Russian River Watershed Pathogen Indicator Bacteria TMDL Action Plan

Public Workshop

U.C. Cooperative Extension – Mendocino County

890 N. Bush Street, Ukiah CA

Wednesday September 23, 2015

6:00 P.M. to 9:00 P.M

Water Boards

Agenda

North Coast Regional Water Quality Control Board

Public Workshop for the Draft Russian River Pathogen Indicator Bacteria TMDL

U.C. Cooperative Extension – Mendocino County
September 23, 2015
6:00 PM to 9:00 PM

I. Welcome

II. Introductions

III. Review Agenda

IV. Staff Presentation

V. Questions and Public Input on draft TMDL Action Plan

VI. Adjourn

Workshop Ground Rules:

- Fill out and turn in speaker cards
- Use microphone
- Limit comments to the Russian River TMDL
- Avoid unnecessary repetitive comments
- Honor time limits for providing comments
- Only one speaker at a time
- Be respectful of others

TMDL Schedule

Milestone	Timeframe
Public Workshops	September 22, 2015 *Monte Rio* September 23, 2015 *Ukiah* September 24, 2015 *Santa Rosa*
Deadline to Submit Written Comments	October 8, 2015
Regional Board Consideration/Hearing	November 19, 2015 *Santa Rosa*
State Board Consideration/Hearing	Spring 2016 *Sacramento*
Office of Administrative Law Review	Summer 2016
U.S. EPA Consideration	Late Summer 2016

Water Boards

Workshop Purpose

- Provide information to the public on the proposed TMDL Action Plan
- Answer questions and hear informal comments about the proposed TMDL Action Plan

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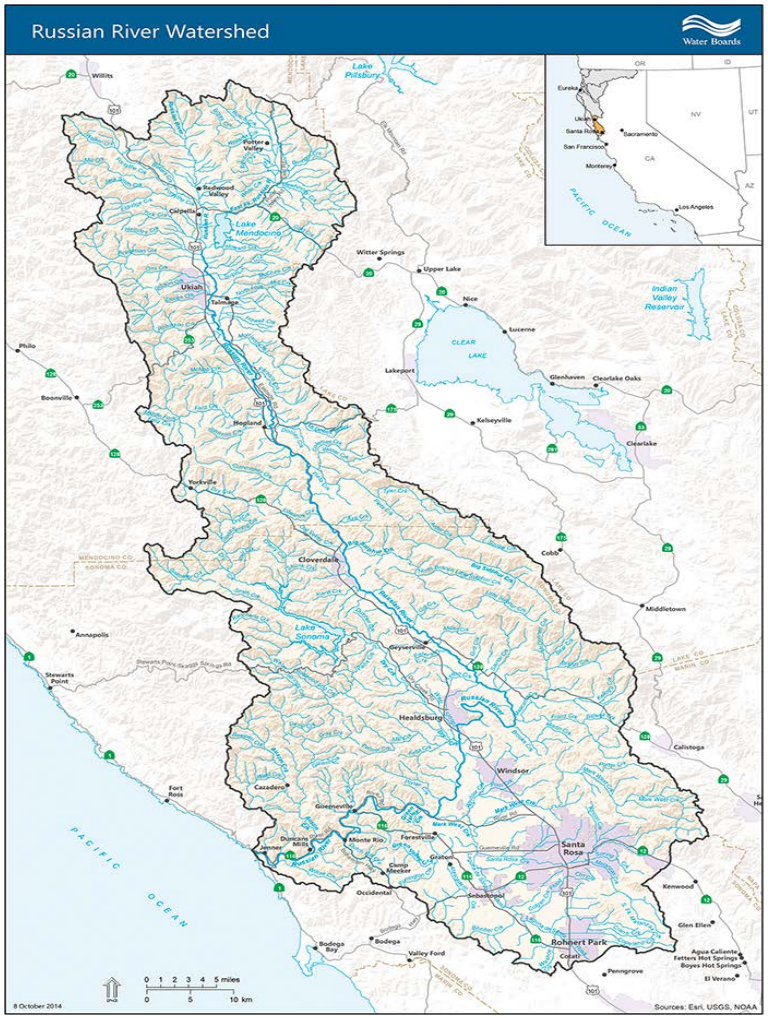
Presentation Topics



1. TMDL Basics
2. Russian River Watershed Impairments
3. TMDL and Allocations
4. Fecal Waste Discharge Prohibition
5. Sources of Bacteria
6. Implementation Actions
7. Funding Opportunities

Water Boards

What is a TMDL?

TMDL stands for Total Maximum Daily Load

- TMDL is the maximum amount of a particular pollutant that a surface water can receive and still support beneficial uses
- TMDL is the Sum of WLAs + LAs + MOS
  - Wasteload Allocations (WLA) for point sources
  - Load Allocations (LA) for nonpoint sources
  - Margin of Safety (MOS) for uncertainty

What is a TMDL?

Pollutant Sources

Point Sources

Nonpoint Sources

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Regulatory Requirements

Federal

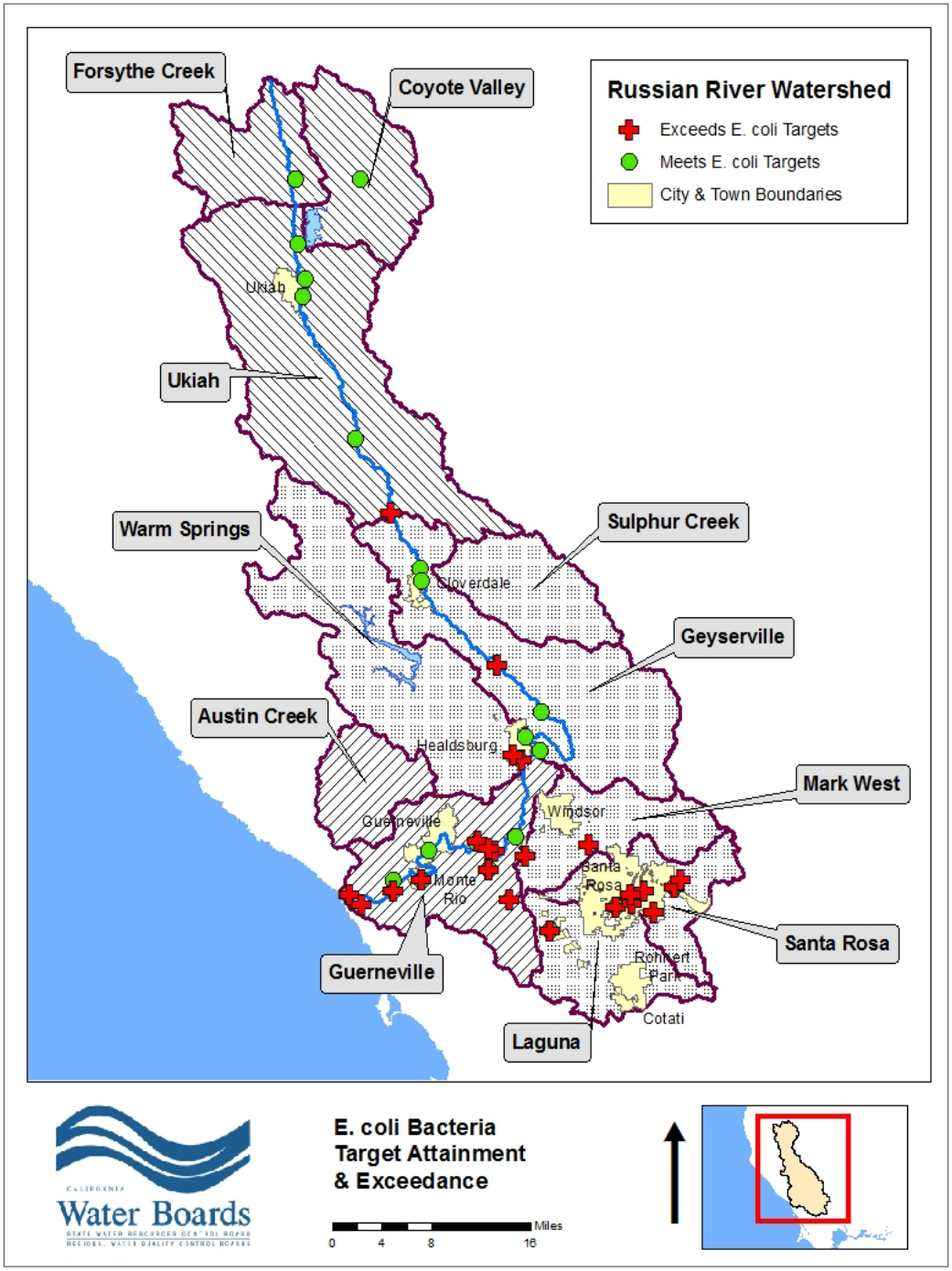
- Clean Water Act requires states to identify waters not meeting water quality standards and list them on the federal Clean Water Act Section 303(d) list
- Develop a TMDL for attainment of water quality standards for each listed surface water body

State

- Porter Cologne Water Quality Control Act specifies requirements for programs of implementation for achieving water quality standards
- Health and Safety Code requires external scientific peer review of a proposed regulation to determine whether the scientific findings, conclusions, and assumptions are based on sound science

Changes to Peer Review Draft TMDL

Peer Review Draft Staff Report	Public Review Draft Staff Report	Justification for Change
Attain standards for Rec-1 and natural background	Attain standards for Rec-1	Need to complete reference study to better define natural background
TMDL based on *E.coli* and Bacteroides bacteria	TMDL based on *E.coli* and enterococci bacteria	• Scientific peer reviewer recommended use of multiple indicators and addition of enterococci bacteria • Stakeholders recommended not relying on Bacteroides for natural background
Rely on Counties to implement program to address existing OWTS with potential to impact water quality	Provide multiple options to address existing OWTS with potential to impact water quality	Counties recommended development of alternatives to proposed performance standards in High Priority Areas


Forsythe Creek
Coyote Valley
Russian River Watershed
Exceeds E. coli Targets
Meets E. coli Targets
City & Town Boundaries
Ukiah
Ukiah
Warm Springs
Sulphur Creek
Cloverdale
Geyserville
Austin Creek
Healdsburg
Mark West
Windsor
Guerneville
Santa Rosa
Monte Rio
Santa Rosa
Rohnert Park
Guerneville
Cotati
Laguna
Water Boards
E. coli Bacteria
Target Attainment
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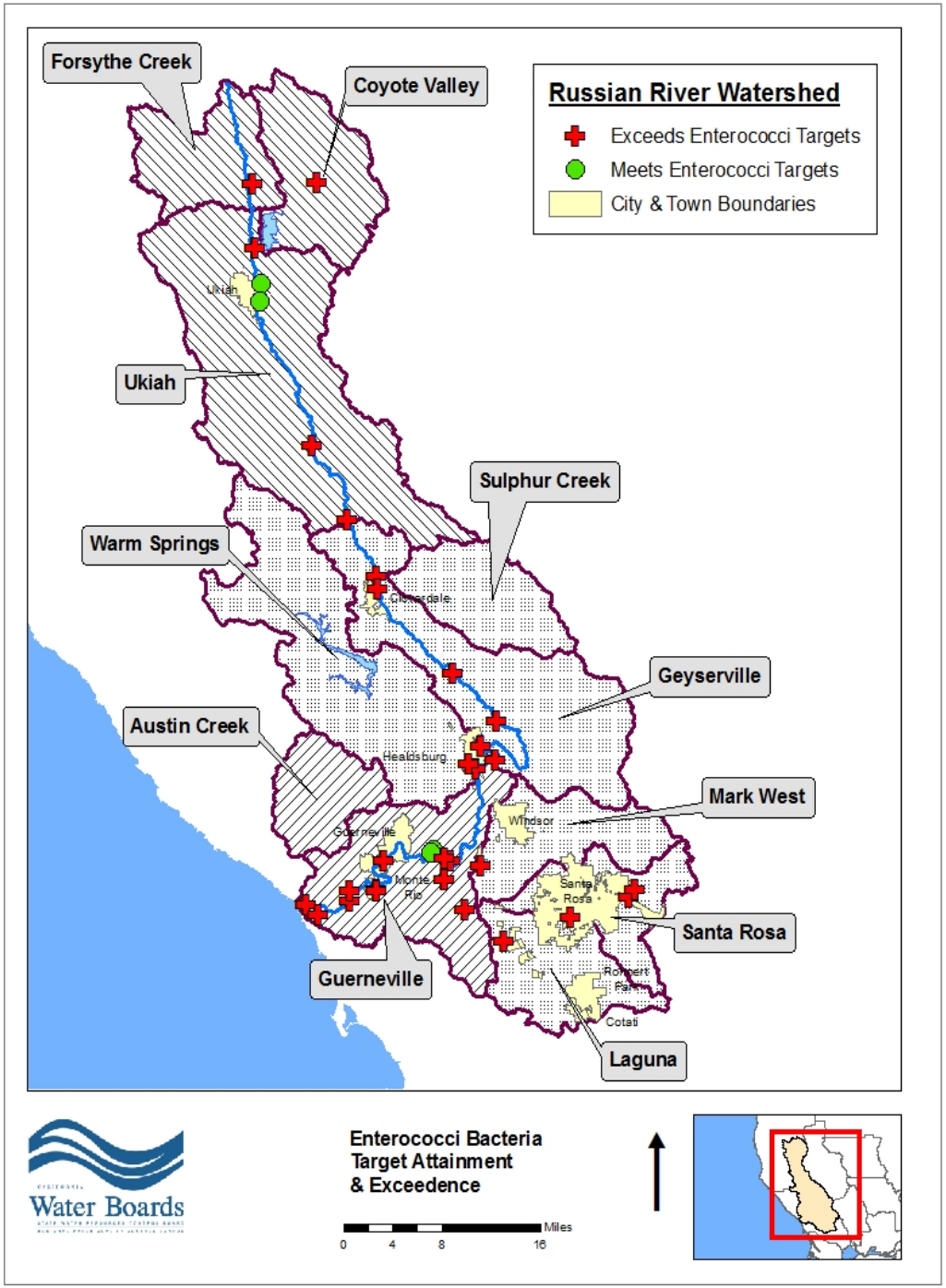
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Other Lines of Evidence

- Fecal Coliform Bacteria
- Human-specific *Bacteroides* Bacteria
- Bovine-specific *Bacteroides* Bacteria
- Bacteria Community Analysis using PhyloChip
- Pathogenic Bacteria Detections using PhyloChip
- *Giardia* and *Cryptosporidium* Detections
- Public Health Advisories

Purpose of the TMDL

- Reduce Pathogen and Indicator Bacteria Levels
- Control Discharges of Fecal Wastes
- Achieve Water Quality Objectives for Recreation

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TMDL and Allocations

- The TMDL and **waste load allocations (WLAs)** and **load allocations (LAs)** are expressed as receiving water concentrations of *E. coli* and enterococci bacteria
- **Margin of Safety** based on criteria that are calculated to result in no more than 32 illnesses/1,000 people, rather than the alternative of 36 illnesses/1,000
- The WLAs and LAs are expressed in concentrations as a geometric mean (GM) and a statistical threshold value (STV)

E. coli Bacteria TMDL and Allocations:

≤ 100 cfu/100 mL as GM

≤ 320 cfu/100 mL as STV

Enterococci Bacteria TMDL and Allocations:

≤ 30 cfu/100 mL as GM

≤ 110 cfu/100 mL as STV

Fecal Waste Discharge Prohibition

TMDL sets forth the following discharge prohibition:

"Discharges of waste containing fecal waste material from humans or domestic animals to waters of the state within the Russian River Watershed that cause or contribute to an exceedance of the bacteria water quality objectives not authorized by waste discharge requirements or other order or action of the Regional or State Water Board are prohibited."

Sources of Bacteria

- Treated municipal wastewater
- Sanitary sewer overflows and spills
- Runoff from land application of municipal sewage (biosolids)
- Recycled water irrigation
- Urban runoff
- Dairies
- Failing onsite wastewater treatment systems
- Recreational water uses
- Waste discharges from homeless encampments and illegal camping

Implementation Actions

- **Dairies**

  Action : Comply with requirements set forth in the Conditional Waiver, the general WDR, an individual WDR, or NPDES permit, as applicable

  Facilities required to have a Waste Management Plan (WMP) and Nutrient Management Plan (NMP) or a Water Quality Plan (WQP) as a condition of the order, the WQP and NMP shall be updated to address sources of bacteria

  Timeline: Within 1 year after the effective date of the TMDL

- **Non-dairy Livestock and Farm Animal Waste**

  Action: Implement BMPs to properly contain and dispose of waste, and mitigate for potential water quality impacts resulting from surface runoff of animal waste

  Timeline: Within 2 years after the effective date of the TMDL

Implementation Actions

- **Municipal Wastewater Discharges**

  Action: Comply with effluent limitations for fecal indicator bacteria and disinfection specifications in federal NPDES permits

  Timeline: Ongoing

- **Wastewater Holding Pond Discharges to Surface Water**

  Action: Demonstrate that discharge does not contain human-source bacteria and pathogens

  Timeline: Within 18 months after effective date of TMDL; up to 10 years to comply

- **Percolation Pond and Irrigation Discharges**

  Action: Update Waste Discharge Requirements to include LAs as effluent limitations

  Timeline: Ongoing ; permits updated as soon as possible

Implementation Actions

- **Sanitary Sewer Systems**

  Action: Update Sanitary Sewer Management Plan (SSMP) that describes actions to further minimize sanitary sewer overflows, spills, and exfiltration

  Timeline: SSMPs must be updated every 5 years, in accordance with general WDR

- **Land Application of Treated Municipal Sewage Sludge (Biosolids)**

  Action: Submit and implement an Erosion Control Plan describing enhanced protections to prevent the movement of biosolids from the application area

  Timeline: Within 1 year of the effective date of the TMDL

- **Recycled Water Irrigation Runoff**

  Action: Develop and implement (or update) a Non-Storm Water BMP Plan

  Timeline: Up to 1 year for existing Plans; 2 years for new Plans, up to 5 years to implement

Implementation Actions

- **Recreational Water Use/Homeless Encampments**

  Action: Implementing parties must submit a Bacteria Load Reduction Plan (BLRP) describing actions to control bacteria discharges

  Timeline: Up to 2 years after the effective date of the TMDL

- **Urban Runoff**

  Action: Implementing parties must submit a Bacteria Load Reduction Plan (BLRP) describing actions to control bacteria discharges

  Timeline: Up to 2 years after the effective date of the TMDL

- **Large Onsite Wastewater Treatment Systems (OWTS)**

  Action: Submit a Report of Waste Discharge (ROWD) to the Regional Water Board. The Regional Water Board shall issue WDRs or Waiver for the OWTS

  Timeline: Up to 1 year after the effective date of the TMDL for OWTS > 10,000 gpd

Water Boards

Implementation Actions

- **Individual Onsite Wastewater Treatment Systems (OWTS)**
  - High Priority Areas – Communities of Cazadero, Monte Rio, Camp Meeker, Guerneville, Rio Nido, Summer Home Park, Hacienda, Mirabel, and Fitch Mountain
  - Low Priority Areas – Communities of East Santa Rosa (Oakmont), North Cloverdale, Talmage, and Redwood Valley

    Areas within 600-feet of the Mainstem Russian River, Austin Creek, Big Sulphur Creek, Little Sulphur Creek, Commisky Creek, Dry Creek, Dutch Bill Creek, Feliz Creek, Fife Creek, Forsythe Creek, Franz Creek, Green Valley Creek, Laguna de Santa Rosa, Maacama Creek, Mark West Creek, Mill Creek, Pieta Creek, East Fork Russian River, Santa Rosa Creek, Sausal Creek, and York Creek
  - Non-Priority Areas – Areas not in High or Low Priority Areas

Implementation Actions

- **Onsite Wastewater Treatment Systems (OWTS)**

  Actions: OWTS in Non-Priority Areas:

  - Existing OWTS. No action. Compliance with Conditional Waiver
  - New and replacement OWTS must comply with Local Agency Management Program (LAMP)

  Timeline: Upon approval of LAMP

Implementation Actions

- **Onsite Wastewater Treatment Systems (OWTS)**

  Actions: All OWTS in Low-Priority Areas:

  - Initial inspection by a qualified professional for assessment of proper operation
    - Pass – No action until next inspection
    - No Pass – Repairs in accordance with local requirements
  - Re-inspections by qualified professional to verify ongoing proper operation and maintenance

  Timeline: Up to 3 years after effective date of the TMDL to complete initial inspection; annual inspections for OWTS not passing initial inspection, re-inspections every five years thereafter

Implementation Actions

- **Onsite Wastewater Treatment Systems (OWTS)**

Actions: All OWTS in High Priority Areas must meet one of these **options**:

1. Meet Performance Standard for Pathogens, plus monitoring and reporting; or
2. Connect to a Centralized Wastewater Collection and Treatment System; or
3. Be regulated under a Local Agency Management Plan (LAMP).

Timelines:

Option 1 - Up to 3 years after effective date of the TMDL to employ supplemental treatment components

Option 2 - Up to 4 years after the effective date of the TMDL to commit to connection to centralized wastewater collection and treatment system

Option 3- Local Agency LAMP will describe timeline for actions to investigate and regulate OWTS; Multi-year phased approach

Monitoring

- Permits will be revised to include individual monitoring requirements in order to demonstrate compliance with WLAs and LAs
- BLRPs will require monitoring, reporting, and adaptive management
- Parties responsible for implementation actions under the TMDL Action Plan will be encouraged to participate in a regional monitoring program
- Regional Water Board is working with stakeholders to develop a regional monitoring program for the Russian River Watershed

Funding Opportunities

- Proposition 1 - $7.545 billion to fund ecosystem and watershed protection, water supply infrastructure projects, drinking water protection
- Nonpoint Source 319(h) Grant Program - $4 million for 2016 for projects that address nonpoint, diffuse sources of pollution
- State Revolving Fund (SRF) Mini-Loan Program – Low interest loans to fund projects with private parties
- Linked Deposit Program – State-backed program that allows private banks to provide reduced interest rate loans to private property owners for eligible projects
- Sonoma County Energy Independence Program (SCEIP) – Financing for residential projects with costs added to the homeowners' property tax bills, with payback periods up to 20 years

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