Attachment 1: Detailed Technical Comments on the 2016 Revisions to the Los Angeles Region 303(d) List

#	Water Body / Pollutant	Technical Comment
1.	Wilmington Drain Zinc	The Fact Sheet for Decision ID 63330 states that one line of evidence is available to assess zinc in Wilmington Drain (90159). LOE 90159 includes data collected by Heal the Bay's, "Compton Creek Monitoring Program" where 3 of 5 samples exceeded the evaluation guideline (i.e., the CTR). However, data collected by Heal the Bay's, "Compton Creek Monitoring Program", were collected from Compton Creek in the Los Angeles River watershed, not in Wilmington Drain. It appears as if the source of confusion is that the samples were collected from a site located at Cressy Street Drain—Williamington Drain (note the difference between Williamington and Wilmington). As such, LOE 90159 consists of data that should not be included when assessing whether or not a zinc impairment exists in Wilmington Drain. Excluding LOE 90159 results in no data available to assess the waterbody pollutant combination. ***Requested Action: Remove Decision ID 63330 for the zinc listing for Wilmington Drain as there are no data to assess the waterbody pollutant combination.***
2.	Wilmington Drain Copper	Although the Fact Sheet for Decision ID 44676 states that only two lines of evidence are available in the administrative record to assess the pollutant, Appendix G shows three distinct lines of evidence (4280, 90131, and 90473). LOE 4280 is a placeholder LOE to support a 303(d) listing decision made prior to 2006. As such, no data are included within this LOE. LOE 90131 includes data collected by the City of Los Angeles where 2 of 33 samples exceeded the evaluation guideline (i.e., the CTR). LOE 90473 includes data collected by Heal the Bay's, "Compton Creek Monitoring Program" where 2 of 5 samples exceeded the evaluation guideline (i.e., the CTR). The Fact Sheet for Decision ID 44676 combines these three LOEs to state that 4 of 38 samples exceed the CRITERIA and this exceeds the allowable frequency listed in Table 4.1 of the Listing Policy. However, as previously noted, the third LOE includes data collected by Heal the Bay's, "Compton Creek Monitoring Program", which was focused on Compton Creek in the Los Angeles River watershed, not in Wilmington Drain. It appears as if the source of confusion is that the samples were collected from a site located at Cressy Street Drain—Williamington Drain (note the difference between Williamington and Wilmington). As such, LOE 90473 consists of data that should not be included when assessing whether or not a copper impairment exists in Wilmington Drain. Excluding LOE 90473 results in the sample exceedance frequency being 2 of 33 samples, which meets the allowable frequency listed in Table 4.1 of the Listing Policy. ***Requested Action: Revise Decision ID 44676 for the copper listing for Wilmington Drain to Delist from 303(d) list and remove from Category 5 (Appendix B) because the total number of exceedances is equal to or less than the number of exceedances allowed to delist per the Listing Policy.***
3.	Los Angeles River Estuary (Queensway Bay) Copper	The Fact Sheet for Decision ID 64264 presents one line of evidence related to copper in the Los Angeles River Estuary (85965). LOE 85965 presents information from a State of California program that sampled marinas throughout California and assess the data provided as follows: *"A total of six grab samples were collected during each sampling event. Four separate grab samples were collected from inside the marina basin (Sites 1, 2, 3, & 4) and two separate grab samples were collected from outside the marina basin (Sites 5 & 6). Sample results for sites inside the marina basin and sites outside the marina basin were averaged per sample event, resulting in two sample results per sampling event."*

		Per the LOE, the Regional Board utilized data collected from inside the Downtown Shoreline Marina (Sites 1, 2, 3, & 4) and data collected outside the marina basin (Sites 5 & 6) to make a determination that 3 of 6 samples exceeded the copper criterion. No site location information is provided specific to these sites (GPS locations are provided in the associated documents, but no sites are specifically named Sites 1, 2, 3, 4, 5, & 6) so it is not possible to verify the locations. Regardless, data from inside the Marina should not be combined with data from the Estuary to assess the Estuary. These are two distinct bodies of water with differing inputs and water quality conditions. Dissolved copper data collected inside the Marina shows an average concentration of 7 ug/L and represents three of the three exceedances identified in the Fact Sheet. Dissolved copper data collected outside of the Marina (presumably in the Estuary) shows an average concentration of 0.72 ug/L and represents zero of three exceedances. The dissolved copper data collected from inside and outside of the Marina are significantly different from one another, as is to be expected, given that they are separate waterbodies and one is a marina and the other is an estuary. ***Requested Action: Either 1) remove Decision ID 64264 and the corresponding 303(d) listing in Attachment B or 2) revise Decision ID 64264 to reflect the waterbody is the Downtown Shoreline Marina rather than the Los Angeles River Estuary and remove the copper listing for the Los Angeles River Estuary from the 303(d) list (Attachment B).***
4.	Ballona Creek Toxicity	The Fact Sheet for Decision ID 34253 presents two lines of evidence that indicate the presence of sediment toxicity (83019 and 83020). LOE 83019 references a Statewide Stream Pollution Trends Study 2008 and LOE 83020 references Statewide Project Urban Pyrethroid Status Monitoring. When reviewing the station locations (404SUP093 and 404BLNAxx) associated with these two LOEs in an August 2012 Surface Water Ambient Monitoring (SWAMP) report titled "Toxicity in California Waters: Los Angeles Region", the sampling locations are identified as (page 11) "approximately one kilometer downstream from the confluence with Sepulveda Channel." In a 2014 SWAMP report titled "Trends in Chemical Contamination, Toxicity and Land Use in California Watersheds: Stream Pollution Trends (SPoT) Monitoring Program Third Report - Five-Year Trends 2008-2012", the site 404BLNAxx is identified as Ballona Creek Downstream of Centinela (33.986 -118.417). In the Ballona Creek Toxics TMDL Staff Report, Ballona Creek Reach 2 and Estuary are defined as follows (page 5): Ballona Creek to Estuary (Reach 2) is the longest segment of the creek (approximately 4 miles) continuing on from National Boulevard and ending at Centinela Avenue where the Estuary begins. As such, the sites identified in LOEs 83019 and 83020 are in the Ballona Creek Estuary rather than in Ballona Creek and the Estuary already has a toxics TMDL. ***Requested Action: Remove Decision ID 34253 for toxicity for Ballona Creek as there are no data to assess the waterbody pollutant combination.***
5.	Dominguez Channel (lined portion above Vermont Ave) Ammonia	The Fact Sheet for Decision ID 35134 states that two lines of evidence are available in the administrative record to assess pollutant (4098 and 83962). LOE 4098 is a placeholder to support a 303(d) listing decision made prior to 2006. As such, no data are included within this LOE. LOE 83962 includes data collected by the City of Los Angeles (City) and states that samples were collected at 3 locations: Artesia Blvd. @ Western Ave., Manhattan Beach Blvd., and El Segundo Blvd. where 2 of the 21 samples exceeded the Water Quality Objective/Criterion. However, the data included within the Data Reference for LOE 83962 includes eight additional results that did not exceed the Water Quality Objective/Criterion (including samples collected at Vermont Ave., which was not identified within the LOE Spatial Representation). Given that the Basin Plan indicates that Vermont Ave. represents the reach break between Dominguez Channel and the Dominguez Channel Estuary, samples collected at Vermont Ave. are representative of the upstream water body (i.e., Dominguez Channel lined portion above Vermont Ave). Including all of the applicable data included within the Data Reference for LOE 83962 results in the sample exceedance frequency

being 2 of 29 samples, which meets the allowable frequency listed in Table 4.1 of the Listing Policy.

Requested Action: Revise Decision ID 35134 for the ammonia listing for Dominguez Channel to Delist from 303(d) list and remove from Category 5 (Appendix B) because the total number of exceedances is equal to or less than the number of exceedances allowed to delist per the Listing Policy.

6. Dominguez Channel Estuary (unlined portion below Vermont Ave) Ammonia

As presented in LOE 83995, ammonia, pH, and temperature data were collected by the City of Los Angeles at four stations in Dominguez Channel Estuary during July 2009 and August 2009. The following table summarizes the number of samples and exceedances.

Summary of data for Dominguez Channel Estuary (unlined portion below Vermont Ave)

Waterbody	# of Samples	# of Exceedances of 4-Day Criteria	Delist if the # of exceedances equal or is less than[1]
Dominguez Channel Estuary (unlined portion below Vermont Ave)	28	0	2

1 For toxicants, the maximum number of exceedances allowed for delisting is shown in Table 4.1 (Page 14) of the Listing Policy.

COMPARISON OF EXCEEDANCES TO LISTING POLICY

As shown in the table above, the total number of exceedances is below the maximum number of exceedances allowed to delist per the Listing Policy. As a result, the available data demonstrates that Dominguez Channel Estuary meets the water quality objectives for ammonia (un-ionized) and should be delisted from the 303(d) list. This decision would be consistent with Decision ID 62240 (which treated the listing as a new listing despite an existing listing being present), which finds that ammonia in the Dominguez Channel Estuary should not be listed and states the following (emphasis added): "Based on the readily available data and information, the weight of evidence indicates that *there is sufficient justification against placing this water segment-pollutant combination on the CWA section 303(d) List in the Water Quality Limited Segments category*. This conclusion is based on the staff findings that:

1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. 0 of 28 samples exceeded the CRITERIA and this does not exceed the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

Regional Board Staff Decision Recommendation: After review of the available data and information, *RWQCB staff concludes that the water body-pollutant combination should not be placed on the section 303(d) list* because applicable water quality standards are not being exceeded."

Requested Action: Revise Decision ID 34669 for the ammonia listing for Dominguez Channel Estuary to Delist from

		303(d) list and remove from Category 5 (Appendix B) based on Decision ID 62240 (for the ammonia [un-ionized] listing for Dominguez Channel Estuary) and the data reference provided in LOE 83995.
7.	Compton Creek Iron	The Fact Sheet for Decision ID 62052 states that one LOE (83798) is available in the administrative record to assess iron in Compton Creek. LOE 83798 lists the following as the Evaluation Guideline used as the basis for the listing: "National Recommended Water Quality Criteria Continuous Concentrations are intended to protect freshwater aquatic organisms from chronic exposures and are expressed as 4-day average concentrations. The City has several concerns with this listing: • The only two exceedances are associated with wet-weather samples collected on October 13, 2009. The Evaluation Guideline used as the basis is **Criteria Continuous Concentrations** (i.e., chronic criterion). It is inappropriate to use a chronic criterion as it is meant to protect aquatic life against chronic exposure and the samples were taken during a wet-weather event not representative of chronic conditions. USEPA does not recommend a Criteria Maximum Concentration (acute criterion) for iron within its National Recommended Water Quality Criteria. • The National Recommended Water Quality Criteria Continuous Concentration for iron does not specify whether the criterion applies to the total recoverable or dissolved fraction. None of the dissolved iron results associated with the samples used to assess the water body exceeded the criterion. • Section 6.1.5.3 of the Listing Policy states that "Samples used in the assessment must be temporally independent. If the majority of samples were collected on a single day or during a single short-term natural event (e.g., a storm, flood, or wildfire), the data shall not be used as the primary data set supporting the listing decision." However, multiple samples were collected on the same day during the same storms and each was considered separately. Samples collected on the same day during the same storm (as was the case with the two exceedances) should not be considered independently from one another as they are clearly not temporally independent and do not meet the Listing Policy requirements. Averaging samples collected on the same day results in 1 of 5 exceedances, which does not meet the requirements of the Listing Policy for placing a water body segment on the 303(d) list. ***Requested Action: Revise the decision for Decision ID 62052 for the iron listing for Compton Creek to Do Not List on 303(d) list (TMDL required list) and remove from Category 5 (Appendix B) due to an inappropriate evaluation guideline being used as the basis for the listing, the observed exceedances were not temporally independent, and none of the dissolved results exceeded the evaluation guideline.***
8.	Ballona Creek Estuary Silver	The Fact Sheet for Decision ID 34520 states "Silver has not been specifically listed on the 303(d) list." Furthermore, the single Line of Evidence (LOE) does not indicate that any data were analyzed (i.e., the number of samples listed is zero). As such, the listing should be removed. ***Requested Action: Revise Decision ID 34520 for the silver listing for Ballona Creek Estuary to Delist from 303(d) list and remove from Category 4 (Appendix C) to be consistent with the Fact Sheet.***
9.	Dominguez Channel Estuary (unlined portion below	The Fact Sheet for Decision ID 33751 states that five LOEs are available to assess copper in the Dominguez Channel Estuary, four of which correspond to sediment and one of which corresponds to water. The sole LOE that presents water data states that 3 of 3 samples exceeded the dissolved California Toxics Rule (CTR) saltwater chronic criterion. However, these sample results were all collected on the same day and appear to be for total copper associated with a wet-weather event. When using the total copper CTR acute criterion (rather than the dissolved CTR chronic criterion), the samples do

<table>
<tr><td></td><td>Vermont Ave)
Copper</td><td>not exceed. As such, all LOEs that support a listing correspond to the sediment matrix.

Requested Action: Revise the pollutant for Decision ID 33751 for the copper listing for Dominguez Channel Estuary to “Copper (sediment)” given that the LOEs supporting a listing correspond to the sediment matrix and move the listing to Category 4a (Appendix C).</td></tr>
<tr><td>10.</td><td>Various waterbodies
Various pollutants</td><td>For a number of existing listings, it appears as if a significant number of readily available data were not considered when making the Final Listing Decision. These data are from NPDES Permit monitoring programs (both wastewater and stormwater). When these data are considered, the number of measured exceedances supports rejection of the null hypothesis as presented in Table 4.1 of the Water Quality Control Policy for Developing California’s Clean Water Act Section 303(d) List (Listing Policy). As such, these listings should be removed from the section 303(d) list.

Furthermore, with regards to the cyanide listing for Ballona Creek, it appears as if Los Angeles (LA) Regional Water Quality Control Board (Regional Board or LARWQCB) staff applied the chronic CTR criterion to the entire dataset instead of applying the chronic CTR criterion during dry-weather and the acute CTR criterion during wet-weather.

<table>
<tr><th rowspan="2">Water Body</th><th rowspan="2">Pollutant</th><th rowspan="2">Listing Category</th><th colspan="2">Date Range</th><th rowspan="2"># of Samples</th><th rowspan="2"># of Exceedances</th><th rowspan="2">Max # of Exceedances to Delist</th></tr>
<tr><th>Start</th><th>End</th></tr>
<tr><td>Ballona Creek</td><td>Cyanide</td><td>5</td><td>10/2000</td><td>12/2010</td><td>66</td><td>5</td><td>5</td></tr>
<tr><td>Burbank Western Channel</td><td>Selenium</td><td>5</td><td>10/2003</td><td>12/2010</td><td>201</td><td>15</td><td>17</td></tr>
<tr><td rowspan="2">Los Angeles River Reach 1 (Estuary to Carson Street)</td><td>Diazinon</td><td>5</td><td>10/2002</td><td>12/2010</td><td>56</td><td>1</td><td>4</td></tr>
<tr><td>Lead</td><td>5</td><td>02/2001</td><td>12/2010</td><td>173</td><td>4</td><td>14</td></tr>
<tr><td>Los Angeles River Reach 2 (Carson to Figueroa Street)</td><td>Lead</td><td>5</td><td>01/2001</td><td>12/2010</td><td>241</td><td>4</td><td>20</td></tr>
<tr><td>Los Angeles River Reach 5 (within Sepulveda Basin)</td><td>Lead</td><td>5</td><td>02/2002</td><td>11/2010</td><td>78</td><td>0</td><td>6</td></tr>
<tr><td rowspan="2">Sepulveda Canyon</td><td>Lead</td><td>4</td><td>10/2004</td><td>12/2010</td><td>98</td><td>4</td><td>8</td></tr>
<tr><td>Selenium</td><td>4</td><td>10/2004</td><td>12/2010</td><td>98</td><td>4</td><td>8</td></tr>
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Requested Action: Revise the decision for the segments listed in the preceding table to Delist from 303(d) list and remove from Category 5 (Appendix B) or Category 4 (Appendix C), whichever is applicable.</td></tr>
<tr><td>11.</td><td>Burbank Western</td><td>The Fact Sheet for Decision ID 32882 finds that lead in the Burbank Western Channel should not be listed and states (emphasis added): “One line of evidence is available in the administrative record to assess this pollutant. None of the</td></tr>
</table>

	Channel Lead	samples exceed the water quality objective. Based on the readily available data and information, the weight of evidence indicates that *there is sufficient justification against placing this water segment-pollutant combination on the section 303(d) list in the Water Quality Limited Segments category*." In addition, the analysis conducted as part of the Upper Los Angeles River (ULAR) Enhanced Watershed Management Program (EWMP) did not identify any exceedances from October 2003 through December 2010. ***Requested Action: Revise Decision ID 32882 for the lead listing for Burbank Western Channel to Delist from 303(d) list and remove from Category 5 (Appendix B) to be consistent with the Fact Sheet and because there have not been any observed exceedances since 2003.***
12.	Los Angeles River Reach 1 (Estuary to Carson Street) Cadmium	The Fact Sheet for Decision ID 32639 finds that cadmium in the Los Angeles River Reach 1 should not be listed and states (emphasis added): "Three lines of evidence are available in the administrative record to assess this pollutant. The CTR criterion for cadmium for the protection of aquatic life was exceeded three out of forty-two samples from data collected between 1996 and 2002 and no samples exceeded CCR Title 22 MCL guidelines for the protection of MUN beneficial uses in data collected between 2000 and 2003. Based on the readily available data and information, the weight of evidence indicates that *there is sufficient justification for removing this water segment pollutant combination from the section 303(d) list.*" In addition, the analysis conducted as part of the ULAR EWMP did not identify any exceedances from February 2001 through December 2010. ***Requested Action: Revise Decision ID 32639 for the cadmium listing for Los Angeles River Reach 1 to Delist from 303(d) list and remove from Category 5 (Appendix B) to be consistent with the Fact Sheet and because there have not been any observed exceedances since 2001.***
13.	Echo Park Lake Ammonia	Decision ID 34696 proposes to change the ammonia listing for Echo Park Lake from List on 303(d) list (TMDL required list) to list on the 303(d) list (being addressed by United States Environmental Protection Agency [USEPA] approved TMDL). However, the TMDL report made a finding of nonimpairment for ammonia, as outlined in the following excerpt from Section 6.2.3.2 of the TMDL report (emphasis added): "Echo Park Lake was listed as impaired for ammonia in 1996 based on an assessment in the Regional Board's Water Quality Assessment and Documentation Report (LARWQCB, 1996). Consistent with project plan recommendations provided in California's Impaired Waters Guidance (SWRCB, 2005), EPA and local agencies collected 35 additional samples (7 wet-weather) between May 2003 and February 2010 to evaluate current water quality conditions. There was one ammonia exceedance in 35 samples (Appendix G, Monitoring Data). Therefore, Echo Park Lake meets ammonia water quality standards and USEPA concludes that preparing a TMDL for ammonia is unwarranted at this time. *USEPA recommends that Echo Park Lake not be identified as impaired for ammonia in California's next 303(d) listing*."[1] ***Requested Action: Revise Decision ID 34696 for the ammonia listing for Echo Park Lake to Delist from 303(d) list and remove from Category 4 (Appendix C) based on USEPA's recommendation.***
14.	Lincoln Park Lake Lead	Decision ID 34817 proposes to change the lead listing for Lincoln Park Lake from List on 303(d) list (TMDL-required list) to list on the 303(d) list (being addressed by USEPA approved TMDL). However, the TMDL report made a finding of

[1] U.S. Environmental Protection Agency, Los Angeles Area Lakes TMDLs, Section 6.2.3.2 Summary of Ammonia Non-Impairment , March 2012, p.6-13

		nonimpairment for lead, as outlined in the following excerpt from Section 5.3 of the TMDL report (emphasis added): "Lincoln Park Lake was listed as impaired for lead in 1996 based on an assessment in the Regional Board's Water Quality Assessment and Documentation Report (LARWQCB, 1996). Consistent with project plan recommendations provided in California's Impaired Waters Guidance (SWRCB, 2005), EPA and local agencies collected 40 additional samples (11 wet-weather) between October 2008 and December 2010 to evaluate current water quality conditions. There were zero dissolved lead exceedances in 40 samples (Appendix G, Monitoring Data). USEPA also collected one sediment sample in September 2010 to further evaluate lake conditions. There were zero sediment lead exceedances of the 128 ppm freshwater (Probable Effect Concentrations) sediment target (Appendix G, Monitoring Data). Therefore, Lincoln Park Lake meets lead water quality standards and USEPA concludes that preparing a TMDL for lead is unwarranted at this time. *USEPA recommends that Lincoln Park Lake not be identified as impaired by lead in California's next 303(d) list*."[2] ***Requested Action: Revise Decision ID 34817 for the lead listing for Lincoln Park Lake to Delist from 303(d) list and remove from Category 5 (Appendix B) based on USEPA's recommendation.***
15.	Lincoln Park Lake Ammonia	The data utilized to develop the original listing in 1998 are not available (these data were requested from USEPA and the Regional Board during development of the TMDL in 2010. Based on USEPA's TMDL report, data collected prior to 2009 were reported as ammonium, without corresponding ammonia, pH, or temperature measurements making it impossible to compare these data to ammonia criteria. Only ammonia data collected with corresponding pH and temperature data can be used to determine if criteria were exceeded. In 2008, the Regional Board collected eight ammonia samples all of which were below the reporting limit of 0.1 mg/L and chronic criterion. In 2009, the City of Los Angeles and USEPA/Regional Board conducted monitoring and collected 15 and three samples, respectively, all of which were below the chronic criterion. As stated in the TMDL report (pg. 5-10): *"There were no exceedances of the acute or chronic ammonia criteria during any recent sampling events with associated pH and temperature measurements."* In summary, there are no ammonia data with corresponding pH and temperature measurements available to support the original listing and all available recent data demonstrate there are no exceedances. ***Requested Action: Revise Decision ID 35004 for the ammonia listing for Lincoln Park Lake to Delist from 303(d) list and remove from Category 5 (Appendix B).***
16.	Los Angeles River Reach 2 (Carson to Figueroa Street) and Los Angeles River Reach	The source of oil seeping into the River was found to be naturally-occurring crude oil. This conclusion is supported by the results of investigations completed by various agencies, which are summarized as follows: An investigation was conducted following seeps of petroleum hydrocarbons into the LA River in June 2001. Based on lab results and borings, it was concluded that the source of the LA River channel oil seeps is naturally-occurring crude oil from Puente formation sands. Oil was visible in Puente formation seams, partings and fractures, as well as sand lenses, and appeared to have migrated upward into sandy alluvial soils. Gasses encountered included hydrogen sulfide, commonly sources from crude oil reservoirs. The hydrocarbon seeps appeared to be concentrated where the Puente formation

[2] U.S. Environmental Protection Agency, Los Angeles Area Lakes TMDLs, Section 5.3 Lead Impairment, March 2012, p.5-18

	5 (within Sepulveda Basin) Oil	contacts with younger, less permeable units or layers. The USEPA On-Scene Coordinator (OSC) conducted subsurface investigations of the oil seeps in the LA River during August and September 2001. The OSC found that the oil did not discharge as a result of a spill, leak, or discharge from any facility and that the oil has been discharging to the river since at least 1943 and there is no practical means of preventing this oil seep from discharging to the River. On April 19, 2002, an email was sent to Steven Pedersen of City of Los Angeles /Watershed Protection Division (WPD) by Steven Poole of the US Coast Guard/National Pollution Funds Center (USGC/NPFC). Mr. Poole stated that City of Los Angeles cannot submit to USGC/NPFC a claim for reimbursement for cost incurred by the City associated with May 2001 oil clean-up efforts in the LA River because Title 1 of the Oil Pollution Act does not allow for reimbursement for **naturally-occurring oil** (natural seepage). In summary, the reports and correspondence discussed herein, indicate that multiple agencies believe that the oil found in the listed reaches of the LA River is associated with naturally-occurring seepage suggesting that a 303(d) listing is not warranted. **Studies Used in the Analysis** The following studies/correspondences were used in the analysis: • Pollution Report (2002), USEPA Region IX • Correspondence (2002) from Michael P. Brown, Manager, Geotechnical Engineering Division, Bureau of Engineering, City of Los Angeles • Correspondence (2002) from Steven Poole, Claims Manager, USGC/NPFC Despite repeated efforts by WPD to obtain the historical information utilized to develop the original listing, the Regional Board has not provided the information for inclusion in the analysis. Therefore, the analysis is based solely on recent information available to WPD. **Summary of Findings** The source of oil seeping into the River was found to be naturally-occurring crude oil. This conclusion is supported by the results of investigations completed by various agencies, which are summarized below. **Investigations of the Geotechnical Engineering Division, Bureau of Engineering, City of Los Angeles – June 2001** An investigation was conducted following seeps of petroleum hydrocarbons into the engineered channel of the LA River across from the Piper Technical Center in June 2001. This study concluded that the source of the LA River channel oil seeps is naturally-occurring crude oil from Puente formation sands, based on lab results and borings. The samples of the oil seeps and associated bacterial-growth scums revealed that the seeps were predominantly in the oil or heavy-hydrocarbon range. This supports the conclusion that the LA River oil seeps are natural crude oil as opposed to

		fuel leaks. Drilling of wells along Mission St. (east of the river channel) confirmed that oil-bearing Puente formation sands and fractures are the source of crude oil and gases that migrate into the shallow alluvial soils. The hydrocarbons, visible oil and PID readings generally increased with depth toward the Puente formation. Oil was visible in Puente formation seams, partings, and fractures, as well as sand lenses, and appeared to have migrated upward into sandy alluvial soils. Gasses encountered included hydrogen sulfide, commonly sources from crude oil reservoirs. The hydrocarbon seeps appeared to be concentrated where the Puente formation contacts younger, less permeable units or layers. **Pollution Report, EPA – January 2002** The USEPA OSC conducted extensive subsurface investigations of the oil seeps in the LA River during August and September 2001. The OSC found that the oil did not discharge to the River as a result of a spill, leak, or discharge from any facility based on the investigation. The oil has been discharging to the river since the least 1943 and there is no practical means of preventing this oil seep from discharging to the LA River. The OSC also evaluated the use of epoxy or urethane sealants on the seeps to reduce the flow of oil. However, it was concluded that the use of sealants on the seeps would cause the oil to get into the subdrain system and eventually enter the LA River. In summary, WPD attempted to evaluate the original listing information in light of the currently available information. Although the Regional Board did not provide the information, the reports and correspondence discussed herein, and attached to this letter, indicate that multiple agencies believe that the oil found in the listed reaches of the Los Angeles River is associated with naturally-occurring seepage. ***Requested Action: Revise Decision IDs 34118 and 34203 for the oil listings for Los Angeles River Reaches 2 and 5 to Delist from 303(d) list and remove from Category 5 (Appendix B) given that the oil found in the listed reaches of the Los Angeles River is associated with naturally-occurring seepage. Alternatively, move the listing to Category 4b as other regulatory programs are reasonably expected to result in attainment of the water quality standard.***
17.	Various waterbodies Various pollutants	Section 2 of the *Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List* (Listing Policy) states (pg. 3): "At a minimum, the California section 303(d) list shall identify waters where standards are not met, **pollutants or toxicity** contributing to standards exceedance, and the TMDL completion schedule." In addition, Section 2.1 of the Listing Policy titled "Water Quality Limited Segments" states (pg. 3): "Waters shall be placed in this category of the section 303(d) list if it is determined, in accordance with the California Listing Factors that the water quality standard is not attained; **the standards nonattainment is due to toxicity, a pollutant, or pollutants**; and remediation of the standards attainment problem requires one or more TMDLs." As such, all listings that do not identify either toxicity or a pollutant as the impairment do not meet the requirements for being placed in the water quality-limited segments category. This is supported by current listing decisions made by the Los Angeles Regional Water Quality Control Board (Regional Board) in Burbank Western Channel for excess algal growth, scum/foam-unnatural, and taste and odor and Calleguas Creek Reach

13 for excess algal growth that state the following (emphasis added): "Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of **removing** these listing from the 303(d) Water Quality Limited Segment list **because the segment pollutant combinations is not a pollutant**." The following table presents water body segments and listings that correspond to instances where there is not a pollutant.

Decision ID	Water Body Segment	Listing
44553	Arroyo Seco Reach 1 (LA River to West Holly Ave.)	Benthic Community Effects
65656	Ballona Creek	Benthic Community Effects
44746	Ballona Creek Wetlands	Exotic Vegetation
34697	Ballona Creek Wetlands	Habitat alterations
34699	Ballona Creek Wetlands	Hydromodification
44747	Ballona Creek Wetlands	Reduced Tidal Flushing
44498	Compton Creek	Benthic Community Effects
32967	Compton Creek	pH
66165	Dominguez Channel (lined portion above Vermont Ave)	Benthic Community Effects
38511	Dominguez Channel Estuary (unlined portion below Vermont Ave)	Benthic Community Effects
34030	Echo Park Lake	Algae
34698	Echo Park Lake	Eutrophic
34756	Echo Park Lake	Odor
44748	Echo Park Lake	pH
35180	Lincoln Park Lake	Eutrophic
44641	Lincoln Park Lake	Odor
35223	Lincoln Park Lake	Organic Enrichment/Low Dissolved Oxygen
35168	Los Angeles Harbor - Consolidated Slip	Benthic Community Effects
33456	Los Angeles River Reach 1 (Estuary to Carson Street)	Nutrients (Algae)
32959	Los Angeles River Reach 2 (Carson to Figueroa Street)	Nutrients (Algae)
66229	Los Angeles River Reach 3 (Figueroa St. to Riverside Dr.)	Benthic Community Effects
34204	Los Angeles River Reach 3 (Figueroa St. to Riverside Dr.)	Nutrients (Algae)
64386	Los Angeles River Reach 3 (Figueroa St. to Riverside Dr.)	Temperature, water
66232	Los Angeles River Reach 4 (Sepulveda Dr. to Sepulveda Dam)	Benthic Community Effects
44326	Los Angeles River Reach 4 (Sepulveda Dr. to Sepulveda Dam)	Nutrients (Algae)

		35160	Los Angeles River Reach 5 (within Sepulveda Basin)	Nutrients (Algae)
		34207	Los Angeles/Long Beach Inner Harbor	Beach Closures
		34208	Los Angeles/Long Beach Inner Harbor	Benthic Community Effects
		34305	Machado Lake (Harbor Park Lake)	Algae
		42417	Machado Lake (Harbor Park Lake)	Eutrophic
		42262	Machado Lake (Harbor Park Lake)	Odor
		61605	Marina del Rey Harbor - Back Basins	Oxygen, Dissolved

Requested Action: Revise the decision for the segments listed in the preceding table to Delist from 303(d) list or Do Not List on 303(d) list, whichever is applicable, and remove from Category 5 (Appendix B) or Category 4 (Appendix C).

18. Various waterbodies Various pollutants

There are numerous listings that include waterbody segments which are in nonattainment due to pollution that is not caused by a pollutant. The *2016 Clean Water Act Sections 305(b) and 303(d) Integrated Report for the Los Angeles Region Staff Report* states the following (pg. 9): "Impaired waters are placed in Category 4c if the impairment is not caused by a pollutant, but rather caused by pollution, such as flow alteration or habitat alteration." Impairments for benthic community effects, exotic vegetation, habitat alterations, hydromodification, reduced tidal flushing, and temperature are caused by either flow and/or habitat alteration (not by a pollutant or combination of pollutants) and; therefore, waterbody segments under these listings should instead be moved to Category 4c.

Decision ID	Water Body Segment	Listing
44553	Arroyo Seco Reach 1 (LA River to West Holly Ave.)	Benthic Community Effects
65656	Ballona Creek	Benthic Community Effects
44746	Ballona Creek Wetlands	Exotic Vegetation
34697	Ballona Creek Wetlands	Habitat alterations
34699	Ballona Creek Wetlands	Hydromodification
44747	Ballona Creek Wetlands	Reduced Tidal Flushing
44498	Compton Creek	Benthic Community Effects
66165	Dominguez Channel (lined portion above Vermont Ave)	Benthic Community Effects
38511	Dominguez Channel Estuary (unlined portion below Vermont Ave)	Benthic Community Effects
35168	Los Angeles Harbor - Consolidated Slip	Benthic Community Effects
66229	Los Angeles River Reach 3 (Figueroa St. to Riverside Dr.)	Benthic Community Effects
64386	Los Angeles River Reach 3 (Figueroa St. to Riverside Dr.)	Temperature, water
66232	Los Angeles River Reach 4 (Sepulveda Dr. to Sepulveda Dam)	Benthic Community Effects

		<table><tr><td>34207</td><td>Los Angeles/Long Beach Inner Harbor</td><td>Benthic Community Effects</td></tr></table> ***Requested Action: Notwithstanding the previous comment that supports revising the decision for the segments listed in the preceding table to Delist from 303(d) list or Do Not List on 303(d) list, whichever is applicable, move all segments listed in the preceding table with impairments caused by pollution to Category 4c and revise Appendix B or C as appropriate.***
19.	Lincoln Park Lake PCBs	Decision ID 64083 proposes to list PCBs in fish tissue for Lincoln Lake Park. However, this Lake is annually stocked with fish and therefore the lake population does not spend its lifespan in Lincoln Park Lake and may have accumulated PCBs from another waterbody. A number of studies have indicated that farmed salmon accumulate PCBs from the fish meal they are fed. In order to determine the source of the exceedance, fish from the State's stocking system need to be tested prior to introduction and the duration of time they spend in the Lake needs to be determined by a tagging program. The current analysis makes the assumption that fish are introduced to the Lake free of PCBs and subsequently bioaccumulate PCBs from Lake sediments. In addition, the Lake is restocked every year in April which suggests that all fish stocked are immediately removed and consumed. Both of these assumptions need to be fully evaluated prior to determining the source of the exceedance and therefore Lincoln Park Lake does not meet the minimum requirements to justify a listing. ***Requested Action: Remove Decision ID 64083 from Category 5 (Appendix B) or revise from Category 5 to Category 3 so that further evaluation of whether or not the lake itself is actually impaired.***
20.	Santa Monica Bay Offshore/ Nearshore Arsenic	The Fact Sheet for Decision ID 67208 presents two lines of evidence related to arsenic in Santa Monica Bay (88949 and 88950). LOE 88949 presents information related to sediment and found that 0 of 32 samples exceeded the sediment goals utilized in the assessment. LOE 88950 presents information related to fish tissue and indicates that 19 of 19 samples collected as part of Hyperion Water Reclamation Plan NPDES Permit during August of 2006, and August, September, October, and November of 2007 exceeded the evaluation guideline with the presumption that results were reported on a wet-weight basis and 10% of the total arsenic result represented the amount of inorganic arsenic in the sample for comparison to the guideline. In reviewing LOE 88950, no information/citation can be found supporting the assumption that 10% of the total arsenic result represented the amount of inorganic arsenic in the sample. It is appropriate to utilize inorganic arsenic in assessing potential risk; however, either measured inorganic arsenic or a conversion factor developed from actual measured ratios from Santa Monica Bay should be utilized. In USEPA's 2000 Guidance for Assessing Chemical Contaminant Data for Use in Fish Advisories Volume 1 Fish Sampling and Analysis Third Edition (EPA 823-B-00-007), USEPA recommends that, in both screening and intensive studies, total inorganic arsenic tissue concentrations be determined for comparison with the recommended screening value for chronic oral exposure. Scientific literature demonstrates that a range of total to inorganic arsenic ratios exist. For example, a 2008 study specifically looking at arsenic speciation in 383 samples of marine fish and shellfish, showed that the inorganic fraction of arsenic is typically <0.5% with a few of the highest samples ranging from 1-5%[3]. The City's concern with the approach has been expressed in other regions of California as well. The Port of San

[3] Peshut, P.J. et al., 2008. *Arsenic speciation in marine fish and shellfish from American Samoa*. Chemosphere 71 488-492. doi:10.1016/j.chemosphere.2007.10.014

Diego in an August 11, 2016 comment letter to the San Diego Regional Water Quality Control Board regarding a 303(d) arsenic listing[4], noted the high level of variability of the proportion of inorganic arsenic across species (typically <10%) as measured in a number of other studies, as well as a methodology that could be used to ground truth the applied proportion through actual sample data. In response to the Port of San Diego's comment the San Diego Regional Board removed an arsenic listing from their draft 303(d) list and stated:

> *"… there is a high level of uncertainty in the levels of inorganic arsenic in shellfish tissue. The assumption regarding the percent of total arsenic in shellfish tissue is likely conservative, and the San Diego Water Board agrees that a listing based on those assumptions has a high probability of mischaracterizing the results as an impairment. The San Diego Water Board supports the Port's suggestion that future monitoring of shellfish incorporate a measurement of both total and inorganic arsenic.[5]"*

The City also has concerns with the approach to utilizing the data in comparison to the guidelines. Section 6.1.5.3 of the Listing Policy states that "Samples used in the assessment must be temporally independent." However, each individual sample was considered on its own without consideration for temporal representation. Samples collected on the same day (i.e., October 2007, November 2007, and September 2008) should not be considered independently from one another as they are clearly not temporally independent. Furthermore, given tissue concentrations represent the accumulation of pollutants over a time period of years and the risk endpoint relates to a carcinogenic effect over a 30-year period, considering samples collected within months of each other (October and November 2007 and August and September 2008) also does not provide the required temporal independence. Data should be aggregated across appropriate temporal timeframes, which should be assessed on a case-by-case basis, but should be no less than annually. Lastly, in assessing tissue data, consideration should be given to the fact that multiple samples and species are collected and the range of concentrations within those samples and across species represents exposure and potential risk. Considering each individual sample separately from one another or across species results in an assumption that an individual sample is representative of the exposure condition. Data should not only be aggregated on an appropriate temporal scale, but also across species, potentially weighted based on likely consumption patterns.

In summary, the lack of inorganic arsenic data and use of an unsupported conversion factor in combination with the approach to comparing tissue data that does not appropriately meet the requirements of temporal independence or reflect actual exposure conditions does support listing arsenic in Santa Monica Bay.

The City welcomes the opportunity to discuss approaches to develop inorganic arsenic data for use in future evaluations, as well as an approach to consider tissue data to properly evaluate arsenic in Santa Monica Bay.

Requested Action: Remove Decision ID 67208 from the 303(d) list. However, if the Regional Board feels it is

[4] Port of San Diego comment letter to California Water Quality Control Board – San Diego Region. *"Comment – CWA Section 305(b)/303(d) Integrated Report."* Letter Dated August 11, 2016.

[5] Page 47 of San Diego Region Response to Comment on 2014 303(d) list.
http://www.swrcb.ca.gov/sandiego/water_issues/programs/303d_list/docs/Response_To_Comments.pdf

		necessary to categorize the information within the Integrated Report, place the waterbody pollutant combination in Category 3 as there is insufficient data and information to make a beneficial use support determination, but information and/or data indicates beneficial uses may be potentially threatened.
21.	Santa Monica Bay Offshore/ Nearshore Mercury	The Fact Sheet for Decision ID 67209 presents three lines of evidence related to mercury in Santa Monica Bay (4165, 88894, and 88891). LOE 4165 and 88891 presents information related to sediment toxicity and sediment chemistry, respectively. LOE 88894 presents information related to fish tissue and indicates that 2 of 19 samples collected as part of Hyperion Water Reclamation Plan NPDES Permit during August of 2006, and August, September, October, and November of 2007 exceeded the evaluation guideline with the presumption that results were reported on a wet-weight basis. Section 6.1.5.3 of the Listing Policy states that "Samples used in the assessment must be temporally independent." However, each individual sample was considered on its own without consideration for temporal representation. Samples collected on the same day (i.e., October 2007, November 2007, and September 2008) should not be considered independently from one another as they are clearly not temporally independent. Furthermore, given tissue concentrations represent the accumulation of pollutants over a time period of years, considering samples collected within months of each other (October and November 2007 and August and September 2008) also does not provide the required temporal independence. Data should be aggregated across appropriate temporal timeframes that should be assessed on a case-by-case basis, but should be no less than annually. Lastly, in assessing tissue data, consideration should be given to the fact that multiple samples and species are collected and the range of concentrations within those samples and across species represents exposure and potential risk. Considering each individual sample separately from one another or across species results in an assumption that an individual sample is representative of the exposure condition. Data should not only be aggregated on an appropriate temporal scale, but also across species, potentially weighted based on likely consumption patterns. The City welcomes the opportunity to discuss an approach to appropriately consider tissue data to properly evaluate mercury in Santa Monica Bay. ***Requested Action: Remove Decision ID 67209 from the 303(d) list. However, if the Regional Board feels it is necessary to categorize the information within the Integrated Report, place the waterbody pollutant combination in Category 3 as there is insufficient data and information to make a beneficial use support determination, but information and/or data indicates beneficial uses may be potentially threatened.***
22.	Echo Park Lake and Machado Lake (Harbor Park Lake) Various pollutants	Echo Park Lake and Machado Lake (Harbor Park Lake) are two waterbodies located in Los Angeles County which have both been included on the 303(d) impaired waters list since 2006. Because of their water quality impairments, the City invested significant resources to rehabilitate the water quality of the lakes. The $45 million Echo Park Lake Rehabilitation Project was completed in 2015 and included extensive changes to the lake hydrology (e.g., storm drain upgrades, inlet and outlet upgrades, removal of contaminated lake sediments, and installation of lake aeration system) and immediately surrounding areas, including best management practices (BMPs) to reduce the loads of targeted pollutants including trash, metals, coliform, pesticides, and nutrients[6]. The Machado Lake Ecosystem Rehabilitation Project involved dredging and

[6] City of Los Angeles. Echo Park Lake Rehabilitation Proposition O Project. December 13, 2006. http://www.lapropo.org/sitefiles/docs/concept_reports/echoparklakerehab.pdf

capping the lake bottom, constructing an oxygenation system, adding new storm drain systems, as well as a number of other BMPs to improve water quality[7]. These award-winning projects have been very successful and produced significant water quality improvements; however, these improvements are not reflected in the Regional Board's proposed 303(d) list.

The proposed changes for Echo Park Lake includes two delistings for copper and lead, which the City supports; however, two new listings were added for chlordane (tissue) and dieldrin. The other legacy listings for Echo Park Lake and Machado Lakes remain on the proposed 303(d) list (see following table). The City maintains that these legacy listings are inappropriately categorized and should instead be listed as Category 3 based on the significant restoration efforts conducted since the last update to the 303(d) list. The USEPA 2010 Integrated Report Guidance[8] uses the following definition for Category 3 listings:

> *"The existing and readily available data and information is not representative of current conditions of the water body. This rationale might include a determination that: significant land use changes have occurred in the watershed changing the hydrology and nonpoint source loadings; point source discharges were removed; new discharges are now operating; or the locations of sampling stations did not reflect the character of the segment (e.g., limited to locations near discharge outfalls)."*

The extensive restoration projects have entirely changed not only the chemical and physical conditions of the lakes themselves, but have also completely transformed the nonpoint source loadings, and hydrology of the system. Any data collected prior to the restoration efforts (i.e., all of the data used for the current listings) are not representative of the current condition of the lakes; therefore, both of these waterbodies are excellent candidates for a Category 3 listing and should be categorized as such until enough data exists to establish their current condition. It is likely that as a result of both of these restoration efforts, the lakes could be entirely delisted. However, until that time, a Category 3 listing would represent the most conservative listing on the part of the Regional Board.

The City appreciates the time and effort that goes into maintaining the 303(d) list and notes that these award-winning restoration projects were facilitated in part by the Regional Board's historical listing actions. The City hopes that the extensive resources put into restoring the beneficial use of these waterbodies can be recognized by assigning the proper Category 3 listing to Echo Park and Machado Lake pollutants.

Decision ID	Water Body Segment	Listing
34030	Echo Park Lake	Algae
34696	Echo Park Lake	Ammonia
62679	Echo Park Lake	Chlordane
62680	Echo Park Lake	Dieldrin

[7] http://www.machadoprojects.com/machado_lake_ecosystem.php

[8] Page 5 of USEPA Information Concerning 2010 Clean Water Act Sections 303(d), 305(b), and 314 Integrated Reporting and Listing Decisions. https://www.epa.gov/sites/production/files/2015-10/documents/2009_05_06_tmdl_guidance_final52009.pdf

34698	Echo Park Lake	Eutrophic
34756	Echo Park Lake	Odor
33999	Echo Park Lake	PCBs (Polychlorinated biphenyls)
44748	Echo Park Lake	pH
32435	Echo Park Lake	Trash
34305	Machado Lake (Harbor Park Lake)	Algae
42416	Machado Lake (Harbor Park Lake)	Ammonia
34362	Machado Lake (Harbor Park Lake)	ChemA (tissue)
42417	Machado Lake (Harbor Park Lake)	Eutrophic
42262	Machado Lake (Harbor Park Lake)	Odor
35181	Machado Lake (Harbor Park Lake)	Trash

In reviewing the proposed listings for the 303(d) list for Echo Park and Machado Lakes a number of inconsistencies were noted. They have been identified below:

- Echo Park Lake PCB (tissue) (Decision ID 33999) is listed as a new 4A listing in Appendix C, but the change is not noted in Appendix A.
- Machado Lake Chlordane (tissue) (Decision ID 33013), Dieldrin (tissue) (Decision ID 33643), and PCBs (tissue) (Decision ID 33285) are not listed as changes in Appendix A, do not appear in Appendix B or C, but are listed in Appendix G.
- Machado Lake DDT (tissue) (Decision ID 33211) is not listed as a change in Appendix A and does not appear in Appendix B or C, but is listed in Appendix G, although incorrectly, as requiring a TMDL despite the fact that DDT is covered by an existing TMDL.
- Machado Lake algae, ammonia, ChemA (tissue), eutrophication, odor and trash are included in Appendix G Fact Sheets as already being addressed by a USEPA-approved TMDL, which is expected to result in attainment of the standard; however, they are all listed as Category 5B in Appendix B and as unchanged in Appendix A in the proposed 303(d) List.

The Regional Board should clarify if these omissions and inconsistencies equate to a delisting of the pollutants. As explained above, the City supports the delisting of the pollutants due to the extensive restoration projects that have been completed. If, for some reason, these listing were omitted in error and the RWQCB disagrees with the City's comment to include them as Category 3, then all of the listings should, at a minimum, be included as Category 4A. Category 4A is defined as "*A TMDL has been developed and approved by USEPA and the approved implementation plan is expected to*

		result in full attainment of the water quality standard within a specified time frame." Category 4A is supported by the approved TMDLs covering Echo Lake Chlordane and PCB listings[9], as well as the Machado Lake Chlordane, DDT, Dieldrin, PCB, algae, ammonia, ChemA(tissue), eutrophication, odor, and trash listings[10,11,12]. ***Requested Actions:*** ***(1) Move all segments listed in the preceding table to Category 3 based on the completion of extensive restoration projects, and include the following text to explain the category change: "Due to recent extensive restoration efforts, data from 2010 and prior is not representative of current conditions of the water body. Available data are insufficient to determine attainment status."*** ***(2) If Category 3 listing of suggested pollutants does not occur, ensure that all pollutants listed in the preceding table are correctly categorized as Category 4A based on the existence of USEPA approved TMDLs.*** **(3) *Correct and/or clarify inconsistent listings in Appendices for consistency throughout the entire proposed 303(d) document.***
23.	Various waterbodies Benthic Community Effects	Notwithstanding the City's comments related to removing all listings that do not identify either toxicity or a pollutant as the impairment, the City identified the following listings for Benthic Community Effects (summarized in the following table) that are inappropriate: • Ballona Creek: Decision ID 65656 • Dominguez Channel (lined portion above Vermont Ave): Decision ID 66165 • LA River Reach 3 (Figueroa St. to Riverside Dr.): Decision ID 66229 • LA River Reach 4 (Sepulveda Dr. to Sepulveda Dam): Decision ID 66232 • Arroyo Seco Reach 1 (LA River to West Holly Ave.): Decision ID 44553 • Arroyo Seco Reach 2 (West Holly Ave to Devils Gate Dam): Decision ID 65548 • Compton Creek: Decision ID 44498 The City believes the listings are inappropriate, based on the following issues that are described in more detail below: • <u>Impairment of the reaches was not demonstrated using an appropriate metric for benthic community condition.</u> The listing decisions were based on Southern California Coastal Index of Biotic Integrity (SCIBI). The State Water Board has rejected use of the SCIBI in favor of the California Stream Condition Index (CSCI). The Regional Board Staff Conclusions (Staff Conclusions) for the listing decisions do not acknowledge that the data used to support the decisions were SCIBI scores, not CSCI scores. Instead, the Staff Conclusions imply that the decisions are based on CSCI scores.

[9] The Los Angeles Area Lakes Nitrogen, Phosphorus, Mercury, Trash, Organochlorine Pesticides and PCBs TMDL approved by USEPA March 26, 2012.

[10] The Machado Lake Nitrogen TMDL approved by USEPA on March 11, 2009.

[11] The Machado Lake Toxics TMDL was approved by USEPA on March 20, 2012.

[12] The Machado Lakes Trash TMDL approved by USEPA on March 6, 2008.

- There is no established water quality criteria for benthic community condition. Use of a SCIBI score of 40 (or other "cutoffs" promulgated by the authors of the SCIBI) as a listing threshold is not consistent with the State Board's current approach for identifying impairment thresholds for benthic community data. The Regional Board use of a CSCI score of 0.79 in other listing decisions (and implied to be appropriate for Ballona Creek) is also not consistent with the State Board's current approach for identifying impairment thresholds for benthic community data.
- Listings for concrete-lined channels using current metrics are inappropriate. Reference reaches for concrete-lined channels in highly urbanized catchments are lacking. Physical habitat conditions were apparently not considered during data evaluation. The State Board is planning to develop expectations for benthic community condition for developed landscapes using the CSCI and a new Algal Stream Condition Index (ASCI). TMDL development for benthic community effects in concrete-lined channels based on unofficial IBI thresholds is premature.
- Insufficient data are available to meet the listing requirements. Notwithstanding the previous issues, several of the listings rely on a single site for data as a basis of the listing inconsistent with the Listing Policy.

Type of Decision	Segment / Station	Cited Benthic Community Data				
		Line of Evidence (LOE) ID	Data Source	Metric used in Data Source	Time Frame	Scores[a]
New Listing	Ballona Creek (Station 14)	82971	Bioassessment Monitoring Report in LA County, 2006-2008	SCIBI	2006, 07, 08	3/3 scores were below 40
New Listing	Dominguez Channel (Station 19)	83960		SCIBI	2006, 07, 08	3/3 scores were below 40
New Listing	LA River Reach 3 (Stations 11 and 12)	85994		SCIBI	2006, 07	4/4 scores were below 40
New Listing	LA River Reach 4 (Station 13)	86097		SCIBI	2006, 07	2/2 scores were below 40
Do Not Delist	Compton Creek (Station 8)	83829		SCIBI	2006, 07, 08	3/3 scores were below 40
		30224	LA County 1994-2005 Integrated Receiving Water Impacts Report. Section 5, LA River Watershed Management Area, pp 5.1 - 5.40	SCIBI	2003, 04	2/2 scores were "very poor"
Previous Listing	Arroyo Seco Reach 1 (Station LALT501)	30223		SCIBI	2003, 04	2/2 scores were below 13
		82895	Bioassessment Monitoring Report in LA County, 2006-2008	SCIBI	2008	1/1 score was below 40
New Listing	Arroyo Seco Reach (Station 7)	82896		SCIBI	2006, 07, 08	3/3 scores were below 40

[a] Per Staff Conclusions, SCIBI scores were binned as very good (80-56), good (41-55), fair (27-40), poor (14-26) and very poor (0-13) habitat conditions; sites with scores below 26 are considered to have impaired conditions.

Impairment of the reaches was not demonstrated using an appropriate metric for benthic community condition.

SCIBI-based datasets should not be considered for listing decisions. Section 3.9 of the Listing Policy states:

		"A water segment shall be placed on the section 303(d) list if the water segment exhibits significant degradation in biological populations and/or communities ***as compared to reference site(s)*** *and is associated with water or sediment concentrations of pollutants including, but not limited to chemical concentrations, temperature, dissolved oxygen, and trash." [Emphasis added.]* While it is commonly assumed that the SCIBI inherently accounted for reference conditions, the reference conditions used to develop the SCIBI were not representative of the low-elevation/low-gradient streams commonly found in the alluvial plains of the Los Angeles Region.[13,14] It was developed using data from 275 sites, ranging from Monterey County to the Mexican border, but not a single reference location represented low-elevation and low-gradient streams. The reaches listed in the table above are extremely low gradient, low-elevation water bodies, and thus the SCIBI does not adequately define relevant reference conditions. Furthermore, the reference conditions used in the SCIBI represent a less restrictive definition of the reference condition than that which was deemed adequate as part of the State's Reference Condition Management Program[15]. The lead scientist for development of the SCIBI, Dr. Peter Ode, has acknowledged the limitations on application of the SCIBI. In a recently published paper regarding a study examining the SCIBI relative to other benthic macroinvertebrate bioassessments, he concluded that the SCIBI did not adequately address reference conditions in low-elevation sites, stating that the SCIBI was "not completely effective at controlling for an elevation gradient."[16] Dr. Ode was also the coauthor of a March 2009 report on recommendations for development and maintenance of a network of reference sites to support biological assessment of California's wadeable streams.[17] This report describes recommendations made by a technical panel of experts on bioassessment, including experts from the California Department of Fish and Wildlife, Southern California Coastal Water Research Project (SCCWRP), US EPA Region 9, and various universities. The technical panel laid out a number of steps that would be necessary to develop a network of adequate reference sites for implementation of criteria for bioassessments. They note that adequate reference sites have not been identified in southern California, stating, "human-dominated landscapes can be so pervasive in locations such as urban southern California and the agriculturally dominated Central Valley that no undisturbed reference sites may currently exist in these regions. A statewide framework

[13] Ode, P.R., A.C. Rehn, J.T. May. 2005. A Quantitative Tool for Assessing the Integrity of Southern Coastal California Streams. Environmental Management Vol. 35, No 4, pp. 494, Figure 1.

[14] Carter, J.L. and V.H. Resh. (2005). Pacific Coast Rivers of the Coterminous United States. pp. 541-590 *in*: A.C. Benke and C.E. Cushing (eds.), Rivers of North America. Elsevier Academic Press. Boston, MA.

[15] Mazor, R.D. (2012). Reference Streams and the Development of Bio-Objectives. Presentation to Member Agencies, Southern California Coastal Water Research Project. Costa Mesa, CA. Accessed on 02/21/2017.

ftp://ftp.sccwrp.org/pub/download/PRESENTATIONS/Symposium2012/Bioassessment_1_Mazor.pdf.

[16] Ode, P.R., C.P. Hawkins, R.D. Mazor, Comparability of Biological Assessments Derived from Predictive Models and Multimetric Indices of Increasing Geographic Scope, J. N. Am. Benthol. Soc., 2008, 27(4):967-985.p. 982. Copy included in Appendix 4.

[17] Ode, P.R., K. Schiff. Recommendations for the Development and Maintenance of a Reference Condition Management Program to Support Biological Assessment of California's Wadeable Streams: Report to the Surface Water Ambient Monitoring Program. Southern California Coastal Water Research Project, Technical Report 581. March 2009. Copy included in Appendix 5.

for consistent selection of reference sites must account for this complexity."

In 2010, as part of its project to develop a statewide Biointegrity Policy, the State Board abandoned use of the SCIBI and other regional IBIs, and funded development of the statewide CSCI (Mazor et al., 2016). The CSCI addressed at least some of the problems with the SCIBI through its use of a modeled reference condition as opposed to a regional reference pool. Starting in late 2016, the State Board began funding the development of a "companion" Algal Stream Condition Index (ASCI). The State Board is developing expectations for benthic community condition using both the CSCI and the ASCI which will be incorporated in a statewide Biointegrity Assessment Implementation Plan.[18]

The Staff Conclusions associated with the new listings in the preceding table do not acknowledge that the data used to support the new listings were SCIBI scores. Further, the Staff Conclusions for all of the new listings imply that Regional Board staff based the listing decision on CSCI scores. The source of the BMI data for each of the new listings, and the new LOE for Compton Creek, ("Bioassessment Monitoring Report in Los Angeles County, 2006-2008") were appendices (Appendix H) of the Los Angeles County Stormwater Monitoring Reports for 2006, 2007, and 2008. *In these reports, BMI data were scored using the SCIBI (Ode et al. 2005), not the CSCI*. In two cases (Ballona Creek and Arroyo Seco Reach 2), the Staff Conclusions explicitly, but erroneously, state that the underlying BMI data were CSCI scores. In the other cases, the ambiguous acronym "IBI" is used where scores are cited, and then the narrative ends with a passage implying that the "IBI" scores were CSCI scores. The misleading information in the Staff Conclusion for each new listing recommendation is provided below.

- Ballona Creek: "Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of placing Benthic Community Effects on the CWA section 303(d) List. .... "**3 of 3 samples were below the California Stream Condition Index (CSCI) score of 0.79**, indicating poor water quality and that pollutant concentration and toxic effects are impacting aquatic life in this waterbody segment" ... "**The CSCI** is available statewide, accounts for a much wider range of natural variability, and provides equivalent scoring thresholds in all regions of the state. **The CSCI** will be used in the future for water quality assessment purposes statewide over the regional indices of biologic integrity." (Regional Board Staff Conclusion for Decision ID 65656, emphasis added)
- Dominguez Channel (lined portion above Vermont Ave.): "Three of the three samples collected had IBI scores below 40 there are several other pollutants in this water body that are listed for impairment including ammonia, copper, diazinon, nitrogen, toxicity, and zinc." ... "**The CSCI** is applicable statewide, accounts for a much wider range of natural variability, and provides equivalent scoring thresholds in all regions of the state. **The CSCI** will be used in the future for water quality assessment purposes statewide over the regional indices of biologic integrity (IBIs)." (Regional Board Staff Conclusion for Decision ID 66165, emphasis added)
- Los Angeles River Reach 3 (Figueroa St. to Riverside Dr.): "Four of the four samples collected had IBI scores below 40." ... "**The CSCI** is applicable statewide, accounts for a much wider range of natural variability, and provides equivalent scoring thresholds in all regions of the state. **The CSCI** will be used in the future for water quality assessment purposes statewide over the regional indices of biologic integrity (IBIs)." (Regional Board Staff

[18] Sutula, M., A. R. Mazor, S. Theroux, E. Stein, P. Ode, A. Rehn, M. Paul, and B. Jessup. (2017) Science Plan to Support the State Water Board's Biostimulatory-Biointegrity Project for California Wadeable Streams.

Conclusion for Decision ID 66299, emphasis added)

- Los Angeles River Reach 4 (Sepulveda Dr. to Sepulveda Dam): "Both of the two samples collected had IBI scores below 40.... Two of the two samples collected had IBI scores below 40. ... "**The CSCI** is applicable statewide, accounts for a much wider range of natural variability, and provides equivalent scoring thresholds in all regions of the state. **The CSCI** will be used in the future for water quality assessment purposes statewide over the regional indices of biologic integrity (IBIs)." (Regional Board Staff Conclusion for Decision ID 66232, emphasis added)
- Arroyo Seco Reach 2 (West Holly Ave to Devils Gate Dam): "3 of 3 samples exceeded the GUIDELINE... **3 of 3 samples were below the California Stream Condition Index (CSCI) score of 0.79**. ... "**The CSCI** is applicable statewide, accounts for a much wider range of natural variability, and provides equivalent scoring thresholds in all regions of the state. **The CSCI** will be used in the future for water quality assessment purposes statewide over the regional indices of biologic integrity (IBIs)." (Regional Board Staff Conclusion for Decision ID 65548, emphasis added)

There is no established water quality criteria.

Regional Board staff utilized a SCIBI score of 40 as a listing threshold. However, this value is not an established water quality criteria, nor does it represent the type of threshold the State Board intends to use to identify community condition or levels of impairment in its Biointegrity Assessment Implementation Plan. A SCIBI score of 39 was originally promulgated by the authors of the SCIBI (Ode et al. 2005) as an "impairment threshold" because it was equal to an arbitrary statistical criterion (two standard deviations below the mean reference site score). Although it was not used for the listings in the table above, Regional Board staff have also used a CSCI score of 0.79 as a listing threshold for other reaches (see also the statement regarding this threshold in the Staff Conclusions excerpt for Ballona Creek above). However, a CSCI threshold of 0.79 is also based on an arbitrary statistical criterion (10th percentile of the reference calibration site scores; Mazor et al. 2016), and is not an adopted water quality criteria.

The State Board is not pursuing use of arbitrary statistical cutoffs, such as reference population percentiles, to identify benthic community impairment going forward. As outlined in the November 2016 Work Plan[19], the State Board is using a Biological Condition Gradient Expert Synthesis approach to relate ranges of biological condition scores to community condition. Using this approach, a team of experts uses taxonomic metrics to assign degrees of biological condition to test sites while being blind to the degree of anthropogenic stressors present at the sites. In addition, the analysis is blind to the relationship between site scores and statistical distributions of overall datasets or reference datasets.

Listings for concrete-lined channels using currently available metrics are inappropriate.

Application of the SCIBI to concrete-lined channels is especially inappropriate given the lack of a reference population for low-gradient streams in coastal southern California, in general, much less for modified channels, in specific. Section 6.1.5.8 of the listing policy states:

> *"When evaluating biological data and information, RWQCBs shall evaluate all readily available data and information and shall evaluate bioassessment data from other sites, and compare to reference condition. Evaluate physical habitat*

[19] Sutula, M., E. Stein, R. Mazor, S. Theroux, M. Paul, B. Jessop, and J. Gerritsen. 2016. Draft Work Plan "Expert Interpretation of the Biological Condition Gradient in California Wadeable Streams" November 2016 Update.

		data and other water quality data, when available, to support conclusions about the status of the water segment." EPA's causal assessment manual cites physical habitat as a leading cause of impairment in streams on 303(d) lists and recommends that, in all cases where physical habitat is evaluated, stream size and channel dimensions, channel gradient, channel substrate size and type, habitat complexity and cover, vegetation cover and structure, and channel-riparian interactions should all be considered before making a decision.[20] Physical habitat conditions are not referenced in the Lines of Evidence for the benthic community effects listings in the preceding table, although physical habitat data collection is a standard part of bioassessment monitoring and reporting. Ultimately, benthic community impairments in concrete-lined channels should be evaluated for potential listing in Category 4c of the 305(b) integrated report, instead of on the 303(d) list of segments requiring a TMDL. The USEPA Guidance for 2006 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d), 305(b) and 314 of the Clean Water Act (IRG) states: *"Circumstances where an impaired segment may be placed in Category 4c include segments impaired solely due to lack of adequate flow or to stream channelization."* As part of its statewide Biostimulatory-Biointegrity Project, in recognition that it may not be appropriate or productive to apply a single set of benthic community condition expectations to streams in pristine and developed landscapes, the State Board is currently employing SCCWRP and CDFW to developing expectations for benthic community condition for developed landscapes using the CSCI and the Algal Stream Condition Index (ASCI).[21] The probability that concrete-lined channels in highly urbanized settings will be candidates for alternative benthic community endpoints is illustrated by language from the Work Plan: *"**In some streams, direct channel modifications (e.g., bank armoring) may also limit opportunities to sustain high-quality ecological conditions for aquatic life**. In these highly developed settings, the large number of linked stressors may prevent a stream from supporting its beneficial uses or attaining high scores on indices of biological condition. **Often, these stressors are difficult to mitigate or remove under the traditional mechanisms available to the Water Boards**. In these circumstances, the range of CSCI and/or ASCI scores may be constrained, but targeted restoration could improve conditions. Key technical questions underpinning the range of options and prioritization of management actions for wadeable streams along the continuum from undeveloped to highly developed landscapes found within California are: For which streams is biological integrity constrained by development in the catchment? How can they be identified and mapped? What are the ranges of biological conditions these developed landscapes can support?" (Mazor et al. 2017; emphasis added)* Triggering TMDL development for benthic community effects in concrete-lined channels using unofficial impairment thresholds derived from statistical distributions of IBIs from unarmored reference reaches is unwarranted. **Insufficient data are available to meet the listing requirements**

[20] U.S. EPA (Environmental Protection Agency). (2010). Causal Analysis/Diagnosis Decision Information System (CADDIS). Office of Research and Development, Washington, DC. Available online at https://www.epa.gov/caddis. Last updated September 23, 2010

[21] Mazor, R., M. Sutula, E. Stein, A. Rehn, and R. Ode (2017) Work Plan. Predicting Biological Integrity of Streams Across a Gradient of Development in California Landscapes.

		Notwithstanding the previous issues, several of the listings rely on a single site for bioassessment data, which is inconsistent with the Listing Policy. Per section 3.9 (Degradation of Biological Populations and Communities) of the Listing Policy, "The analysis should rely on measurements from at least two stations." Only one site is referenced in the Fact Sheets for the following listing decisions: • Ballona Creek • Dominguez Channel (lined portion above Vermont Ave) • Los Angeles River Reach 4 (Sepulveda Dr. to Sepulveda Dam) [Also, note that the data associated with Los Angeles River Reach 4 was actually collected in Los Angeles River Reach 5.] • Arroyo Seco Reach 1 (LA River to West Holly Ave.) • Arroyo Seco Reach 2 (West Holly Ave to Devils Gate Dam) • Compton Creek Because data were only collected at one site within these waterbodies, the requirements of the Listing Policy are not met. **Summary** As described in detail above, the approach utilized to establish benthic community effects impairments are not demonstrated using an appropriate metric for benthic community condition. The listings rely on an unestablished water quality criteria based on metrics that are not appropriate for concrete-lined channels. Lastly, in all but one listing, there are not sufficient data to meet the listing requirements per the Listing Policy as the data were only collected at a single site within a waterbody. ***Requested Action: Remove the following Decision IDs from the 303(d) list:*** • ***Ballona Creek: Decision ID 65656*** • ***Dominguez Channel (lined portion above Vermont Ave): Decision ID 66165*** • ***LA River Reach 3 (Figueroa St. to Riverside Dr.): Decision ID 66229*** • ***LA River Reach 4 (Sepulveda Dr. to Sepulveda Dam): Decision ID 66232*** • ***Arroyo Seco Reach 1 (LA River to West Holly Ave.): Decision ID 44553*** • ***Arroyo Seco Reach 2 (West Holly Ave to Devils Gate Dam): Decision ID 65548*** • ***Compton Creek: Decision ID 44498***
24.	Los Angeles River Reach 3 (Figueroa St. to Riverside Dr.) Temperature, water	The temperature listing for Los Angeles River Reach 3 uses an evaluation guideline of 13-21°C as the optimum growth range for rainbow trout. However, the beneficial use listed for Los Angeles River Reach 3 is WARM. Only the COLD beneficial use uses the rainbow trout growth range as a listing criteria. This guideline should be removed and the number of exceedances recalculated based on the Basin Plan criteria for WARM. Notwithstanding that the evaluation guideline of 13-21°C is inappropriate for Los Angeles River Reach 3 given the water body's beneficial uses, the manner in which the evaluation guideline is applied is also inappropriate. Line of Evidence (LOE) 85933 references Moyle 1976 as the source of the evaluation guideline. Moyle 1976 was revised and expanded by Moyle 2002[22]. Moyle 2002 states: "Rainbows are found where daytime temperatures range from nearly 0°C in winter to

[22] Moyle, Peter B. 2002. Inland Fishes of California – Revised and Expanded. University of California Press Berkeley and Los Angeles, California.

		26-27°C in summer, although extremely low (<4°C) or extremely high (>23°C) temperatures can be lethal if the fish have not previously been gradually acclimated. Even when acclimation temperatures are high, temperatures of 24-27°C are invariably lethal to trout, except for very short exposures." As such, while temperatures above 21°C may not be optimal according to Moyle 1976, Moyle 2002 clearly states that lethal temperatures are those greater than 23°C which indicates that the evaluation guideline of 21°C is more appropriately applied as a chronic guideline (necessitating the establishment of an averaging period) and 23°C is the more appropriate "not-to-exceed" guideline as used in the proposed listing. When utilizing 23°C, only 40 of the 542 samples exceed the guideline, which does not meet the *Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List* (Listing Policy) minimum number of measured exceedances needed to place a water segment on the Section 303(d) list for conventional or other pollutants (a minimum of 90 exceedances would be required). As such, even if the Los Angeles River Reach 3 was designated with a COLD beneficial use, applying the appropriate "not-to-exceed" guideline of 23°C results in a finding of nonimpairment for temperature in Los Angeles River Reach 3. Lastly, notwithstanding that the evaluation guideline of 13-21°C is inappropriate for Los Angeles River Reach 3 given the water body's beneficial uses and that 23°C is the more appropriate "not-to-exceed" guideline, when the average water temperature across Los Angeles River Reach 3 was above 21°C (69.8°F), with only one exception out of 33, the air temperature was also above 21°C (69.8°F). As such, ambient air temperature above 21°C is most likely cause of exceedances of the 21°C evaluation guideline. ***Requested Action: Revise Decision ID 64386 for the temperature water listing for Los Angeles River Reach 3 to Do Not List on 303(d) list and remove from Category 5 (Appendix B) because the beneficial use protected by the evaluation guideline is not an existing or potential beneficial use within Los Angeles River Reach 3; the number of measured exceedances does not meet the minimum number of measured exceedances needed to place a water segment on the Section 303(d) list for conventional or other pollutants if an appropriate evaluation guideline is applied; and ambient air temperature is the most likely cause of exceedances of the evaluation guideline.***
25.	Los Angeles River Reach 3 (Figueroa St. to Riverside Dr.), Los Angeles River Reach 5 (within Sepulveda Basin), Bull Creek, Wildlife Lake, and Balboa Lake	The Fact Sheet for Decision ID 32974 corresponds to the ammonia listing for Los Angeles River Reach 3 (Figueroa St. to Riverside Dr.) and states that two lines of evidence are available in the administrative record to assess the pollutant, although there are three lines of evidence present (85894, 86019, and 2507). LOE 2507 is a placeholder to support a 303(d) listing decision made prior to 2006. LOEs 85894 and 86019 each state that all of the exceedances in each dataset occurred prior to and in 2007. The City found that the last exceedance was July 2007, which is to be expected given that 2007 was the year that the nitrification/denitrification (NDN) treatment process as completed at both the Los Angeles-Glendale Water Reclamation Plant (LAGWRP) and Donald C. Tillman Water Reclamation Plant (DCTWRP). Both the LAGWRP and DCTWRP discharges travel through Los Angeles River Reach 3, and since the NDN processes to remove ammonia were completed in July 2007, no exceedances in this waterbody have been observed. The Fact Sheet for Decision ID 32567 corresponds to the ammonia listing for Los Angeles River Reach 5 (within Sepulveda Basin) and states that two lines of evidence are available in the administrative record to assess the pollutant, although there are three lines of evidence present (86205, 86204, and 2520). LOE 2520 is a placeholder to support a 303(d) listing decision made prior to 2006. LOEs 86205 and 86204 each state that all of the exceedances in each dataset occurred prior to March and August 2007, respectively. The DCTWRP discharge flows through part of Reach 5 and the NDN processes to remove ammonia were completed in 2007.

	Ammonia	The Fact Sheet for Decision ID 60597 corresponds to the ammonia listing for Bull Creek and states that two lines of evidence are available in the administrative record to assess the pollutant (83158 and 83154). LOE 83154 presents one data point collected in May 2008 that does not show an exceedance. LOE 83158 states that all of the exceedances occurred prior to August 2007. The DCTWRP discharge flows through Bull Creek and the NDN processes to remove ammonia were completed in 2007. The Fact Sheet for Decision ID 66374 corresponds to the ammonia listing for Wildlife Lake and states that one line of evidence is available in the administrative record to assess the pollutant (90174). LOE 90174 states that all of the exceedances occurred prior to August 2007. The DCTWRP discharge flows through Wildlife Lake and the NDN processes to remove ammonia were completed in 2007. The Fact Sheet for Decision ID 60378 corresponds to the ammonia listing for Balboa Lake and states that one line of evidence is available in the administrative record to assess the pollutant (82930). LOE 82930 states that all of the exceedances occurred prior to August 2007. The DCTWRP discharge flows through Balboa Lake and the NDN processes to remove ammonia were completed in 2007. Furthermore, the Fact Sheet for Decision ID 32913 corresponds to the ammonia listing for Los Angeles River Reach 4 (Sepulveda Dr. to Sepulveda Dam) and includes the decision to Delist from 303(d) list (being addressed by USEPA approved TMDL) based on the following Regional Board Staff Decision Recommendation: "RWQCB staff concludes that the water body-pollutant combination should be removed from the section 303(d) list because applicable water quality standards for the pollutant are not being exceeded." This decision is based on two LOEs (2513 and 86136). LOE 2513 states "A TMDL and implementation plan have been approved for this water segment-pollutant combination. The Los Angeles River Nitrogen TMDL was approved by RWQCB on August 19, 2003 and subsequently approved by USEPA on March 18, 2004." LOE 86136 finds that 0 of 152 samples exceeded the site-specific basin plan objective for total ammonia as nitrogen and only includes samples collected from 2008 to 2010 (which is after the date when the WRPs added the NDN treatment process and is inconsistent with the dates used in the assessments conducted for Los Angeles River Reaches 3 and 5, Bull Creek, and Wildlife Lake). Through the installation and implementation of NDN treatment facilities and process optimization by the City of Los Angeles (and City of Burbank), which has spent approximately $75 million to construct advanced treatment facilities to address ammonia, and approximately $6 million per year to operate those facilities, the quality of the water in the Los Angeles River watershed has been demonstrated to be fully attaining the applicable water quality objectives for ammonia. The message from the City and the Regional Board should be that the cooperative process worked, and that the applicable water quality standards are now being attained. Instead, the 303(d) list does not reflect the water quality improvement. Given that the addition of the NDN treatment process to the WRPs has eliminated exceedances, the timeframe used to evaluate impairments due to ammonia should be made consistent with the timeframe used in Los Angeles River Reach 4 which would result in the same listing decision for each water body (i.e., Delist from 303(d) list [being addressed by USEPA approved TMDL]). ***Requested Action: Revise the following Decision IDs to a finding of nonimpairment and remove listings for ammonia from Category 5 (Appendix B) because the data used to conclude that the applicable water quality standards for the pollutant were exceeded are no longer representative of ammonia concentrations observed within the water bodies due to the installation and operation of NDN:***

		- ***Los Angeles River Reach 3 Decision ID 32947*** - ***Los Angeles River Reach 5 Decision ID 32567*** - ***Bull Creek Decision ID 60597*** - ***Wildlife Lake Decision ID 66374*** - ***Balboa Lake Decision ID 60378***
26.	Los Angeles River Reach 1 (Estuary to Carson Street) and Los Angeles River Reach 2 (Carson to Figueroa Street) Ammonia	The Fact Sheet for Decision ID 32973 corresponds to the ammonia listing for Los Angeles River Reach 1 (Estuary to Carson Street) and is based on one LOE (2319), which does not contain any data. As such, the decision previously approved by the State Water Resources Control Board and the USEPA has not changed. The Fact Sheet for Decision ID 32911 corresponds to the ammonia listing for Los Angeles River Reach 2 (Carson to Figueroa Street) and is based on one LOE (2465) which does not contain any data. As such, the decision previously approved by the State Water Resources Control Board and the USEPA has not changed. In light of the information presented in the previous comment, it can be expected that conditions in Los Angeles River Reaches 1 and 2 since NDN was fully implemented (mid-2007) are consistent with what has been observed in Los Angeles River Reaches 3, 4, and 5 (i.e., no exceedances). A review of the ammonia data analyzed as part of the Upper Los Angeles River (ULAR) Enhanced Watershed Management Program (EWMP) do not show any exceedances. ***Requested Action: Revise the following Decision IDs to a finding of nonimpairment and remove listings for ammonia from Category 5 (Appendix B) because the data used to conclude that the applicable water quality standards for the pollutant were exceeded are no longer representative of ammonia concentrations observed within the water bodies due to the installation and operation of NDN:*** - ***Los Angeles River Reach 1 Decision ID 32973*** - ***Los Angeles River Reach 2 Decision ID 32911***
27.	Tujunga Wash (LA River to Hansen Dam) Ammonia	The Fact Sheet for Decision ID 32873 corresponds to the ammonia listing for Tujunga Wash (LA River to Hansen Dam) and is based on one LOE (2554) which does not contain any data. Rather, the Fact Sheet states that "One line of evidence is available in the administrative record to assess this pollutant. A TMDL has been developed and approved by USEPA and an approved implementation plan is expected to result in attainment of the standard. The Los Angeles River Nitrogen TMDL was approved by RWQCB on August 19, 2003 and subsequently approved by USEPA on March 18, 2004. This listing will substitute for the previous listings for foam, floc, scum, and taste and odor." As there are no data to support the listing, the ammonia listing for Tujunga Wash should be removed. Also, substituting the listing for foam, scum, and taste and odor is not necessary because the Regional Board removed those listings from the section 303(d) list because they are not pollutants or toxicity. ***Requested Action: Revise Decision ID 32873 for the ammonia listing for Tujunga Wash to Delist from 303(d) list and remove from Category 5 (Appendix B).***
28.	Bull Creek, Los Angeles River Reach 3 (Figueroa St. to	The Fact Sheets for the following Decision IDs relate to toxicity in the water column: - Decision ID 39159 Bull Creek - Decision ID 64389 Los Angeles River Reach 3 (Figueroa St. to Riverside Dr.) - Decision ID 64465 Los Angeles River Reach 4 (Sepulveda Dr. to Sepulveda Dam)

	Riverside Dr.), Los Angeles River Reach 4 (Sepulveda Dr. to Sepulveda Dam), Los Angeles River Reach 5 (within Sepulveda Basin), Los Angeles River Reach 6 (Above Sepulveda Flood Control Basin), and Los Angeles/Long Beach Outer Harbor (inside breakwater) Toxicity	- Decision ID 64489 Los Angeles River Reach 5 (within Sepulveda Basin) - Decision ID 64536 Los Angeles River Reach 6 (Above Sepulveda Flood Control Basin) - Decision ID 33930 Los Angeles/Long Beach Outer Harbor (inside breakwater) The City has several concerns with the proposed listings: 1. Section 6.1.5.3 of the Listing Policy states that "Samples used in the assessment must be temporally independent." However, data collected on the same day within the same waterbody are considered as independent samples without consideration of the fact they represent the same condition. These samples should be evaluated as representative of a single day. 2. In developing the number of samples analyzed and exceeded, the Regional Board appears to count a sample collected as one sample, but count acute and chronic results separately. In certain situations the result is two exceedances for the same sample. However, the Regional Board does not consider it conversely when there are no exceedances of acute or chronic end points there is only one sample that is identified as not exceeded. One sample should result in only one nonexceedance or one exceedance. 3. For Decision IDs associated with the Los Angeles River watershed, data are included that do not represent current conditions. As described previously, the LAGWRP and DCTWRP upgraded their treatment processes to remove ammonia. Since the NDN processes to remove ammonia were completed, no exceedances for ammonia have been observed since August 2007. All toxicity data prior to August 2007 should be removed from the analysis. 4. A number of the results are based on testing with *Ceriodaphnia dubia* (*C. dubia*). As discussed in the Stormwater Monitoring Coalition: Toxicity Testing Laboratory Guidance Document (SCCWRP Technical Report 956 December 2016), the report states (page 18) that during the intercalibration study, multiple laboratories observed *C. dubia* toxicity in laboratory dilution water (which should be non-toxic). Additionally, the report (page 16) found testing variability observed during the intercalibration study for *C. dubia* which had a response that ranged from 16 to 27% effect, and a standard deviation of 19 to 27% effect. The report further indicated that this large variability is not uncharacteristic of the variability observed by others. 5. Toxicity testing results were developed with a statistical approach that is no longer utilized in the NPDES monitoring programs. The LAGWRP, DCTWRP, HWRP and TIWRP NPDES permits require that toxicity endpoints be calculated using the Test of Significant Toxicity (TST) statistical approach. Future data will not be comparable to the listing data. As such, data used for listings should be assessed in a manner consistent with current regulations prior to making a determination of impairment. Given the issues associated with the data analysis and testing methods used as well as the implications of the listings, the City believes that additional efforts are needed to validate and assess whether or not an impairment exists. The City welcomes the opportunity to discuss an approach to properly evaluate toxicity in the affected waterbodies. ***Requested Action: Revise Decision IDs 39159, 64389, 64465, 64489, 64536, and 33930 for toxicity listings from Category 5 to Category 3.***