Public Workshop

2012 Integrated Report
for the
305(b) Surface Water Assessment
& 303(d) List of Impaired Waters

Katharine Carter & Rebecca Fitzgerald
North Coast Regional Water Quality Control Board
April 8, 2014
Santa Rosa

Presentation Outline

1. Overview of the 2012 Integrated Report
2. 305(b) & 303(d) Updates Timeline
3. 2012 Assessment Process
4. Staff Recommendations
5. Water Body-Specific Recommendations
6. Questions & Comments
Overview of the 2012 Integrated Report

Requirements of the federal Clean Water Act (CWA)

Combination of the:

• CWA Section 305(b) Surface Water Quality Assessment Report (includes impaired & non-impaired waters)

• CWA Section 303(d) List of Impaired Waters

Overview of the 2012 Integrated Report

305(b) Report:

• Biennial assessment of surface waters

• Compiled by US EPA into the “National Water Quality Inventory Report to Congress” and the “ATTAINS” database.
Overview of the 2012 Integrated Report

303(d) List:

- Identifies waters not meeting water quality standards
  - Objectives
  - Beneficial Uses (for example: Agricultural Supply, Cold Freshwater Habitat, Municipal & Domestic Supply)
- Identifies pollutant(s) – but does not identify sources
- Includes a priority ranking
- A total maximum daily load (TMDL) is generally developed for waters on the 303(d) List

Overview of the 2012 Integrated Report

- Staff Report available at:
  
305(b) & 303(d) Updates Timeline

1976 to 2002: 303(d) List updates developed by Regional Water Board

2004: No 303(d) List Update

2006: 303(d) & 305(b) developed by State Water Board

2010 & 2012: 303(d) & 305(b) developed by Regional Water Board

Likely 2018: Next Integrated Report Cycle for the North Coast Region

2012 Assessment Process

- State Water Board staff develops Lines of Evidence
- Regional Water Board staff develops Decisions
- Regional Water Board staff develops 2012 Integrated Report
  Public Comment Period

- Regional Water Board Response to Public Comments
- Regional Water Board considers adoption
- State Water Board considers adoption
- US EPA considers approval
Definitions

Listed Policy:
• The “Water Quality Control Policy for Developing California’s Clean Water Act Section 303(d) List”

Water body-Pollutant Pair:
• A reach of a water body plus the pollutant (e.g., Klamath River for sediment, or Eel River for temperature)

Fact Sheet:
• Includes a “Decision” and all supporting “Lines Of Evidence”
• Developed for each water body-pollutant pair

2012 Assessment Process

Step 1: Obtain data

Step 2: Analyze data according to rules of the Listing Policy

Step 3: Develop Line(s) of Evidence (LOEs)

Step 4: Make Decision
(aka: staff recommendations)
2012 Assessment Process

Step 1: Obtain Data

Data Sources:

• Data submitted by the public during solicitation period (1/14/10 to 8/30/10)
• Data from the 2010 List
• Data from SWAMP (the Surface Water Ambient Monitoring Program)
• Counties’ ocean beach monitoring data under AB411
• Data collected by Regional Water Board staff, state and federal agencies, counties, tribes, citizen monitoring groups, and academic institutions

Step 2: Analyze Data

Data were analyzed according to the rules of the Listing Policy

• Includes a data quality and quantity assessment process
• Data compared to Basin Plan objectives, USEPA criteria, or numeric evaluation guidelines

Listing Policy available at:
2012 Assessment Process

Fact Sheets available at:

2012 Assessment Process

Step 3: Develop Line(s) of Evidence

• LOEs summarize: who, what, where, when, and how
• LOEs highlight the number of samples & number of exceedances
• LOEs were input into the California Water Quality Assessment Database (CalWQA)
• Over 4,700 LOEs were developed
### 2012 Assessment Process

#### Step 3: Develop Lines of Evidence

**Example**

**Lower Eel River**

- **Benefit Use:** Municipal & Domestic Supply
- **Number of Surveys:** 15
- **Number of Examinations:** 6
- **Data and Information Type:** PHYSICAL/CHEMICAL MONITORING
- **Data Used to Assess Water Quality:** None of the 15 sites sampled exceeded the Lower Eel River water quality standards. The samples were collected as part of the Surface Water Ambient Monitoring Program (SWAMP). The data are based on the SWAMP Monitoring Plan for the Lower Eel River Basin.
- **Data Reference:** Surface Water Ambient Monitoring Program (SWAMP) Data Base, 2012.

**SVAMP**

- **Objective/Criterion:** Pre-treatment Bacteria (NURSERSOB 2007, p. 3-3-301). Waters shall not contain bacteria at levels producing substances in concentrations that impart hazardous toxins or other fish-harm or other adverse effects on aquatic life or, if such conditions are adverse, affect beneficial uses.
- **Objective/Criterion Reference:** Surface Water Ambient Monitoring Program (SWAMP) Data Base, North Coast Region (Update 1).
- **Eutrophication Reference:** Pre-treatment Bacteria (NURSERSOB 2007, p. 3-3-301). The unexposed secondary maximum contaminant level for sulfates is 250 mg/L.
- **Eutrophication Reference:** Pre-treatment Bacteria (NURSERSOB 2007, p. 3-3-301). The unexposed secondary maximum contaminant level for sulfates is 250 mg/L.
- **Environmental Conditions:** Power plants, known environmental impacts, e.g., temperature, land use practices, fish, events, storms, etc., that are related to the site.
- **QAPP Information:** Quality Assurance Protocol (QAPP) for the Lower Eel River Basin.
- **QAPP Information Reference:** Quality Assurance Protocol (QAPP) for the Lower Eel River Basin.

#### Step 4: Make Decision

**Example**

**Lower Eel River**

- **Pollutant:** Sulfuric
- **Final Listing Decision:** Do Not List on MNDR List (TMDL required list)
- **Last Listing Cycle:** Do Not List on MNDR List (TMDL required list)
- **Revision Status:** Revised
- **Importance from Pollution:**
- **Regional Board Staff:**
  - **Conclusion:** This pollutant is being considered for placement on the Section 304(d) List. Under Section 3.2 of the Listing Policy, a single line of evidence in necessary to assess listing status. One line of evidence is available to assess protection of the municipal and domestic water supply (MNDW) beneficial use at the lower Eel River Delta (LOE 25541), and one line of evidence is available to assess protection of the MNDW beneficial use at Lower Eel River (LOE 25541). Based on the available data and information, the weight of evidence indicates that there is sufficient justification to place this source segment-pollutant combination on the section 304(d) list in the Water Quality Limited segments category (i.e., sufficient justification to list). This conclusion is based on the staff finding that: (1) the data used satisfies the data quality requirements of section 6.1.4 of the Policy; (2) the data used satisfies the data quantity requirements of section 6.1.5 of the Policy; (3) these data are consistent with the data used for the listing of other pollutants in the section 304(d) list; and (4) the data used satisfies the data quality requirements of section 6.1.4 of the Policy.
  - **Recommendation:** After review of the available data and information, the EFVOCB staff concludes that the water body-pollutant combination should not be placed on the section 304(d) list because it cannot be determined if applicable water quality standards are not being exceeded.
2012 Assessment Process
Step 4: Make Decision

How did staff determine impairment?
Staff applied the rules of the Listing Policy:

- Exceedance Frequency
  For example: ≥ 2 exceedances out of 20 samples = List
- Weight of Evidence

2012 Assessment Process
Step 4: Make Decision

What decisions did staff make?

Water Body-Pollutant IS NOT on the 2010 303(d) List:

- List (impaired)
- Do Not List (not impaired or not enough data)

Water Body-Pollutant IS on the 2010 303(d) List:

- Do Not Delist (impaired)
- Delist (not impaired)
### 2012 Assessment Process

#### Step 4: Make Decision

Staff determined the beneficial use support category for each water body:

<table>
<thead>
<tr>
<th>Integrated Report Categories</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Evidence shows all core uses are supported.</td>
</tr>
<tr>
<td>2</td>
<td>Evidence shows some core uses are supported (at least one use is supported).</td>
</tr>
<tr>
<td>3</td>
<td>Evidence is insufficient to make use support determinations.</td>
</tr>
<tr>
<td>4a</td>
<td>Evidence shows at least one use is not supported, a TMDL has been developed and is reasonably expected to result in the attainment of the water quality standard within a reasonable, specified time frame, and the TMDL has been approved by the USEPA.</td>
</tr>
<tr>
<td>4b</td>
<td>Evidence shows at least one use is not supported, but a TMDL is not needed as an existing regulatory program is reasonably expected to result in the attainment of the water quality standard within a reasonable, specified time frame.</td>
</tr>
<tr>
<td>4c</td>
<td>Evidence shows at least one use is not supported, but a TMDL is not needed as the impairment is caused by non-pollutant sources.</td>
</tr>
<tr>
<td>5</td>
<td>Evidence shows at least one use is not supported and a TMDL is needed.</td>
</tr>
</tbody>
</table>

Categories 4a, 4b, 4c, and 5 make up the California 303(d) List.

No water bodies in Category 1, 4b, or 4c.

### Staff Recommendations

#### 2012 Proposed Listing & Delisting Summary

- 991 water body – pollutant pair recommendations (Decisions)

**Listings** (# water body – pollutant pairs)
- New Listings: 29
- Increase in geographic extent of listing: 1
- Recommendation for USEPA to list: 2 (Native American Reservation)

**Delistings** (# water body – pollutant pairs)
- New delistings: 14
- Reductions in geographic extent of listing: 20
Specific Recommendations

- Ocean Beaches Indicator Bacteria - delistings
- Freshwater Indicator Bacteria - listings & delistings
- Laguna de Santa Rosa, Mark West Creek, & Santa Rosa Creek (Laguna Watershed) - re-segmentation - indicator bacteria and nutrient listings & delistings
- Requests to List for Flow
- Ten Mile River HSA Temperature - delistings

Indicator Bacteria Overview

Use of Indicator Bacteria in 2012
Integrated Report Assessment

Saltwater:
  - Enterococcus
  - Fecal Coliform*

Freshwater:
  - *Escherichia coli (E. coli)*
  - Fecal Coliform*

*Basin Plan bacteria objective currently under revision. Fecal coliform numeric objective utilized until objective is revised.
### Specific Recommendations

#### Saltwater Indicator Bacteria Delistings

<table>
<thead>
<tr>
<th>Hydrologic Unit</th>
<th>Water Body</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delist (New delisting in 2012)</td>
<td></td>
</tr>
<tr>
<td>Mendocino Coast HU</td>
<td>Hare Creek Beach</td>
</tr>
<tr>
<td></td>
<td>Pudding Creek Beach</td>
</tr>
<tr>
<td>Trinidad HU</td>
<td>Luffedholz Beach</td>
</tr>
<tr>
<td></td>
<td>Moonstone County Park</td>
</tr>
<tr>
<td></td>
<td>Trinidad State Beach</td>
</tr>
<tr>
<td>Do Not Delist (keep listed as impaired)</td>
<td></td>
</tr>
<tr>
<td>Bodega HU</td>
<td>Campbell Cove</td>
</tr>
</tbody>
</table>

### Specific Recommendations

#### Freshwater Indicator Bacteria Listings & Delistings

<table>
<thead>
<tr>
<th>Hydrologic Unit</th>
<th>Water Body</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>List as Impaired</strong> (New listing in 2012)</td>
<td></td>
</tr>
<tr>
<td>Eureka Plain HU</td>
<td>Lower Mainstem Elk River and Martin Slough*</td>
</tr>
<tr>
<td></td>
<td>Campbell Creek*</td>
</tr>
<tr>
<td></td>
<td>Jolly Giant Creek*</td>
</tr>
<tr>
<td>Mad River HU</td>
<td>Widow White Creek*</td>
</tr>
<tr>
<td>Mendocino Coast HU</td>
<td>Noyo River HA, Pudding Creek Lagoon*</td>
</tr>
<tr>
<td>Trinidad HU</td>
<td>Mainstem Little River and Bullwinkle Creek*</td>
</tr>
<tr>
<td>Russian River HU</td>
<td>Mainstem Dutch Bill Creek</td>
</tr>
<tr>
<td><strong>Do Not Delist</strong> (keep listed as impaired)</td>
<td></td>
</tr>
<tr>
<td>Russian River HU</td>
<td>Mainstem Russian River at Healdsburg Memorial Beach*</td>
</tr>
<tr>
<td></td>
<td>Mainstem Russian River from Fife Creek to Dutch Bill Creek*</td>
</tr>
<tr>
<td></td>
<td>Mainstem Atascadero Creek</td>
</tr>
<tr>
<td></td>
<td>&quot;Stream 1&quot; on Fitch Mountain*</td>
</tr>
<tr>
<td></td>
<td>Mainstem Santa Rosa Creek</td>
</tr>
<tr>
<td><strong>Delist</strong> (New delisting in 2012)</td>
<td></td>
</tr>
<tr>
<td>Russian River HU</td>
<td>Mainstem Laguna de Santa Rosa &amp; Tributaries to the Laguna de Santa Rosa**</td>
</tr>
<tr>
<td></td>
<td>Tributaries to Santa Rosa Creek**</td>
</tr>
</tbody>
</table>
Specific Recommendations
Laguna de Santa Rosa Watershed

Laguna de Santa Rosa Watershed
Indicator Bacteria Current (2010) Listing Extent
### Specific Recommendations

**Laguna de Santa Rosa Watershed – Summary of Proposed Listings**

<table>
<thead>
<tr>
<th>Water Body Hydrologic Unit (HU)</th>
<th>Water Body Name</th>
<th>Pollutant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Russian River HU</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Middle Russian River HA, Laguna HSA, mainstem Laguna de Santa Rosa</td>
<td>Phosphorus*</td>
<td>Dissolved Oxygen*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mercury*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Temperature</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sediment/Siltation</td>
</tr>
<tr>
<td>Middle Russian River HA, Laguna HSA, tributaries to the Laguna de Santa Rosa (except Santa Rosa Creek and its tributaries)</td>
<td>Dissolved Oxygen*</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Temperature</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sediment/Siltation</td>
</tr>
<tr>
<td>Middle Russian River HA, Mark West HSA, mainstem Mark West Creek downstream of the confluence with the Laguna de Santa Rosa</td>
<td>Phosphorus*</td>
<td>Dissolved Oxygen*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Temperature</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sediment/Siltation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Aluminum</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Manganese</td>
</tr>
<tr>
<td>Middle Russian River HA, Mark West HSA, mainstem Mark West Creek upstream of the confluence with the Laguna de Santa Rosa</td>
<td>Temperature</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sediment/Siltation</td>
</tr>
<tr>
<td>Middle Russian River HA, Mark West HSA, tributaries to Mark West Ck (except Windsor Ck and its tributaries)</td>
<td>Temperature</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sediment/Siltation</td>
</tr>
<tr>
<td>Middle Russian River HA, Mark West HSA, Windsor Creek and its tributaries</td>
<td>Temperature</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sediment/Siltation</td>
</tr>
<tr>
<td>Middle Russian River HA, Santa Rosa HSA, mainstem Santa Rosa Creek</td>
<td>Indicator Bacteria*</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Temperature</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sediment/Siltation</td>
</tr>
<tr>
<td>Russian River HU, Middle Russian River HA, Santa Rosa HSA, tributaries to Santa Rosa Creek</td>
<td>Temperature</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sediment/Siltation</td>
</tr>
</tbody>
</table>

* TMDL currently under development

* Listing only applies to the mainstem of Colgan Creek
Requests to List for Flow

Data submitted for the following waterbodies:

• Eel River
• Gualala River
• Mattole River
• Navarro River
• Russian River Tributaries:
  - Maacama Creek
  - Mark West Creek
  - Redwood Creek
• Scott River
• Shasta River

Requests to List for Flow

<table>
<thead>
<tr>
<th>Integrated Report Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category</td>
</tr>
<tr>
<td>---------</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>4a</td>
</tr>
<tr>
<td>4b</td>
</tr>
<tr>
<td>4c</td>
</tr>
<tr>
<td>5</td>
</tr>
</tbody>
</table>
Specific Recommendations
Ten Mile Watershed Temperature Delistings

- Ten Mile River and its tributaries drain to the Pacific Ocean (North of Fort Bragg)
- Continuously Monitored Temperature Data from Campbell Timber Management (1994 - 2003)
- Maximum Weekly Maximum Temperature (MWMT) calculated from data
  - MWMT = highest weekly maximum temperatures for a year/season
  - one MWMT per year/season
- MWMT compared to the USEPA Criteria:
  - 16°C core salmonid juvenile rearing
  - 18°C salmond adult migration & non-core salmonid juvenile rearing
- One Line of Evidence per stream

Specific Recommendations
Ten Mile Watershed Temperature Delistings

Situation Specific Weight of Evidence Approach
(Section 4.11 Listing Policy)

- Delist
  - Mill Creek
  - Gulch 11
  - Churchman Creek
  - Little Bear Haven Creek
  - Buckhorn Creek
  - Booth Gulch
  - Smith Creek
  - Bear Haven Creek
  - Little North Fork Ten Mile River
- Do Not Delist
  - Remainder of the water body
Timeline

Public Review Draft available . . . . . . . . . . . . March 14, 2014

Public Workshops:
- Santa Rosa . . . . . . . . . . . . . . . . . . . . . . . . . . . April 8, 2014
- Redding . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . April 9, 2014

Close Public Comment Period . . . . . . . . . . . . April 18, 2014

Regional Board Workshop (Fortuna) . . . . . . . . May 8, 2014

Regional Board Hearing (Santa Rosa) . . . . . . . . June 19, 2014

State Board . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Late 2014

USEPA . . . . . . . . . . . . . . . . . . . . . . . . . . . . Late 2014 / Early 2015

Contact Information

Katharine Carter
707-576-2290
Katharine.Carter@waterboards.ca.gov

Rebecca Fitzgerald
707-576-2650
Rebecca.Fitzgerald@waterboards.ca.gov

Integrated Report Website:
http://www.waterboards.ca.gov/northcoast/water_issues/programs/tmdls/303d/

5550 Skylane Boulevard, Suite A
Santa Rosa, CA 95403