

# Highlights of RMP and SFEI Plans for 2010 (and Beyond!)

Jay Davis

Joint Meeting of the TRC and CTAG

May 11, 2010

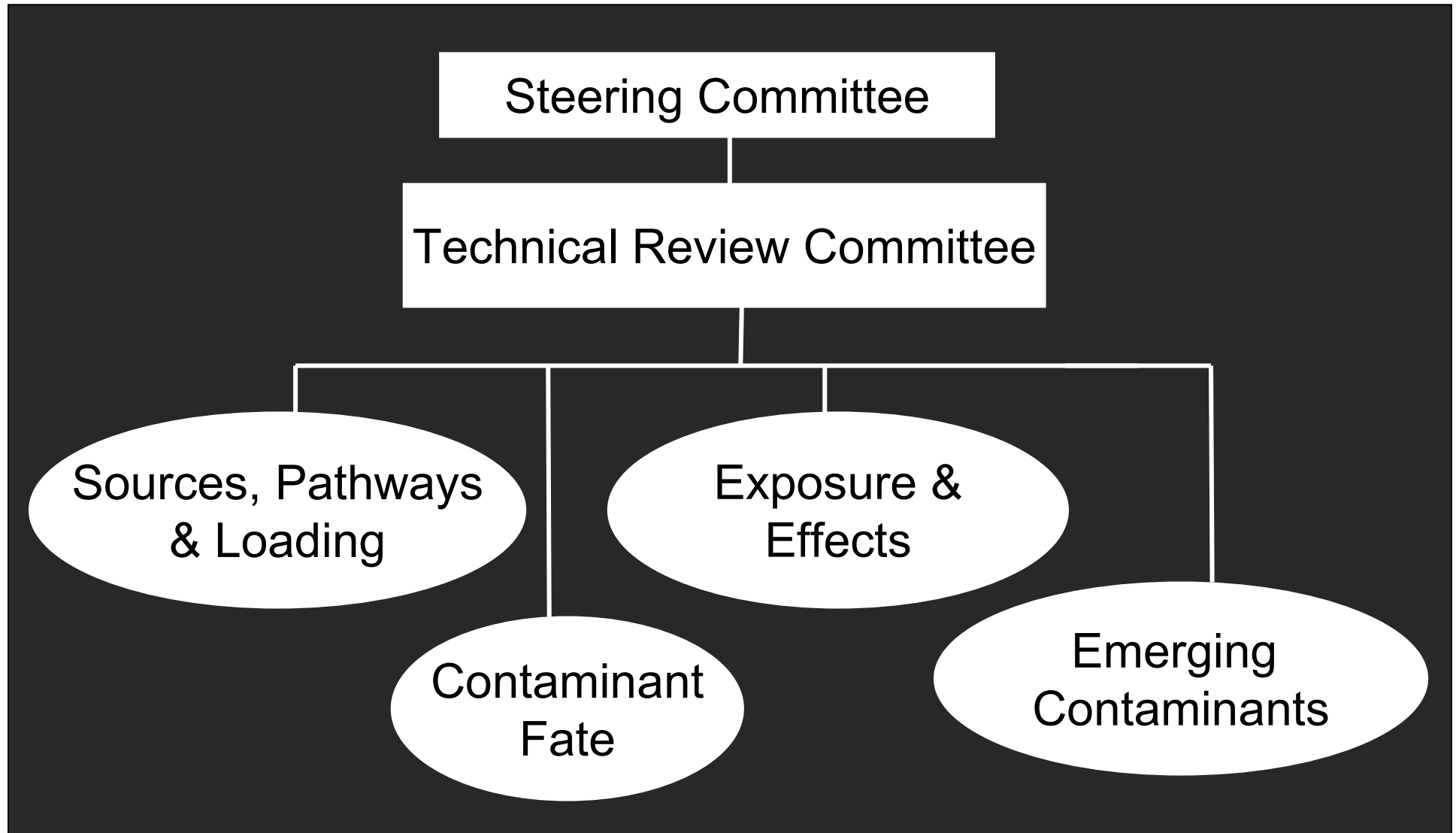


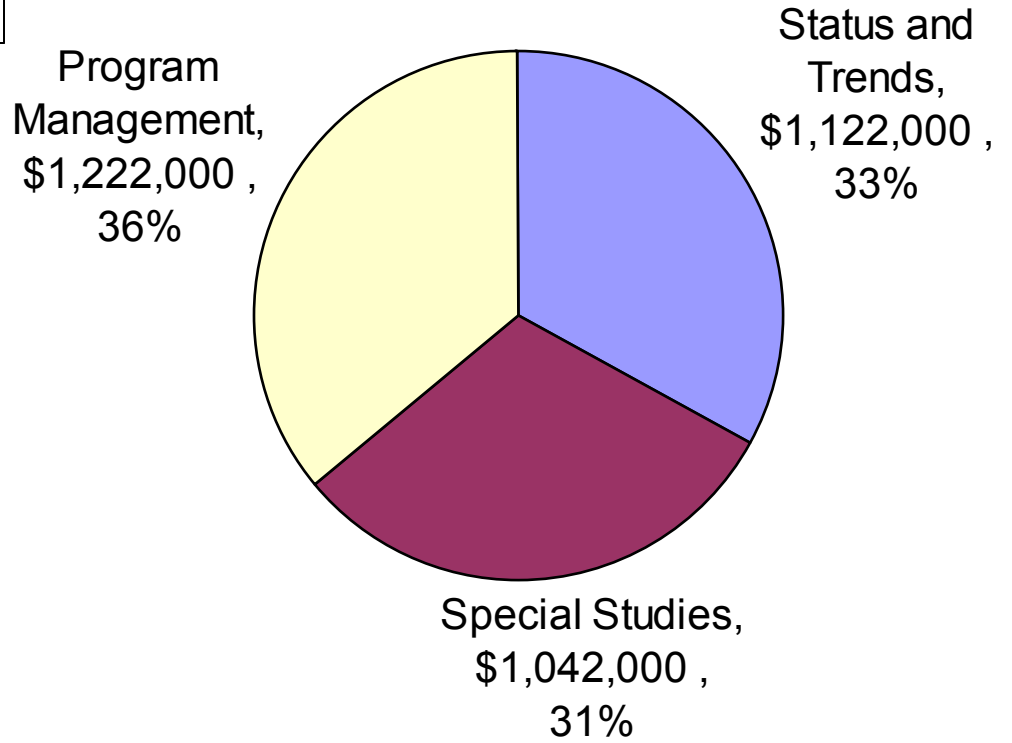
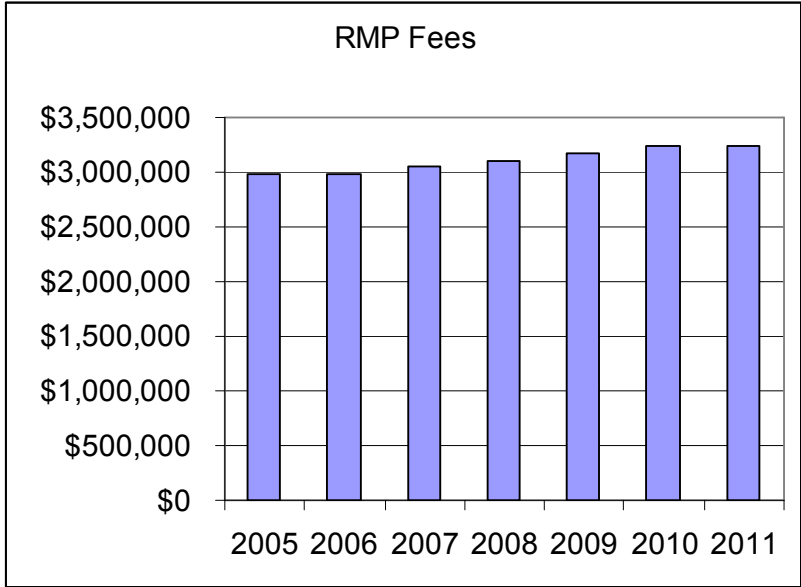
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# RMP Structure





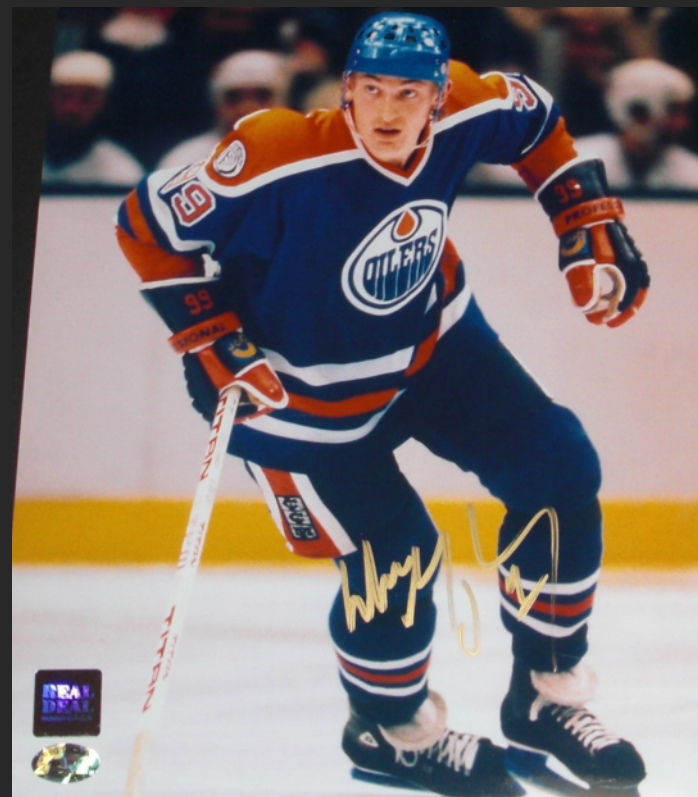
# The Goal

Collect data and communicate information about water quality in the San Francisco Estuary to support management decisions



# Recent Advances in RMP Planning

- Updated Goal and Management Questions
- Workgroup Five Year Plans
- Strategies
- Master Plan
  - Annual Planning Workshop



# Current Plans for Special Studies: 05-11-10

	2010	2011	2012	2013	2014	2015	6 Yr Total
<b>Mercury</b>	150	75	0	0	0	0	225
<b>PCBs</b>	50	50	0	0	0	0	100
<b>Dioxins</b>	78	54	89	20	20	0	261
<b>Emerging Contaminants</b>	116	125	0	0	0	0	241
<b>Small Tributaries</b>	270	340	540	485	410	0	2,045
<b>Other SPL</b>	110	0	0	0	0	0	110
<b>Exposure and Effects</b>	138	50	50	0	0	0	238
<b>Forecasting</b>	140	85	55	105	105	145	635
<b>SQO (S&amp;T + Special)</b>	<b>320</b>	<b>230</b>	<b>305</b>	<b>263</b>	<b>271</b>	<b>279</b>	<b>1,667</b>

Amounts in 1000s of \$

# Small Tributary Loading

## Management

- MRP
- TMDLs
- Prioritizing tributaries
- Prioritizing actions

## Studies

- Load Monitoring Plan
- Load Monitoring
- Simple Modeling
- Dynamic Modeling



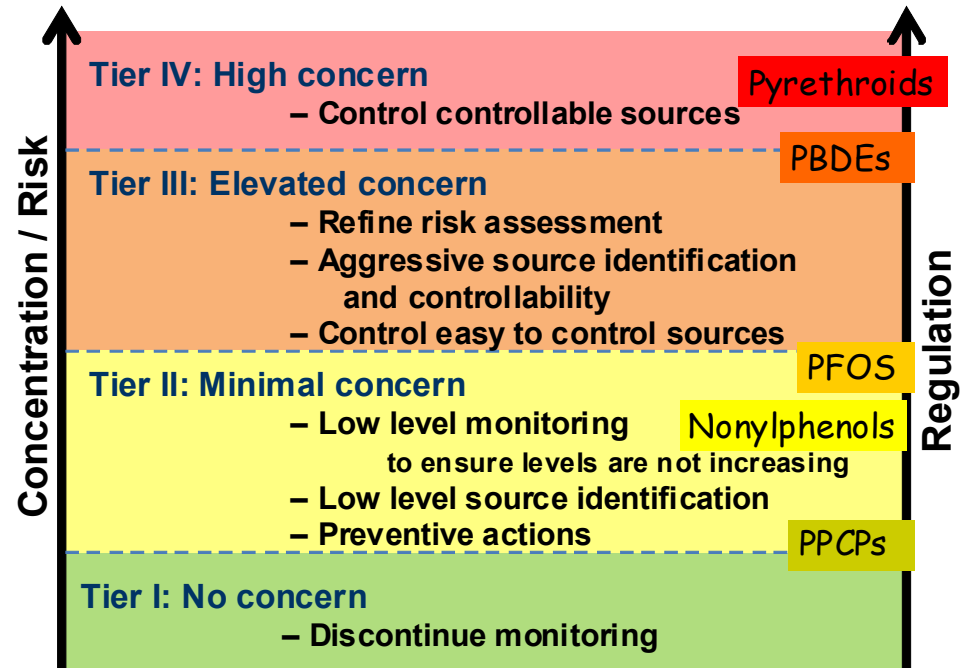
# Emerging Contaminants

## Management

- Water Board Emerging Contaminants Strategy
  - Tiered risk- and action-based monitoring plan

## Studies

- White Paper
- Broadscan
- NMW
- Axys Mussel Study
- More to come...





# Sediment Quality

## Management

- SQO implementation
- 303(d) listings
- Reasonable potential and permit requirements

## Studies

- Triad monitoring
- Index development
- Stressor identification



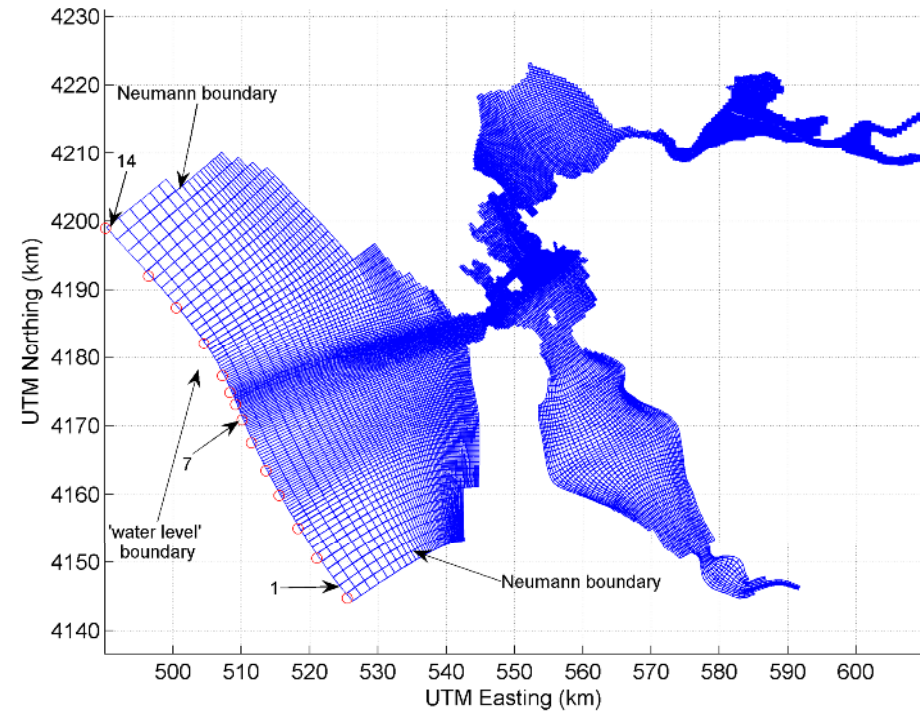
# Forecasting

## Management

- TMDLs
- Prioritizing tributaries
- Prioritizing margin sites
- Prioritizing actions

## Studies

- Bay and margin model



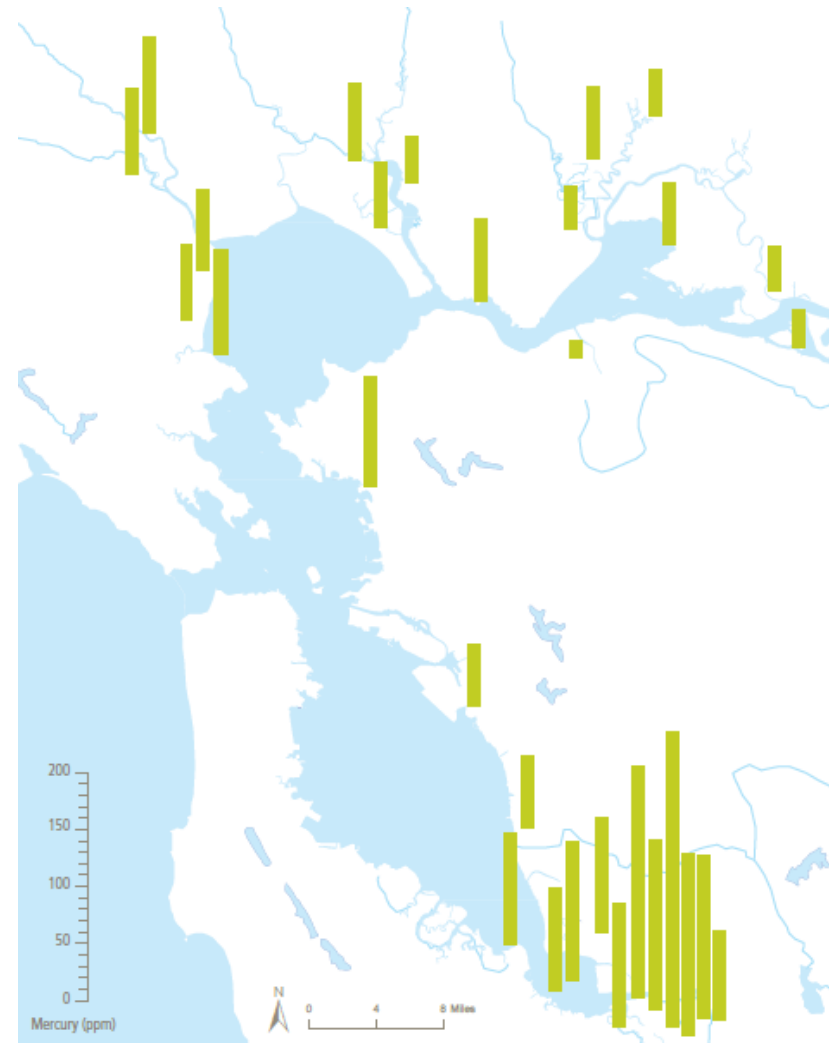
# Mercury

## Management

- Implementation of TMDL 1.0
- Development of TMDL 2.0

## Studies

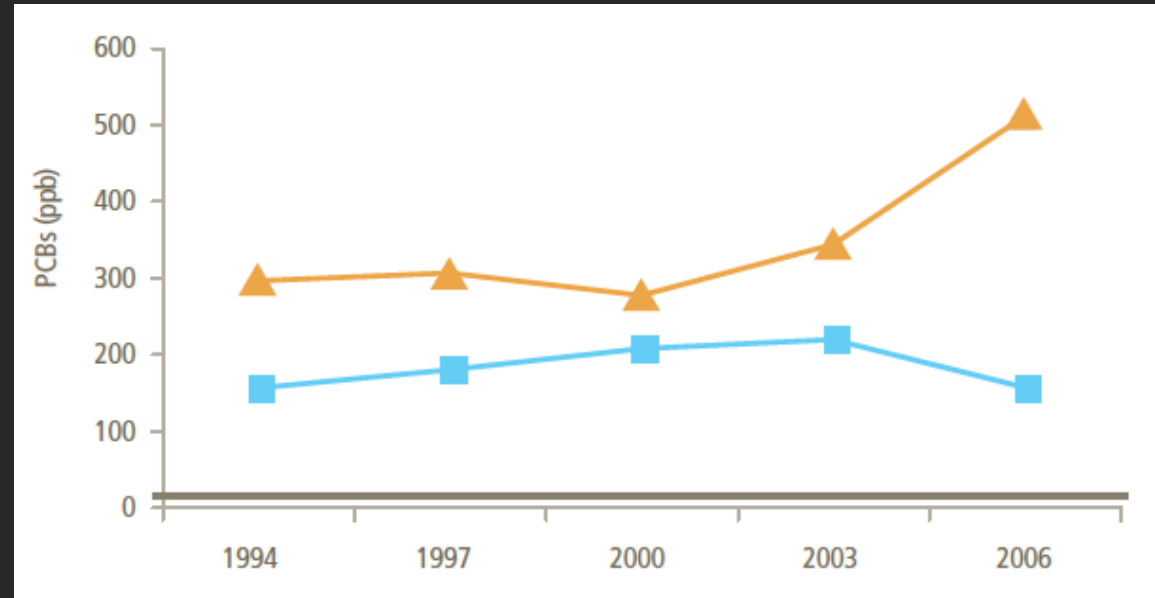
- Small fish monitoring
- Mercury isotopes
- Passive samplers
- Modeling
- More to come...



**Mercury in Small Fish**

# Other Priority Topics & Potential Topics

- PCBs
- Dioxins
- Effects
- Atmospheric deposition
- Trash particles
- Nutrients
- Bacteria



PCBs in Sport Fish

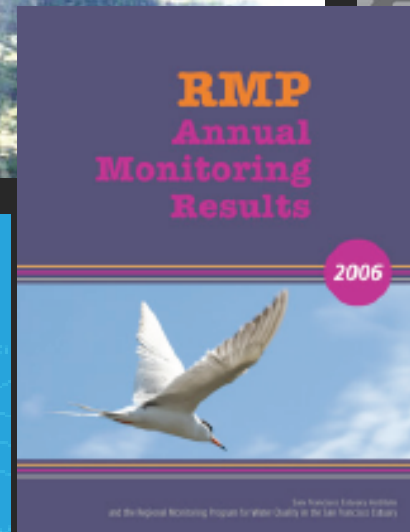
# S&T Highlight: Coordinated Sport Fish Sampling

- SWAMP, Bight '08, RMP
- Combined budget of \$1.3 million
- Budgetary efficiencies
- Joint assessment and reporting across programs
- Better information on regional and statewide scales



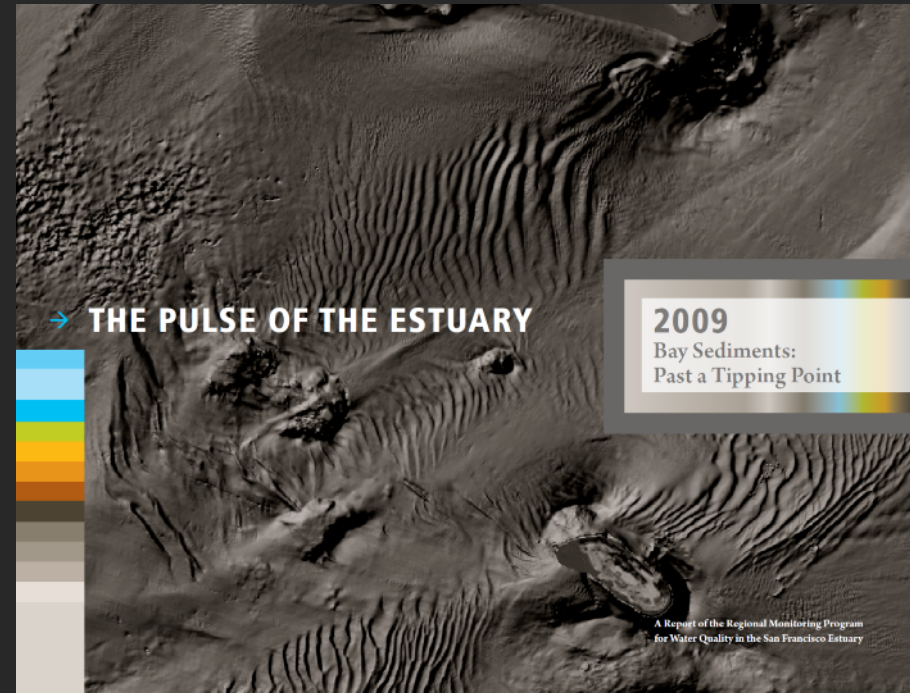
# Disseminating Information

- Pulse
- Technical reports
- Journal articles
- Fact sheets
- RMP Annual Meeting
- Workshops
- Web



# The Pulse

- 2007 - 35 Years after the Clean Water Act
- 2008 - Mercury
- 2009 - Sediment
- 2010 - Linking Watersheds and the Bay
- 2011 - (Emerging Contaminants)



# SFEI/ASC

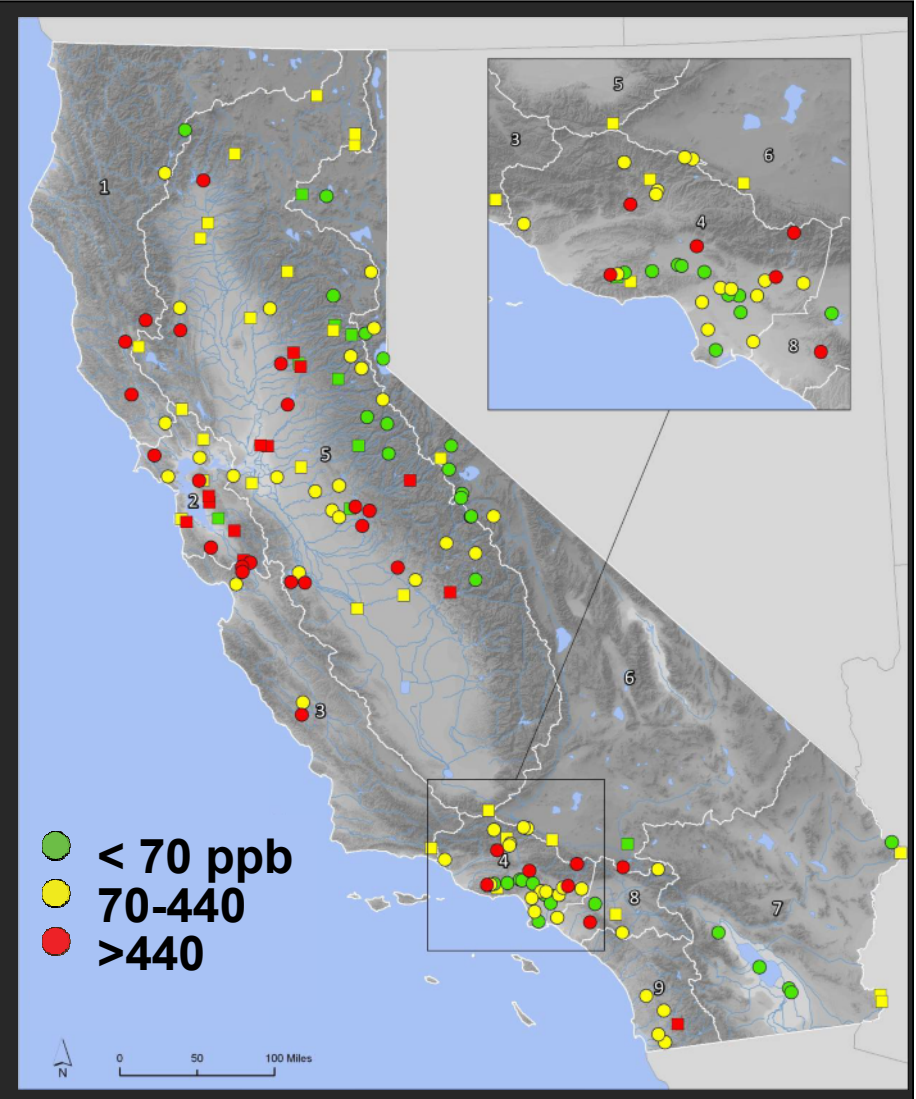
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*Region-wide Science for Ecosystem Management*





# Contaminants

- SWAMP Bioaccumulation
- Delta RMP
- SQO Phase 2
  - Delta
  - Indirect effects



# California Wetland and Riparian Protection Framework

SFEI/ASC provides science support:

- Statewide definitions, classification, and delineation methods
- Protection through new State policy and revised Water Code
- Coordinated, regional monitoring plans to assess policies, programs, and projects based on standardized mapping and condition assessment
- Statewide data management through regional data centers with public access

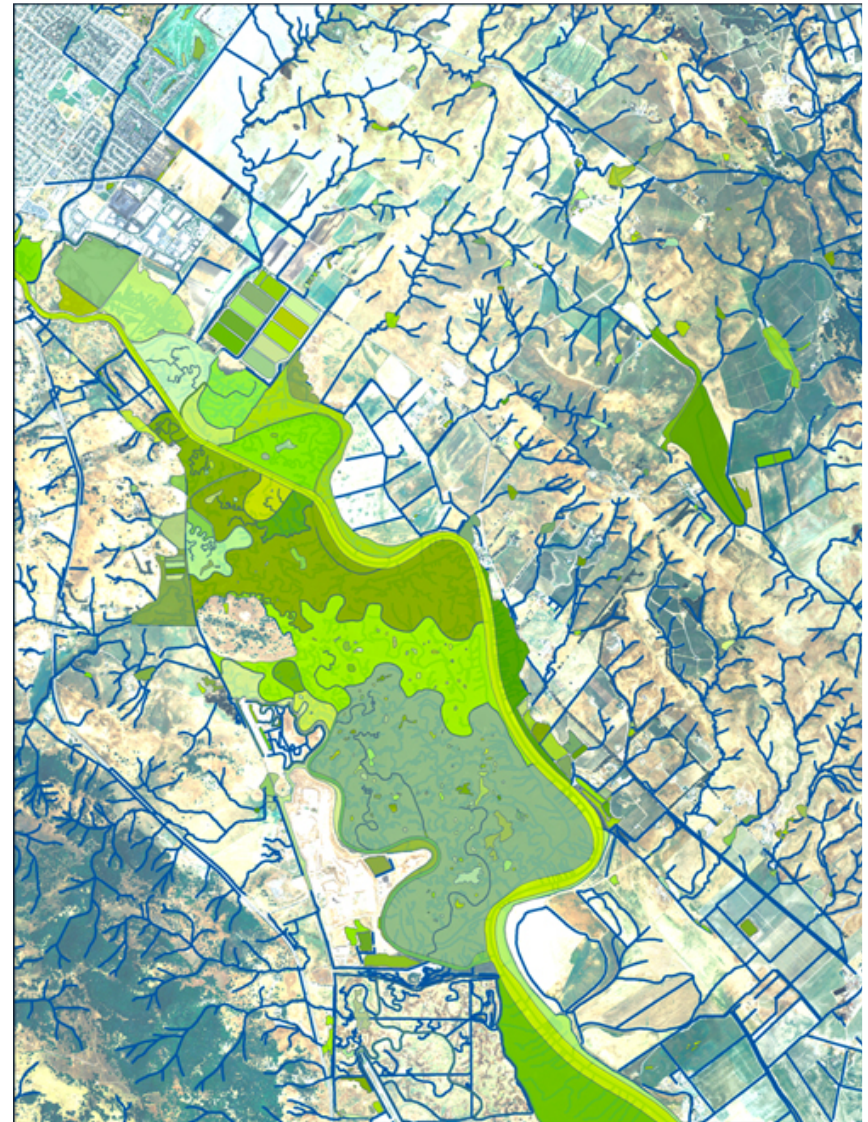
# Bay Area Base Map

Streams, Wetlands and Riparian Areas

- Geographic Scope: SWRCB Region 2
- Standardized mapping methods
- Based on 2005 NAIP imagery
- Stream order and flow direction



- Riparian areas mapped based on vegetation and hillslope



Example: Number of Features in Sonoma Quad			
	NWI	NHD	WRMP
Streams	191	472	3,209
Wetland Polygons	211	166	2,691
Riparian Polygons	0	n/a	3,279
Total	402	638	9,179

# Watershed Science Program

- Load monitoring
  - Guadalupe R.
  - *New-Walnut Creek*
- LID assessment/design
  - Green infill - Clean Stormwater
  - El Cerrito Green Streets Pilot
- Source Tracking/BMP support
  - North Richmond Pump Station
  - PCBs in Building Materials
  - *New-Senador Mine Rehabilitation*
  - *New-BASMAA MRP/BMP Support*
- Geomorphic Assessments
  - Alameda Creek
  - Napa River
  - *New-Zone 7 Alameda*



# Historical Analysis of Southern California Coastal Lagoons

## Goals:

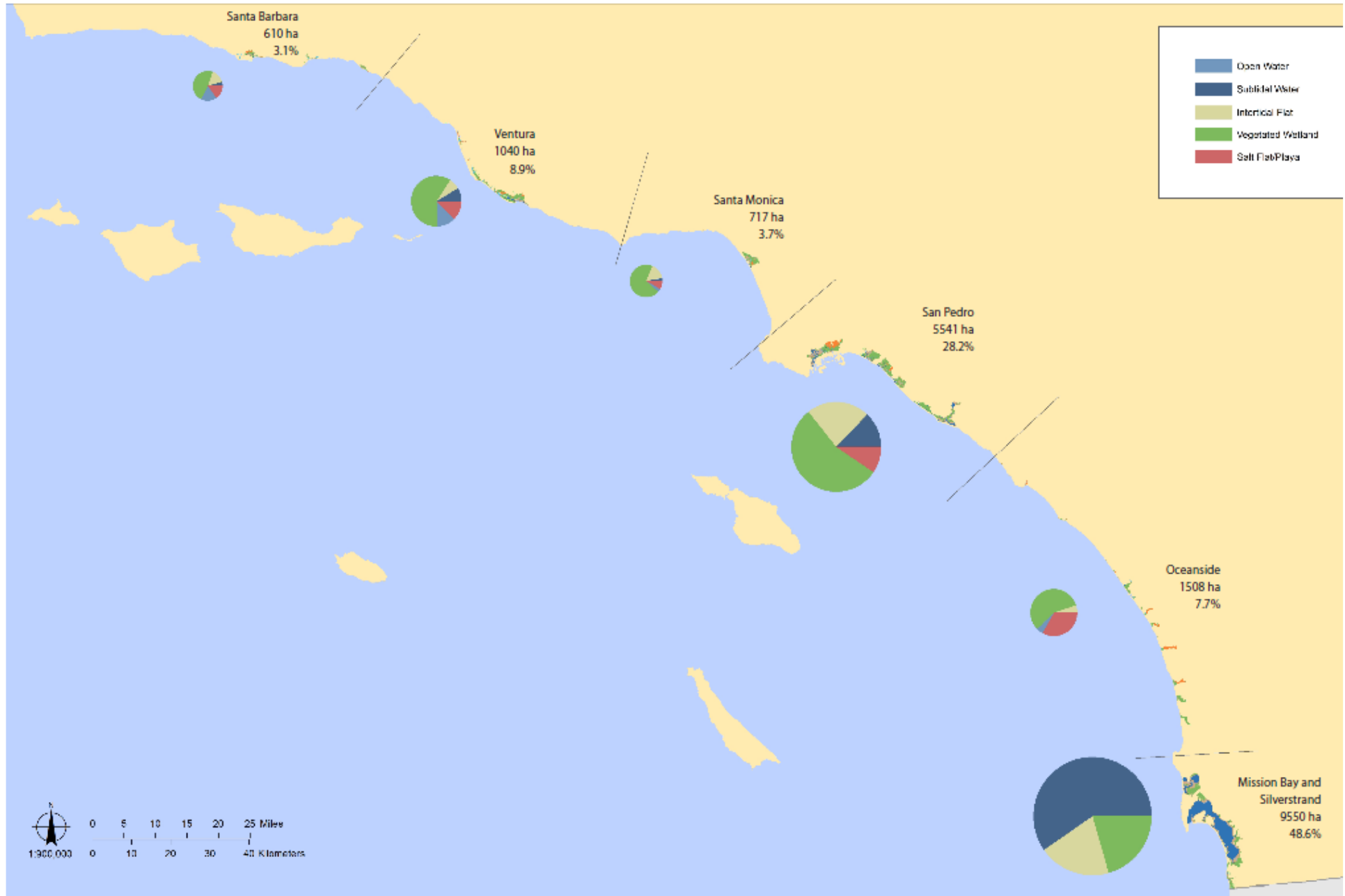
- document the extent of losses of different wetland types  
→ Prioritize restoration targets
- understand natural controls on wetland formation and maintenance  
→ More cost effective, sustainable projects



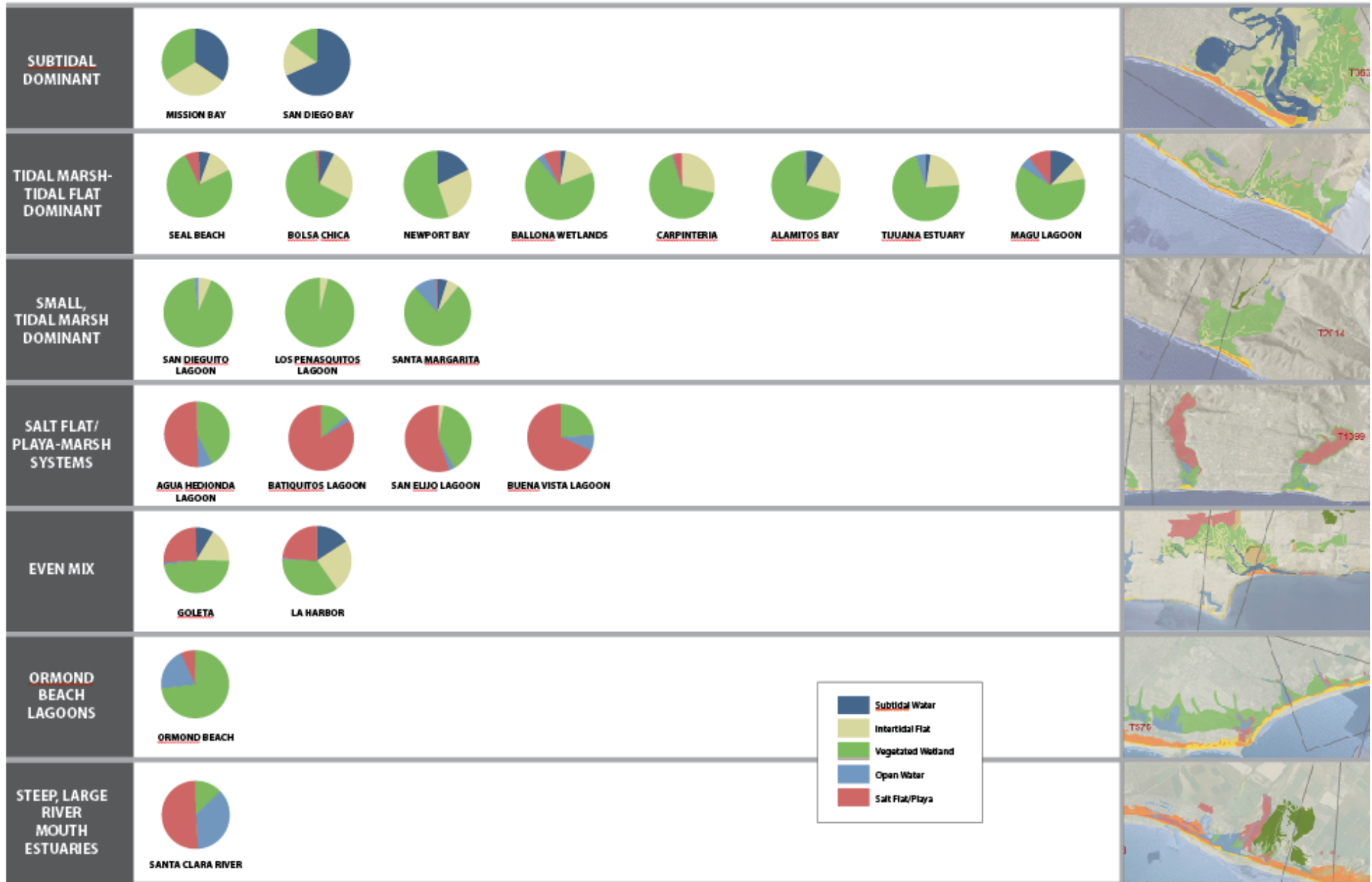
California State University  
**Northridge**



# Subregional distribution of major habitat types



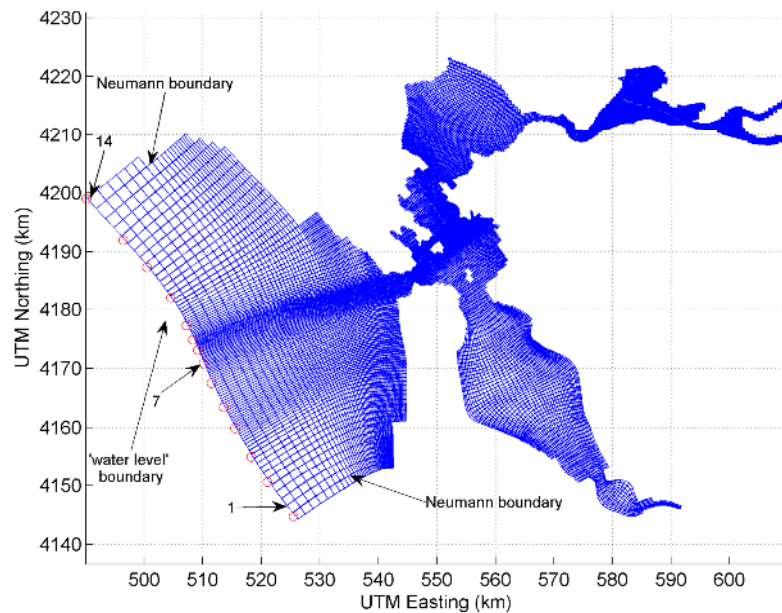
# Regional “archetypes”



# Environmental Informatics

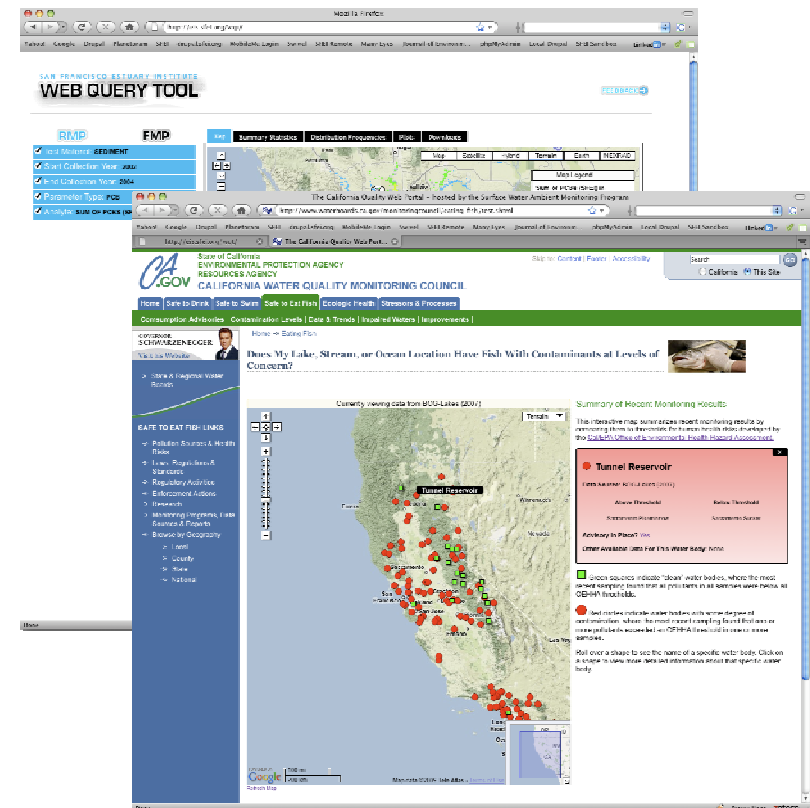
## ✓ Ecosystem Modeling

- Watershed Models
- 3D Bay Model



## ✓ Information Dissemination

- Monitoring Council Web Portals
- SFEI Regional Data Center





# Information Technology

- Web development (Wetlands Portal, Central Valley Monitoring Inventory, eCRAM)
- Web hosting and management for SFEI and partners
- Information infrastructure management

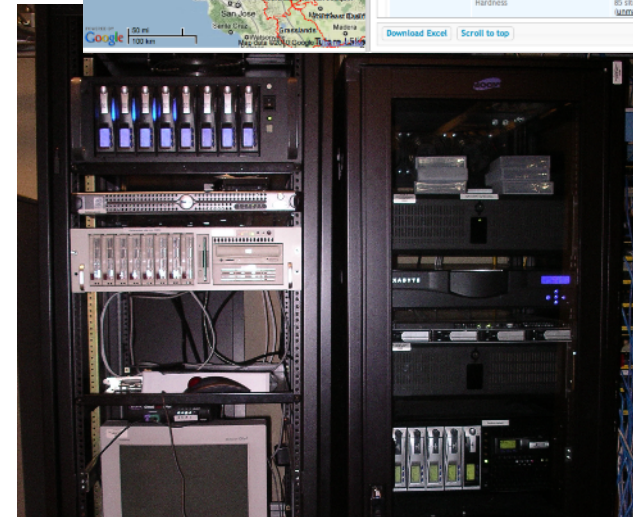
Central Valley Watershed Monitoring Directory  
Main Directory

Basin:  All  Delta  Sacramento River  San Joaquin River  Tulare Lake

Map Satellite Hybrid Terrain

Programs	Agencies	Parameters	Sites	Help	Debug
Analyst Group	Parameter	No of sites	Basin		
Biosessment	Benthic Macroinvertebrates	9 sites	Sacramento River		
	Macrophytes	9 sites	Sacramento River		
	Periphyton	9 sites	Sacramento River		
	Physical Habitat	9 sites	Sacramento River		
	Physical habitat	1 sites	Sacramento River		
	Phytoplankton	9 sites	Sacramento River		
Disinfection Byproducts	Total Residual Chlorine (TRC)	5 sites	Sacramento River		
	Trihalomethanes	33 sites	Sacramento River		
	THMFP	2 sites	Sacramento River		
General Water Quality	Alkalinity	3 sites	Sacramento River		
	Dissolved Oxygen (DO)	184 sites	Sacramento River		
	Electrical Conductivity (EC)	101 sites	Sacramento River		
	Hardness	85 sites	Sacramento River		

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- Reports
- Program information
- Data

