Comment Summary and Responses on March 11, 2010 Draft Revised Los Angeles River and Tributaries Metals TMDL

Public Comments
1. County of Los Angeles, Department of Public Works
2. Heal the Bay
3. City of Los Angeles, Bureau of Sanitation
4. City of Burbank

Comment Number	Comment	Response to Comment
1. County of Los Angeles, Department of Public Works		
1.1	**Allocations for all sources should be adjusted in accordance with the revised loading capacity of the receiving water** As part of the subject reconsideration, the staff of the California Regional Water Quality Control Board, Los Angeles Region (Regional Board), is proposing to adjust the copper numeric targets and loading capacities for the Los Angeles River Reaches 1 - 4 and the Burbank Western Channel based on a 2008 Water-Effects-Ratio Study conducted by three Publicly Owned Treatment Works (POTWs); namely, the Tillman, LA-Glendale, and Burbank Water Reclamation Plants. If adopted, the proposed changes would increase the copper numeric targets and loading capacities of these reaches by about a factor of four. It is reasonable to expect that changes in	A more robust data set is needed to develop copper WERs that could be applied to all sources. Staff disagrees that changes in the loading capacity for Reaches 1-4 and Burbank Western Channel would trigger adjustments to WLAs for all discharges to those reaches. The results of the 2008 WER study provide staff with assurances that the loading capacity can be adjusted using a copper WER and a portion of that loading capacity can be allocated to the POTW WLAs (with ongoing monitoring and toxicity testing), but not that the remaining portion can be allocated to other sources. The 2008 WER study was developed using primarily U.S. EPA's 2001 *Streamlined Water-Effect Ratio Procedure for Discharges of Copper*, which is only recommended where copper concentrations are elevated due to a continuous point source effluent (e.g. municipal

Comment Number	Comment	Response to Comment
	the loading capacity would trigger adjustments to the corresponding load allocations and wasteload allocations (WLAs) for all discharges to those reaches. However, the Regional Board's staff is proposing to adjust only the WLAs for discharges from the above-mentioned POTWs and not the allocations for other sources including storm drain discharges. As indicated in the Regional Board's 2005 Staff Report for the subject TMDL, urban runoff accounts for a significant portion of the dry-weather flow and stormwater accounts for the majority of the wet-weather flow in the Los Angeles River, and the corresponding allocations in the 2008 version of the TMDL reflected these facts. This indicates that most of the newly adjusted receiving water-loading capacity would remain unallocated and, if approved as currently proposed, the unallocated portion of the loading capacity would be taken as a margin of safety. The draft Staff Report and the Basin Plan Amendment provide no explanation or justification for allocating more than half of the receiving water-loading capacity as a margin of safety. This inordinate margin of safety is not justified because it forces stormwater agencies to implement costly control measures to reduce storm drain copper loading to pre-Water-Effects-Ratio levels, even though the new loading capacity of the river reaches indicates that the river's beneficial uses would be protected with a much smaller copper reduction. In other words, as it is currently proposed, the revised TMDL forces stormwater agencies to expend scarce public funds unnecessarily	effluent). While the 2008 study followed an "enhanced" Streamlined Procedure, including more sampling events, sampling locations, and toxicity testing than the minimum requirements of the Streamlined Procedure, certain requirements of the Streamlined Procedure were followed that are not applicable to multiple and variable discharges, such as the use of simulated downstream water (a mix of POTW effluent and upstream water) for some sampling events and locations to perform the toxicity testing. Staff agrees that urban runoff constitutes a significant portion of dry-weather flow, and the use of simulated downstream water does not account for this flow. The 2008 study did include additional toxicity testing at downstream locations to determine if urban runoff contributions between the upper and lower reaches would alter the copper WER. The results of the study demonstrate that the copper WER would be altered going downstream, from 5.87 in Reach 4 to 3.96 in Reaches 1, 2, and 3. It is clear from these results that urban runoff impacts the toxicity of copper in the receiving water, but this impact is not fully characterized by the limited amount of data in the 2008 WER study. This is why staff is proposing to apply the more protective WER of 3.96 to adjust the loading capacity and POTW WLAs, but not allocations for other dischargers. Given the uncertainty about the contribution from urban runoff, the copper WLAs for stormwater dischargers cannot be adjusted based on the 2008 WER study. The

Comment Number	Comment	Response to Comment
	and without a just cause. Consequently, the copper WLAs for stormwater dischargers should be adjusted in accordance with the newly proposed loading capacities for the Los Angeles River Reaches 1 - 4 and the Burbank Western Channel.	margin of safety provided by the unallocated portion of the loading capacity is justified and necessary to ensure that the revised TMDL will attain water quality standards and protect beneficial uses. A group of watershed stakeholders submitted a separate draft work plan for a watershed-wide copper WER to the Regional Board in May 2009. The new study would include additional sampling based on EPA's *Interim Guidance on the Determination and Use of Water-Effect Ratios for Metals* to create a more robust data set that could appropriately be used to reconsider the TMDL copper allocations for all sources. The Regional Board may reconsider the TMDL at any time to reflect the results of recent studies and data.
1.2	**TMDL schedule for reconsideration** The draft Staff Report indicates that staff intends to adjust the allocations for the remaining sources at the time the TMDL is reconsidered again in January 2011 according to the TMDL's schedule. This would seem impractical considering the unlikelihood that new information would become available between now and January 2011 that would otherwise change the outcome. Therefore, it would be more appropriate to address allocations for all sources now.	In May 2009, a group of watershed stakeholders submitted a separate draft work plan for a watershed-wide copper WER to the Regional Board. The new copper WER study would include additional sampling based on EPA's *Interim Guidance on the Determination and Use of Water-Effect Ratios for Metals* to create a more robust data set that would account for multiple sources. Staff understands that stakeholders in the watershed have recently agreed to fund the completion of this study. Staff has committed to consider the results of this study to determine the appropriateness of revising WLAs for other sources in the watershed based on a copper WER when the TMDL is reconsidered. The Regional Board may reconsider the TMDL at any time to reflect the results of recent studies and data.

Comment Number	Comment	Response to Comment
2. Heal the Bay		
2.1	**The Regional Board should not incorporate the copper WER into this TMDL. Incorporating this WER into the TMDL is not protective of water quality.** We often see WER studies pursued by dischargers as a way to avoid meeting protective water quality standards. This WER is no exception. This is confirmed by the Staff Report when it states, "LA-Glendale and Burbank POTWs must achieve compliance with NPDES permit limits for copper based on the existing final copper WLAs by January 11, 2011. While the POTWs will not be able to meet the existing copper limits by January 11, 2011, the 2008 WER study demonstrates that the POTWs can discharge copper at levels higher than the existing WLA-based permit limits and still fully protect beneficial uses. Therefore, the POTWs have not submitted a work plan for the installation of advanced treatment in order to receive an extended implementation schedule." (Staff Report Pages 6-7). In general, the use of WERs to modify water quality standards is not a protective approach. Of note, there has never been a WER study pursued that resulted in tougher water quality objectives. The incorporation of WERs into this TMDL will result in an increased amount of copper discharge allowed into our waterways, which in turn, could have serious ramifications to beneficial uses. In	The US EPA has developed the water-effect ratio (WER) procedure as a technically sound method of accounting for local conditions that affect a pollutant's bioavailability and toxicity to aquatic life. In establishing this procedure, EPA has found that, "site specific criteria, properly determined, will fully protect existing uses" (US EPA 1994). EPA also has stated that, "a site specific criterion is intended to come closer than the national criterion to providing the intended level of protection to the aquatic life at the site, usually by taking into account the biological and/or chemical conditions … at the site." (US EPA 1994). Because it is not feasible to determine national numeric aquatic life criteria by conducting field tests on a wide enough variety of waterbodies, EPA's Guidelines for Deriving Numerical National Water Quality Criteria for the Protection of Aquatic Organisms and Their Uses (1985 National Guidelines) sets forth a feasible approach that is intended to ensure adequate protection of aquatic life across a wide variety of waterbodies throughout the nation. To accomplish this, EPA's recommended ambient water quality criteria published pursuant to CWA §304(a) are derived from data on a large number of taxa from a variety of taxonomic and functional groups to ensure that, at a national level, a reasonable level of protection is guaranteed for 95% of species.

Comment Number	Comment	Response to Comment
	the case of the LA River, application of the WER developed in the 2008 Copper WER study will increase the amount of allowable discharge of copper by a factor of 4. Moreover, the SSO study for the WER proposed to be included in the TMDL is inadequate, as we explain below. Thus, there is little assurance that the WER will actually be protective of the beneficial uses of the waterbody.	In light of this approach, federal regulations state that, in establishing criteria, states should establish numerical values based on (i) 304(a) Guidance; or (ii) 304(a) Guidance modified to reflect site-specific conditions; or (iii) Other scientifically defensible methods (40 CFR 131.11(b)(1)). EPA recognizes that local conditions may affect a pollutant's bioavailability and toxicity and that it is justifiable for states to investigate these local conditions and adjust the national water quality criteria accordingly such that the state's water quality standards provide the same level of protection that was intended by the 1985 National Guidelines. Given that national criteria are set to protect 95% of species represented in a national dataset, it is not surprising that, in most cases, where a WER study is pursued, the results show that local conditions lessen the bioavailability and toxicity of a pollutant (US EPA 1985). In this case, staff has proposed very limited revisions to the TMDL based on the results of the 2008 WER study and ongoing monitoring to ensure that application of the WER is protective of water quality and beneficial uses. First, the 2008 WER study was overseen by Regional Board staff and a three-member technical advisory committee (TAC) comprised of experts in the field of toxicity and WER protocols. The study included more sampling events, sampling locations, and toxicity testing than the minimum requirements of the Streamlined

Comment Number	Comment	Response to Comment
		Procedure to ensure that applying a copper WER to the POTWs would still be protective of beneficial uses in the river. Second, the proposed revision only adjusts the WLAs for the POTWs (and not other sources) and includes ongoing monitoring to ensure that any changes in water quality that may occur after implementation of the WLAs will not affect the toxicity of copper in the river or impact beneficial uses. Finally, the proposed TMDL revision contains implementation language specifying that even though the POTW WLAs are being revised by a copper WER, the effluent limitations in the POTWs' NPDES permits will be set such that effluent concentrations and mass discharges shall not exceed the levels of water quality that can be attained by performance standards of their current treatment technologies. In other words, application of the copper WER developed by the 2008 study to the POTW WLAs will not necessarily increase the allocable discharge of copper to the river by a factor of 4.
2.2	**The WER was developed using inappropriate methods and reasoning**. The original SSO study for developing the WER has a number of inadequacies, as Heal the Bay commented back in August 2004. To summarize, we believe a number of non-conservative assumptions were made and insufficient data were collected to determine the critical condition of the tributaries being investigated during the development of the WER. For instance, as we previously	The design for the 2008 WER study was based on appropriate methods and assumptions that justify the application of a copper WER to the numeric targets and loading capacity in Reaches 1-4 and the Burbank Western Channel, and to adjust the WLAs for the POTWs in these reaches (with ongoing monitoring and toxicity testing). The number and locations of sampling sites and the frequency of monitoring in the 2008 WER study support staff's proposal, and exceed the recommendations in the Streamlined Procedure. Staff is not proposing to apply the WER to any

Comment Number	Comment	Response to Comment
	commented, the sampling design does not encompass the entire range of environmental conditions in the watershed and may not adequately address critical conditions. The study evaluates merely five sampling sites for dry weather, and merely three sites in wet weather. In addition, the wet-weather sampling plan may not address critical conditions. Five sample events occurred over the course of less than a year, with merely one storm event included in the sampling. Considering that the Los Angeles River is over 50 miles long and that these WERs are being applied to entire reaches of the Los Angeles River, these were too few sample locations and events to capture the annual site-to-site variations of the Los Angeles River. Because of these inadequacies, we believe the WER value developed is flawed and is not protective of beneficial uses in the Los Angeles River. Hence, this value should not be incorporated into the TMDL. The proposed revision is a perfect example of why a comprehensive WER policy is desperately needed in our region. Although we do not support the pursuit of WERs or their incorporation into TMDLs, we believe a WER policy is needed to outline methods for performing WER studies in a more protective fashion and incorporating them in to TMDLs consistently within the region in order to adequately protect beneficial uses of the Los Angeles River instead of in the piecemeal fashion we have seen to date.	other reaches or tributaries in the watershed or any other sources. The assumption that dry weather is the critical condition was based on the wet-weather sampling plan as well as an analysis using the biotic ligand model (BLM). In addition, in response to a TAC member comment, the study included an additional sampling event to represent the elevated flow conditions that occur 7-10 days after a rain event (defined as a "shoulder event" in 2008 WER study report). Based on the results of the BLM analysis, the wet-weather sampling event and the high-flow dry-weather event, dry weather is the critical condition. The proposed TMDL revision contains monitoring to confirm this assumption. Regarding the need for a WER policy, staff concluded that there are adequate existing state and federal regulations, policies, and guidance that identify necessary considerations in WER development and adoption, establish limitations on the use of WERs, and provide direction on their derivation. The California Toxic Rule (CTR) provides for the application of WERs and specifies what EPA technical guidance should be used in WER development. In the guidance referred to in the CTR, EPA states that a site-specific criterion is intended to come closer than the national criterion to providing the intended level of protection to aquatic life at the site. Therefore, there is assurance that the level of aquatic life protection intended by the CTR will be maintained, when using the

Comment Number	Comment	Response to Comment
		specified guidance. Additionally, the EPA guidance specified in the CTR allows for site-specific sampling requirements to account for conditions specific to a site. Therefore, the issue of variability in flows and water quality conditions can be addressed in the sampling design. Finally, as WERs will be adopted with robust monitoring requirements, there is the ability to confirm that no degradation of existing water quality would occur as a result of the WER. Staff presented these conclusions to the Regional Board at a board meeting on September 3, 2009. At that meeting, the Regional Board agreed with staff's conclusions.
2.3	**The Regional Board should pursue other alternatives to incorporating a WER into this TMDL.** As mentioned in their March 11, 2010 letter to Regional Board responding to the first proposed revisions, EPA did not support an extension of compliance schedules to meet final WLAs for POTWs, and they were concerned "with the application of site specific copper WERs, which may be implemented in the NPDES permits as new, less stringent, interim limits" (EPA letter page 2). In response, Regional Board is proposing to amend final Waste Load Allocations (WLAs) to incorporate the WER value for copper resulting from the 2008 Copper WER study. We do not believe this is an appropriate solution to the concerns EPA raised in their letter. From	Staff carefully considered EPA's comments when preparing the revised draft TMDL reconsideration. Staff responded to EPA's concern that the application of WERs might be implemented in NPDES permits as less stringent limits by including language that makes it clear that NPDES permit limits will be based on levels of water quality that can be attained by performance standards of current treatment technologies. This ensures that there will be no degradation of existing water quality. Based on the data provided in the EPA letter and current monitoring reports for the three POTWs, it is not apparent that two out of three of the plants would be able to meet final effluent limits based on the current WLAs in the TMDL.

Comment Number	Comment	Response to Comment
	the information EPA provided with their letter, it appears that all of the plants are meeting interim limits, and two out of three of the plants are already able to meet final effluent limitations based on sample data taken between January 2008 and December 2009. Hence, using WERs to increase the WLAs in the TMDL for the express purpose of facilitating one out of three of the plants to comply seems unnecessary, is poor public policy, and should be avoided. A preferred alternative would be to simply issue a Time Schedule Order to allow Burbank time to improve their processes to better treat copper if necessary.	
2.4	**The Regional Board should clarify how it will determine existing performance of treatment technologies, as described in the proposed revisions.** We support the fact that Staff has introduced antidegradation provisions aimed to prevent dischargers from discharging an amount of copper at higher levels than they can currently treat, in response to concerns brought up by EPA. However, it is unclear how these provisions will be interpreted. Footnote 2 of the revisions to the waste load allocation section of the TMDL states, "Regardless of the WER, effluent limitations shall ensure that effluent concentrations and mass discharges do not exceed the levels of water quality that can be attained by performance of this facility's treatment technologies existing at the time of permit issuance, reissuance, or modification." (Revised	TMDL staff are working with permitting staff to determine how to define existing performance of current treatment technologies for the three POTWs. This determination will be applied at the time of the permit re-openers. The proposed Basin Plan amendment is necessary because current monitoring reports for the three POTWs demonstrate that they would not all be able to consistently meet effluent limits based on the current WLAs in the TMDL.

Comment Number	Comment	Response to Comment
	TMDL page 8). It is unclear how the Regional Board plans to define the facilities' performance "existing at the time of permit issuance." What performance data will be used? This needs to be defined in order for this provision to be effective in preventing increased copper loading to the Los Angeles River. As discussed above, the Tillman and Glendale plants are already meeting the current final effluent limits. Also, as the Regional Board included this footnote to prevent the plants from backsliding from the achieved existing effluent limits, it appears the Regional Board intends for the POTWs to meet technology based limits below the proposed WER-adjusted-WLAs. Therefore, what is the point of including a WER in the Basin Plan Amendment? This causes much confusion and should be considered before pursuing these proposed revisions.	
2.5	**These revisions do not provide an explicit margin of safety to this TMDL.** We disagree with the revisions introduced into the Margin of Safety section of the Basin Plan Amendment which state "An additional explicit margin of safety is provided in Reaches 1-4 and Burbank Western Channel for which a site-specific WER has been developed" (Revised BPA page 12). While we agree that the WER should not be applied to sources other than the POTWs, we do not believe this equates to an explicit margin of safety. The Regional Board can apply a more protective	The margin of safety provided by leaving a portion of the loading capacity unallocated, along with the use of an "enhanced" Streamlined Procedure in the 2008 WER study, which included more sampling events, sampling locations, and toxicity testing in order to ensure that application of a copper WER to the POTWs would still protect beneficial uses, will ensure attainment of water quality standards. Therefore, staff does not recommend an additional margin of safety.

Comment Number	Comment	Response to Comment
	margin of safety to this TMDL by including an explicit margin of safety equal to 10% of the loading capacity available for reaches 1-4.	
2.6	**The Regional Board should not place a WER factor before each waste load allocation in this TMDL.** We believe it is unnecessary to add the language "WER x" with the accompanying footnote outlining that the "WER(s) have a default value of 1.0 unless site-specific WER(s) are approved" to WLAs other than copper within the LA River TMDL. It is understood that the default WER factor is 1.0, thus it is unnecessary to state this explicitly.	The WER factor is a variable in the equation used to derive the copper, lead, cadmium, and zinc criteria established in the CTR, and is included for transparency.
3. City of Los Angeles, Bureau of Sanitation		
3.1	**The Bureau Supports the Tentative Resolution** The Bureau greatly appreciates the efforts of RWQCB staff in working to develop the information necessary to support the current TMDL modification and reconsideration. As discussed in the Staff Report, the current TMDL implementation schedule and permit provisions require the Bureau to achieve compliance with NPDES permit limits for copper based on the existing final copper Waste Load Allocations (WLAs) by January 11, 2011. Based on the last two years of data, the City of Burbank's Water Reclamation Plant will not	Comment noted.

Comment Number	Comment	Response to Comment
	be able to and the City of Los Angeles Donald C. Tillman Water Reclamation Plant may not be able to consistently meet the existing copper limits by January 11, 2011. However, the 2008 Water-Effect Ratio (WER) Study demonstrates that copper concentrations can be higher in the receiving waters than the current TMDL targets and allocations without adversely affecting the designated beneficial uses (e.g., aquatic life) and still be as protective as intended by the TMDL. The development of information to support this determination occurred through a thorough stakeholder and scientific review process. A Draft Work Plan was submitted to RWQCB staff and the TAC on June 10, 2004, which focused on the development of copper WERs for inclusion into the NPDES-discharge permits for the City of Los Angeles Donald C. Tillman (DCT) and Los Angeles-Glendale Water (LAG) Reclamation Plants (WRPs) and the City of Burbank's Water Reclamation Plant. Between the June 10, 2004 Draft Work Plan submittal and the Final Work Plan on October 18, 2005, the RWQCB and TAC reviewed three intermediate draft Work Plans, and three SC meetings were held to present information to the public and solicit feedback. Based on input from the RWQCB, TAC, and SC, the Study sponsors significantly expanded the scope of the Study to include the addition of sampling sites as well as increasing the number of sampling events downstream of WRPs to evaluate WERs	

Comment Number	Comment	Response to Comment
	in the lower part of the river. The changes resulted in more than doubling the number of WER samples collected and the resultant costs. The intent of these changes was to increase confidence in determining scientifically accurate, precise, and reasonably protective copper WERs for the Los Angeles River. Subsequent to the completion of sampling, two draft versions of the Study Report were reviewed by the RWQCB and TAC. The third draft was submitted to the RWQCB, TAC, and SC on November 1, 2007, and the fourth and final SC meeting was held on December 3, 2007. The Final Study Report was submitted to the RWQCB on June 3, 2008 and, per the direction of RWQCB staff, recommended the modification of copper objectives rather than adoption of permit specific WERs as presented in the Tentative Resolution. As such, the Final Study Report recommends the use of the results of the Work Plan to modify the CTR copper criteria for Los Angeles River Reaches 1, 2, 3, 4 and Burbank Western Channel and the TMDL targets through the use of site-specific WERs for these waterbodies. The conclusions presented in the Final Study Report were supported by the TAC, including the two members who were co-authors of USEPA's WER guidance document. Furthermore, USEPA Region 9 staff submitted a statement supporting the findings and conclusions of the Study.	

Comment Number	Comment	Response to Comment
	The 2008 Study followed established USEPA methods and exceeded their minimum requirements. The Study sponsors engaged in a process to seek input from a wide range of stakeholders during both Work Plan and Final Report development resulting in significant revisions and additional costs to insure a scientifically defensible approach. Lastly, an independent TAC, which included two co-authors of USEPA's original WER guidance, agreed that the Work Plan approach and Final Report conclusions were consistent with USEPA guidance and resulted in a site-specific and scientifically validated WER protective of aquatic life. The Bureau appreciates the RWQCB's consideration and adoption of the Tentative Resolution with the incorporation of the comments presented below.	
3.2	**Minor modifications should be made to the Tentative Resolution to make it more defensible.** Paragraph 7 of the Tentative Resolution States that "Both state and federal law require that NPDES permits are consistent with any available WLAs," and cites 40 C.F.R. § 122.42 and California Water Code section 13263. Since neither of these cited laws contain that express Requirement, these citations should be modified to cite 40 C.F.R. §122.44(d)(1)(vii)(B) and Cal. Water Code 13372.	The citation to Cal. Water Code section 13263 is correct. Section 13263(a) states, "[discharge] requirements shall implement any relevant water quality control plans that have been adopted." In other words, WDRs must implement TMDLs, which are incorporated into the water quality control plan. The Tentative Resolution has been revised to include the citation to Cal. Water Code section 13372. The citation to 40 CFR 122.42 was a typographical error and should have read 122.44. This error has been corrected in the revised Tentative Resolution.

Comment Number	Comment	Response to Comment
	Paragraph 7 also states that "And because the copper WER study was developed using primarily the study design outlined in U.S. EPA's 2001 Streamlined Water Effect Ratio Procedure for Discharges of Copper, which is not applicable for multiple sources, the copper WER cannot be used to adjust the copper WLAs for sources other than POTWs." This Statement is not entirely accurate since the development of the Study utilized guidance from both the Streamlined Procedure and the Interim Guidance expressly referenced in the CTR in addition to specific recommendations from the TAC, SC, and RWQCB staff. The inclusion of guidance from the multiple sources was intended to enhance the Study design, not limit the application of the WER. The 2008 Study conducted more sampling events than required by either USEPA approach, collected more samples than required by either approach, and used more measurements to calculate the WER proposed in the Tentative Resolution than required by either approach. Further, even though the 1994 Guidance recommends, but does not require, two species, the TAC (including RWQCB staff) approved the use of a single species given their knowledge of WER testing (two of the TAC members wrote the WER guidance) and the relative sensitivity of test species (i.e., the study used the most tentative test species to generate the most protective results).	The resolution states that the study was developed *primarily* using the Streamlined Procedure. The additional information provided in the resolution findings, staff report, and these responses to comments makes it clear that guidance from multiple sources was considered in developing the 2008 WER study. No change is necessary. Staff acknowledges that the 2008 study followed an "enhanced" Streamlined Procedure that included more sampling events, locations, and more measurements to calculate the WER than the minimum requirements of the Streamlined Procedure or Interim Guidance. However, States have discretion in adopting WERs, and in this case, Regional Board staff required the "enhanced" approach to ensure that the resulting WER would ensure attainment of water quality standards and protect beneficial uses. The additional components of the study design were in response to Regional Board staff as well as TAC concerns about applying the Streamlined Procedure to the subject reaches of the Los Angeles River. Regional Board staff appreciates the additional time spent and cost incurred by the Study sponsors to obtain a more robust data set that would allow the application of the copper WER to the POTW WLAs.

Comment Number	Comment	Response to Comment
	There is one major difference where the 2008 Study, with agreement froth the TAC and RWQCB staff, followed the Streamlined Guidance over the Interim Procedure. The difference is in the manner in which the WER value is calculated and the resulting final WER values the calculation using the Interim Procedure Approach resulted in a WER of 9.60. This is in comparison to the use of the Streamlined Guidance approach to WER Calculation, which resulted in a much lower and more conservative WER of' 3.96. (equal to the WER presented in the Tentative Resolution) than that under the Interim Procedure approach alone. The 2008 Study followed established USEPA methods and exceeded their minimum requirements. The Study sponsors engaged in a process to seek input from a wide range of stakeholders during both Work Plan and Final Report development resulting in significant revisions and additional costs to insure a defensible approach. Lastly, an independent TAC, which included two co-authors of USEPA's original WER guidance, agreed that the Work Plan approach and Final Report conclusions were consistent with USEPA guidance and resulted in a WER protective of aquatic life. As such, the Bureau requests that the last sentence in paragraph 7 of the Tentative Resolution be revised since more than just the 2001 Streamlined Procedure was utilized.	It is not appropriate to compare the results of WERs calculated based on the different calculation methods in the Streamlined Procedure and Interim Guidance because the differences in calculation procedures are intended to account for the differences in study design. The Streamlined Procedure calculation method accounts for its less rigorous study design. Using the Interim Guidance calculation procedure based on data collected using Streamlined Procedure methods does not present an accurate comparison. This comparison would tend to imply that the proposed WER of 3.96 based on the Streamlined Procedure calculation method is overprotective, when in fact 3.96 is the most appropriate value, given the comments raised by the TAC, SC, and Regional Board staff about the need for a more robust data set to account for potential impacts on downstream beneficial uses and the variability in flow. No change to the Tentative Resolution is necessary.

Comment Number	Comment	Response to Comment
3.3	**TMDL Target and WLA Recalculation** The Bureau requests that the Tentative Resolution clarify that the 2008 Study was developed to be protective for both chronic and acute exposure periods. As such, the Tentative Resolution or staff report should include a statement that the proposed WER of 3.96 is applicable to both the chronic and acute criteria utilized to calculate the revised TMDL targets and wasteload allocations.	Since the TMDL numeric targets are based on chronic (in dry weather) and acute (in wet weather) criteria, and the WERs are applied to both the dry-weather and wet-weather numeric targets, it is implicit that the WER is protective for both chronic and acute exposure periods. No change is necessary.
3.4	**Margin of Safety** The Bureau requests that the Tentative Resolution documentation clarify language related the margin of safety (MOS) as it is associated with the application of the WER. As presented in the Revised Basin Plan Amendment MOS section: "An additional explicit margin of safety is provided in reaches 1-4 and Burbank Western Channel for which a site-specific WER has been developed. Specifically, while the copper targets and loading capacity are adjusted based on the final WER of 3.96, only the WLAs for Tillman WRP, LA-Glendale WRP, and Burbank WRP are adjusted using the site-specific WER until additional data are collected to determine whether the site-specific WER is fully protective of aquatic life in all reaches and can be appropriately applied to all LAs and WLAs."	Staff disagrees that the two decisions regarding the additional number of samples and the use of the Streamlined Procedure in the development of the 2008 study or the application of the downstream WER provide a better representation of the margin of safety. The decisions made during the development of the study and staff's proposed application of the study are necessary to ensure that the application of the WER to the POTWs will attain water quality standards and protect beneficial uses. The additional margin of safety provided by leaving a portion of the WER-adjusted loading capacity unallocated is necessary to address the additional uncertainty of applying the WER to the entire loading capacity for the subject reaches. No change is necessary. See also response to comment No. 3.2.

Comment Number	Comment	Response to Comment
	A number of decisions were made during the development and implementation of the 2008 Study that provide a better representation of a MOS. Two key decisions relate to the number of samples collected to determine the WERs and the method used to calculate the WERs. The Copper WER Study conducted more sampling events than required by either USEPA approach, collected more samples than required by either approach, and used more measurements to calculate the WER proposed in the Tentative Resolution than required by either approach. As such, the expanded sampling conducted through the 2008 Study represents an implicit MOS. In addition to the expanded sampling undertaken through the 2008 Study, the calculations of the WERs, with agreement from the TAC and RWQCB staff were conducted utilizing the Streamlined Guidance over the Interim Procedure. Using the Interim Procedure approach to WER calculation results in a WER of 9.60. This is in comparison to the use of the Streamlined Guidance approach to WER calculation, which results in a WER of 3.96 (equal to the WER presented in the Tentative Resolution). Therefore the use of the Streamlined Guidance rather, than the Interim Guidance resulted in the calculation of a lower WER, and represents an implicit MOS.	

Comment Number	Comment	Response to Comment
	In addition to the two considerations described immediately above, the 2008 Study found that WERs of 5.871 for Reach 4 and Burbank Western Channel would result in site-specific criteria as protective as intended by the California Toxics Rule (CTR). However, notwithstanding the additional capacity in the upper reaches, the WER of 3.96 determined for Reaches 1, 2, and 3 is being applied to Reach 4 and Burbank Western Channel. The application of the lower WER upstream represents a MOS and should be noted as such.	
3.5	**Discussion Related to Effluent Limitations.** Because the TMDL cannot prejudge the effluent limitations to be issued in a future hearing and because no authority has been cited to support the language contained therein, footnote 2 on both pages 8 and 10 of the proposed Basin Plan Amendment (applying to the dry and wet weather WLAs for Tillman; Glendale, and Burbank, respectively) should be modified in order to be more defensible. The Bureau recommends the following language be inserted into both of these footnotes: 2. The WER for this constituent is 3.96. ~~Regardless of the WER, effluent limitations shall ensure that the effluent concentrations and mass discharges do not exceed the levels of water quality that can be attained by~~	The footnote language proposed by staff in the tentative Basin Plan amendment is in direct response to EPA's comment letter and is necessary to ensure that application of the WER does not allow the degradation of existing water quality. This language is nearly identical to the WLA language in the Calleguas Creek Metals TMDL, adopted by Resolution 2006-012 and effective as of March 27, 2007.

Comment Number	Comment	Response to Comment
	~~performance of this facility's treatment technologies existing at the time of permit issuance, reissuance, or modification.~~ When effluent limitations are adopted for these treatment plants, those limits will be set based on the requirements of 40 C.F.R. §122.44(d)(1)(vii)(B)(requiring consistency with any available wasteload allocations for the discharge) and other applicable provisions of state and federal laws and regulations.	
4. City of Burbank		
4.1	**Support of the Tentative Resolution** The City of Burbank greatly appreciates the efforts of RWQCB staff in working to develop the information necessary to support the current Metals TMDL modification and reconsideration. As discussed in the Staff Report, the current Metals TMDL implementation schedule and permit provisions, require the City of Burbank to achieve compliance with National Pollutant Discharge Elimination System (NPDES) permit limits for copper based on the existing final copper waste load allocations (WLAs) by January 11, 2011. Based on the last two years of data, the City of Burbank's Water Reclamation Plant will not meet the permit copper limits and the City of Los Angeles' Donald C. Tillman Water Reclamation Plant may not be able to consistently meet the existing copper limits by January 11, 2011. However, the 2008 Copper Water-Effects Ratio (Copper WER)	See response to comment No. 3.1.

Comment Number	Comment	Response to Comment
	study demonstrates that copper concentrations can be higher in the receiving waters than the current Metals TMDL targets and WLAs without adversely affecting the designated beneficial uses (e.g., aquatic life), while still protective as intended by the Metals TMDL. The development of information to support this determination occurred through a thorough stakeholder and scientific review process. A Draft Work Plan was submitted to RWQCB staff and the TAC on June 10, 2004, which focused on the development of Copper WERs for inclusion into the NPDES discharge permits for the City of Los Angeles' Donald C. Tillman (DCT) and Los Angeles-Glendale Water Reclamation Plants and the City of Burbank's Water Reclamation Plant. Between the June 10, 2004 and October 18, 2005 Draft and Final Work Plan submittals, respectively, the RWQCB and TAC reviewed three intermediate draft Work Plans, and three SC meetings were held to present information to the public and solicit feedback. Based on input from the RWQCB, TAC, and SC, the Study sponsors significantly expanded the scope of the Study to include the addition of sampling sites and the frequency of sampling events downstream of the 3 WRPs to evaluate Copper WERs in the lower part of the river downstream of the WRPs. The changes resulted in more than doubling the number of Copper WER samples collected and the resultant costs. The intent of these changes was to increase confidence	

Comment Number	Comment	Response to Comment
	in determining scientifically accurate, precise and reasonably protective Copper WERs for the relevant Los Angeles River reach waterbodies. Subsequent to the completion of sampling, two draft versions of the Study Report were reviewed by the RWQCB and TAC. The third draft was submitted to the RWQCB, TAC, and SC on November 1, 2007, with the fourth and final SC meeting being held on December 3, 2007. The Final Study Report was submitted to the RWQCB on June 3, 2008 and, per the direction of RWQCB staff, recommended the modification of copper objectives rather than adoption of permit specific Copper WERs as presented in the proposed Tentative Resolution. As such, the Final Study Report recommends the use of the results of the Work Plan to modify the CTR copper criteria for Los Angeles River Reaches 1, 2, 3, 4 and Burbank Western Channel and the TMDL targets through the use of site-specific Copper WERs for these waterbodies. The conclusions presented in the Final Study Report were supported by the TAC, including the two members who were co-authors on USEPA's WER guidance document. Furthermore, USEPA Region 9 staff submitted a statement supporting the findings and conclusions of the Study. The 2008 Study followed the USEPA methods and exceeded their minimum requirements. The Study sponsors engaged in a process to seek input from a wide	

Comment Number	Comment	Response to Comment
	range of stakeholders during both Work Plan and Final Report development resulting in significant revisions and additional costs to insure a scientifically defensible approach. Lastly, an independent TAC, which included two co-authors of USEPA's original WER guidance, agreed that the Work Plan approach and Final Report conclusions were consistent with USEPA guidance and resulted in a site-specific and scientifically validated WER protective of aquatic life. The City of Burbank appreciates the RWQCB's consideration and adoption of the Tentative Resolution with the incorporation of the comments presented below.	
4.2	**Necessary Minor Modifications to the Tentative Resolution** The Tentative Resolution currently states in paragraph 7 that "Both state and federal law require that NPDES permits are consistent with any available WLAs," and cite 40 C.F.R. §122.42 and California Water Code section 13263. These citations should be modified to include 40 C.F.R. §122.44(d)(1)(vii)(B) and Cal. Water Code 13372. Paragraph 7 also states that "And, because the Copper WER study was developed using primarily the study design outlined in U.S. EPA's 2001 Streamlined Water-Effect Ratio Procedure for Discharges of Copper, which is not applicable for multiple sources, the Copper WER cannot be used to adjust the copper WLAs for sources	See response to comment No. 3.2.

Comment Number	Comment	Response to Comment
	other than POTWs." This statement is not entirely accurate since the development of the Study utilized guidance from both the Streamlined Procedure and the 1994 Interim Guidance expressly referenced in the CTR, in addition to specific recommendations from the TAC, SC, and RWQCB staff. The inclusion of guidance from the multiple sources was intended to enhance the Study design, not limit the application of the Copper WER. The 2008 Study conducted more sampling events than required by either USEPA approach, collected more samples than required by either approach, and used more measurements to calculate the Copper WER proposed in the Tentative Resolution than required by either approach. Further, even though the 1995 Guidance recommends, but does not require, two species, the TAC (including RWQCB staff) approved the use of a single species given their knowledge of WER testing (two of the TAC members wrote the WER guidance) and the relative sensitivity of test species (i.e., the study used the most sensitive test species to generate the most protective results). There is one major difference where the 2008 Study, with agreement from the TAC and RWQCB staff, followed the Streamlined Guidance over the Interim Procedure. The difference is in the manner in which the Copper WER value is calculated and the resulting final Copper WER values. The calculation using the Interim	

Comment Number	Comment	Response to Comment
	Procedure Approach resulted in a WER of 9.60. This is in comparison to the use of the Streamlined Guidance approach to Copper WER calculation, which resulted in a much lower and more conservative Copper WER of 3.96 (equal to the Copper WER presented in the Tentative Resolution) than that under the Interim Procedure approach alone. The 2008 Study followed the USEPA methods and exceeded their minimum requirements. The Study sponsors engaged in a process to seek input from a wide range of stakeholders during both Work Plan and Final Report development resulting in significant revisions and additional costs to insure a defensible approach. Lastly, an independent TAC, which included two co-authors of USEPA's original WER guidance, agreed that the Work Plan approach and Final Report conclusions were consistent with USEPA guidance and resulted in a WER protective of aquatic life. As such, the City of Burbank requests that the last sentence in paragraph 7 of the Tentative Resolution be revised since more than just the 2001 Streamlined Procedure was utilized.	
4.3	**Recalculation of TMDL Targets and WLAs** The City of Burbank requests that the Tentative Resolution clarify that the 2008 Study was developed to be protective for both chronic and acute exposure periods. As such, the Tentative Resolution or staff report should include a statement that the proposed Copper	See response to comment No. 3.3.

Comment Number	Comment	Response to Comment
	WER of 3.96 is applicable to both the chronic and acute criteria utilized to calculate the revised TMDL targets and WLAs.	
4.4	**Margin of Safety** The City of Burbank requests that the Tentative Resolution documentation clarify language related to the margin of safety (MOS) as it is associated with the application of the Copper WER. As presented in the Revised Basin Plan Amendment MOS section: "An additional explicit margin of safety is provided in Reaches 1-4 and Burbank Western Channel for which a site-specific WER has been developed. Specifically, while the copper targets and loading capacity are adjusted based on the final WER of 3.96, only the WLAs for Tillman WRP, LA-Glendale WRP, and Burbank WRY are adjusted using the site-specific WER until additional data are collected to determine whether the site-specific WER is fully protective of aquatic life in all reaches and can be appropriately applied to all LAs and WLAs." A number of decisions were made during the development and implementation of the 2008 Study that provide a better representation of a MOS. Two key decisions relate to the number of samples collected and the method used to calculate the Copper WERs.	See response to comment No. 3.4.

Comment Number	Comment	Response to Comment
	The Copper WER Study conducted more sampling events than required by either USEPA approach, collected more samples than required by either approach, and used more measurements to calculate the WER proposed in the Tentative Resolution than required by either approach. As such, the expanded sampling conducted through the 2008 Study represents an implicit MOS. In addition to the expanded sampling undertaken through the 2008 Study, the calculation of the Copper WERs, with agreement from the TAC and RWQCB staff, were conducted utilizing the Streamlined Guidance over the Interim Procedure. Using the Interim Procedure approach for a Copper WER of 3.96 (equal to the WER presented in the Tentative Resolution). Therefore, the use of the Streamlined Guidance rather than the Interim Guidance resulted in the calculation of a lower Copper WER and represents an implicit MOS. In addition to the two considerations described immediately above, the 2008 Study found that Copper WERs of 5.871 for Reach 4 and Burbank Western Channel would result in site-specific criteria as protective and as intended by the CTR. However, notwithstanding the additional capacity in the upper reaches, the Copper WER of 3.96 determined for Reaches 1, 2, and 3 is being applied to Reach 4 and Burbank Western Channel. The application of the lower Copper WER upstream represents a MOS and should be noted as such.	

Comment Number	Comment	Response to Comment
4.5	**Effluent Limitations Language Modifications** The TMDL cannot prejudge the effluent limitations to be issued in a future hearing, and no authority has been cited to support the language contained therein. Thus, footnote 2 on both pages 8 and 10 of the proposed Basin Plan Amendment (applying to the dry and wet weather WLAs for Tillman, Glendale, and Burbank WRPs, respectively) should be modified in order to be more defensible. The City of Burbank recommends the following language be inserted into both of these footnotes: 2. The WER for this constituent is 3.96. ~~Regardless of the WER, effluent limitations shall ensure that the effluent concentrations and mass discharges do not exceed the levels of water quality that can be attained by performance of this facility's treatment technologies existing at the time of permit issuance, reissuance, or modification.~~ When effluent limitations are adopted for these treatment plants, those limits will be set based on the requirements of 40 C.F.R. §122.44(d)(1)(vii)(B)(requiring consistency with any available wasteload allocations for the discharge) and other applicable provisions of state and federal law and regulations.	See response to comment No. 3.5.