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

- 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

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

<table>
<thead>
<tr>
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<th>Magnitude</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Geometric Mean</td>
</tr>
<tr>
<td>Fecal Coliform</td>
<td>200/100mL</td>
</tr>
</tbody>
</table>

- Geometric Mean
  - Calculated every 30-days
- Single Sample Maximum
  - The maximum value not to be exceeded in any single sample
## Ocean Plan Water Quality Objectives

### Enterococci

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<th>Indicator</th>
<th>Estimated Illness Rate (NGI): 32/1,000</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Magnitude</strong></td>
</tr>
<tr>
<td></td>
<td>6-week GM</td>
</tr>
<tr>
<td>Enterococci</td>
<td>30cfu/100mL</td>
</tr>
</tbody>
</table>

- **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

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<tr>
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- **Geometric Mean**
  - Calculated every 30-days

- **Single Sample Maximum**
  - The maximum value not to be exceeded in any single sample

NGI: 32 illnesses per 1,000 Recreators
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

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

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<td>400/100mL</td>
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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?