PROPOSED ADOPTION OF BACTERIA PROVISIONS AND A VARIANCE POLICY

Part 3 of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California

Amendment to the Water Quality Control Plan for Ocean Waters of California

Item 5
August 7, 2018
Lori Webber

Summary

- Project background and timeline
- Bacteria Provisions and Variance Policy
- Comments, revisions, and responses
- Questions
- Public comment

Background

- U.S. EPA 2012 recommended criteria for recreation (REC-1)
- Basin Plans and Ocean Plan inconsistent
- Proposed Bacteria Provisions:
  - Based on U.S. EPA's 2012 recommendations
  - Utilize best available science
  - Consistent objectives and implementation approaches
- Variance Policy
  - Established in 2015 by U.S. EPA at 40 CFR § 131.14

Timeline

- **2014 - 2017:** Focus group meetings and scoping
- **July 2017:** Staff Workshop
- **August 2017:** State Water Board public hearing
- **January 2018:** Draft documents distributed
- **July 2018:** Revised draft documents distributed

Components of the Bacteria Provisions

- Bacteria water quality objectives for fresh and saline waters
- Beneficial use definition: Limited Water Contact Recreation (LREC-1)
- Implementation approaches
- Water Quality Standards Variance Policy

REC-1 Bacteria Objectives

Applicable Waters	Objective Elements	Estimated Illness Rate: 32/1,000	
		Magnitude	
	Indicator	6-week GM	STV
All waters where the salinity is equal to or less than 1 ppth 95% or more of the time	*E. coli*	100cfu/100mL	320cfu/100mL
All waters where the salinity is greater than 1 ppth more than 5% of the time	Enterococci	30cfu/100mL	110cfu/100mL

- Inland Surface Waters, Enclosed Bays, and Estuaries (ISWEBE) Plan – E.coli & enterococci
- Ocean Plan – enterococci
- Geometric Mean (GM)
  - Calculated every six-weeks
  - Rolling
- Statistical Threshold Value (STV)
  - Calculated every calendar month
  - Shall not be exceeded by more than 10% of samples collected

Estimated Illness Rate

- Above the proposed geometric mean, there is increased risk of illness
- Below proposed geometric mean, the risk of illness blends into the ambient illnesses rate
- Illness Rate 32 per 1,000
- Risk of illness 3.2% per person
- Lower illness rate than 1986 criteria

REC-1 Bacteria Objectives

- Supersedes numeric REC-1 basin plan bacteria objectives
- Do not supersede narrative and site-specific objectives
- Existing TMDLs for bacteria remain in effect

Limited Water Contact Recreation (LREC-1) Beneficial Use Definition

"Uses of water that support limited recreational activities involving body contact with water, where activities are predominantly ***limited by physical conditions*** *and, as a result,* ***body contact with water and ingestion of water is infrequent or insignificant.****"*

- Only applicable to ISWEBE waters
- No proposed designations

Implementation Approaches

- ISWEBE and Ocean Plan
  - Reference system/antidegradation
  - Natural source exclusion
- ISWEBE Plan:
  - Temporary high-flow suspension of REC-1
  - Seasonal suspension of REC-1
  - Provisions for designation of Limited Water Contact Recreation (LREC-1)
- Not requirements: implemented through basin planning actions

Water Quality Standards Variance Policy

- Temporary suspension of water quality objective
- Identifies U.S. EPA's 2015 federal variance rule
- Does not add to or limit
- Explains existing state law

Comments, Revisions, and Responses

Ocean Plan fecal coliform objective:

- Fecal coliform may be a better indicator during certain conditions
- Staff reviewed data
- Retain existing Ocean Plan fecal coliform objective

Ocean Plan Fecal Coliform Objective

Indicator	Magnitude	
	30-day GM	SSM
Fecal Coliform	200/100mL	400/100mL

Geometric Mean

- Calculated every 30-days

Single Sample Maximum

- The maximum value not to be exceeded in any single sample

Comments, Revisions, and Responses

Ocean Plan Water Quality Objectives

Enterococci

Indicator	Estimated Illness Rate (NGI): 32/1,000	
	Magnitude	
	6-week GM	STV
Enterococci	30cfu/100mL	110cfu/100mL

Geometric Mean (GM)

- Calculated every six-weeks
- Rolling

Statistical Threshold Value (STV)

- Calculated every calendar month
- Static
- Shall not be exceeded by more than 10 percent of samples collected

NGI: 32 illnesses per 1,000 Recreators

Fecal Coliform

Indicator	Magnitude	
	30-day GM	SSM
Fecal Coliform	200/100mL	400/100mL

Geometric Mean

- Calculated every 30-days

Single Sample Maximum

- The maximum value not to be exceeded in any single sample

Comments, Revisions, and Responses

Lahontan Region's existing numeric objective:

- Commenters requested clarification on proposed vs. existing objective
- Applies to all waters, not specific to REC-1 uses
- Will not be superseded
- Staff Report revised

Lahontan Region's Objective

Indicator	30-day Log Mean	Maximum
Fecal Coliform	20/100mL	40/100mL

Lake Tahoe's proposed site-specific objective:

- Draft documents included a site-specific objective Lake Tahoe
- Based on a translation of the existing fecal coliform objective to E.coli
- Translation deemed inappropriate
- Site-specific objective for Lake Tahoe removed

Comments, Revisions, & Responses

North Coast Region's existing fecal coliform objective for REC-1 uses:

- Commenters requested to retain existing fecal coliform citing concerns that the proposed objective not as protective
- Existing objective is:
  - Related to protection of high quality waters
  - Not related to a specific risk of illness
- Numeric objective will be superseded
- Narrative objective will not be superseded

North Coast Region's Objective

Indicator	Geometric Mean	Single Sample Maximum
Fecal Coliform	50/100mL	400/100mL

Comments, Revisions, & Responses

Reference system/antidegradation and natural source exclusion approaches

- Allowed within context of TMDL
- Commenters requested TMDL alternative option
- A TMDL provides rigorous framework
- No established process for TMDL alternatives
- TMDL alternative option not included

RECOMMENDATION

Adoption of the Revised Proposed Final Bacteria Provisions

Questions?