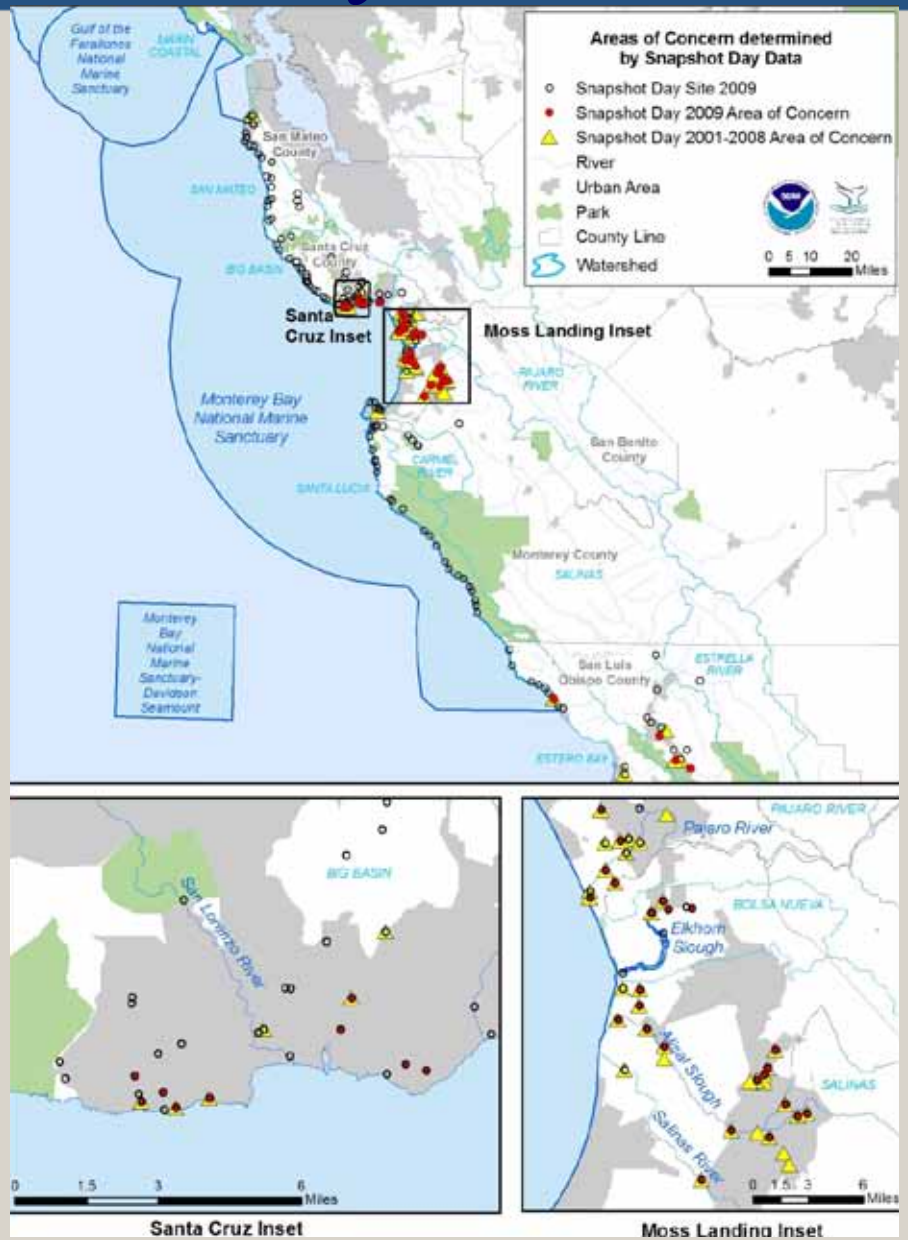
Snapshot Day

E. Coli bacteria

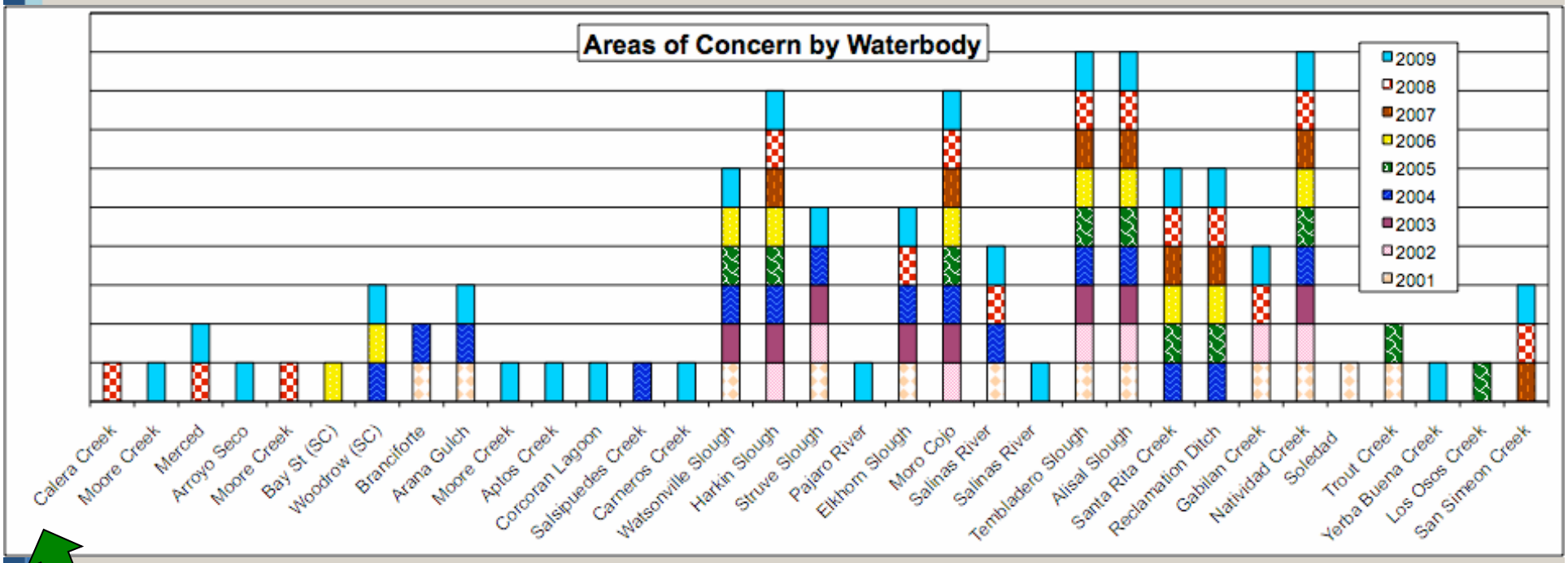


Snapshot Day

Areas of Concern-
any three parameters



Snapshot Day



Questions?

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