



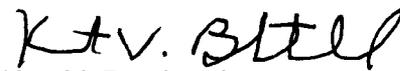
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**Santa Ana Regional Water Quality Control Board**

**TO:** Vicky Whitney  
Deputy Director, Division of Water Quality  
State Water Resources Control Board

**FROM:**   
Kurt V. Berchtold  
Executive Officer

**DATE:** November 15, 2013

**SUBJECT:** EXECUTIVE OFFICER CORRECTIONS: RECREATION STANDARDS BASIN  
PLAN AMENDMENTS ADOPTED UNDER RESOLUTION NO R8-2012-0001

On June 15, 2012, the Santa Ana Regional Water Board adopted Resolution No. R8-2012-0001, approving amendments to the Basin Plan for the Santa Ana Region that revise recreation standards for freshwaters in the Region and incorporate other Basin Plan changes. The amendments are shown in two attachments to Resolution No. R8-2012-0001: Attachment 1 is the underline/strikeout version of the amendments; Attachment 2 is the "clean" version of the amendments.

On February 12, 2013, I sent a set of certain non-substantive corrections to the amendments. It has come to my attention that certain additional non-substantive corrections are required. These corrections are shown below.

The final versions of the amendments, including the February 12, 2013 corrections and those identified herein, are shown in the corrected Attachments 1 and 2 to Resolution No. R8-2012-0001. These corrected Attachments are attached to this memo.

If there any questions concerning these corrections, please contact Joanne Schneider at 951-782-3287 or [jschneider@waterboards.ca.gov](mailto:jschneider@waterboards.ca.gov).

**November 15, 2013 Corrections to Attachment 2 ("clean" version of amendments) to Resolution No. R8-2012-0001:**

1. p. 69 *et seq.* of 79: *Antidegradation targets for REC2 only freshwaters* , Modify as follows (added text is underlined; deleted text is shown in strike-out type)

The baseline condition (antidegradation target) for each REC2 only water will be established through a comprehensive statistical analysis of ambient bacteria quality data that is conducted as part of the UAA used to justify the REC2 only designation. The statistical analysis must be designed to characterize the entire distribution of the dataset. This includes determination of the geometric mean, median, standard deviation, coefficient-of-variation, maximum value, ~~upper~~ 75<sup>th</sup> percentile value and sample size for the dataset. The ~~upper~~ 75th percentile density will serve as the antidegradation target, that is, the trigger threshold for further investigation and possible corrective action. As new data become available pursuant to requisite monitoring, they will be compared to this antidegradation target to determine whether further investigation or action is needed. The additional monitoring results must be sufficiently robust to assess whether a lowering of water quality has occurred.

In general, the following method will be used to estimate the ~~upper~~ 75th percentile densities:

- Step 1) Log-transform the existing data
- Step 2) Calculate the mean of the log-transformed data
- Step 3) Calculate the standard deviation of the log-transformed data
- Step 4) Multiply the standard deviation of log-transformed data by 0.675
- Step 5) Add result from Step 4 to the mean value calculated in Step 2
- Step 6) Calculate the anti-log for the value derived in Step 5; this is the 75% ~~Upper-Confidence-Level~~ percentile of the fitted log-normal distribution.

Use Attainability Analyses have been completed to justify the designation as REC2-only the specific freshwater stream segments listed in Table 5-REC2 Only Targets-FW. For each of these waters, this Table shows the antidegradation indicator bacteria targets, based on the 75% percentile ~~upper-confidence-level~~ of data obtained as part of the UAAs:

**Table 5-REC2 Only Targets-FW<sup>1</sup>**

| REC2 Only Waterbody              | <i>E. coli</i> Densities (cfu/100 mL) |           |         |                    |                                   |
|----------------------------------|---------------------------------------|-----------|---------|--------------------|-----------------------------------|
|                                  | Geometric Mean                        | Std. Dev. | N       | Max. Observed      | 75% <sup>3</sup> UCL <sup>3</sup> |
| Temescal Creek, Reach 1a         | 198-192                               | 34        | 119-108 | 9,200 <sup>2</sup> | 374- 359                          |
| Santa Ana Delhi Channel, Reach 2 | 448- 411                              | 110       | 63- 56  | 12,590             | 1234 1,104                        |

UCL= Upper Confidence Level; **75% percentile upper confidence level is the antidegradation target**

<sup>1</sup> CDM, Inc. Technical Memorandum. Calculation of Antidegradation Targets for REC2 Only Freshwaters. April 24, 2012.

<sup>2</sup> A value of 1,800,000 cfu/100 mL, from the sample collected on 9/8/2007, was excluded as an outlier.

<sup>3</sup> Targets calculated for dry weather baseflow conditions only; do not apply to samples collected during wet weather conditions.

**Table 5-REC2 Only Targets-Others Waters<sup>1</sup>**

| REC2 Only Waterbody                     | Enterococcus Densities (cfu/100 mL) |                    |                  |                |                      |
|---|-------------------------------------|--------------------|------------------|----------------|----------------------|
|   | Geometric Mean                      | Std. Dev.          | N                | Max. Observed  | 75% <sup>2</sup> UCL |
| Greenville-Banning Channel, Tidal Prism | 44- <u>24</u>                       | 2041<br><u>144</u> | 116<br><u>61</u> | 22,000<br>740  | 133<br><u>64</u>     |
| Santa Ana-Delhi Channel, Tidal Prism    | 439- <u>240</u>                     | 4852<br><u>474</u> | 65<br><u>43</u>  | 28,600<br>2200 | 1,320<br><u>464</u>  |

UCL= Upper Confidence Level; **75% percentile upper confidence level is the antidegradation target**

<sup>1</sup> California Regional Water Quality Control Board, Santa Ana Region. Memorandum prepared by David Woelfel, Calculation of Antidegradation Targets for REC2 Only Waters-Tidal Prisms. April 24, 2012.

<sup>2</sup> Targets calculated for dry weather baseflow conditions only; do not apply to samples collected during wet weather conditions.

cc w/ att: Santa Ana Regional Board members  
David Rice, OCC  
Jon Bishop, Rik Rasmussen, Paul Hann, DWQ