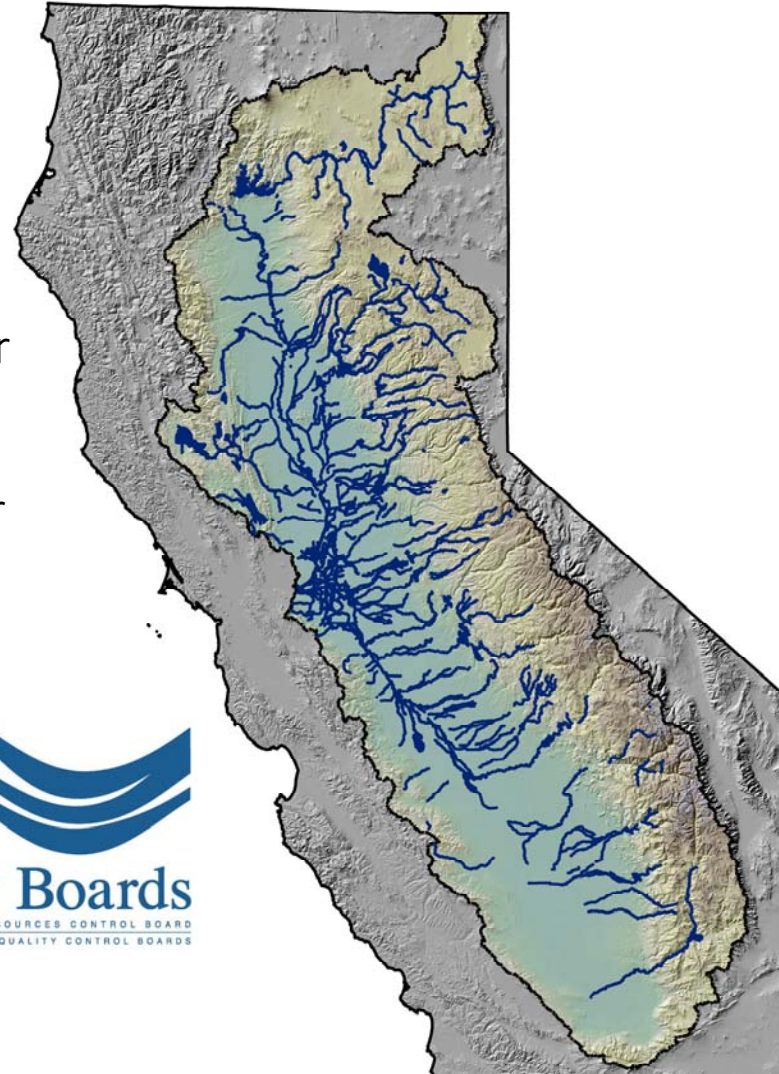



2008 303(d)/305(b) Integrated Report

Danny McClure, P.E.
Water Resource Control Engineer

Jerry Bruns
Environmental Program Manager

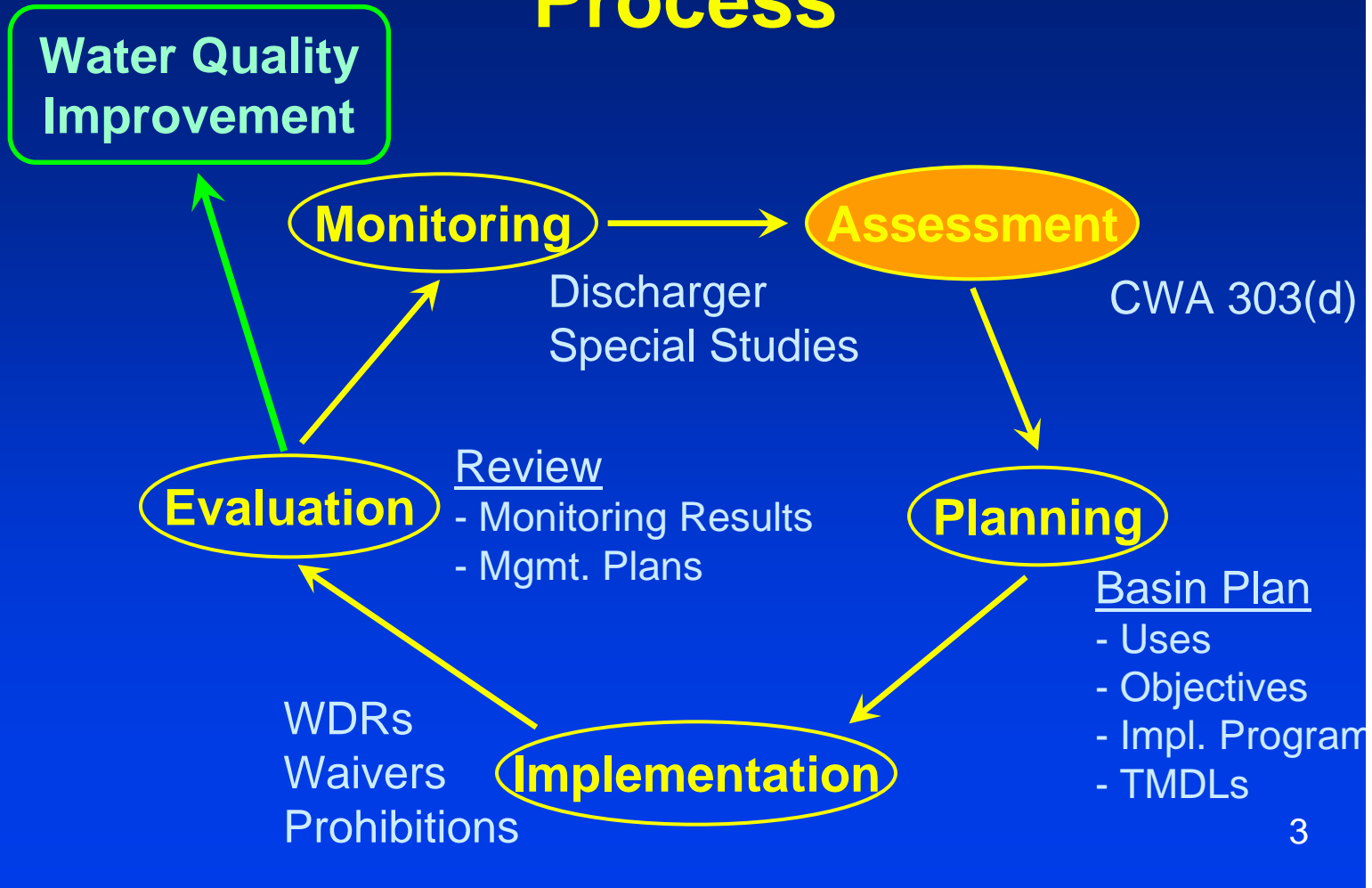




Introductory Remarks

Jerry Bruns
Environmental Program Manager

Water Quality Management Process



Resources

- Similar to TMDL development
- 2.5 years
- TMDL and SWAMP
- Similar to 2006 Statewide 303(d)

Importance

- Feedback
- Requires regulatory response (TMDLs, etc.)
- Prioritization
- Permit Requirements

Presentation Overview

Danny McClure,
Water Resource Control Engineer

- Background
- 2008 303(d)/305(b) Integrated Report
 - Methodology
 - Results
- Comments and Responses
- Next Steps
- Review and Staff Recommendation

Background: Federal Clean Water Act (CWA) Requirements for States

- 303(d) List
 - ◆ Waterbodies that are impaired - not meeting *Water Quality Standards*
- 305(b) Report
 - ◆ Overall quality of the water
- 303(d)/305(b) **Integrated Report**

Background: 303 (d) List

- Updated every 2-4 years
- Requires regulatory response
 - ◆ State's Policy for Impaired Waters
 - ◆ TMDL development
 - ◆ Revision of standards/de-listing
 - ◆ Being addressed by actions
- Consideration in monitoring requirements and effluent limits

Background: California's 303(d) Listing Policy

- **State Board (2004)**
- **Requirements for Regional Boards**
- **Data analysis**
 - ◆ **All readily available data**
 - ◆ **Statistical test**
 - ◆ **Weight of evidence**
- **Administrative process**

Background: 305(b) Report

- **All waters**
- **Beneficial Uses supported**
- **Every 2 years**



2008 303(d)/305(b) Integrated Report

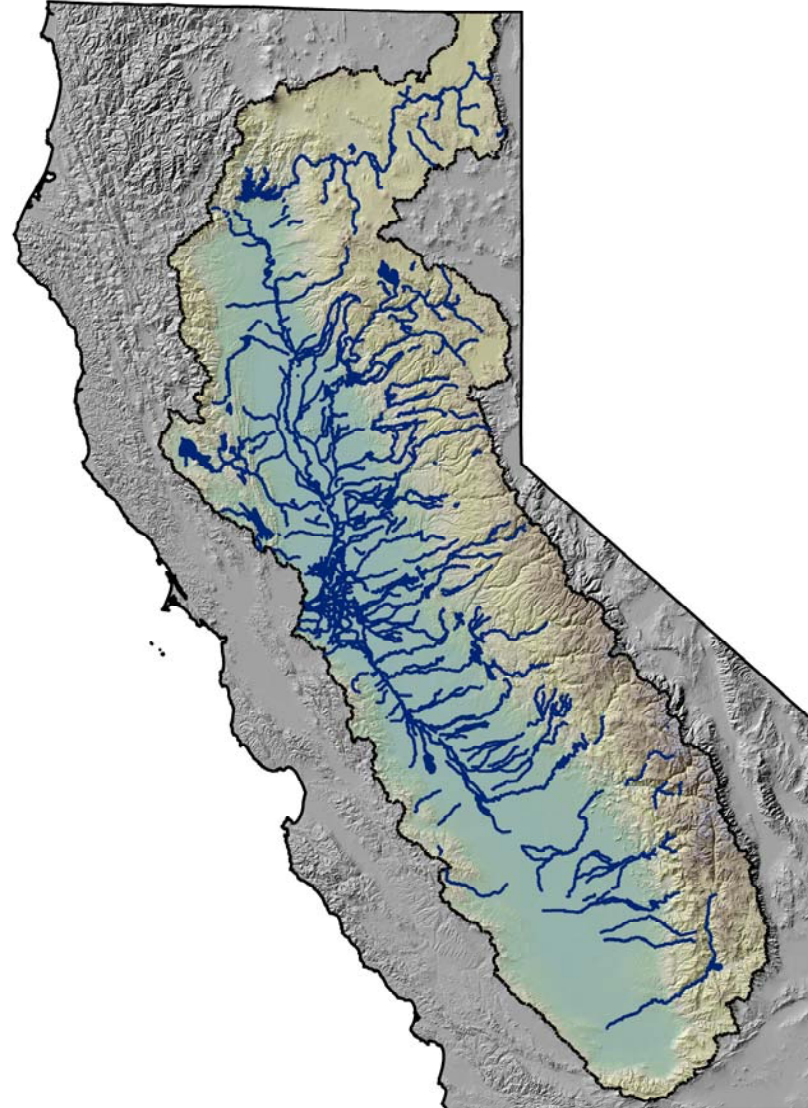
Where we are in the Process

Current 303(d) list finalized	SWRCB October 2006 EPA June 2007
Solicitation of Data	Dec – Feb 2007
Temperature Listing Workshop	September 2007
Public Review Draft	January 2009
Public Meeting	10 March 2009
Written Comment Deadline	16 March 2009
Draft final with response to comments	11 May 2009
Regional Board Hearing	11 June 2009
State Water Board	Early 2010
USEPA	Early/mid 2010

Project Scope

- Direct application of Listing Policy, existing Water Quality Standards
- All readily available data
- 386 waterbody segments
- Over 70 pollutants
- Over 1,800 “Fact Sheets”
- Over 80,000 samples

**Waterbody Segments
Assessed**



Data Sources

- Data Solicitation
 - ◆ 18 Submittals
- Other Readily Available Sources
 - ◆ Through January 2007
 - ◆ Irrigated Lands Program
 - ◆ SWAMP
 - ◆ CalFed studies
 - ◆ TMDL
 - ◆ NPDES
 - ◆ USGS
 - ◆ FERC power plant re-licensing

Water Quality Objectives

- Numeric Water Quality Objectives (WQOs)
 - ◆ Basin Plan Objectives
 - Oxygen, pH, bacteria, selenium, diazinon and chlorpyrifos
 - Drinking water MCLs
 - ◆ California Toxics Rule (CTR)

Water Quality Objectives

- Narrative Objectives
 - ◆ Toxicity, temperature
 - ◆ “Evaluation Guidelines” to interpret
 - ◆ Listing Policy Requirements

Interpreting Narrative Objectives: Evaluation Guidelines

- OEHHA Fish Contaminant Guidelines
 - ◆ Mercury
 - ◆ PCBs
 - ◆ Organochlorine Pesticides
- Water Quality Criteria (USEPA, DFG)
 - ◆ Bacteria (E. Coli)
 - ◆ Pesticides
 - ◆ Ammonia
 - ◆ Temperature

303(d) List Development

- Initial Screening of data
 - ◆ Identify potential 303(d) list changes
- Fact Sheet Preparation
 - ◆ Decision on 303(d) list changes
 - ◆ Lines of evidence (LOEs) for all data available
 - ◆ Statewide database
 - ◆ Internet links to sources of data and evaluation guidelines

303(d) List Development

- ◆ Waterbody Segments
 - Major tributaries
 - Land use
 - Many smaller waterbodies not divided

303(d) List Development

- ◆ Listing/de-listing decision recommendations
 - Listing Policy Statistical Test
 - Weight of Evidence

303(d) List Development

- Completion Dates
 - ◆ Years TMDL before Regional Board
 - ◆ Specific for TMDLs being developed
 - ◆ Approximate for TMDL Projects in Planning
 - ◆ 13 years out maximum
- Potential Sources
 - ◆ Geography
 - ◆ Pollutant

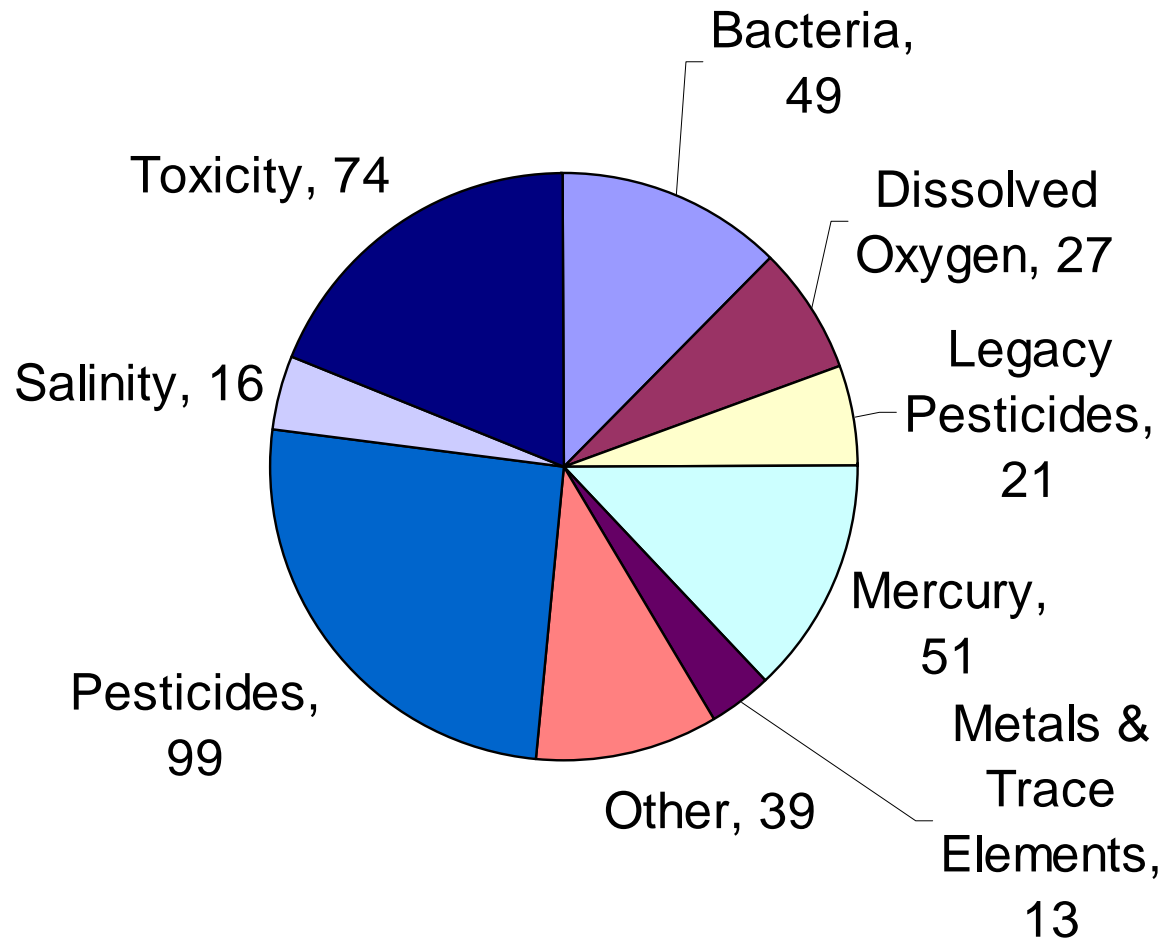


Results

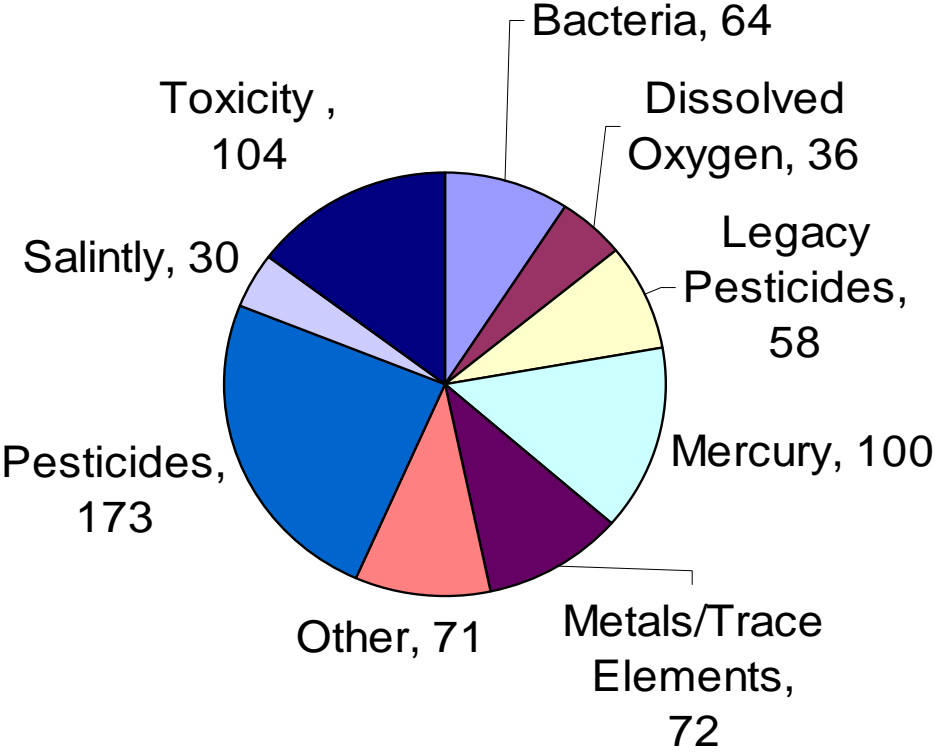
Results: Proposed 303(d) List Changes

- 389 proposed new listings
 - ◆ **NOT** indicative of trends
- 708 total listings
 - ◆ (389 new + 342 existing – 23 proposed de-listings)

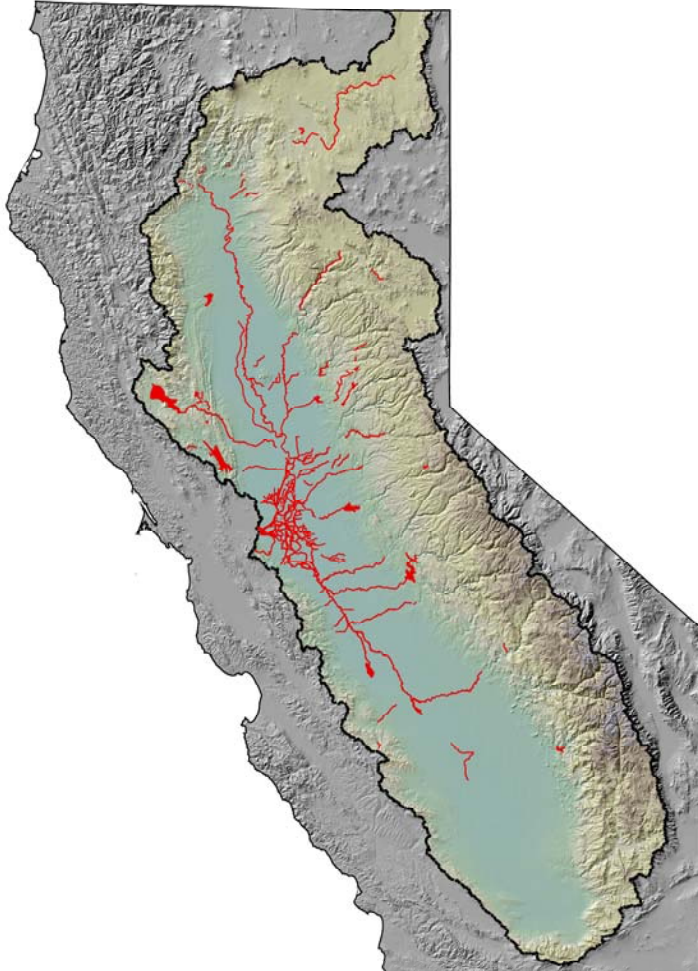
Proposed New 303(d) Listings



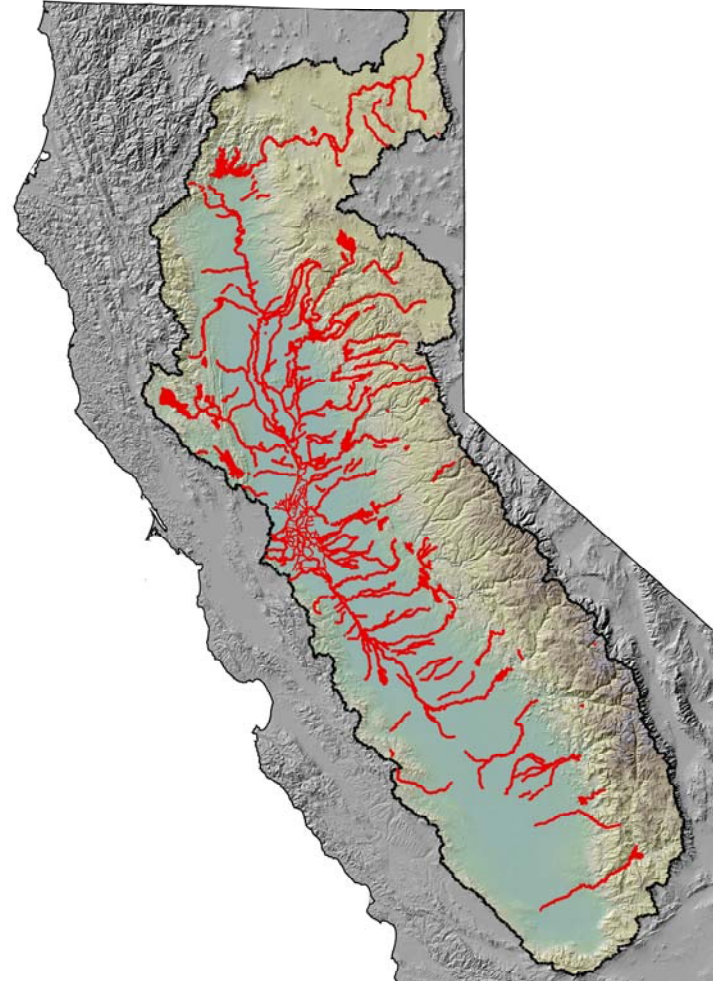
2008 303(d) - 708 Listings



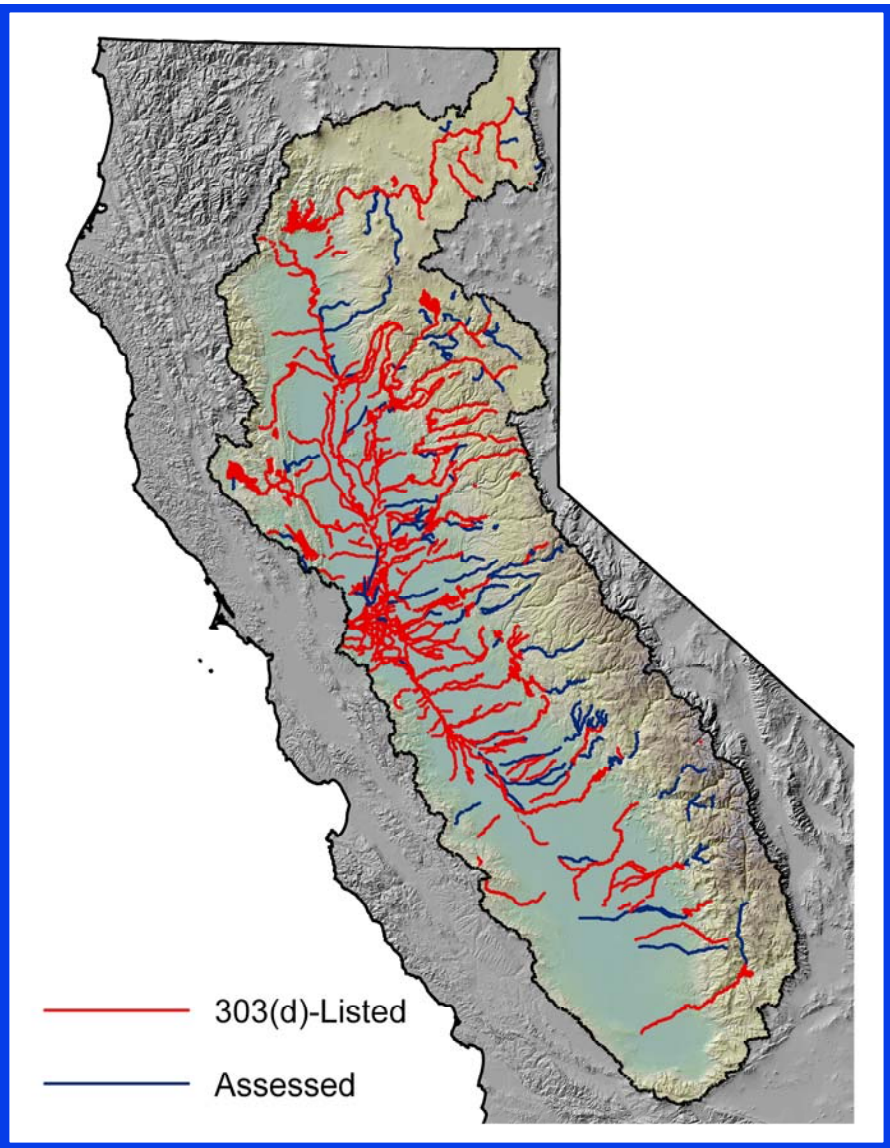
Current (2006) 303(d) List



Proposed (2008) 303(d) List



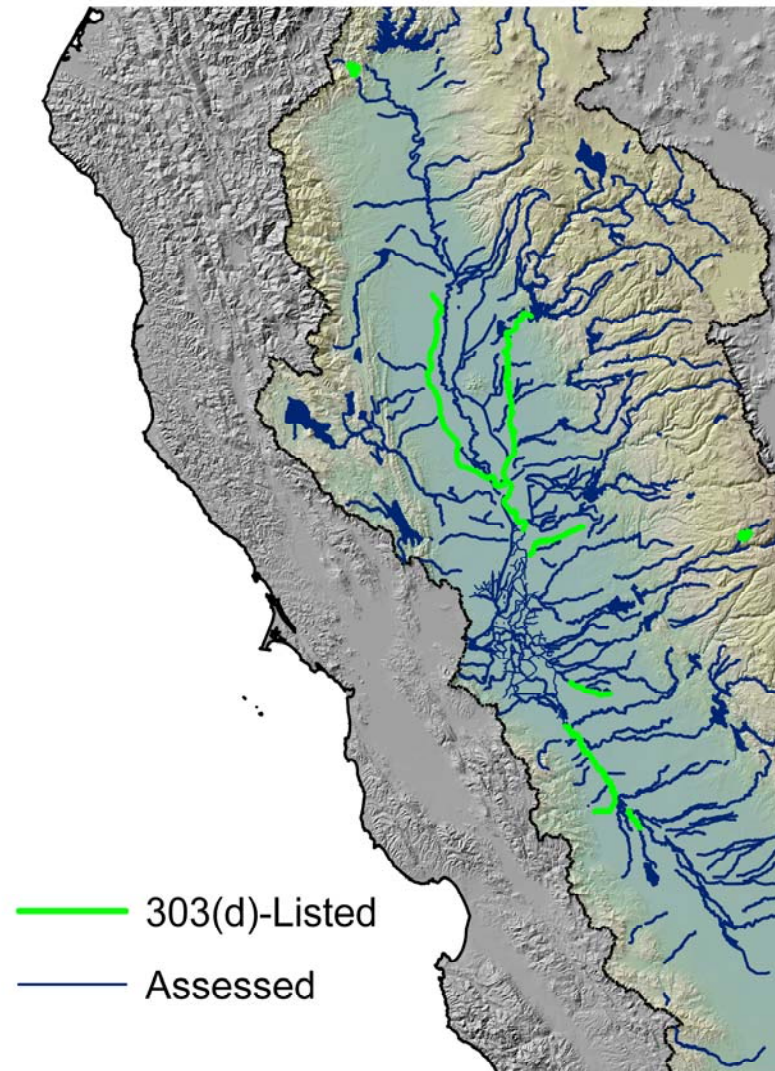
Proposed 2008 303(d) List



Results:

Proposed De-Listings

- 23 de-listings
- Success stories!
 - ◆ Diazinon - Sacramento, Feather, San Joaquin Rivers
 - ◆ Metals in the Sacramento River
 - ◆ Bacteria in Whiskeytown reservoir
 - ◆ San Joaquin Valley selenium
- SJR Salt
- Correction of one erroneous listing



305(b) Report

- Waterbody Categories
- Beneficial Use (BU) support
- 303(d) Listed (Impaired)
 - ◆ Category 5 (TMDL required)
 - ◆ Category 4 (no new TMDL required)
- Not Impaired
 - ◆ Category 1 (fully supporting all BU's)
 - ◆ Category 2 (fully supporting one BU)
 - ◆ Category 3 (insufficient information)

305(b) Report

- Conservative in determining Categories for unimpaired waterbodies
- 305(b) categories do not affect listing decisions

Results: 305(b) Report

- 386 waterbody segments
- 260 Category 5
 - ◆ Impaired, needing TMDL
- 6 Category 4
 - ◆ Impaired, have TMDLs
- 96 Category 3
 - ◆ Not Impaired, insufficient info to determine full use support
- 24 Category 2
 - ◆ Not impaired, fully supporting at least one beneficial use

A scenic photograph of a calm river or lake. The water is very still, acting as a perfect mirror for the sky and the surrounding landscape. The sky is a pale blue with soft, white clouds. The shoreline is lined with various trees and bushes, some with green leaves and others with hints of autumnal yellow and orange. The reflection in the water is sharp and clear, creating a symmetrical scene. The overall mood is peaceful and serene.

Comments and Responses

Comments

- Over 30 comment letters
- Federal, State, County Agencies
- Environmental Groups
- Agriculture, Pesticide Manufacturers, Water Rights Holders, Stormwater and Wastewater discharges
- Comments on ~ 150 assessments
- Some general support
- No comments on 305(b)

Standards and Beneficial Uses

- *Comment: Current Water Quality Objectives and/or Beneficial Uses Inappropriate*
- Response:
 - ◆ Re-evaluation of standards outside scope
 - ◆ Forwarded for triennial review

Metals Aquatic Life Criteria

- *Comment: Metals Listings Inappropriate*
 - ◆ *CTR criteria for dissolved*
- Response: Revised metals assessments
 - ◆ dissolved data only
 - ◆ withdrawal of several proposed listings, mostly copper

Evaluation Guidelines

- *Comment: Pesticide evaluation guidelines used were inappropriate*
- Response
 - ◆ Followed Basin Plan
 - ◆ Appropriate under Listing Policy

Fish Tissue Contaminant Levels

- *Comment:*
 - ◆ *Use a different (higher) value to assess fish tissue*
- *Response:*
 - ◆ Lower threshold appropriate
 - ◆ Consistent with other State and Regional Boards, past 303(d)

Temperature Listings

- *General Comment: Temperature Listings Inappropriate for a number of reasons (SJRGGA, others)*
 - ◆ *Natural conditions, attainability*
 - ◆ *Temperature not cause of fish decline*
 - ◆ *Criteria inappropriate*
 - ◆ *Narrative Objective not applicable*
 - ◆ *Beneficial Uses do not exist*
- **General Response**
 - ◆ Staff followed Listing Policy requirements
 - ◆ Recommendations of Dept of Fish & Game
 - ◆ Temperatures do not support Salmon

Temperature Listings

- *Comment: USE of EPA Region 10 Temperature Criteria Inappropriate*
- Response
 - ◆ Recommended by CA Department of Fish and Game
 - ◆ Local Conditions Reflected in Application
 - Species of salmonids
 - Life stage timing and location

Data Not Considered

- *General Comment: Data were not included which should have been*
- Response:
 - ◆ Staff made efforts to include
 - Readily available, improved accuracy
 - ◆ Withdrawals of proposed listings
 - Pleasant Grove Creek, DO
 - Middle Fork Feather R., DO
 - Kern River, high pH (**Late Change**)
 - ◆ Need to cut off new data
 - ◆ Addressed in future listing cycles

Decisions Based on Limited Data

- *General Comment: Decisions were based on limited data sets, more study/information should be considered*
 - ◆ *Dischargers (listing)*
 - ◆ *CalSPA (de-listing)*
- Response:
 - ◆ Listing Policy requires decisions made with available data
 - ◆ Can be revised in future cycles when more data are available

Not enough samples above objectives to list

- *Comment: There are not enough samples above the objective to list using the Listing Policy statistical test*
- Response:
 - ◆ frequency contained in criteria or objectives
 - ◆ Appropriate under Listing Policy
 - ◆ Clarified fact sheets

Waterbody Segments/Extent of Impairment

- *Comments:*
 - ◆ *Further divide waterbodies*
 - ◆ *Extent of listing too large*
- *Response:*
 - ◆ Segments divided up following Listing Policy factors
 - ◆ Used available data
 - ◆ Revised when appropriate

Delta Waterways

- Delta Waterways not clearly defined in listings
- Response
 - ◆ Generated maps and lists of Delta waterways portions

Impact of Listing

- General Comment Area: Impacts of listing
- Response
 - ◆ CWA, Listing Policy Requirements
 - ◆ Separate processes

TMDL Not Needed

- *Comment: TMDLs may not be necessary, list as already being addressed (USFS, ILRP coalitions)*
- Response:
 - ◆ EPA guidance - Factors for listing as TMDL not required (“category 4b”)
 - ◆ Will Re-assess before TMDL

Bacteria Data (USEPA)

- *Bacteria data warrant listing, may result in additional listings by USEPA*
- Response:
 - ◆ One additional bacteria listing
 - ◆ No others warranted under State Listing Policy

Pyrethroid Pesticide Listings

- *Comment: Pyrethroid Listings Inappropriate (Pyrethroid Working Group)*
 - ◆ *Consider weight of evidence*
 - ◆ *Benthic community condition not correlated with pyrethroid concentrations*
- **Response: Listing required under Listing Policy**
 - ◆ **Valid toxicity and chemistry data**
 - ◆ **Independent Applicability**

Algal Toxicity

- *Comment: Proposed listings based on algal toxicity test (Kings River RCD, Turlock ID)*
 - ◆ *Uncertainty in results*
 - ◆ *Effects observed from properties of some waters - not from toxicant*
- **Response: Listing Policy requires listing**
 - Test is established EPA method
 - Effects of waters properties not shown

San Joaquin Dissolved Oxygen

- *Comment: Stockton Deepwater Ship Channel/San Joaquin R. should be de-listed (SJIRGA)*
 - ◆ *Aerator*
- *Response:*
 - ◆ *Data near aerator*
 - ◆ *Aerator is a 2 year pilot project*

Miscellaneous Corrections

- *Comments on errors in Beneficial Use, Objectives, Sources in the fact sheets*
- Response
 - ◆ Corrected if erroneous
 - ◆ Corrected systematic errors

Response to Comments Summary

- Numerous comments, diverse groups
- Responded to all comments
- Changes when appropriate
 - ◆ Several proposed listings withdrawn
 - Mostly metals
 - ◆ One additional listing
 - ◆ Revisions to extents of proposed listings
 - ◆ Changes to sources, TMDL completion dates
- Comments improved accuracy

Late Revision

Lower Kern River High pH

- Proposed listing withdrawn
- NPDES data
- Revised fact sheet
- One less listing
- Kern River not impaired

Minor Late Revisions

- San Joaquin River - salt
 - ◆ Revise number of exceedances to zero
 - ◆ Does not change de-listing
- Pleasant Grove Creek - pyrethroids
 - ◆ Fact sheet finding on extent of impairment



Next Steps

Next Steps

- State Water Board
 - ◆ Statewide Integrated Report ~ Late 2009
 - ◆ Changes requested, other changes
 - ◆ Statewide 303(d) List adopted by State Board ~ early 2010 (changes not remanded to Regions)
- USEPA – Early/Mid 2010
 - ◆ fully or partially approve list
 - ◆ public comments on changes to State list
- Solicitation for next cycle ~ 2010

Review and Summary

- Background
- 2008 303(d)/305(b) Integrated Report
 - Methodology
 - Results
- Comments and Responses
- Next Steps

Staff Recommendation

- Adopt the Integrated Report including late revisions

