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Jun Zhu
California Regional Water Quality Control Board
Los Angeles Region
320 W. 4th St. Suite 200
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RE: SWMP/I-WMP Submittal

Dear Mr. Zhu:

The **City of Compton** is pleased to submit for your consideration the attached comments regarding the Regional Board's proposed 2016 303(d) list revisions.

We note that the Regional Board has proposed excluding many metals (copper, lead, selenium, and zinc). This is good news for the City. Once the Los Angeles Basin Plan is amended, the City's MS4 Permit compliance burden will be significantly reduced.

In closing, the City appreciates the opportunity to comment on this matter. Should you have questions or require additional information please do not hesitate to contact me.

Sincerely,

A handwritten signature in blue ink, appearing to read "Glen W. C. Kau".

Glen W. C. Kau
Director of Public Works

Cc: Cecil Rhambo, City Manager
Craig Cornwell, City Attorney
Hien Nguyen, Asst. City Engineer
Ray Tahir, TECS Environmental

City of Compton Comments In Re: Los Angeles Regional Board's Proposed 2016 303(d) List Revisions Affecting Los Angeles River Metals

I. Summary

The 2016 303(d) revisions for the several reaches (water quality segments) of the Los Angeles River and tributaries¹ propose to **de-list**, **do not de-list**, and **do not list** metals-related pollutants including copper, lead, selenium and zinc. These pollutants are the subject of the *Total Maximum Daily Loads for Metals for the Los Angeles River (LAR-MTMDL)* adopted by Regional Board in 2007. This TMDL has been incorporated into the current Los Angeles County MS4 Permit MS4 Permit (MS4 Permit). The MS4 Permit enables compliance with TMDL waste load allocations (WLAs) -- also referred to as numeric targets. The numeric targets are translated into water quality based effluent limitations (WQBELs) which are applied to MS4 outfall discharges and to receiving waters as limitations. To comply with both, the MS4 Permit coercively encourages compliance through Watershed Management Programs (E/WMPs).

Although many metals have either been placed on the "de-list" or "do not list" categories for Los Angeles River water quality segments, many also have been placed on the "list" and do not de-list categories. These listings should be voided because:

1. Although the LAR-MTMDL claims to have developed water quality standards (includes TMDLs) in accordance with the federal California Toxic Rule (CTR) adopted in 2000, it actually has not; and
2. The LAR-MTMDL is based on water quality samples that were conducted before the *Water Quality Control Policy for California's Clean Water Act Section 303(d) List* (Listing Policy), which was adopted in 2004.

• California Toxic Rule

CTR was adopted to provide a mathematical method for establishing ambient (dry weather) water quality standards for toxics necessary to protect beneficial uses of receiving waters. The LAR-MTMDL, however, along with other TMDLs, does not comply with CTR in two significant respects.

First, the TMDL calculates numeric water quality standards/TMDLs for both wet weather and ambient receiving water conditions instead of only on ambient. The LAR-MTMDL misinterprets CTR by claiming EPA did not differentiate between wet and dry weather conditions when establishing metals and toxics limitations. There is nothing in CTR that supports that view. CTR makes it clear that its purpose is to establish ambient water

¹Includes but is not limited to the Estuary (Queens Bay); Los Angeles/Long Beach Harbor, Estuary to Reach 1, Reaches 2, 3, 4, 5, and 6; Alhambra Wash, Arroyo Seco, Reaches 1 and 2 (tributaries); Compton Creek (tributary); Monrovia Canyon, Rio Hondo Reach 1; Reach 1 (tributary); Sawpit Wash, and Tujunga Wash.

quality standards: *This final rule establishes ambient water quality for priority toxic pollutants.* USEPA defines ambient as:

Natural concentration of water quality constituents prior to mixing of either point or nonpoint source load of contaminants. Reference ambient concentration is used to indicate the concentration of a chemical that will not cause adverse impact to human health.

In other words, ambient is the normal reference condition of a receiving water. This is also the clear understanding of the Regional Board's Surface Water Ambient Monitoring Program (SWAMP). MS4 and other point source stormwater (wet weather) outfall discharges, using sampling and analysis results, are measured against the ambient target for a pollutant established by CTR. For example, suppose a copper limitation is set at 37 micrograms per liter for a given water body. This limit is required to protect fish. Persistent exceedances of the limit based on outfall monitoring would necessitate a revision to the MS4 Permittee's stormwater management program.

Second, CTR requires a hardness parameter (calcium carbonate) to make chemical water quality analysis of toxics more accurate. Generally, the higher the hardness value the higher the toxic pollutant expressed as a numeric limit. The LAR-MTMDL calculates CTR for metals/toxics using a hardness value of 100 milligrams per liter (mg/l). It contends that this is the hardness value required by CTR. This is false. CTR requires actual hardness to be determined by water quality sampling and analysis at the same time a toxic pollutant is sampled. The Regional Board's SWAMP abides by this requirement. Therefore, the LAR-MTMDL establishes limitations for metals and toxics that are more stringent than necessary. This provides another reason for voiding the LAR-MTMDL and revising it with a recalculated limitation for each metal by using an actual hardness value based on future ambient water quality sampling and analysis.

- **California 303(d) Listing Policy (Listing Policy)**

The Listing Policy was adopted to provide a statistical method to determine how many water quality samples that exceed a water quality standard are required to place a pollutant on the 303(d) list. That method is a binomial distribution based on the rejection of a null hypothesis measured against sample sizes (see attachment #1). A review of the 2016 303(d) list fact sheets reveals that the metals placed on previous 303(d) lists did not conform to the Listing Policy. In fact, the LAR-MTMDL is based on water quality data that was developed prior to the adoption of the Listing Policy in 2004. According to the LAR-MTMDL, the metals numeric targets were based on data that was limited to 2002. Based on this fact alone the LAR-MTMDL should be voided.

II. Los Angeles River Reach/Tributary Specific Comments

Presented below are specific justifications for removing metals that fall under either the "list" or "do not list" categories because they do not conform to CTR or the Listing Policy. Almost all of them fall into these categories.

1. Compton Creek

Of the 4 subject LAR-MTMDL metals, the 2016 303(d) list only places selenium on the “do not list” for the Creek.

According to the fact sheet, copper is placed on the “do not de-list” based on 1 of 15 samples that exceeded dissolved copper. This result, however, does not meet the 3.1 Listing Policy’s binomial test requirement. The policy explains that the application of the binomial test requires a minimum sample size between 2 and 24, with at least 2 exceedances required for 303(d) listing placement. But, the Listing Policy also mentions that a sample size less than 16 is insufficient to meet the listing test.

Lead is also placed under the “do not de-list” category. This appears to be in error. According to the fact sheet, *1 of 15 samples and 0 of 3 samples exceeded the criteria for this sample size to determine the applicable beneficial use.* However, 1 exceedance out of 15 and 0 out of 3 samples do not meet the Listing Policy for 303(d) list placement. Not only is the exceedance frequency insufficient, but the sample size is too small.

The same is true of zinc, which was placed on the “list” category because 2 of the 15 samples exceeded the allowable frequency. That cannot be. Once again, a sample size of 15 is too small. Further, it is not clear whether the samples were taken from the Creek during a storm event or during an ambient water body condition.

It should also be noted that according Regional Board SWAMP data taken in June of 2005, no exceedances were reported for copper, lead, or zinc.

Based on the foregoing, it is recommended that copper, lead, and zinc be placed on the “**do not list**” category.

Table I. Compton Creek

2010 303 (d) List		2016 303 (d) List					MS4 Permit Requirement
Pollutant	List	List	De-List	Don't List	Don't De-list	Should De-List	Yes/No
Copper	x	-	-	-	x	x	Yes
Lead	x	-	-	-	x	x	Yes
Selenium	-	-	-	x	-		Yes
Zinc	-	x	-	-	-	x	Yes

2. Los Angeles River Reach 1 (Estuary to Carson)

Copper, lead, and zinc were listed, while selenium was not. The justification for their listing is questionable. The listing fact sheet indicates 7 out of 18 samples exceeded CTR criteria. Because the LAR-MTMDL asserts that CTR limitations can be based on both wet weather and dry weather (ambient) sampling, the Regional Board needs to provide data that shows which samples were based on wet weather and dry weather.

As mentioned above, CTR limitations are exclusively expressed as ambient standards. Wet weather samples should be excluded. If the number of excluded samples does not meet the Listing Policy requirement for minimum sample size, then the sampling data is invalid. Further, it is not clear when the samples were taken, nor whether the actual hardness value was applied.

Based on this information, copper, lead, and zinc should be de-listed.

Table II. LAR Reach 1

2010 303 (d) List		2016 303 (d) List					MS4 Permit Requirement
Pollutant	List	List	De-List	Don't List	Don't De-list	Should De-List	Yes/No
Copper	x	-	-	x	x	x	Yes
Lead	x	-	-	x	x	x	Yes
Selenium	-	-	-	-	-	-	Yes
Zinc	-	x	-	-	-	x	Yes

3. Los Angeles River Reach 2 (Carson to Figueroa)

Copper and lead are carried-over from the 2010 303(d) list and placed in the “do not de-list” category. Selenium and zinc were not listed. Copper and lead should be de-listed because according to the 303(d) listing fact sheet, 0 samples were taken.

Based on this information copper and lead should be should be de-listed.

Table III. LAR Reach 2

2010 303 (d) List		2016 303 (d) List					MS4 Permit Requirement
Pollutant	List	List	De-List	Don't List	Don't De-list	Should De-List	Yes/No
Copper	x	-	-	-	x	x	Yes
Lead	x	-	-	-	x	x	Yes
Selenium	-	-	-	-	-	-	Yes
Zinc	-	-	-	-	-	-	Yes

Attachment #1

TABLE 3.1: MINIMUM NUMBER OF MEASURED EXCEEDANCES NEEDED TO PLACE A WATER SEGMENT ON THE SECTION 303(D) LIST FOR TOXICANTS.

*Null Hypothesis: Actual exceedance proportion < 3 percent.
Alternate Hypothesis: Actual exceedance proportion > 18 percent. The minimum effect size is 15 percent.*

Sample Size	List if the number of exceedances equal or is greater than
2 – 24	2*
25– 36	3
37– 47	4
48– 59	5
60– 71	6
72– 82	7
83– 94	8
95– 106	9
107– 117	10
118– 129	11

*Application of the binomial test requires a minimum [sample size of 16](#). The number of exceedances required using the binomial test at a sample size of 16 is extended to smaller sample sizes.

For sample sizes greater than 129, the minimum number of measured exceedances is established where α and $f3 < 0.2$ and where $|\alpha - f3|$ is minimized.

α = Excel® Function BINOMDIST(n-k, n, 1 – 0.03, TRUE)

$f3$ = Excel® Function BINOMDIST(k-1, n, 0.18, TRUE)

where n = the number of samples,

k = minimum number of measured exceedances to place a water on the section 303(d) list,

0.03 = acceptable exceedance proportion, and

0.18 = unacceptable exceedance proportion.