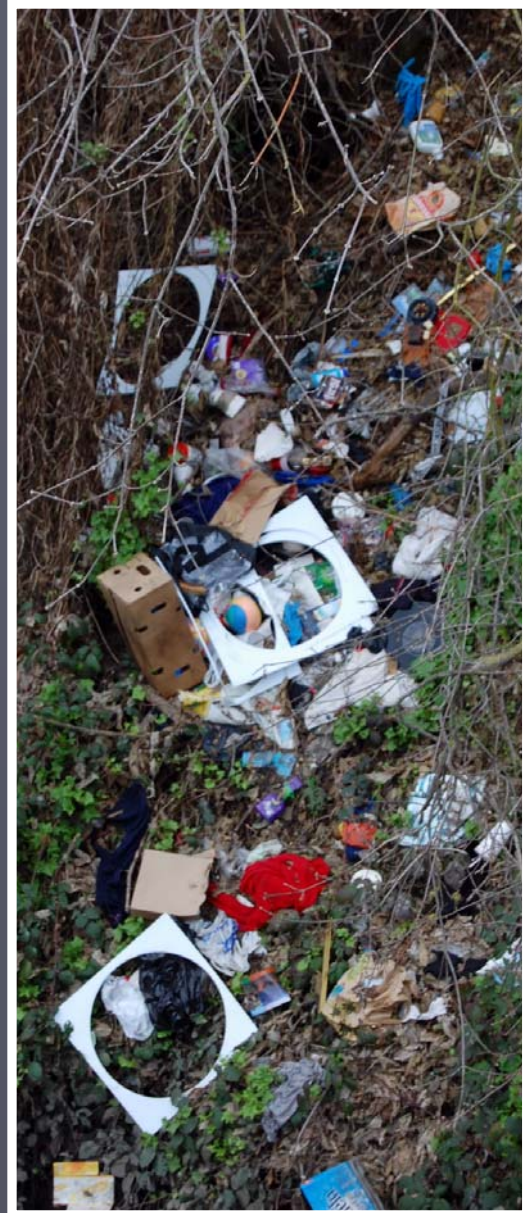


# WATER QUALITY ASSESSMENT AND 2008 303(d) LIST OF IMPAIRED WATER BODIES

Testimony Hearing

January 14, 2009

Barbara Baginska  
Richard Looker



# Water Quality Assessment

- ❖ Federal Clean Water Act Section 305(b) requires water quality assessment
- ❖ Waters not meeting water quality standards must be listed as impaired - 303(d) List
- ❖ Last 303(d) List adopted by the State Board in 2006
- ❖ Applied 2004 State Board Listing Policy
- ❖ Results of 305(b) assessment and 303(d) List compiled into an Integrated Report for submittal to US EPA

# 303(d) List Elements

- ❖ Water bodies and pollutants/stressors
  - Kirker Creek / Pyrethroids or Coyote Creek / Trash
- ❖ Listing / De-listing recommendations
- ❖ Revisited every 2 years



Kirker Ck – Feb 2004

# Region's Role

- ❖ Assemble existing, readily available water quality information
- ❖ Develop lines of evidence into fact sheets to support our assessments
- ❖ Staff develops recommendations for changes to the 303(d) List
- ❖ Board approves recommendations

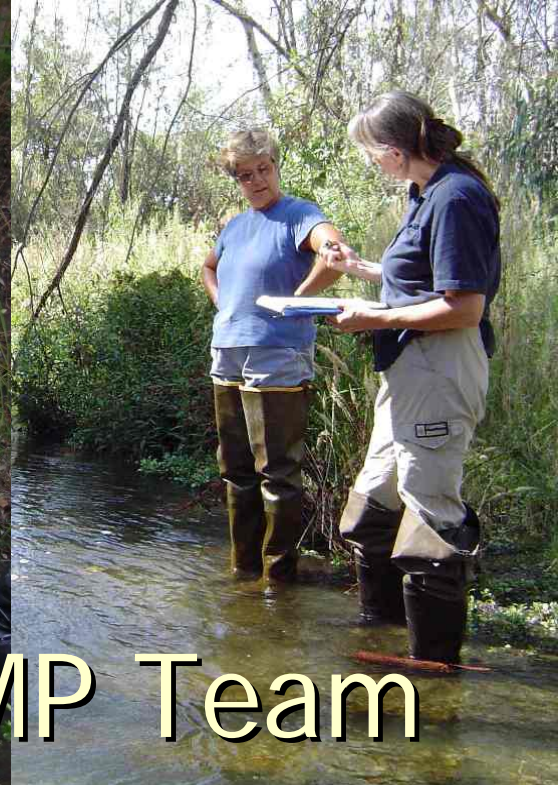
# 2008 303(d) Process

- ❖ Public solicitation (December '06)
  - 16 submittals (February '07)
- ❖ Draft Report (October '08)
  - 26 comment letters (December '08)
- ❖ Report revisions, response to comments, our Board approval (February '09)
- ❖ State Board action (2009)

# Assessment of SWAMP Data

- ❖ 2001-2006 SWAMP data set
  - 37 watersheds
  - More than 190 monitoring locations
  - 3 hydrologic regimes: wet weather, spring flow, and dry weather
  - Comprehensive suite of parameters: chemical, biological and physical





# SWAMP Team



# 2004 State Board Listing Policy

- ❖ Adopted in 2004 & used by State Board in 2006
  - Offers systematic framework for data analysis
  - Provides listing and delisting factors
  - Listing factors include a process for listing based on weight of evidence



# Integrated Report Categories

1. Evidence shows all designated uses supported
2. Evidence shows some uses supported (at least 1)
3. Evidence is insufficient to determine if any designated use is attained
4. Evidence shows at least one use not supported - TMDL not needed because:
  - a. TMDL completed
  - b. Other control measures will attain standards
5. Evidence shows at least one use not supported - TMDL needed

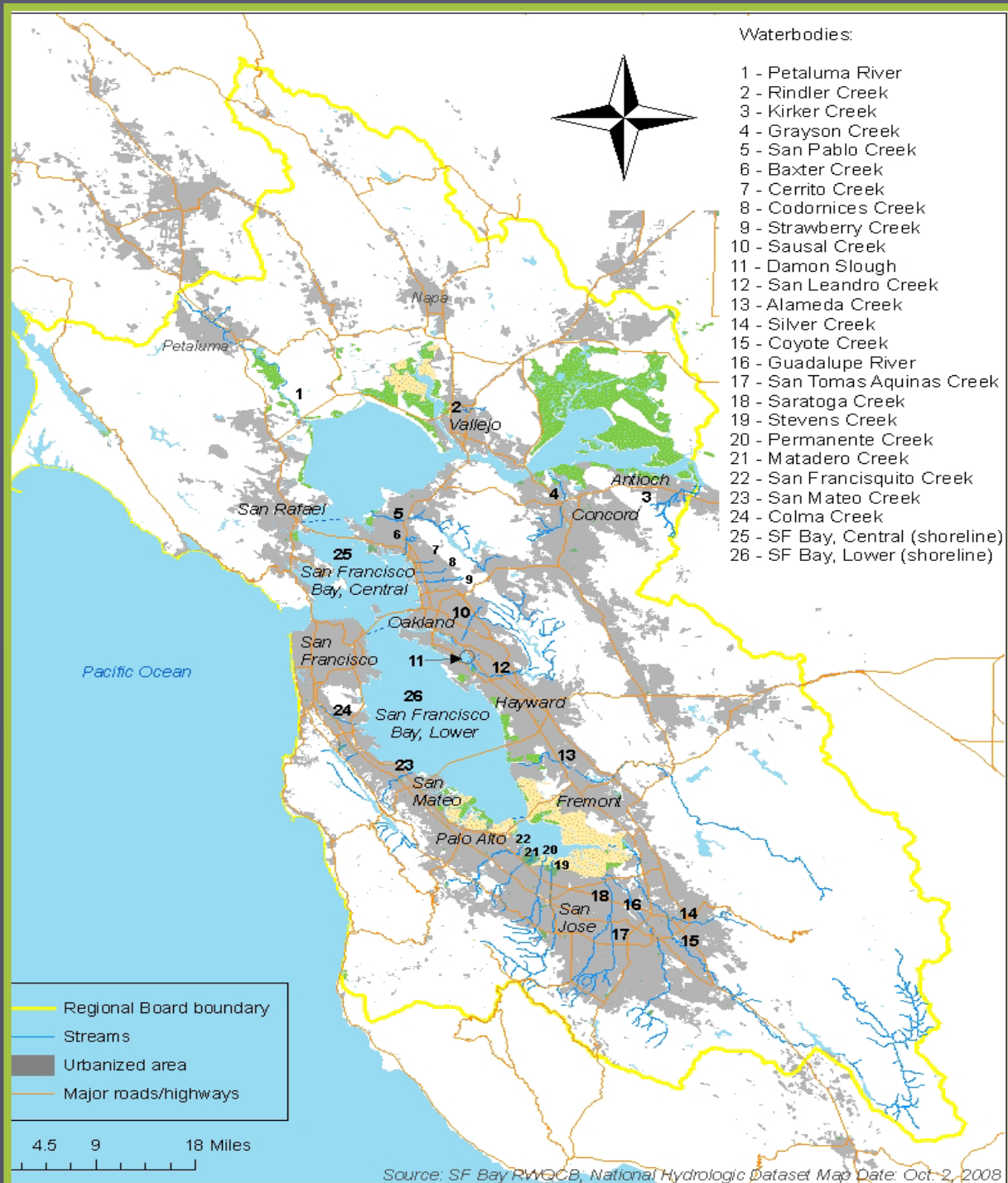
305(b)

303(d)  
List

# Additions to 303(d) List

## Trash

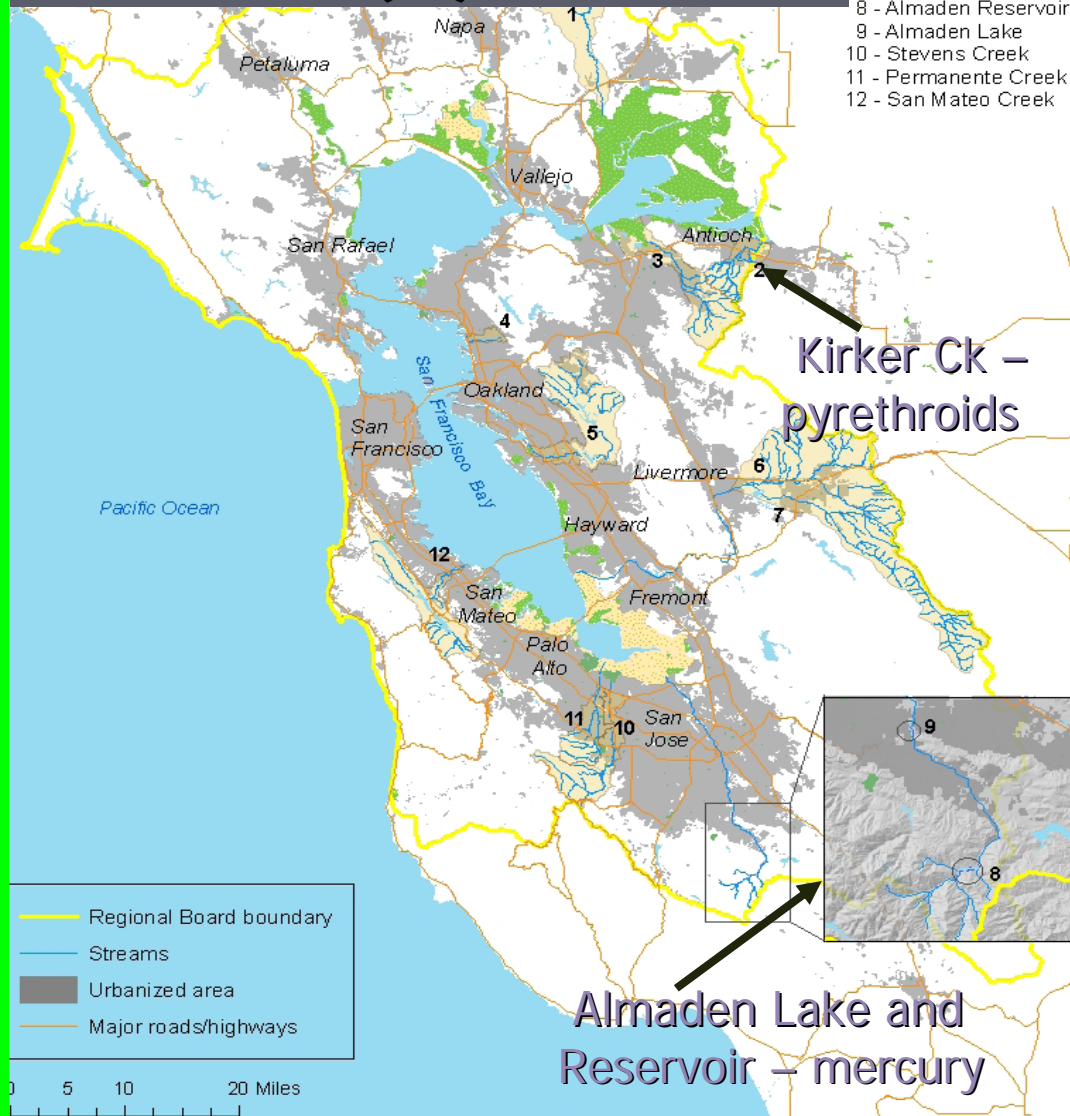
- 24 streams
- 2 shoreline areas



# Additions to 303(d) List

## Waterbodies

- 1 - Suisun Creek
- 2 - Kirker Creek
- 3 - Mt. Diablo Creek
- 4 - Codornices Creek
- 5 - San Leandro Creek
- 6 - Arroyo Las Positas
- 7 - Arroyo Mocho Creek
- 8 - Almaden Reservoir
- 9 - Almaden Lake
- 10 - Stevens Creek
- 11 - Permanente Creek
- 12 - San Mateo Creek



Source: SF Bay RWQCB, National Hydrologic Dataset Map Date: 06/01/00

# Other Pollutants

Solano County:

1. Suisun - **dissolved oxygen, temperature**

Contra Costa County:

3. Mt. Diablo - **water toxicity**

Alameda County:

4. Codornices - **temperature**
5. San Leandro - **chromium VI**
6. Arroyo Las Positas - **eutrophication**
7. Arroyo Mocho - **temperature**

Santa Clara County:

10. Stevens - **temperature**
11. Permanente - **selenium, water toxicity**

San Mateo County:

12. San Mateo - **sediment toxicity**

# Proposed De-Listings

## ❖ Nickel

- Sacramento-San Joaquin Delta, San Pablo Bay and Suisun Bay



# Proposed Revisions

- ❖ No TMDL required -addressed by action other by TMDL
  - Castro Cove, Richmond Sediment Hot Spot

# Lots of Trash Data Assessed

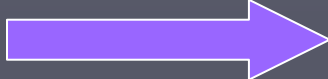

- ❖ Rapid Trash Assessments
  - Quantitative trash count and characterization
  - Scores established for trash impacts



## ❖ Photographic Evidence

- More than 900 photos submitted
- Developed methodology for impairment determination

# SWAMP Rapid Trash Assessment

- ❖ Assess 100 foot stream sections in wide range of conditions, from rural residential to dense urban areas
- ❖ Evaluate 6 parameters of trash impacts
  - level of trash  **Non-contact rec. (REC2)**
  - number of items found
  - threat to aquatic life  **Wildlife habitat (WILD)**
  - threat to human health
  - illegal dumping
  - trash accumulation
- ❖ Poor Condition Score (pre-defined) = Listing

# Assessment Based on Photos

- ❖ Reviewed all photos to establish assessment score for the **"Level of Trash"** (REC2) and **"Threat to Aquatic Life"** parameters (WILD).
  - Require "panoramic" and close-up photos
  - Was visual impression of the photos similar to that for locations scoring in the 'poor condition' category?
  - If so, REC2 or WILD not supported
- ❖ Generally, listing required two or more sites on at least two occasions with **"Poor Condition"**



## Example of Close-Up Photo of Trash

Despite visually obvious trash, scores not established for this date  
lack of panoramic contextual photos



## Example of Close-Up Photo of Trash

Example of trash harmful to aquatic life and wildlife



# LIST: Colma Creek

- Data: 3 sites & 5 dates
- 50 close-up photos
- 8 panoramic photos



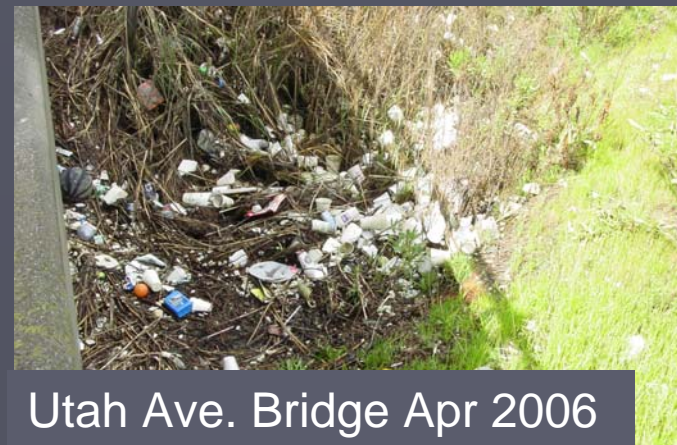
Pedestrian Br. Dec 2002



Mitchell Ave. Jan 2005



Mitchell Ave. Dec 2003



Utah Ave. Bridge Apr 2006



Utah Ave. Bridge Feb 2006



Cordelia Rd. Dec 2003



Cordelia Rd. Jan 2005

## DO NOT LIST: Ledgewood Ck

- 1 site only
- 3 different dates
- 8 close-up photos
- no panoramic photos

# Comments Received

## ❖ 26 comment letters

- Urban Runoff Agencies
- Municipalities
- BASMAA
- Environmental Groups
- Concerned Citizens
- BACWA, WSPA

Coyote Ck downstream of Julian St. Bridge



# Stormwater Management Agencies

- ❖ Don't list entire creeks or bay segments for trash
- ❖ Assessment method not scientific or reproducible
- ❖ Do not use photos as sole basis for listing
- ❖ Take into consideration active trash control programs
- ❖ Reference guidelines not adequate in lieu of numeric water quality objectives

# Environmental Groups

- ❖ Support Trash and Pyrethroid Listings
- ❖ SF Baykeeper - List SF Bay for PBDEs
- ❖ Center for Biological Diversity – List Pacific Ocean for acidification due to carbon dioxide absorption

# Concerned Citizens

- ❖ Support trash listings
- ❖ Disagrees with trash listings – TMDL development instead of actions
- ❖ States TMDL still needed - Stege Marsh
- ❖ Clarify that Almaden Lake and Reservoir do not require TMDL



# BACWA and WSPA

- ❖ Delist SF Bay for Selenium



**White sturgeon**  
(*Acipenser transmontanus*)

**Green sturgeon**  
(*Acipenser medirostris*)



# Next Steps

- ❖ Prepare responses to comments
- ❖ Revise Staff Report and the proposed 303(d) recommendations
- ❖ Seek approval of the 2008 303(d) List at the Board Meeting in February