



April 8, 2013

Lisa Honma  
California Regional Water Quality Control Board  
San Diego Region  
9174 Sky Park Court, Suite 100  
San Diego, CA 92123-4340

**Subject: Tentative Resolution No. R9-2013-0003 Amending *The Water Quality Control Plan For the San Diego Basin (9)* to Incorporate Total Maximum Daily Loads for Toxic Pollutants in Sediment at the Mouths of Paleta, Chollas, and Switzer Creeks in San Diego Bay**

Dear Ms. Honma:

The San Diego Unified Port District (District) appreciates the opportunity to provide comments to the San Diego Regional Water Quality Control Board (Regional Board) on Tentative Resolution No. R9-2013-0003 Basin Plan Amendment to Incorporate Total Maximum Daily Loads for Toxic Pollutants in Sediment at the Mouths of Paleta, Chollas, and Switzer Creeks in San Diego Bay ("Draft Technical Report"), dated February 19, 2013. The Basin Plan Amendment would incorporate requirements for TMDLs for chlordane, total polycyclic aromatic hydrocarbons (PAHs), and total polychlorinated biphenyls (PCBs) to address toxicity and benthic community degradation impairments in sediment at the mouths of Paleta, Chollas, and Switzer Creeks. The Regional Board identifies the District as one of the responsible parties for discharges to Switzer and Chollas Creek and assigns Waste Load Allocations (WLAs) to the District for toxic pollutants at both creek mouths.

The District generally agrees with the approach for watershed modeling analysis used by the Regional Board in these TMDLs. However, the model is not capable of defining areas with overlying authorities (e.g. easements, leases, or industrial permits). Thus, hydrologic and pollutant loading modeling assumptions used to calculate WLAs may not necessarily reflect what is actually occurring in a particular area, such as areas with full capture treatment of stormwater.

The San Diego Unified Port District was established in 1962 by the state of California to effectively develop the harbors and port facilities for multiple purpose use for the benefit of the people. Through the Port Act, the District was provided the authority to manage the lands that overlay the city boundaries of the Cities of Chula Vista, Coronado, Imperial Beach, National City and San Diego. However, during the course of establishing the District, several parcels and/or utilities remained under the authority of the respective underlying city through records granted by the District to the respective cities. These documents enabled the cities to maintain ownership of such areas, and further, indemnified the District for claims or damages arising from their use. These instances have been documented in historic records showing as easements, dedicated streets, and other deeded rights. As such, it can be the case that some of the streets and stormdrains shown to be within the District jurisdictional boundary are actually owned, operated, and maintained by

another agency. To assist the Regional Board in better understanding how this correlates with the proposed TMDLs, the District is performing a more detailed analysis of the District's jurisdictional authority within the boundary of District tidelands, and reserves the right to provide further information to the Regional Board at a future date.

The comments that follow are based upon the District's review of the Draft Technical Report. Attachment A provides a tabular summary of the District's comments and a recommendation pertaining to each comment. The top seven key assertions are further detailed in this letter. Based on supporting information provided, the District respectfully requests the Regional Board consider the comments herein:

- 1. The District's discharges to Chollas Creek are "negligible", or are already being addressed as part of another named party's responsibilities, and thus the District should be removed as a responsible MS4 Phase I party for Chollas Creek.**

The Regional Board named the District as a responsible party for point sources of pollutants to Chollas Creek as a NPDES Phase I Municipal Separate Storm Sewer System (MS4) Permit holder (Section 5.2.1.1). The watershed model used to calculate WLAs assumed that all land within the District's parcels are 1) ongoing point sources of discharges, and 2) that all of the land within the tidelands boundary is under the District's authority. As discussed above, the District is currently performing a thorough analysis of easements, leasehold boundaries, and other factors to ascertain its jurisdictional authority over discharges in the area surrounding the Chollas Creek mouth.

Chollas Creek discharges to San Diego Bay at the southern boundary of a parcel under long term lease to General Dynamics NASSCO. As correctly stated in the Draft Technical Report, NASSCO's leasehold is regulated by an individual NPDES industrial permit. This Permit requires that any discharges from the facility meet stringent toxicity standards. As a result, the facility has elected to install a self-contained retention/treatment system that captures and treats all stormwater discharges, making it a zero-discharge facility. In addition, NASSCO implements and maintains Best Management Practices (BMPs) as required by their individual NPDES industrial permit. The Regional Board names NASSCO as a primary source of toxic pollutants to the mouth of Chollas Creek in Section 5.4.

The Regional Board also considered NASSCO a responsible party for sediment remediation of Chollas Creek mouth sediment in Section 9.3 and requires NASSCO to monitor, assess, and report PCB concentrations in fish tissue at the mouth areas of Paleta, Chollas and/or Switzer Creeks (Section 10.3.2.5). Furthermore, an additional area identified in the Draft Technical Report is the employee's parking lot, which also is part of the NASSCO leasehold. The Draft Technical Report states that storm water runoff from NASSCO's employee parking lot is "negligible" (Section 8.1.1).

The District believes that the historic record analysis will show that the entirety of the MS4 portions within the District's jurisdictional boundary either 1) are within the NASSCO leasehold or 2) are under the authority of the City of San Diego (dedicated streets and stormdrains). As such, the District recommends that the District be removed as an MS4 Phase I discharger to Chollas Creek and that the District's WLA be more appropriately provided to NASSCO which is already one of the named parties to this TMDL.

- 2. The District should be identified in TMDL requirements for Switzer Creek as an Industrial Permit holder.** The District does not believe it should be named as a Phase I MS4 Permit holder in Switzer Creek and requests to classify the District's listing as an Industrial Permittee for the Tenth Avenue Marine Terminal (TAMT).

Clarification of the District's listing in Switzer Creek is necessary in order to accurately identify the District's potential obligations and WLAs from TAMT. Several discrepancies in the District's listing were found in the Draft Technical Report. For example, the Regional Board identifies TAMT as a primary source of PAHs to the mouth of Switzer Creek (Section 5.5.6, Table 5-6), although TAMT is not designated as either an Industrial Permittee or MS4 discharger in Table 5-6. However, the Regional Board later identifies the "Port of San Diego" as a Phase I MS4 responsible party for point source discharges into Switzer Creek (Section 9.3) based on the results of the watershed model. Furthermore, the Regional Board assigned WLAs to the District for Switzer Creek based on its contributions as a "Municipal Discharger" (Section 8.1.1).

The Regional Board identified discharges from TAMT as a primary source of pollutants into the Switzer Creek mouth. TAMT is regulated by a General Industrial NPDES permit issued to the District and the District has implemented monitoring and BMP strategies to address discharges from the facility as required under the permit. The District is also performing special studies to further assess stormwater discharges from TAMT.

The District requests a revision of the TMDL to more accurately assign WLAs with consideration of the District's role as an Industrial Permit holder at Switzer Creek, thus continuing to regulate TAMT and the implementation of this plan through the General Industrial Permit. Furthermore, the District requests the Regional Board include language in the TMDL that allows consideration of information from special studies and/or assessments of drainage and jurisdictional authority in the area to comply with the TMDLs, as described in Comment #5 below.

- 3. The Draft Technical Report does not acknowledge the successful completion of Cleanup and Abatement Order 95-21 (CAO) for the Campbell Shipyard site as it relates to any potential overlap with the TMDL project area, nor does it**

**acknowledge the ongoing monitoring of the site under the corresponding Monitoring and Reporting Program developed under Order No R9-2004-0295.**

Per CAO 95-21 and the corresponding Order No. R9-2004-0295, the District completed an engineered cap over contaminated sediments, of which the pollutants included PAHs, PCBs and various metals. With the exception of chlordanes, the pollutants are similar to those for the TMDL. This effort required the District to 1) dredge contaminated materials from the areas and 2) construct an engineered cap over the site. The engineered cap was completed in February 2008, and regular monitoring is ongoing to ensure and document the overall integrity of the cap over time.

The Draft Technical Report accurately identifies the development of the cap and acknowledges that the Campbell Shipyard is not considered to be an ongoing source. However, it does not indicate what impact the cap may have had on remediating the Switzer Creek Project Area. The Draft Technical Report identifies the impaired Switzer Creek Project Area to be 5.5 acres at the mouth of the creek, although there do not appear to be any GPS coordinates within the draft TMDL document that clearly outline this 5.5-acre boundary. GPS coordinates are available for the engineered cap, and after comparing the TMDL photographs delineating the Switzer Creek Project Area boundary with the engineered cap, it is highly likely that the southernmost portion of the capping effort overlies the TMDL-defined Switzer Creek Project area. If so, then a portion of the site may have already been successfully remediated. The District intends to do its due diligence to determine whether the cap implemented in response to CAO 95-21 overlays the Switzer Creek Project Area prior to the proposed the TMDL Hearing on June 12, 2013. The District will be requesting the Switzer Creek Project Area GPS coordinates from the Regional Board and would like to work with Regional Board staff in advance of the June hearing to ascertain whether or not the projects overlay each other.

Furthermore, it is extremely important to point out that any sediment remediation in response to the TMDL must take into consideration the cap on the north side of Switzer Creek for two reasons. First, the District has already allocated considerable resources to remediate a portion of the contaminated sediments along this site, and second, because the northern boundary of the site utilized capping as its remediation strategy, any further remediation in the form of dredging must not jeopardize the integrity of the engineered cap.

Based on this information, the District requests that the Draft Technical Report include: 1) GPS coordinates to clearly outline the Switzer Creek Project Area; 2) provide an updated Figure 2-5 on page 17 to provide a current representation of the TMDL project area footprint and surrounding land area to reflect changes within the tideland areas in the creek mouth; and 3) include language (pending the outcome of the GPS coordinate review) that acknowledges efforts that the District

has already completed in the sediment remediation and count those CAO 95-21 efforts toward any future cleanup obligations that are proportioned to the Parties.

4. **TMDLs should not include cleanup of contaminated sediments in the receiving water.** Because the sites involve largely historic contamination, the TMDL could potentially overlook a significant group of responsible parties who should be involved in efforts to remediate the impairment. The District recommends that the Regional Board consider a two-part remediation approach as detailed below for sites impacted by both legacy contaminants and ongoing sources.

TMDLs should be solely for the purpose of controlling ongoing pollution sources. A TMDL's primary objective is to limit the ongoing loading of various constituents into an impaired waterway. Apart from being primarily forward looking in its approach, TMDLs will likely not be as effective in addressing the current environmental conditions at the creek mouths. In particular, TMDLs focus on parties whose current operations are in some fashion contributing to contaminant loading. For this reason, TMDLs are not as effective in imposing liability on parties whose past operations contributed to historic and current impairment.

As noted, TMDLs may not hold accountable all of the parties that largely created the condition. Any sediment remediation effort should be separate from the TMDLs and not a part of TMDL implementation. Because sediment remediation may include parties that are not a part of this TMDL, **compliance with the TMDLs should not be dependent on the status or ultimate success of the sediment remediation.** Moreover, it is not appropriate to expect the TMDL parties to develop and implementation plan for which other parties may also be responsible.

5. **The Regional Board should include language in the TMDL to provide flexibility for the District to perform monitoring or special studies and remove the District from the monitoring requirements of Phase I MS4s.** As described above, the District's boundary is unique in that nearly all of the tidelands area is below the tidal prism and as such, cannot be accurately accounted for in the upstream watershed monitoring efforts. Furthermore, as discussed earlier, much of the District's input to these TMDL locations is currently regulated under industrial permits.

The District is requesting that the Draft Technical Report include language that 1) acknowledges that the District's boundary is below the tidal prism, 2) indicates the relatively small proportion of land associated with District tidelands, and 3) provides the flexibility for the District to develop its own monitoring programs and/or load reduction plans as an alternative to the required MS4 Phase I requirements.

For example, a proposed special study by the District to analyze pollutant concentrations from the District's jurisdiction to the creek mouths could be completed and submitted to the Regional Board for timely review. As a result of the special study, monitoring requirements in the TMDLs could be modified to require the District to implement appropriate monitoring activities and BMP strategies for TAMT and remove the District's obligations for upstream Phase I monitoring requirements.

This approach supports the adaptive management process outlined in the Draft Technical Report, by enabling the District to allocate its resources to areas within its control thus providing the most water quality benefit. Additionally, it will further support Regional Board policies recently adopted or in development, such as the Regional Monitoring Framework and the San Diego Bay Strategy. Language in the TMDL should support such possibilities, continuing to hold the District accountable for future discharges from its jurisdiction (below the tidal prism) but not requiring monitoring or assessment of upstream watershed sources

- 6. The Regional Board's evaluation of PCB limits in fish tissue in the TMDL should not include specific species or protocol, such as the use of *Macoma nasuta*.** The District has concerns that physiological differences between *Macoma nasuta* and fish consumed by humans may make the clam a poor indicator of potential human health impact. No studies are currently available that demonstrate a direct relationship between *Macoma nasuta* and fish tissue testing. Please see Attachment A for specific references and further details on this issue.

The District recommends that the Regional Board modify the Draft Technical Report language so that it does not specify a particular species or protocol for evaluating numeric PCBs limits. Stating such specificity at this early stage for monitoring that would occur six or more years after TMDL approval would preclude the ability to consider new testing protocols which may be more scientifically defensible. Moreover, stating the testing method in the TMDLs mandates the use of *Macoma nasuta* as a test species even if other organisms or methods prove more appropriate at the time of the study.

For example, the Regional Board should take into account the development and implementation of Phase II of the Sediment Quality Objectives for human health, which are currently being developed by the State Water Quality Control Board and will be released well before post-remediation sediment sampling and testing is required by the TMDLs. Therefore, the Regional Board should provide flexible language in the TMDL to direct the parties to use the most relevant species and scientific testing methods.

- 7. Chlordane should not be listed as a toxic pollutant in the TMDLs.** Recent studies have confirmed that chlordane is not the cause of toxicity in sediments, including those at the mouth of Switzer Creek. Therefore, the District strongly recommends that the Regional Board remove Chlordane as a contaminant of

concern in the TMDLs for Paleta, Chollas, and Switzer Creeks. Please refer to Comment for specific references and further details on this issue.

The District lauds the Regional Board's efforts in the development of the toxic sediment TMDLs and use of regional water quality and sediment data to inform calculations of pollutant loads. It is now evident that on-going inputs of toxic pollutants from watershed sources to the creek mouths have diminished over time. This positive conclusion is a testament to the Regional Board's dedication to addressing Beneficial Uses of San Diego Bay.

Finally, the District appreciates the Regional Board's engagement in recent conversations to answer initial questions about these TMDLs, and values the opportunity to comment on the Draft Technical Report. Please contact Stephanie Bauer, Associate Environmental Specialist, at (619) 400-4719 if you require additional information or clarification of our comments in this letter or in Attachment A.

Sincerely,



Randa Coniglio  
Executive Vice President, Operations  
San Diego Unified Port District

**Attachment A. Summary of District Comments**

**Tentative Resolution No. R9-2013-0003 Amending *The Water Quality Control Plan For the San Diego Basin (9)* to Incorporate Total Maximum Daily Loads for Toxic Pollutants in Sediment at the Mouths of Paleta, Chollas, and Switzer Creeks in San Diego Bay**

**April 8, 2013**

Comment No.	Draft Technical Report Reference	Topic	District Comments	District Recommendations
1	General Comment p. 57, 62, 91, 116	<b>The District's Role in Chollas Creek</b>	The District does not believe it should be named in the TMDL for Chollas Creek. The District was allotted a WLA for Chollas Creek based upon a watershed model. The model assigned WLAs to the District for Chollas Creek assuming all land within the area assessed for WLA District's is under its jurisdictional authority and are on-going point sources of discharge. The model did not account for areas where there is an overlay of jurisdictional authority, easements or right of ways, or uses or activities that may actually be occurring in significantly alter the Port's responsibilities at the creek mouth. As a result, the District is currently doing its due diligence to ascertain its jurisdictional authority in Chollas Creek. NASSCO has its own NPDES Industrial Permit, having a self-contained retention/treatment system that captures all stormwater discharge from their facility. NASSCO also maintains BMPs as required by their individual NPDES permit. The TMDL a parking lot leased to NASSCO for its employees as a potential pollutant source. However, the Draft Technical Report states that storm water runoff from NASSCO's employee parking lot is considered "negligible" (p. 91) and as a result did not receive any allocations. The District believes that the historic record analysis will show that the entirety of the MS4 portions within the District's jurisdictional boundary either 1) are within the NASSCO leasehold or under the authority of the City of San Diego (dedicated streets and stormdrains). As such, the District recommends that the District be removed as an MS4 Phase I discharger to Chollas Creek and that the District's WLA be more appropriately provided to NASSCO which is already one of the named parties to this TMDL.	<b>The Regional Board should remove the District as a responsible party for Chollas Creek.</b>
2	p. 37, 91, 101, 110	<b>The District's Role in Switzer Creek</b>	The District should be identified in TMDL requirements for Switzer Creek as an Industrial Permit holder. There appears to be discrepancies in the TMDL as to how what the District is classified for Switzer Creek, either as a general industrial permittee or a Phase I MS4 discharger. The TMDL acknowledges that the TAMD is regulated under the general industrial permit but the District is also identified as a responsible Phase I MS4 discharger into Switzer Creek on pages 91 and 101. The District believes an overwhelming percentage of the District's discharge is from industrial uses and has limited MS4. Therefore, it should be identified as an NPDES General Industrial Permit holder for Switzer Creek in the TMDL as discharge to the Creek from District property. The District believes it should be identified in the TMDL as an Industrial NPDES Permit holder in Switzer Creek and any WLAs should be placed into the industrial permit. The TMDL identifies the Tenth Avenue Marine Terminal (TAMT) as a primary source of the pollutants in Switzer Creek. TAMT is managed by the District and is regulated under the General Industrial NPDES permit. The District samples stormwater runoff and reports all results in its industrial permit annual report, and requires tenants to maintain SWPPPs and implement Best Management Practices (BMPs) in compliance with the permit. As with Chollas Creek, the model assigned WLAs to the District for Switzer Creek assuming all land within the area assessed for WLA District's is under its jurisdictional authority and are on-going point sources of discharge. The model did not account for areas where there is an overlay of jurisdictional authority, easements or right of ways, or uses or activities that may actually be occurring in the creek mouth. Therefore, the District is currently doing its due diligence to ascertain its jurisdictional authority in Switzer Creek and performing additional assessments of discharge under its authority.	<b>The Regional Board should identify the District as an Industrial Permit holder and remove the District as a Phase I MS4 Permit holder in Switzer Creek.</b>
3	General Comment	<b>Cleanup and Abatement Order 95-21 (CAO) for the Campbell Shipyard site</b>	Per CAO 95-21 and the corresponding Order No R9-2004-0295, the District completed an engineered cap over contaminated sediments, of which the pollutants included PAHs, PCBs and various metals. With the exception of chlordane, the pollutants are similar to those for the TMDL. This effort required the District to 1) dredge contaminated materials from the areas and 2) construct an engineered cap over the site. The engineered cap was completed in February 2008, and regular monitoring is ongoing to ensure and document the overall integrity of the cap over time. The Draft Technical Report accurately identifies the development of the cap and acknowledges that the Campbell Shipyard is not considered to be an ongoing source. However, it does not indicate what impact the cap may have had on remediating the Switzer Creek Project Area. The Draft Technical Report identifies the impaired Switzer Creek Project Area to be 5.5 acres at the mouth of the creek, although there do not appear to be any GPS coordinates within the draft TMDL document that clearly outline this 5.5-acre boundary. GPS coordinates are available for the engineered cap, and after comparing the TMDL photographs delineating the Switzer Creek Project Area boundary with the engineered cap, it is highly likely that the southernmost portion of the capping effort overlies the TMDL-defined Switzer Creek Project area. If so, then a portion of the site may have already been successfully remediated. The District intends to do its due diligence to determine whether the cap implemented in response to CAO 95-21 overlays the Switzer Creek Project Area prior to the proposed the TMDL Hearing on June 12, 2013. The District will be requesting the Switzer Creek Project Area GPS coordinates from the Regional Board and would like to work with Regional Board staff in advance of the June hearing to ascertain whether or not the projects overlay each other. Furthermore, it is extremely important to point out that any sediment remediation in response to the TMDL must take into consideration the cap on the north side of Switzer Creek for two reasons. First, the District has already allocated considerable resources to remediate a portion of the contaminated sediments along this site, and second, because the northern boundary of the site utilized capping as its remediation strategy, any further remediation in the form of dredging must not jeopardize the integrity of the engineered cap. Based on this information, the District requests that 1) the Draft Technical Report include GPS coordinates to clearly outline the Switzer Creek Project Area; 2) provides an updated Figure 2-5 on page 17 to provide a current representation of the TMDL project area footprint and surrounding land area to reflect changes within the tideland areas in the creek mouth; and 3) language be added to the Draft Technical Report (pending the outcome of the GPS coordinate review) that acknowledges efforts that the District has already completed in the sediment remediation and count those CAO 95-21 efforts toward any future cleanup obligations that are proportioned to the Parties.	<b>The Regional Board should acknowledge the successful completion of Cleanup and Abatement Order 95-21 (CAO) for the Campbell Shipyard site and the ongoing monitoring at the site.</b>

**Attachment A. Summary of District Comments**

Tentative Resolution No. R9-2013-0003 Amending *The Water Quality Control Plan For the San Diego Basin (9)* to Incorporate Total Maximum Daily Loads for Toxic Pollutants in Sediment at the Mouths of Paleta, Chollas, and Switzer Creeks in San Diego Bay

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Comment No.	Draft Technical Report Reference	Topic	District Comments	District Recommendations
4	General Comment	<b>Appropriateness of Remediation Requirements in the TMDL</b>	<p>A sediment remediation effort should be separate from the TMDLs and not a part of TMDL implementation. The District recommends an approach that is more flexible, yet is still protective of the environment. As such, the District recommends that the Regional Board consider a two-part remediation approach, as detailed below, for this and other sites impacted by both legacy contaminants and ongoing sources.</p> <p>TMDLs should be solely for the purpose of controlling ongoing pollution sources. A TMDL's primary objective is to limit the ongoing loading of various constituents into an impaired waterway. Apart from being primarily forward looking in its approach, TMDLs will likely not be as effective in addressing the current environmental conditions at the creek mouths. In particular, TMDLs focus on parties whose current operations are in some fashion contributing to contaminant loading. For this reason, TMDLs are not as effective in imposing liability on parties whose past operations contributed to historic and current impairment. Compliance with the TMDLs should also not be dependent on the status or ultimate success of the sediment remediation. The mouths of Chollas, Paleta, and Switzer Creeks are largely impaired due to historic contamination, particularly for chlordane and PCBs. These pollutants require little to no source reduction. An alternative mechanism such as a Cleanup and Abatement Order seems more appropriate for remediation of chlordane and PCBs given that their liability rests with those that had historic discharges of these contaminants.</p>	<b>The Regional Board should remove sediment remediation from the requirements of the TMDL.</b>
5	General Comment	<b>Additional Special Studies</b>	<p>The District recommends the TMDL language include flexibility to allow monitoring requirements and responsible parties to be reevaluated and adapted based on results and new information. The District requests the Regional Board accept special studies to: 1) further develop a more accurate representation of the District's jurisdictional authority; 2) Identify discharge points within the District's jurisdictional authority on the two creek mouths, and 3) perform water quality monitoring to further characterize discharge points from areas within the District's jurisdictional authority.</p>	<b>The Regional Board should include flexible language throughout the TMDL that would allow compliance requirements to adapt to new information as it is provided by additional special studies.</b>
6	General Comment p. 32, 116, 119	<b>Use of <i>Macoma</i> as a Surrogate for Evaluating Numeric PCBs Limits in Fish Tissue</b>	<p>The Regional Board should not specify a particular species or protocol for evaluating numeric PCBs limits. Stating such specificity at this stage for monitoring that will occur at a much later date would preclude the development of protocols to which all responsible parties may agree. Moreover, stating a testing method in the TMDLs mandates the use of <i>Macoma nasuta</i> as a test species even if other organisms or methods prove more appropriate at the time of the study. Therefore, the Regional Board should provide flexible language in the TMDL to direct the parties to use the most relevant species and scientific testing methods. The TMDL is proposing to address the protection of human health in two ways: 1) comparison of chlordane, benzo(a)pyrene, and total PCBs levels in ambient water samples to human health protection CTR numeric criteria, and 2) collecting post-remediation creek mouth sediments and conducting 28-day-long, ex-situ laboratory tests using the clam <i>Macoma</i>. Following the 28-day-long exposure period, the clam tissues would be analyzed for PCB levels. The TMDL's numeric target for the protection of human health would use OEHHA's Fish Contaminant Goal of 3.6 µg/kg (wet weight) for total PCBs in fish tissue. Essentially, the TMDL would use the tissue of the <i>Macoma</i> clam as a surrogate for fish tissues. While <i>Macoma</i> is a common test species for conducting bioaccumulation analyses for dredged material investigations and ecological risk assessments studies, its utility as an endpoint for the protection of human health is questionable. <i>Macoma</i> is an attractive species for conducting sediment contaminant investigations because it is a sessile, sediment-dwelling, particle-feeding bivalve; however, these same attributes make it a questionable choice as a surrogate for fish. Clams also metabolize and partition compounds differently than fish, and have a greater water content and lower lipid concentration than fish. In addition, OEHHA's fish contaminant goals for total PCBs is based upon analysis of only the edible portion (i.e. skin-off or skin-on fillets) of the fish, whereas <i>Macoma</i> analyses would be conducted on the whole body of the clam. Furthermore, page 41 of OEHHA's Fish Contaminant Goals and Advisory Tissue Levels for Contaminants in Sport Fish report (June 2008) states, "Any agency using FCGs provided in this report to establish fish tissue-based criteria for their own purposes must accept the assumptions described herein." Therefore, did the Regional Board seek an opinion from OEHHA (or any other agency) regarding the acceptability of using the clam <i>Macoma</i> in laboratory exposures as a surrogate for wild-caught fish and comparing the results of these laboratory bioaccumulation tests to the total PCB FCG of 3.6 µg/kg (wet weight) derived for fish by OEHHA?</p> <p>Finally, Phase II of the SQOs focused on human health is currently under development, but is expected to be finalized well before post-remediation sediment sampling and testing is required by the TMDL. To be consistent with final protocols in Phase II of the SQOs and the San Diego Bay Strategy, the TMDL should not yet specify a particular species to assess human health impacts from eating contaminated fish. The difficulty with relating tissue PCB concentrations of fish at the site is well recognized due to the low site fidelity and movement of fish caught for consumption to other areas in the bay. It should be noted, however, that there are standard ASTM protocols for assessment of bioaccumulative substances in fish that would provide a much better measure than a benthic dwelling clam (ASTM E1022 - 94[2013] Standard Guide for Conducting Bioconcentration Tests with Fishes and Saltwater Bivalve Mollusks).</p>	<b>The Regional Board should remove <i>Macoma</i> as a specific test species for special studies related to Human Health Beneficial Uses.</b>

**Attachment A. Summary of District Comments**

**Tentative Resolution No. R9-2013-0003 Amending *The Water Quality Control Plan For the San Diego Basin (9)* to Incorporate Total Maximum Daily Loads for Toxic Pollutants in Sediment at the Mouths of Paleta, Chollas, and Switzer Creeks in San Diego Bay**

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Comment No.	Draft Technical Report Reference	Topic	District Comments	District Recommendations
7	p. 22	Chlordane	<p>The listing of chlordane and its inclusion in the TMDL is based on studies that incorrectly identify chlordane as a toxicant. More recent studies have occurred since the original studies used in the development of the TMDL. These follow-up studies by Anderson et al., (2010) and Phillips and Anderson (2011) confirm <b>that chlordane is not a potential cause for toxicity</b> in sediments, including those at the mouth of Switzer Creek. Furthermore, several of these researchers were the same ones involved in the original studies referenced in the TMDL. The studies describe that spiked concentrations of chlordane thousands of times greater than that currently found in the sediments were non-toxic to the amphipod <i>Eohaustorius estuarius</i>. Subsequently, the Phase II/ III TIEs identified pyrethroid insecticides as the cause for toxicity in sediments in the mouth of Switzer Creek. Studies prior to development of the TMDL initially suggested that chlordane might be responsible for toxicity (SWRCB, 2003 and Greenstein et al., 2005). These initial conclusions were based on Phase I toxicant characterization TIEs that identified non-polar organic compounds as the cause for toxicity combined with a simple correlation between toxicity and chlordane concentrations. Correlation, as noted by the authors of the studies, cannot implicate and identify causes of toxicity since many chemicals and physical parameters will co-correlate with toxicity simply based on relationships to pollutant inputs and physical parameters such as grain size. In addition, only a small fraction of chemicals are routinely measured, so it is impossible to use single correlations to identify a cause of toxicity in any matrix, particularly in sediments which have very complex properties. Based on these updated findings, the inclusion of chlordane in the TMDL should be reevaluated and the pollutant ultimately removed from the TMDL.</p> <p>Please see the following references for more information:                      Phillips, B., and B. Anderson, 2011. <i>RMP Sediment Toxicity Study 2009-2010 - Determining the Causes of Sediment Toxicity in the San Francisco Estuary. Regional Monitoring Program for the San Francisco Estuary</i>. December 22, 2011. 51pp.                      Anderson, B.S., B.M. Phillips, J.W. Hunt, S.L. Clark, J.P. Voorhees, R.S. Tjeerdema, J. Casteline, M. Stewart, D. Crane, and A. Mekebri. 2010. <i>Evaluation of methods to determine causes of sediment toxicity in San Diego Bay, California, USA</i>. <i>Ecotoxicology and Environmental Safety</i>: 73:534-540.</p>	<p><b>The Regional Board should remove Chlordane as a toxic pollutant in the TMDL.</b></p>
8	a). Section 8.1.1, p. 91  b). Section 5.2.2.1, pgs 48-50, Tables 5.3 (pg 57), 5.4 (pg 65), and 5.6 (pg 72)  c). General Comment	Aerial Deposition	<p>a). Page 91 of the TMDL Technical Report states that "...an allocation was not given to bay sources because the bay source would be impractical to manage and concentrations within the open bay are much lower than that at the TMDL sites." Likewise, aerial deposition is also impractical to manage, but chlordane is included in WLAs. Based on this, please clarify the reasoning for inclusion of air deposition of chlordane in the LAs and how this affects the ability to TMDL goals given that this is an uncontrollable source. Furthermore, can site-specific special studies be performed to refine aerial deposition estimates?</p> <p>b). Although prior studies have found PAHs and PCBs to have a net flux from the bay waters to the air, this relationship does not apply to the much larger land area within the watersheds. Therefore, it seems that LAs for aerial deposition of PAHs and PCBs is appropriate and missing in the TMDL. Please explain why the net flux onto land for these constituents is not considered as an uncontrollable non-point source LA.</p> <p>c). From previous draft comments, Caltrans stated "aerial deposition should be considered as a non-controllable, non-point source in the TMDL." The Regional Board response indicates that deposition directly to the water is accounted in LAs (background levels), and it specifically points out that aerial deposition is an uncontrollable non-point source. The District supports the Regional Board's assertion that aerial deposition is a non-point source. In addition, if aerial deposition was to be quantified, it should subsequently not be part of a MS4 responsibility. The District believes the Air Resources Board needs to be involved as a responsible stakeholder. The District is concerned that a letter alone will not be sufficient to bring the Air Resources Board to the table regarding water quality impacts from the atmosphere. Please describe further anticipated roles and responsibilities of the Air Resources Board and methods envisioned to foster their participation.</p>	<p><b>The Regional Board should include the Air Resources Board as a responsible stakeholder in the TMDL to help address aerial deposition as an uncontrollable, non-point source. The Regional Board should clarify how responsible parties should address aerial deposition of chlordane, PCBs, and PAHs as an uncontrollable, non-point source that is included in WLAs and LAs.</b></p>
9	General Comment	Remediation Definition	<p>The term "remediation" should be clarified as it pertains to this TMDL. A definition of remediation should be defined in the glossary, and any references to "dredging" should be replaced with "remediation" throughout the document.</p>	<p><b>The Regional Board should define "remediation" and replace "dredging" throughout the TMDL with this term.</b></p>
10	General Comment Section 10.6, p. 120	Consistency with other Regional Board Requirements	<p>The TMDL should be coordinated with other ongoing regulatory efforts by the Regional Board. For example, the District recommends that the Regional Board include flexible language in the TMDL requirements that would allow consistency with the San Diego Bay Strategy, which is currently under development. More flexible language in the TMDL would also allow responsible parties' monitoring efforts to be consistent with requirements set forth in the Framework for Monitoring and Assessment, which was approved by the Regional Board in December 2012. Furthermore, the District agrees with the statement on page 120 that mentions we should avoid duplication of other TMDL implementation plans and regulatory actions within watersheds where there are TMDLs.</p>	<p><b>The Regional Board should include flexible language throughout the TMDL that would allow consistency with other ongoing regulatory efforts.</b></p>
11	General Comment p. 21, 63	Maintenance Dredging Activities	<p>The TMDL should take in account periodic maintenance dredging for navigational purposes at Chollas and Switzer Creeks. For example, maintenance dredging of Chollas and Switzer Creeks occurs every 10 to 15 years on average, so a portion of the mouth of Chollas Creek will likely be dredged this year. Therefore, it is important to understand how the dredging footprint may correlate with the proposed TMDL sediment remediation footprint for each creek and how the timing of maintenance dredging correlates with the TMDL timeline. The dredging footprints will affect how named parties may be able to implement remediation within the sediment remediation footprint as the sediment will periodically be removed. Finally, there may also be impacts on water quality monitoring activities and results due to dredging activities.</p>	<p><b>The Regional Board should describe how maintenance dredging activities within the creek mouths will affect sediment remediation requirements in the TMDL.</b></p>
12	p. 21	Physical Disturbance Effects on Benthic Communities	<p>Physical disturbance such as maintenance dredging activities will temporarily affect benthic community conditions and should clearly be acknowledged in the TMDL. Therefore, TMDL monitoring requirements must take into consideration maintenance dredging activities and how they may influence the benthic community and monitoring results. There should be some flexibility or allowances in compliance requirements relating to the periodic maintenance dredging for Chollas and Switzer Creeks and anticipated impacts on TMDL monitoring activities and results. Furthermore, the areas in front of the mouths at both Chollas and Switzer Creek experience heavy boat traffic, which regularly causes physical disturbance to the sediments due to prop wash from boats. This factor should be highlighted further in the TMDL and will need careful consideration with regard to assessment of benthic community condition and ultimate SQO scores.</p>	<p><b>The Regional Board should describe how physical disturbance from maintenance dredging activities and boat traffic will affect monitoring requirements and, ultimately, TMDL compliance.</b></p>

## Attachment A. Summary of District Comments

Tentative Resolution No. R9-2013-0003 Amending *The Water Quality Control Plan For the San Diego Basin (9)* to Incorporate Total Maximum Daily Loads for Toxic Pollutants in Sediment at the Mouths of Paleta, Chollas, and Switzer Creeks in San Diego Bay

April 8, 2013

Comment No.	Draft Technical Report Reference	Topic	District Comments	District Recommendations
13	Section 4.1, p. 27 Table 4-1	<b>Numeric Targets for PAHs</b>	The numeric target in the TMDL is for PPPAHs (priority pollutant PAHs). The WLA, however, uses Total PAHs because the equations used for watershed monitoring related to sediment loading identifies Total PAHs, not PPPAHs. This discrepancy is of concern because Total PAHs include 20-30 pollutants, whereas there are only 16 PPPAHs listed in the TMDL. Please describe the implications of having a PAH target that differs from that used in the models.	The Regional Board should clarify how the numeric target requirements for PPPAHs in the TMDL differ from the Total PAHs used in the model, and implications this discrepancy has for responsible parties.
14	Section 8.1, p. 88, paragraph 2	<b>Pollutant Concentrations</b>	Page 88 states that "...the assumption was made that the pollutant concentrations from San Diego Bay cannot be reduced and that sediment toxic pollutant concentrations will be reduced to target values." Please clarify this assumption. Is it referring to contaminants in the water column? Does this include storm water?	The Regional Board should clarify what pollutant concentrations from San Diego Bay "cannot be reduced."
15	p. 90, 91, 105, 117	<b>Special Studies - Sources and Pathways vs. Intertidal Segment</b>	The TMDL requires that the Port contribute to a special studies to investigate contributing sources, pathways and loads and sediment concentrations of chlordane, PAHs, and PCBs. On page 117, the first special study is referred to as "intertidal segment studies." It is unclear how the Regional Board will use this monitoring information once collected (i.e., to refine load-based requirements of the TMDL, or in developing CAOs).	The Regional Board should clarify how it will use the required special studies throughout the TMDL compliance process.
16	Section 8.2, p. 98 Table 8-6	<b>Minimum Acceptable Detection Limits</b>	The water column concentration targets for chlordane, benzo(a)pyrene, and total PCBs are set equal to human health targets in the CTR. These concentrations, however, are much lower than the detection levels that laboratories can currently achieve. Therefore, it is important for the Regional Board to include "minimum acceptable detection limits" for analysis of these compounds in waters, sediments, and tissues. Similar language has been used in Table II-4 of the Ocean Plan, in MS4 permits, and the CA SWAMP protocol. This is to ensure that responsible parties receiving "Non-detect" levels from laboratory analysis are in compliance with the TMDL requirements. The web address for the latest minimum reporting limit tables following SWAMP protocols is: <a href="http://www.waterboards.ca.gov/water_issues/programs/swamp/docs/qapp/qappr082209.pdf">http://www.waterboards.ca.gov/water_issues/programs/swamp/docs/qapp/qappr082209.pdf</a> . These tables are located within the SWAMP Quality Assurance Program Plan and include applicable limits for water, sediments, and tissue.	The Regional Board should include "minimum acceptable detection limits" for analysis of chlordane, benzo(a)pyrene, and total PCBs so that responsible parties receiving "Non-detects" from laboratories are in compliance with CTR numeric targets in the TMDL.
17	Section 10.6, p.12-122.	<b>Monitoring Requirements</b>	The Regional Board should add language in the Monitoring Requirements that allows for flexibility in long-term management. For example, if the District continues to receive "Non-detects" during stormwater and receiving water analytical monitoring, then that requirement should be lifted and the District should be in compliance with the TMDL.	The Regional Board should provide flexible language in the TMDL that allows for monitoring requirements to be lifted if the District continues to received "Non-detects."
18	Section 10.2, p. 106	<b>Re-evaluation of TMDLs</b>	The District supports a reopener clause being incorporated into the TMDL. This approach allows for an adaptive management approach, providing a mechanism to facilitate adaptive monitoring to enable consistency with requirements of future bay-wide strategies and other Regional Board regulations.	The Regional Board should provide a reopener clause in the TMDL to allow for requirements to be reevaluated and altered through an adaptive management approach.
19	Section 10.2, p. 104, Table 10-1	<b>Milestone Schedule</b>	This is an aggressive milestone schedule. The required load reductions for the Los Peñasquitos Sediment TMDL responsible parties include a 20% reduction at year 5, 40% reduction at year 10, 80% at 15 years, and 100% at 20 years. The District requests a revision to the schedule to provide more time to implement programs and strategies to adequately address sources of the pollutants. The timing of the sediment remediation and watershed load reductions also does not appear to be in sync, as remediation is to be completed and monitoring to be initiated prior to the second milestone while there are still potentially ongoing sources from the MS4.	The Regional Board should revise the Milestone Schedule to be consistent among requirements and provide sediment remediation at a later time.
20	p. 116. #3	<b>NASSCO Responsibility</b>	The Regional Board stated "the primary sources of toxic pollutants to the mouth of Chollas Creek include the Chollas Creek watershed, Naval Base San Diego, NASSCO, and atmospheric deposition" and identified NASSCO as a primary source of toxic pollutants at mouth of Chollas Creek due to historical operations only. Therefore, NASSCO should be named for remediation requirements, not the District. In addition, Page 116 states that NASSCO must implement monitoring, assessment, and reporting requirements for the creek mouth areas of Switzer, Paleta, and Chollas. Please clarify NASSCO's role in in the TMDL for the three creeks.	The Regional Board should clarify NASSCO's role and identify it as a responsible party for Chollas Creek only.
21	Section 4.2, p. 32	<b>References Cited</b>	References (USEPA 1997; OEHA 2008; USEPA 1998a, and ASTM 2001) are not included in the main document – the references are present in Appendix I, however.	The Regional Board should include specific references in the main content of the Draft Technical Report.
22	Section 5.2, p. 36	<b>Text Edit</b>	The Regional Board states "wasteloads of chlordane and PCBs reflect residues accumulated from historical uses, applications, or spills that contaminated soils within the watersheds and act as ongoing sources. In spite of these compounds being banned in the US, residual concentrations of these legacy pollutants continue to remain elevated in bay sediments..." The District recommends adding the following language to the statement: "...and sediments in the watersheds, creeks, and storm drains."	The Regional Board should address this technical edit.
23	p. 72 section 5.5.6	<b>Text Edit</b>	Revise language to state, "industrial uses in watershed area <b>AND</b> along the waterfront."	The Regional Board should address this technical edit.