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

Water Quality Improvement

Monitoring
- Discharger
- Special Studies

Assessment
- CWA 303(d)

Evaluation
- Review
  - Monitoring Results
  - Mgmt. Plans

Planning
- Basin Plan
  - Uses
  - Objectives
  - Impl. Program
  - TMDLs

Implementation
- WDRs
- Waivers
- Prohibitions
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
## Where we are in the Process

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

- Bacteria, 49
- Dissolved Oxygen, 27
- Legacy Pesticides, 21
- Mercury, 51
- Metals & Trace Elements, 13
- Other, 39
- Pesticides, 99
- Salinity, 16
- Toxicity, 74
2008 303(d) - 708 Listings

- Bacteria, 64
- Toxicity, 104
- Dissolved Oxygen, 36
- Legacy Pesticides, 58
- Pesticides, 173
- Mercury, 100
- Salinity, 30
- Other, 71
- Metals/Trace Elements, 72
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
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  (SJRLGA)
  - 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

- **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