



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:

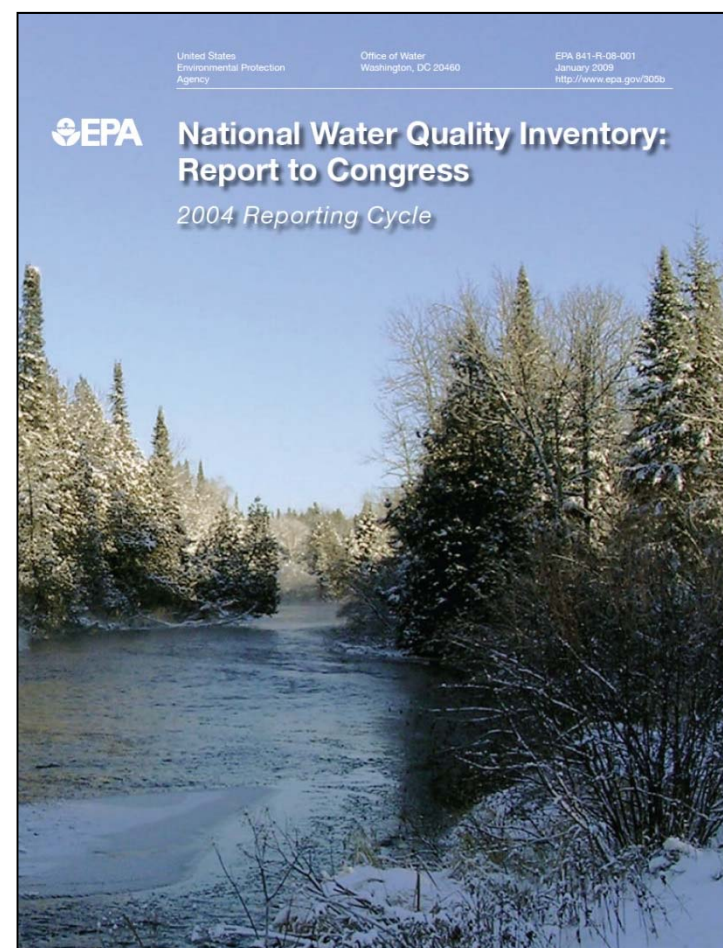
- **CWA Section 305(b)**
Surface Water Quality Assessment Report
(includes impaired & non-impaired waters)
- **CWA Section 303(d)**
List of Impaired Waters



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:**

http://www.waterboards.ca.gov/northcoast/water_issues/programs/tmdls/303d/140313/FINAL2012IR_PublicReviewDraft_StaffReport_March10_2014.pdf

State of California
Regional Water Quality Control Board
North Coast Region

Public Review Draft
Staff Report
for the
2012 Integrated Report
for the Clean Water Act
Section 305(b) Surface Water Quality Assessment
and the 303(d) List of Impaired Waters

March 14, 2014



California Regional Water Quality Control Board
North Coast Region
5550 Skylane Boulevard, Suite A
Santa Rosa, California 95403
707-576-2220
www.waterboards.ca.gov/northcoast



305(b) & 303(d) Updates Timeline

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

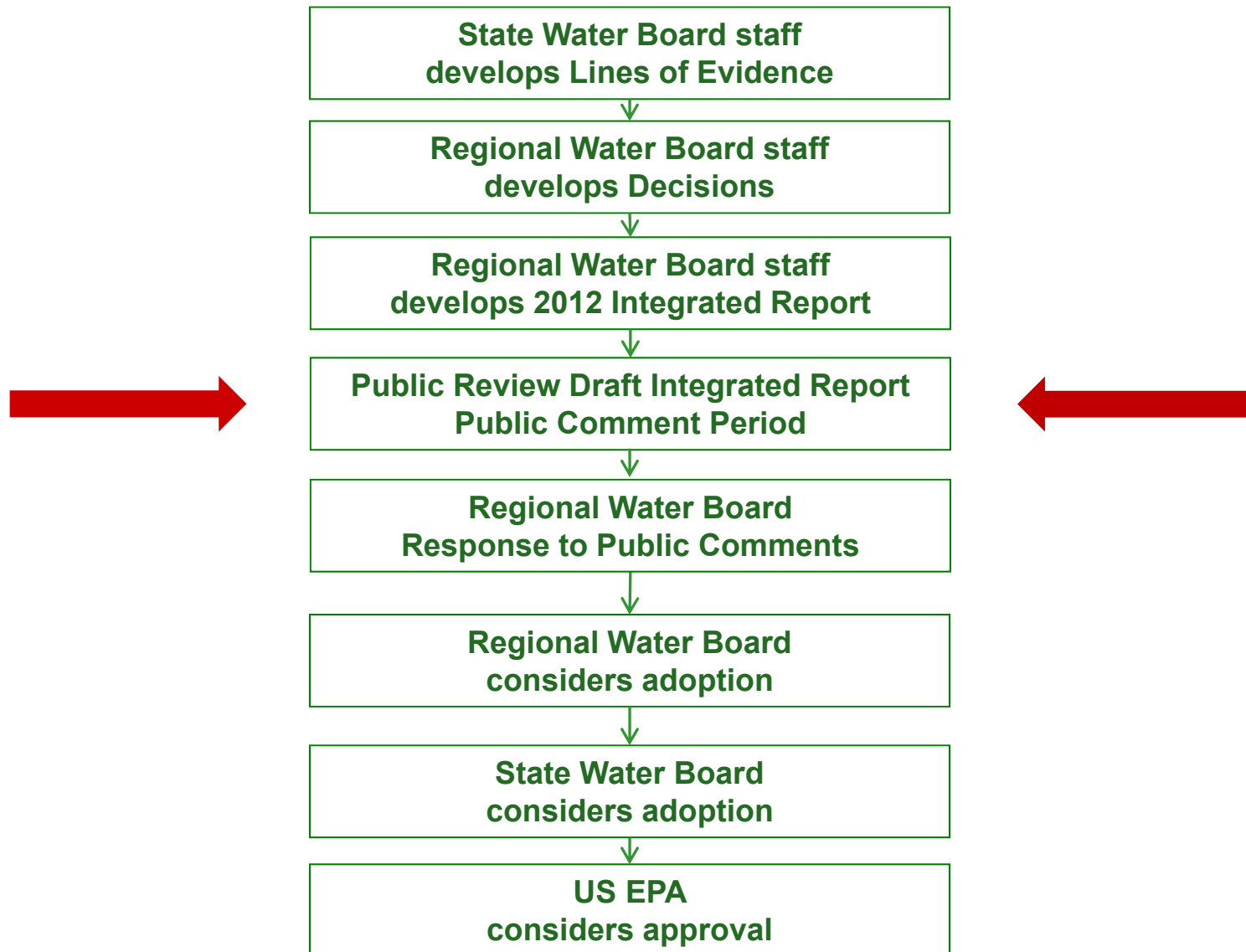
2004: No 303(d) List Update

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





Definitions

Listing 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**

2012 Assessment Process

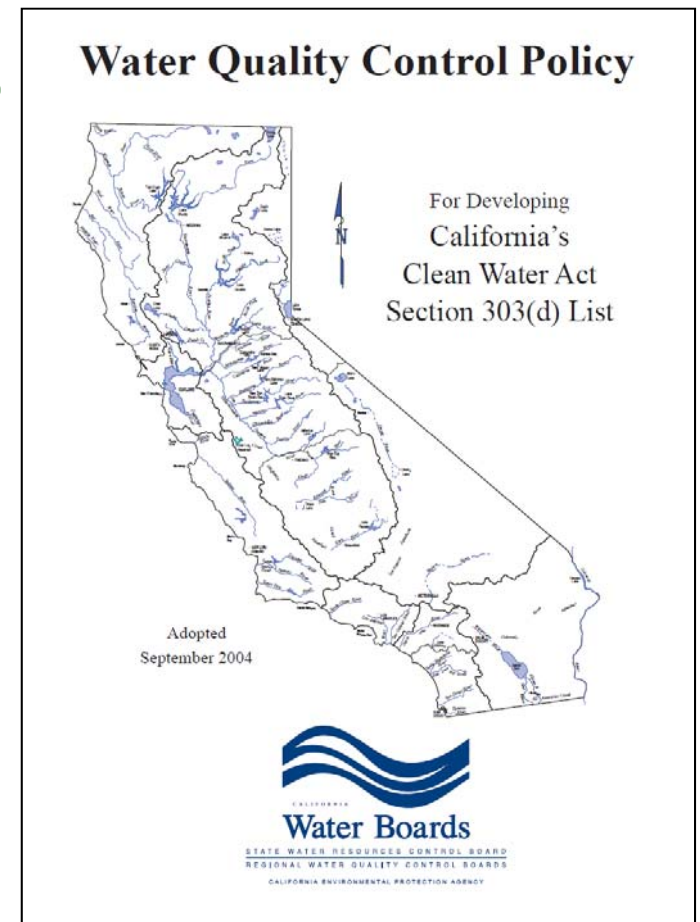
Step 2: Analyze Data

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:

http://www.waterboards.ca.gov/water_issues/programs/tmdl/docs/ffed_303d_listingpolicy093004.pdf





2012 Assessment Process

Fact Sheets available at:

**[http://www.waterboards.ca.gov/northcoast/
water_issues/programs/tmdls/303d/140313/
FactSheets/table_of_contents.shtml](http://www.waterboards.ca.gov/northcoast/water_issues/programs/tmdls/303d/140313/FactSheets/table_of_contents.shtml)**



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

LOE ID:	25541
Pollutant:	Sulfates
LOE Subgroup:	Pollutant-Water
Matrix:	Water
Fraction:	Not Recorded
Beneficial Use:	Municipal & Domestic Supply
Number of Samples:	15
Number of Exceedances:	0
Data and Information Type:	PHYSICAL/CHEMICAL MONITORING
Data Used to Assess Water Quality:	None of the 15 sulfate samples collected in the Lower Mainstem Eel River watershed exceed the evaluation guideline. The samples were collected as part of the Surface Water Ambient Water Monitoring Program (SWAMP). The data are found in the 5-Year Monitoring Report (NCRWQCB 2008).
Data Reference:	Surface Water Ambient Monitoring Program (SWAMP). Summary Report for the North Coast Region (RWQCB-1) for years 2000-2006. North Coast Regional Water Quality Control Board. March 2008
SWAMP Data:	SWAMP
Water Quality Objective/Criterion:	Per the Basin Plan (NCRWQCB 2007, p. 3-3.00): Waters shall not contain taste- or odor-producing substances in concentrations that impart undesirable tastes or odors to fish flesh or other edible products of aquatic origin, or that cause nuisance or adversely affect beneficial uses.
Objective/Criterion Reference:	Water Quality Control Plan (Basin Plan) - North Coast Region (Region 1)
Evaluation Guideline:	Per 22 CCR 64449 (Table 64449-B): The recommended secondary maximum contaminant level for sulfate is 250 mg/L.
Guideline Reference:	Title 22, Division 4, Chapter 15, Sections 64400 et seq. California Code of Regulations
Spatial Representation:	Samples were collected from the Lower Mainstem Eel River at Holmes (SWAMP Station ID 111EELHOL). Samples were collected from well-mixed flows in glides or riffles.
Temporal Representation:	Samples were collected from 15 site visits from February 2002 to June 2005. Most of the site visits corresponded to fall, winter, spring and early summer seasonal conditions.
Environmental Conditions:	There are no known environmental conditions (e.g., seasonality, land use practices, fire events, storms, etc.) that are related to these data.
QAPP Information:	Quality control was conducted in accordance with the SWAMP Quality Assurance Management Plan (SWAMP 2002).
QAPP Information Reference(s):	Quality Assurance Management Plan for the State of California's Surface Water Ambient Monitoring Program. Sacramento, CA. State Water Resources Control Board. SWAMP. December 2002

2012 Assessment Process

Step 4: Make Decision

Example Lower Eel River

DECISION ID 26844		Region 1
Eel River HU, Lower Eel River HA (includes the Eel River Delta)		
Pollutant:	Sulfates	
Final Listing Decision:	Do Not List on 303(d) list (TMDL required list)	
Last Listing Cycle's	Do Not List on 303(d) list (TMDL required list)(2010)	
Final Listing Decision:		
Revision Status	Revised	
Impairment from	Pollutant	
Pollutant or Pollution:		
Regional Board Staff Conclusion:	This pollutant is being considered for placement on the Section 303(d) List under Section 3.2 of the Listing Policy. Under Section 3.2, a single line of evidence is necessary to assess listing status. One line of evidence is available to assess protection of the municipal and domestic supply (MUN) beneficial use in the lower mainstem Eel River (LOE 25541), and one line of evidence is available to assess protection of the MUN beneficial use in Larabee Creek (LOE 44052). Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification against placing this water segment-pollutant combination on the section 303(d) list in the Water Quality Limited Segments category (i.e., sufficient justification to not list). This conclusion is based on the staff findings 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) Zero of 15 samples from the lower mainstem Eel River and zero of one sample from Larabee Creek exceed the objective, however these sample sizes are insufficient to determine with the power and confidence of the Listing Policy if standards are not met, as a minimum of either (1) 26 samples, or (2) greater than or equal to 5 exceedances of the objective with less than 26 samples is needed for application of Table 3.2. (4) Pursuant to Section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.	
Regional Board Staff Decision Recommendation:	After review of the available data and information, RWQCB staff concludes that the water body-pollutant combination should not be placed on the section 303(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)

or

Do Not List
(not impaired or
not enough data)

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

Do Not Delist
(impaired)

or

Delist
(not impaired)



2012 Assessment Process

Step 4: Make Decision

Staff determined the beneficial use support category for each water body

Integrated Report Categories	
Category	Description
1	Evidence shows all core uses are supported.
2	Evidence shows some core uses are supported (at least one use is supported).
3	Evidence is insufficient to make use support determinations.
4a	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.
4b	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.
4c	Evidence shows at least one use is not supported, but a TMDL is not needed as the impairment is caused by non-pollutant sources.
5	Evidence shows at least one use is not supported and a TMDL is needed.

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



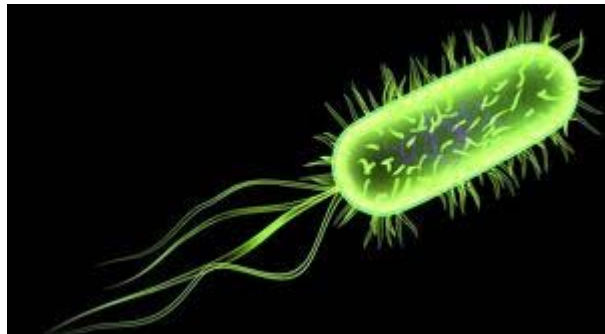
Specific Recommendations

Indicator Bacteria Overview

Use of Indicator Bacteria in 2012 Integrated Report Assessment

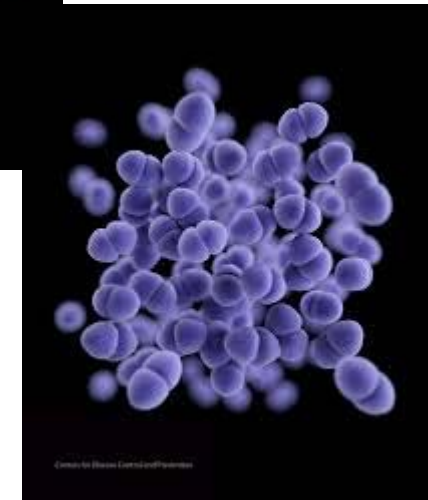
Saltwater:

- 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

Hydrologic Unit	Water Body
Delist (New delisting in 2012)	
Mendocino Coast HU	Hare Creek Beach
	Pudding Creek Beach
Trinidad HU	Luffenholtz Beach
	Moonstone County Park
	Trinidad State Beach
Do Not Delist (keep listed as impaired)	
Bodega HU	Campbell Cove

Specific Recommendations

Freshwater Indicator Bacteria Listings & Delistings

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

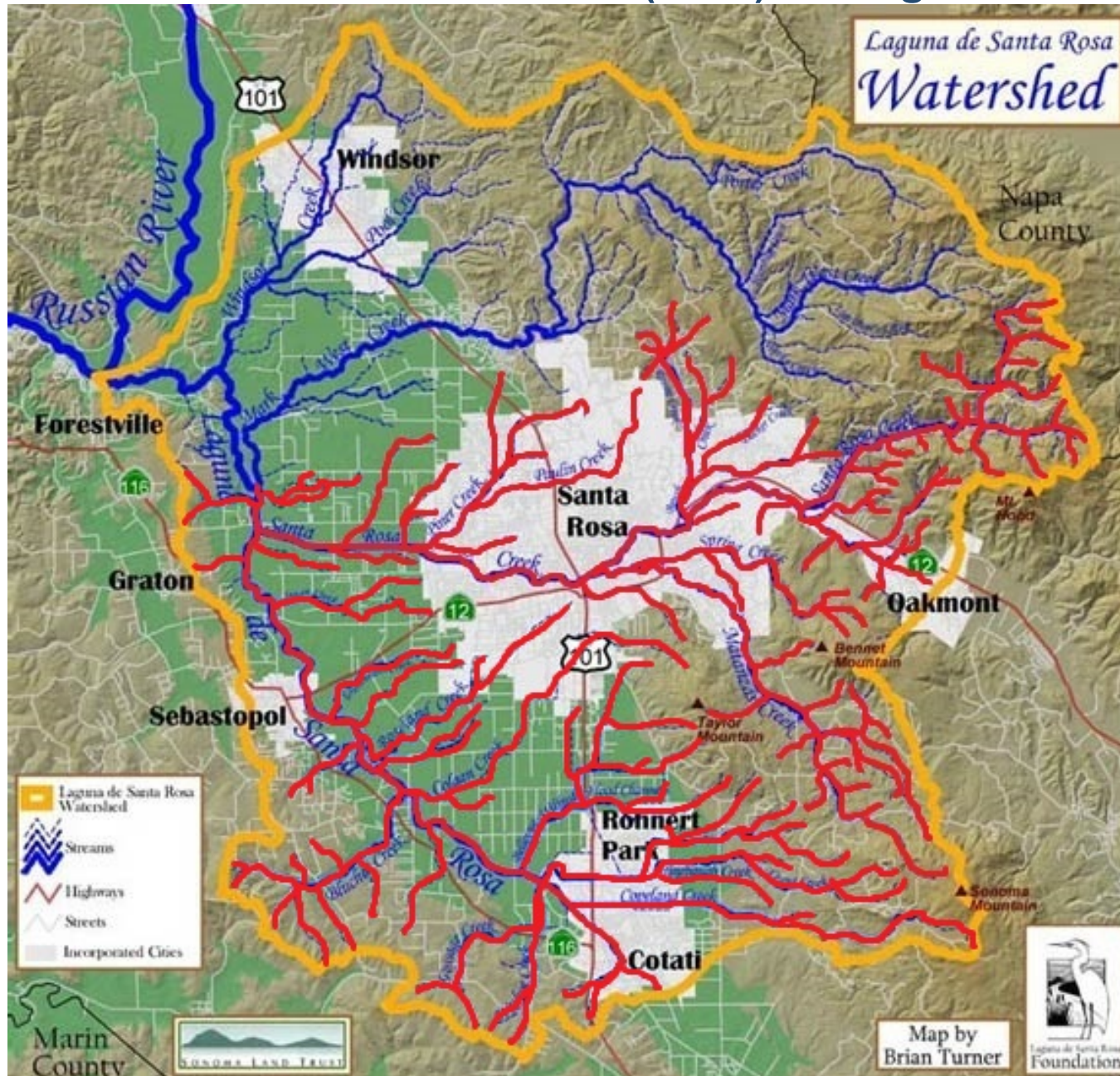
*** = Listing based solely upon fecal coliform data.**

**** = Delisting due to insufficient number of samples**

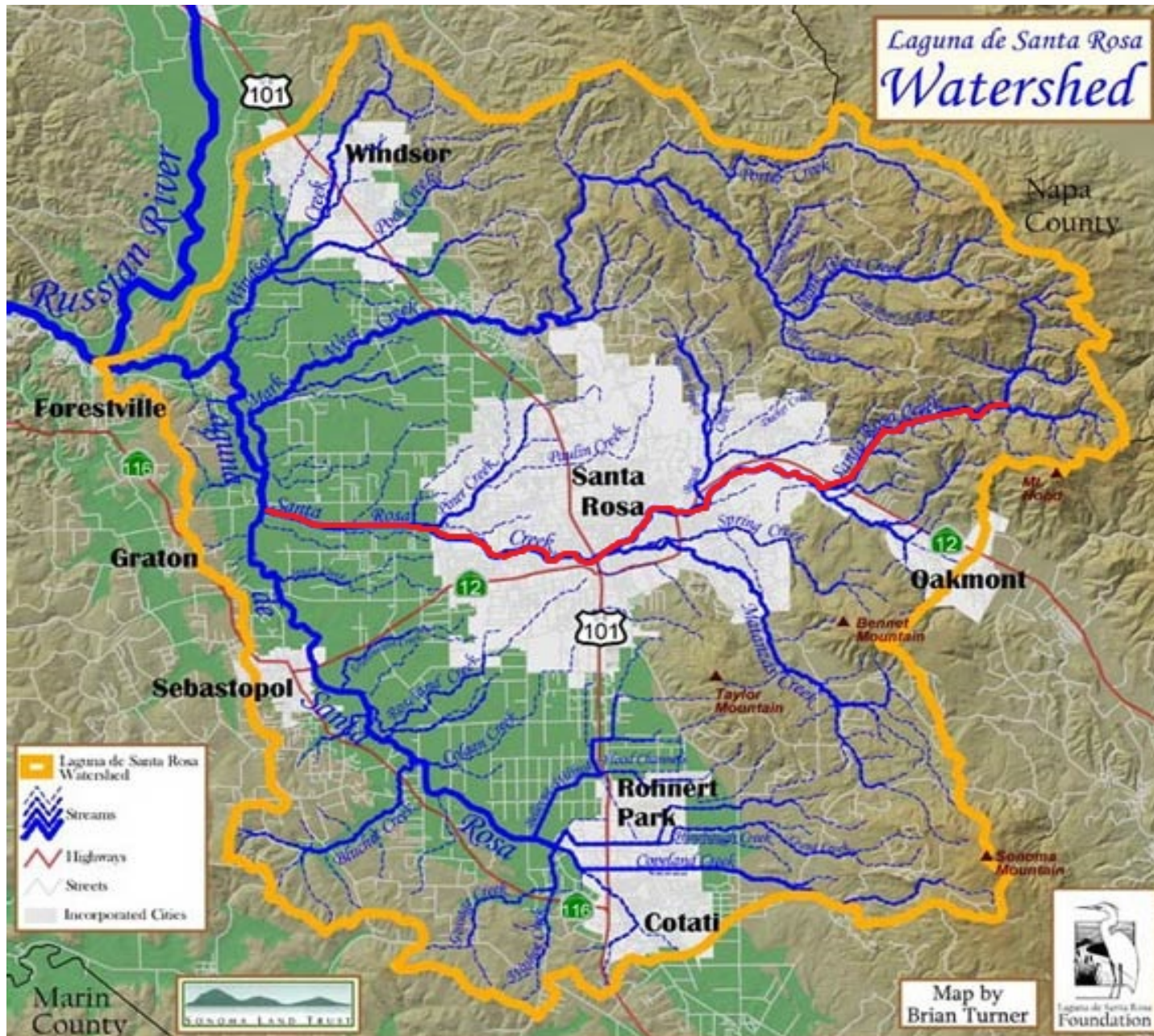


Laguna de Santa Rosa Watershed

Indicator Bacteria Current (2010) Listing Extent

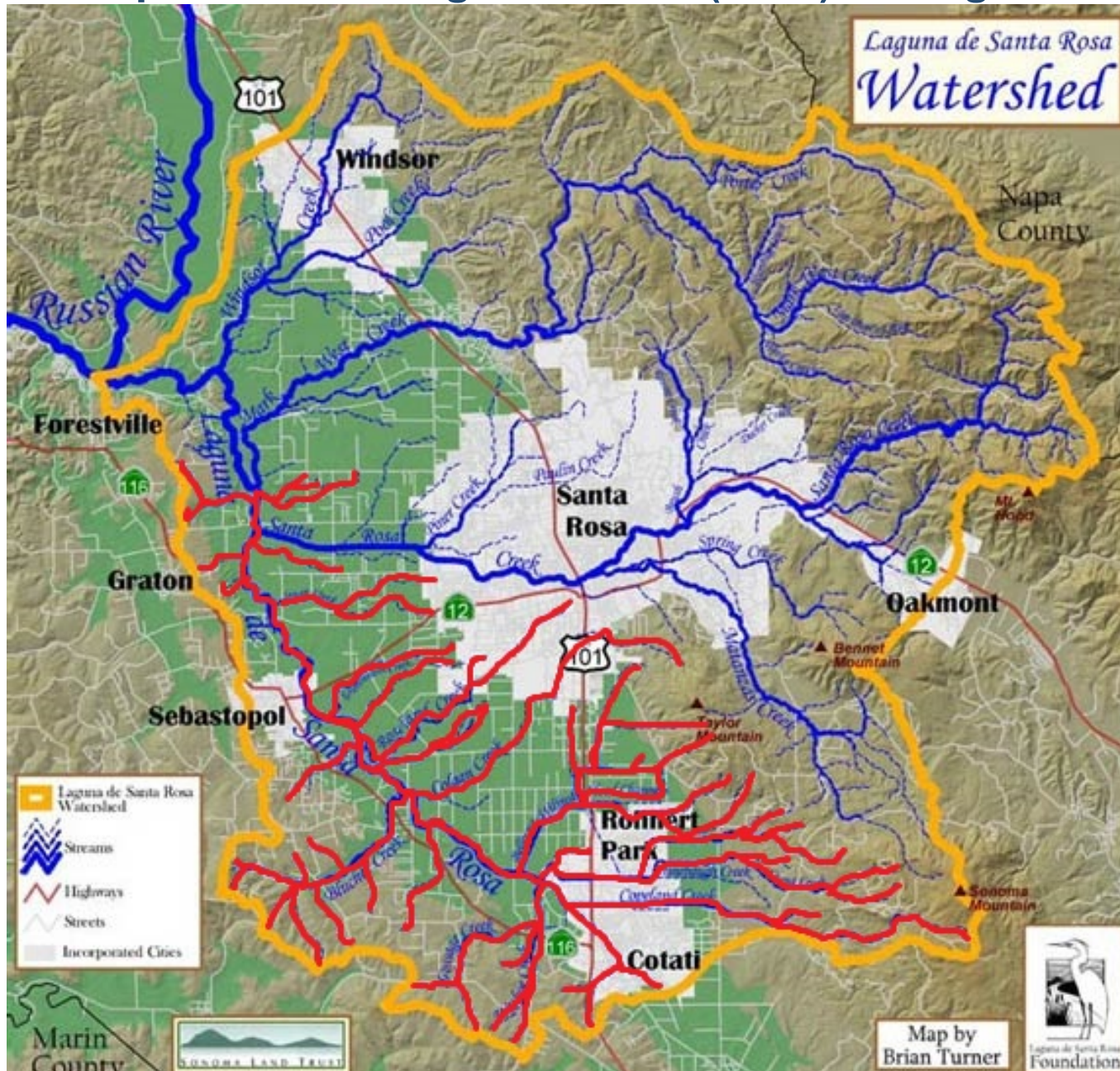


Indicator Bacteria 2012 Proposed Listing Extent



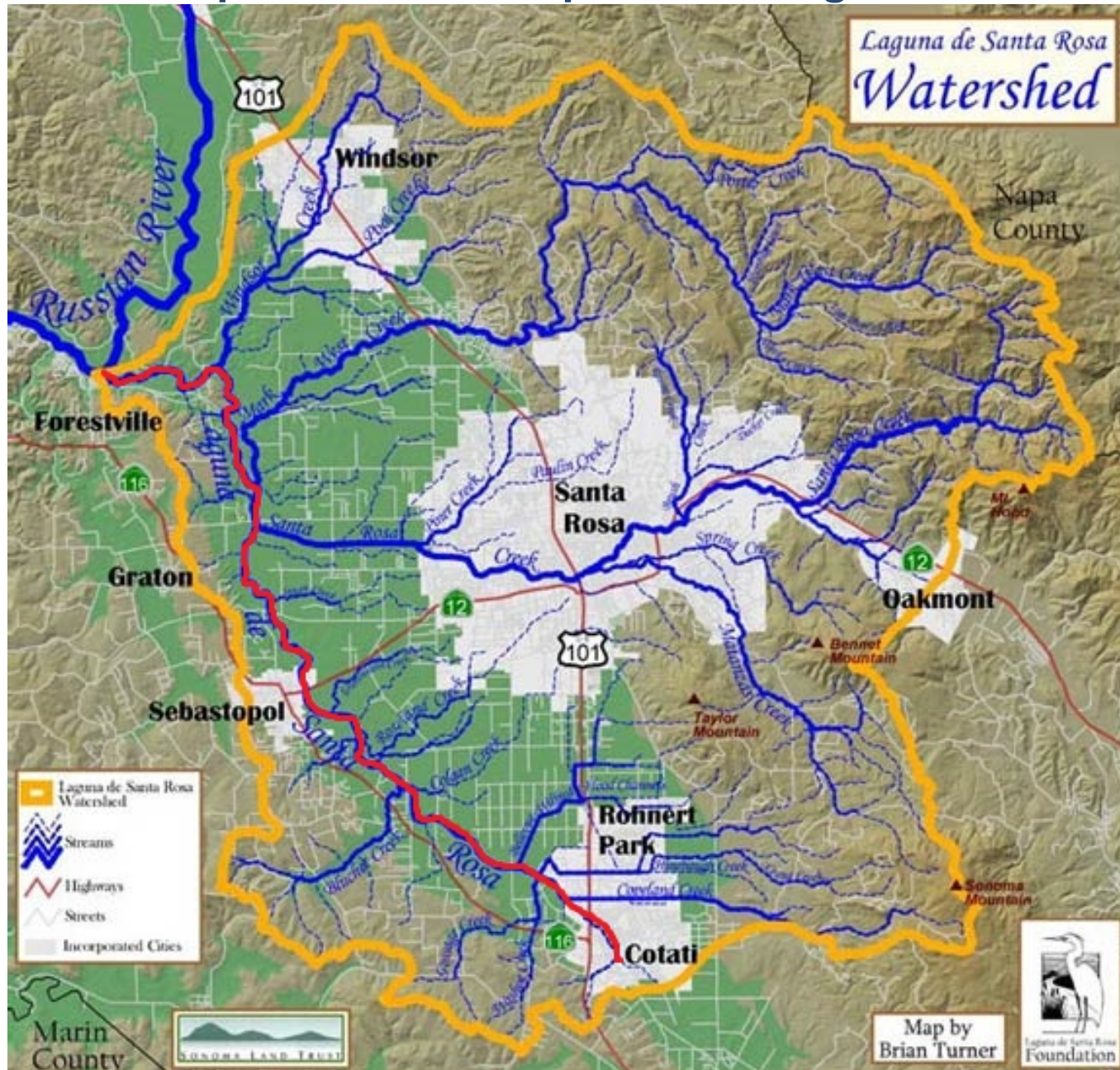
Laguna de Santa Rosa Watershed

Phosphorus & Nitrogen Current (2010) Listing Extent



Laguna de Santa Rosa Watershed

Phosphorus 2012 Proposed Listing Extent



Specific Recommendations

Laguna de Santa Rosa Watershed – Summary of Proposed Listings

New Proposed Listings in Bold

Water Body Hydrologic Unit (HU)	Water Body Name	Pollutant
Russian River HU	Middle Russian River HA, Laguna HSA, mainstem Laguna de Santa Rosa	Phosphorus* Dissolved Oxygen* Mercury* Temperature Sediment/Siltation
	Middle Russian River HA, Laguna HSA, tributaries to the Laguna de Santa Rosa (except Santa Rosa Creek and its tributaries)	Dissolved Oxygen* ¹ Temperature Sediment/Siltation
	Middle Russian River HA, Mark West HSA, mainstem Mark West Creek downstream of the confluence with the Laguna de Santa Rosa	Phosphorus* Dissolved Oxygen* Temperature Sediment/Siltation Aluminum Manganese
	Middle Russian River HA, Mark West HSA, mainstem Mark West Creek upstream of the confluence with the Laguna de Santa Rosa	Temperature Sediment/Siltation
	Middle Russian River HA, Mark West HSA, tributaries to Mark West Ck (except Windsor Ck and its tribs)	Temperature Sediment/Siltation
	Middle Russian River HA, Mark West HSA, Windsor Creek and its tributaries	Temperature Sediment/Siltation
	Middle Russian River HA, Santa Rosa HSA, mainstem Santa Rosa Creek	Indicator Bacteria* Temperature Sediment/Siltation
	Russian River HU, Middle Russian River HA, Santa Rosa HSA, tributaries to Santa Rosa Creek	Temperature Sediment/Siltation

* TMDL currently under development

¹ 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

Integrated Report Categories	
Category	Description
1	Evidence shows all core uses are supported.
2	Evidence shows some core uses are supported (at least one use is supported).
3	Evidence is insufficient to make use support determinations.
4a	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.
4b	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.
4c	Evidence shows at least one use is not supported, but a TMDL is not needed as the impairment is caused by non-pollutant sources.
5	Evidence shows at least one use is not supported and a TMDL is needed.



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:
 - 16C core salmonid juvenile rearing
 - 18C salmonid 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/](http://www.waterboards.ca.gov/northcoast/water_issues/programs/tmdls/303d/)

**5550 Skylane Boulevard, Suite A
Santa Rosa, CA 95403**