



November 30, 2016

Mr. Kurt V. Berchtold
Santa Ana Regional Water Quality Control Board
3737 Main Street Suite 500
Riverside, CA 92501-3348

Re: Proposed Basin Plan Amendments to address REC-1 objectives for bays and estuaries, the Fecal Coliform TMDL for Newport Bay, and other water quality standards matters

Dear Mr. Berchtold:

OC Public Works has reviewed the proposed Basin Plan Amendments to address the Newport Bay Fecal Coliform TMDL and other indicator bacteria-related water quality objectives for the Santa Ana Region. We appreciate the efforts of the Santa Ana Regional Water Quality Control Board to update indicator bacteria-related standards. The science of indicator bacteria has advanced considerably since adoption of the Newport Bay Fecal Coliform TMDL and we support efforts to revise water quality standards to reflect current science. The following comments are provided:

1. Amendment to Chapter 3 – SHEL beneficial use definition

Since the primary concern is the risk to human health from pathogenic bacteria, it is appropriate to narrow the definition of shellfish to filter feeding bivalves.

#1

2. Amendment to Chapter 3 - Table 3-1 Beneficial Uses

The definition of REC-1, as stated on page 4 of the Basin Plan Amendment Staff Report (December 9, 2016), is that 'recreational activities involving body contact with water where ingestion of water is reasonably possible. These uses may include, but are not limited to, swimming, wading, water-skiing, skin and scuba diving, surfing, whitewater activities, fishing and use of natural hot springs'. Not stated explicitly is that head immersion is required, as indicated in the 2012 USEPA's Recreational Water Quality Criterion. In epidemiological studies, the test subjects are required to have their heads under water in order to reliably count them in the exposure cohort. Many of the waterbodies that are being designated as REC-1 do not have such characteristics. Many are either inaccessible, or dry.

#2

most of the time, or so shallow that REC-1 is impossible, or when deep enough during storm events, too dangerous to recreate in and subject to the high flow suspension provisions of the Basin Plan (see attachment photos). For example:

- a. Big Canyon Creek -the creek is too shallow to recreate, and the ponds are within a preserve where swimming is not allowed.
- b. Brea Creek (San Gabriel River Drainage): upstream of Brea Dam is mostly either concrete or riprap, and the flow is intermittent, and too shallow to recreate. Downstream of the Dam is fully channelized with vertical concrete walls.
- c. Fullerton Creek and Carbon Creek (San Gabriel River Drainage): These channels are mostly concrete or riprap, and too shallow to recreate.

] #2a
] #2b
] #2c

Similar to Greenville Banning Channel these waterbodies should be candidates for delisting through a UAA rather than listing as part of this process.

We are also concerned with the intermittent ("I") designation of MUN for some of the coastal streams. The State's Sources of Drinking Water Policy allows an exception applicable to surface and ground waters where "There is contamination, either by natural processes or by human activity (unrelated to a specific pollution incident), that cannot reasonably be treated for domestic use using either Best Management Practices or best economically achievable treatment practices." In coastal streams, flows occur intermittently in response to rain events and are subject to natural contamination by indicator bacteria, turbidity, and other naturally occurring substances. Homes and businesses in the area currently use municipal water supplies for drinking and other municipal purposes, and capturing and treating water from intermittent coastal streams for municipal use would not be reasonable or economically feasible. Similarly, applying MCLs and other objectives applicable to municipal supplies to intermittent streams would not be a reasonable use of public funds. The proposed intermittent ("I") MUN designation for Muddy Canyon Creek, Los Trancos Creek, Buck Gully Creek, Big Canyon Creek, Carbon Creek, and Brea Creek should be removed.

] #2d

3. Amendment to Chapter 4 -- include only geometric mean water quality objective for *Enterococcus* for Bays and Estuaries by removing water quality objective for fecal coliform

There is now wide consensus in the scientific community that *Enterococcus* spp. as indicators of bacterial pathogens are more closely associated with human health risk than either total or fecal coliforms. The US Environmental Protection Agency recognized this in their 1986 ambient water quality criteria recommendations and its following 2012 Recreational Water Quality Criteria.

] #3

The removal of fecal coliform objectives and incorporation of the *Enterococcus* geometric mean objective for bays and estuaries is therefore appropriate given the additional protections built into the proposed Basin Plan Amendments. The Staff Report also correctly recognizes that there are additional efforts at the state level to develop statewide objectives that may supersede regional objectives in the future.

4. **Amendments to Chapter 5 – Antidegradation targets for REC2 only waters**

The freshwater REC2 anti-degradation targets outlined in Table 5 are an appropriate approach and consistent with prior Board actions.

#4

5. **Amendments to Chapter 5 – Newport Bay Watershed: Remove fecal coliform TMDL for REC1**

As noted previously, there is consensus that *Enterococcus* is a better indicator of risk to human health from water contact recreation than fecal coliforms in estuary and bay environment. Studies have shown fecal coliforms do not have a strong association with human health and therefore are poor indicators of risk. It is therefore appropriate to remove recreational water quality objectives and the TMDL based on fecal coliforms and to rely on the *Enterococcus* water quality objective. Additionally, the Newport Bay Bacteria Stakeholder Group is currently being formed and will develop further recommendations to the Regional Board regarding the protection of the REC-1 and SHELL beneficial uses in Newport Bay. This consensus-focused process is the appropriate forum to develop the future regulatory direction for bacteria in Newport Bay.

#5

6. **Amendments to Chapter 5 – Newport Bay Watershed: Extend the compliance date for the SHEL objectives**

Because of the complexity of bacterial ecology, there are many challenges in managing the prevalence of indicator bacteria in Newport Bay. Extension of the SHEL compliance date is appropriate since it will allow time for these issues to be addressed in conjunction with the Newport Bay Bacteria Stakeholder Process. The County supports extension of the compliance date for SHEL water quality objectives and appreciates the Basin Plan Amendment recognizing the stakeholder process and its goals to develop consensus among watershed stakeholders regarding future regulation of bacteria levels in the Bay.

#6

Specific Comments:

The following specific comments regarding the Staff Report and proposed Basin Plan Amendment are provided:

- a. Staff report, page 11 (and other pages) we are unaware of evidence to support statements asserting that there are continuing perennial flows, erosion problems, and/or other water quality concerns in Muddy Creek, Los Trancos Creek, and Buck Gully Creek. BMPs and other measures have been implemented to address dry weather water quality concerns. The language in the Staff Report be modified accordingly.
- b. Staff report, page 13, map, 'Big Cannon' should be 'Big Canyon'.
- c. Staff report, page 30, "Huntington Harbor" should be 'Huntington Harbour'
- d. Staff report, page 30 et seq., any reference to enterococcus should in fact be 'Enterococcus' or Enterococci because it's the name of a genus so it should always be capitalized.

#7a

#7b

#7c

#7d

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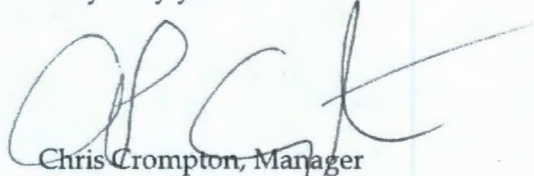
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- e. Staff report, page 32, second bullet, line 9, the number '9' should instead be '5' since OCHCA operates based on the quasi-standard method of 5 samples per 30 days, therefore, each sample result is embedded in 5 consecutive geometric mean numbers. #7e
- f. Staff report, page 33, 3rd paragraph, bullet point 2, '30 day' and 'monthly' are two slightly different concepts and the intention is apparent to use calendar month. The same comment applies to the REC-1 WQO on the same page. The intent should be clarified. #7f
- g. Staff report, page 34, 1st paragraph, 'The State Water Board is developing a statewide REC1 bacteria objectives policy to implement the 2012 Criteria' should be 'The State Water Board is developing statewide REC1 bacteria objectives consistent with the 2012 Criteria'. #7g
- h. Staff report, page 35, 2nd paragraph, second bullet point, should be more appropriately revised to '(2) there is no impairment of the REC1 use in Newport Bay as measured by the promulgated Enterococci objective'. #7h
- i. Staff report, page 35, 4th paragraph states: "Again, that TMDL does not confer protection to the REC1 use and, as stated above, continuing to implement it may result in appropriate expenditure of public resources." Given the content, the term should be "inappropriate" instead of "appropriate". #7i
- j. Basin Plan Amendment (strike out version), Page 6, Big Canyon Creek: Big Canyon Creek is incorrectly placed under Santa Ana-Delhi Channel. It should be placed under Big Canyon Wash Drainage area. #7j
- k. Basin Plan Amendment (clean version), Page 20, 29 and 32) and staff report (page 33, 36): fecal indicator bacteria water quality objectives are expressed in different units (organisms, CFU/100ml, or MPN/100ml). Although those units are considered equivalent, it is suggested that they are expressed consistently to avoid confusion. Alternatively, we suggest the following language, or similar, to be used as a footnote to the chapter header: "Bacteria objectives, targets, and TMDL and/or Waste Load Allocations are expressed with different units for protecting REC1 (organisms/100 mL), REC2 (cfu/100 mL), and SHEL (MPN/100 mL). "CFU" and "MPN" represent units specific to analytical techniques used to quantify bacteria concentration, whereas "organisms" is a generic term used to express bacteria concentration. All unit expressions are considered equivalent measures of bacteria concentration (see Protocol for Developing Pathogen TMDLs, USEPA 2001, Office of Water, EPA 841-R-00-002 p 2-1). " #7k
- l. Table 3-1 (Staff Report at pp. 24-28) supporting details are missing regarding the addition of beneficial use designations to certain waters in. Additional information should be provided, including data or documentation supporting the proposed designations, citations for "recent research documents," and details on communications with staff from the resources agencies. #7L

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Thank you for the opportunity to provide comments. Please contact Jian Peng at 714-955-0650 if you have any questions.

Very truly yours



Chris Crompton, Manager
Water Quality Compliance

Attachment - Photos of Brea Creek, Fullerton Creek and Carbon Creek

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Attachment

Photos of Brea Creek (left), Fullerton Creek (middle) and Carbon Creek (right)

