Regional Bacteria Monitoring Program
Data Update and Recent Changes

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October 22, 2019
Outline

• 2019 dry season conditions
• RB letter dated June 26, 2019
• Cucamonga Creek
2019 Dry Season
Priority 1

• Very low bacteria concentrations everywhere all of the time – consistent with findings since inception of RMP
Santa Ana River at MWD

Synoptic study period

Site: WW-S1
Dry Season 2019

Log E. coli Concentration (MPN/100 mL)

Sample Week (2019)

- Warm Season - Single Sample
- Warm Season - Geomean
- REC 1 Geomean Criteria (100 MPN/100 mL)
Santa Ana River at Pedley

Site: WW-S4
Dry Season 2019

Synoptic study period

Log E. coli Concentration (MPN/100 mL)

Sample Week (2019)

- Warm Season - Single Sample
- Warm Season - Geomean
- REC 1 Geomean Criteria (100 MPN/100 mL)
Chino Creek at Central

Site: WW-C7
Dry Season 2019

Log E. coli Concentration (MPN/100 mL)

Sample Week (2019)

- Warm Season - Single Sample
- Warm Season - Geomean
- REC 1 Geomean Criteria (100 MPN/100 mL)

Synoptic study period
24000 mpn/100mL

24000 mpn/100mL
Mill-Cucamonga Creek

Site: WW-M6
Dry Season 2019

Log E. coli Concentration (MPN/100 mL)

Sample Week (2019)

- Warm Season - Single Sample
- Warm Season - Geomean
- TMDL Target (113 MPN/100 mL)
Prado Park Lake

Site: WW-C3
Dry Season 2019

Log E. coli Concentration (MPN/100 mL)

Sample Week (2019)

- Warm Season - Single Sample
- Warm Season - Geometric Mean
- REC 1 Geometric Mean Criteria (100 MPN/100 mL)
Prado Park Lake

- May consider delisting and exclusion from revisions to MSAR bacteria TMDL
Priority 3 Site Geomeans

- Four years of geomeans provide some insights on future directions

<table>
<thead>
<tr>
<th>Waterbody</th>
<th>Geomean of E. coli Samples (mpn/100mL)</th>
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<tbody>
<tr>
<td></td>
<td>2016</td>
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<tr>
<td><strong>Bolsa Chica Channel</strong></td>
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<td>2016</td>
<td>51</td>
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<tr>
<td><strong>Borrego Creek</strong></td>
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<td>Dry</td>
<td>Dry</td>
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<td><strong>Buck Gully Creek</strong></td>
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<td>2016</td>
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<td><strong>Morning Canyon Creek</strong></td>
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<td><strong>Peters Canyon Wash</strong></td>
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<td>2016</td>
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<td><strong>San Diego Creek Reach 1</strong></td>
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<tr>
<td>2016</td>
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<td><strong>San Diego Creek Reach 2</strong></td>
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<td>2016</td>
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<td><strong>Goldenstar Creek</strong></td>
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<td>2016</td>
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<td><strong>Santa Ana River Reach 4</strong></td>
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<tr>
<td>2016</td>
<td>48</td>
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</tbody>
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Priority 4

• Santa Ana Delhi channel at tidal prism exceeded Enterococci anti-deg criteria (September 2019)
  – Construction work occurring upstream on sampling day
  – OCPW is planning to collect follow-up samples
• Cucamonga Creek at Hellman dataset increasing
  – Monthly sampling initiated 2019
  – SBCFCD “10-week” program in 2016-18 provides a 30 sample jumpstart
Monitoring Plan and QAPP Updates
Status Update

- RB approved June 2019 MP and QAPP - added a few key comments in June 26 letter for Task Force to consider
- Changes made in August 2019 addressed some of these additional comments
  - Updates to make consistent with statewide provisions
    - Revised WQOs stated in the documents
    - Monitoring for enterococci in high TDS inland waters
    - Removal of recreational use tiers and STVs no longer applicable
  - Proposal to remove OC sites from RMP not approved by RB
    - OCPW will look at alternative ways to reduce redundancy with core program
  - Correction to terminology regarding targets and allocations for priority 2 (with TMDL) waters
Priority 3 (Impaired no TMDL) Waters

- New sites listed in the 2014/16 303(d) List are added to the RMP: Warm Creek, San Timoteo Creek
- Other waters referenced in Regional Board letter: Jenks Lake and San Antonio Creek
Priority 3 (Impaired no TMDL) Waters

• RB June 26 letter suggests that
  – An assessment is needed for the Priority 3 sites to determine whether they are on track for delisting or justifying an increase in sampling frequency
  – Source evaluation plans are needed, pursuant to Resolution No. R8-2012-0001, where water quality monitoring data indicate significant non-compliance with the applicable pathogen indicator objective

• August 2019 MP extends monitoring priority 3 waters through 2020 dry season, followed by assessment in 2020/21 to propose a course of action in each waterbody
  – Delisting, source evaluation, UAA, others
Other Important RB Suggestions

• Regarding the role of harmful algal blooms (HABs), RB June 26 letter requests Task Force consider
  – ….future monitoring of cyanobacteria/cyanotoxins to guide all aspects of protecting REC1 use... REC 2 use would also have to be taken into account as would impacts to domestic pets (i.e., dogs)....

• From RB priority list of issues (2019-22)
  – “For REC1 bacteria objectives consider the development of region-specific reference/natural sources exclusion policy, development of a limited REC1 use and/or development of UAAs to remove REC1 for certain waters”
Priority 4: Cucamonga Creek @ Hellman Ave

- Increased sampling to **monthly** monitoring year-round.
- To re-evaluate antideg target for new normal RP1 flows
Synoptic Surveys in 2016-2018

- Longitudinal sampling along Cucamonga Creek over 10 consecutive weeks
- Focused on outfalls in San Bernardino County only
- Geomean (2017-18) in Cucamonga Creek at Hwy 60 is 20 mpn/100mL
Synoptic Surveys in 2016-2018

- No relationship between concentration at Hellman Avenue and at WW-M6 compliance site
Synoptic Surveys in 2016-2018

- SBCFCD led 10-week studies
  - blend of inflows does not consider flows from Eastvale
  - suggests variable nature of net growth versus decay
  - CHRIS basin outflow remains a key source of *E. coli* load