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The Port of LONG BEACH
The Green Port

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VIA UNITED PARCEL SERVICE

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Re: Comment Letter – Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters Toxic Pollutants TMDL

Dear Ms. Townsend:

The Port of Long Beach (Port) appreciates the opportunity to continue to work with the State Water Resources Control Board (State Board), the Regional Water Quality Control Board (Regional Board), the United States Environmental Protection Agency, Region 9 (EPA) and other stakeholders on the development of the draft Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters Toxic Pollutants Total Maximum Daily Load (TMDL). The Port has been an active stakeholder in this process since 2006, contributing significant resources to the development of this TMDL.

The Port is committed to the protection and improvement of the Long Beach Harbor (Harbor) waters as demonstrated through our participation in this TMDL development process, as well as the numerous water and sediment programs the Port has implemented over the last two decades. Our innovative storm water program, developed with Regional Board Staff in the early 1990s, has made us a worldwide leader in the successful management of storm water at port facilities. As an original signatory member of the Southern California Contaminated Sediment Task force (CSTF), we have worked towards the sustainable management of not only our own sediments, but have provided opportunities for the safe sequestration and disposal of contaminated sediments from around the Los Angeles Region. Historically we have demonstrated this by accepting regional material in our Slip 2 engineered fill, for which we received an EPA award in 2001. We have continued to demonstrate our commitment to this effort by recently agreeing to accept up to 1.3 million cubic yards of contaminated sediments from throughout the region to be safely and beneficially reused in our Middle Harbor landfill. Further, working with the Port of Los Angeles, the Regional Board, EPA, and other stakeholders, we adopted and are now implementing the Water Resource Action Plan (WRAP). This voluntary, proactive action taken by both ports put in motion many of

the programs, best management practices (BMPs), and other measures that will be required to meet this TMDL years prior to its being adopted. In fact, the WRAP was created in anticipation of this TMDL and upcoming National Pollutant Discharge Elimination System (NPDES) permits. As a result of these programs, we can proudly say that the largest port complex in the nation, and sixth largest in the world, is home to a thriving and healthy marine community. We remain firmly committed to continuing to do our part to ensure all beneficial uses of the Harbor are achieved.

As stated goals of the WRAP, the Port is committed to (1) supporting the attainment of full beneficial uses of harbor waters and sediments by addressing the impact of past, present, and future port operations, and (2) preventing port operations from degrading existing water and sediment quality within the port.

In order for the Port to meet these goals, however, it is critical that the TMDL be scientifically sound; technically, logistically, and economically feasible; and executed in a manner that ensures environmentally harmful and unwarranted costly actions are not required.

The Port believes that a scientifically sound, technically and economically feasible TMDL, when implemented properly, could be an effective tool for all of the regional contributors to collectively achieve improvement of the water bodies of the Dominguez Channel and the San Pedro Bay. To date, the Port, in cooperation with the Port of Los Angeles, have spent over $3,000,000 in connection with this TMDL, including collecting sediment and water data, developing a robust hydrodynamic model, and providing countless data, historical information, technical support, and other information requested by the Board and EPA staff, and these efforts are continuing. This summer, along with the Port of Los Angeles, we will be conducting the most extensive fish studies ever undertaken in the Harbor waters, as well as building upon an EPA-led study on the Superfund site at the Palos Verdes Shelf (PV Shelf) to track fish movements within the Harbor and between the ports and the PV Shelf. These two studies will be critical in defining the parameters that affect the fish tissue aspects of the TMDL, as discussed in more detail below. The Port has been and will continue to be an active and committed partner in this effort.

In accordance with Title 23, section 3779(f) of the California Code of Regulations, each of the comments presented in this letter was previously raised to the Regional Board for its consideration prior to the adoption of the TMDL on May 5, 2011, via Regional Board Resolution No. R11-008, with the exception of the due process comments contained in Section C below. The due process comments were not raised before the Regional Board because the issues arose during the course of the May 5, 2011 hearing and had not yet occurred as of the date the Port's other comments were submitted. In addition, the Port was denied the ability to present its due process objections at the May 5, 2011 hearing. The

Port's specific responses to the Regional Board Comments are listed in the table attached to this comment letter.

The Port respectfully submits the following comments on the TMDL documents, in order to ensure that the final TMDL provides the tools to meet all the beneficial uses of the water body, does not cause more environmental harm than benefit, and recognizes that the pollution it deals with is a regional problem that calls for a regional solution.

Our fundamental concerns with the TMDL are briefly summarized below. More detailed comments follow within this letter and the attached documents.

The proposed TMDL is not scientifically sound as is required by state and federal regulations. It employs measurements, targets and methods that are overly conservative, not achievable, and are ironically poised to cause more environmental damage than good. The TMDL needs modification in terms of measuring and achieving compliance. The TMDL is structurally and conceptually flawed, to such an extent that it is unachievable, will not result in the restoration or protection of beneficial uses, and cannot be fixed through special studies, better data, or further model development.

The TMDL's use of Effect Range Low (ERL) to derive targets for sediments and fish tissue is not scientifically justifiable. The TMDL's interim sediment targets are accordingly deeply flawed and must be revised. If enforced, the interim targets could require such extensive dredging so as to result in the destruction of marine habitats that currently support healthy marine life.

The TMDL is not based on current or accurate site specific data. Targets involving fish tissue are not environmentally sound. For example, the use of Office of Environmental Health Hazard Assessment (OEHHA) fish contaminant goals (FCGs) is unwarranted because FCGs are designed solely as a starting point for developing appropriate targets. Finally, the TMDL fails to establish necessary linkages between: sediment numeric targets and pollutant sources; existing sediment bed sources and sediment bed concentrations; water column concentrations and sediment concentrations; and fish tissue targets and sediment numeric targets.

The TMDL's California Environmental Quality Act (CEQA) document, the Substitute Environmental Document (SED), does not adequately analyze the TMDL's impacts and thus does not inform the decision makers and the public of the actual impacts of the TMDL. The SED fails to provide adequate findings of significance, fails to provide an adequate cumulative impact analysis, and fails to adequately discuss and address project alternatives. Accordingly, the SED must be revised and recirculated.

The TMDL is also legally insufficient in a number of respects. As an initial matter, the Port was denied its full due process rights at the Regional Board hearing. The TMDL may not comply with the Administrative Procedure Act because it lacks authority, clarity, and is duplicative. Because it imposes a new program and a higher level of service without state financing, various aspects of the TMDL amount to an unconstitutional unfunded mandate. The Port also notes that the TMDL may not be the appropriate regulatory mechanism to address legacy pollution in the Harbor. Furthermore, the TMDL does not adequately address the fact that certain of its components may have already been funded by an existing consent decree. The Regional Board also failed to fully consider the financial impact of the TMDL pursuant to Water Code section 13241. The TMDL also imposes numerous conditions that do not constitute total maximum daily loads as required by law. For this TMDL to be scientifically and legally sound and technically and economically feasible, the Port recommends that the State Board remand the TMDL to the Regional Board to adopt a TMDL that:

- Establishes a scientifically valid TMDL for sediment protection (source control) based on sediment endpoints (targets) derived through Sediment Quality Objectives (SQO) Phase 1 process for direct effects and PV Shelf cleanup goals as interim targets for bio-cumulative pollutants until site specific studies and/or the implementation of SQO Phase 2 can be established through a regional assessment that is inclusive of all sources of loading.

- Does not include fish tissue targets until a regional assessment that is inclusive of all coastal waters for which fish tissue are impaired (Santa Monica to Seal Beach) is conducted to ensure all potential sources of loading to fish tissue, including the PV Shelf, are evaluated.

- Includes an SED that is in full compliance with CEQA, ensuring that a full and complete environmental analysis of project impacts and alternatives was conducted, providing the decision makers, other regulatory agencies, and the public with the required understanding of whether the environmental benefits of the proposed TMDL outweigh the significant and unavoidable environmental impacts.

An outline of the comments is as follows:

A. The TMDL Is Not Scientifically Sound

All TMDLs must be based on sound science and must be established in accordance with state and federal regulations, which provide for informed decision making and opportunities for meaningful public input. (40 C.F.R. 130.7(c).) Numeric water quality targets for a TMDL, if deemed necessary, must be identified and an adequate basis for those targets as an interpretation of water quality standards must be specifically documented in the submittal. (40 C.F.R. 130.7(c)(1).) Furthermore, the TMDL document must describe the relationship between numeric target(s) and identified pollutant sources, and estimate total assimilative capacity (loading capacity) of the water body for the pollutant of concern. (40 C.F.R. 130.7(d) and 40 C.F.R. 130.2 (i) and (f).)

The model results used to develop the Waste Load Allocations (WLAs) and Load Allocations (LAs) lack scientific credibility. As documented in the Port's original technical comments, the two Peer Reviews, and other stakeholders' technical comments, the model results, and therefore the WLAs and LAs derived from it, lack scientific credibility and should not be relied upon for this TMDL. Dr. Keller, the second peer reviewer selected by the Board to review this TMDL, states **"[i]nsofar as I lack confidence in the results of the EFDC model used to generate the proposed implementation plan and allocations, I must conclude that the TMDL report does not provide sufficient scientific basis for the proposed plan and allocations."** (Response to Peer Review Comments, Response 2.22 at p. 64.)

The Port has been involved throughout the development of the TMDL and has questioned the basis and methodologies used to establish existing loads, total maximum daily loads, WLAs, and LAs during stakeholder meetings, workshops, and formal comments. Consistent with our commitment to this TMDL, the Port thoroughly reviewed the Draft TMDL and related documents when they were released for public review in mid-December 2010. The Port submitted extensive comments on the draft documents to the Regional Board on February 22, 2011. Unfortunately, our significant comments have not been adequately addressed in the final TMDL documentation. The Regional Board's written response to our technical comments, many of which were echoed by peer reviewers Dr. Brezonik and Dr. Keller, has either: (1) not addressed the issue raised, or (2) dismissed the comment outright. Similarly, the peer reviews conducted by Dr. Brezonik and Dr. Keller, which are highly critical of the scientific validity of this TMDL, were largely dismissed in the Regional Board's Response to Comments.

In one particularly telling example, the Port commented that "for certain pollutants such as DDT, air deposition loading to the water surface alone exceeds the loading capacities…The allocation assigned to bed sediment is -125 g/yr, indicating that even if all other inputs are completely eliminated, TMDLs would continue to be exceeded and dredging or other

remedial measures would be required on an ongoing basis." (Regional Board Responses to All Comments "Comment Responses" at p. 107.) The Regional Board's response was: "...Staff acknowledges the DDT TMDL is smaller than the air deposition load for certain water bodies; however, staff does not find that this will require constant remediation of bed sediments. Rather a more extensive DDT flux study within these waters will help clarify these results and perhaps provide more accurate characterization." (*Id.*) This response does not clarify how zero or negative allocations in the sediments should be interpreted regarding short-term and long-term compliance with the TMDL.

In fact, the comment response from the Regional Board states, "[t]he negative values indicate that the contaminated bed sediment load must be reduced." (Comment Response at p. 107.) The fact that the negative allocations are measured on an annual basis inescapably indicates continual remediation. Source control efforts and hotspot and targeted dredging will not ever, regardless of how effective they are, reach a "zero" allocation in the bed sediment if ongoing air deposition exceeds the target. The uncertainty in the calculations of WLAs and LAs that have led to the creation of the negative allocations conclusively indicates a TMDL that utterly fails to set achievable source control and remediation targets. Nevertheless, as the Regional Board does time and time again in their comment responses regarding the TMDL, it incorrectly states that the deficiency can be corrected in the future. (Comment Response at p. 107.)

The Port does not expect a perfect TMDL that does not require future revision and correction, but the law mandates that there is a point where a TMDL is so lacking in a proper scientific basis that it cannot be implemented into the Water Quality Control Plan: Los Angeles Region Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties (Basin Plan). (40 C.F.R. 130.7(c).) As the Port demonstrates in this letter and the attached materials, this TMDL lacks a proper scientific basis in several regards. Furthermore, the Port believes that our original concerns as to the validity of the methodologies and data used to establish the TMDL, as well as the concerns of Dr. Brezonik and Dr. Keller, remain largely unanswered. These legitimate concerns must be adequately addressed before the Basin Plan is amended.

The Port is concerned that the TMDL process is being driven by the deadline imposed by the terms of the consent decree between Heal the Bay et al. and EPA. (*Heal the Bay v. Jackson*, No. 98-cv-4825 (Stipulation to Modify Consent Decree and Order Thereon at p. 3 (Sept. 1, 2010).) While efforts have been underway on this TMDL for some time, sufficient analysis has not yet been completed to fully understand the complex system affected by this regulatory effort. It is the Port's opinion that the rush to finalize the TMDL to meet the consent decree deadline has resulted in the identification of targets that are based on unsound science, unclear expectations for achieving compliance, and an inadequate analysis of the potential effects of implementing this TMDL. These failures have ultimately compromised

the development process and led to the adoption of a deficient TMDL that promises to do more harm than good.

1. The TMDL Employs Measurements, Targets, And Methods That Are Overly Conservative, Not Achievable, And Potentially Harmful

The targets in the final TMDL adopted by the Regional Board are inappropriate, ignore the assimilative capacity of the system, and are overly conservative. The targets are irrelevant to the area, ignoring site-specific conditions. The targets also assume overly simplistic and unrealistic relationships between all contaminants and all living organisms. In addition, the targets are overly conservative and significantly underestimate the current water and sediment quality within the Harbor. Data over the last 10 years has demonstrated improvement in Harbor conditions compared to older data over the past 20 years, such that the latest data indicates conditions in the Harbor are better than they were 20 years ago.

Further, the Port is greatly concerned that the TMDL provides targets, LAs and WLAs that, if enforced, could cause greater environmental harm than benefit. If the TMDL is enforced as is, the targets will require construction of massive, unwarranted storm water treatment systems, and the removal of sediments from every inch of the sea floor which currently supports a thriving marine community. The Port contends that greater environmental damage will result from attempts to meet the numeric targets in the TMDL than any impacts from current conditions.

a. The Board Should Use SQOs And Not ERLs As The Targets

The final TMDL adopted by the Regional Board does not address the problem associated with the use of Effects Range Low (ERL) to establish water quality targets for sediment. Despite many commenters' well-placed criticism of this unnecessarily strict standard, the Regional Board continues to insist that the use of ERL as the source of targets is justified and advisable. (Basin Plan Amendment at p. 4 ("The marine sediment quality guidelines of Effect Range Low (ERL) . . . were used to establish the numeric targets for marine sediment for the greater Los Angeles and Long Beach Harbor waters").) The new basin plan amendment, on the other hand, does state that "[ERL-derived targets] are *not intended* to be used as 'clean up standards' for navigational, capital or maintenance dredging or capping activities; rather they are long-term sediment concentrations that should be attained after reduction of external loads, targeted actions addressing internal reservoirs of contaminants, and environmental decay of contaminants in sediment." (Basin Plan Amendment at p.5, emphasis added.) It also says "the categories designed in the SQO Part 1 as Unimpacted and Likely Unimpacted by the interpretation and integration of multiple lines of evidence shall be

considered as the protective narrative objective for sediment toxicity and benthic community effects." (*Id.*)

Accordingly, the Regional Board seems to state that ERL-derived numeric objectives are both a standard and not a standard. It remains entirely unclear whether, how, and when the sediment quality measurements derived from ERLs will apply, and whether or not they will constitute enforceable standards. Replacing the words "not necessarily" with "not intended" does not correct this problem. (Change Sheet at p.1.) Despite the Regional Board's apparent "intention," ERL remains the basis for the determination of numerical targets in the TMDL and, as even the Regional Board admits, how much dredging will have to be conducted remains a huge question mark. (Comment Responses at p. 108 ("The range of cost estimates to achieve the Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters TMDL is large. This is due in large part to the current uncertainty regarding the necessary extent of remediation of contaminated sediments (e.g. dredge volume) to meet the TMDL requirements").)

The establishment of the appropriate target is, perhaps, the most critical element of a TMDL. The wrong selection method and target will dramatically alter the outcome of the TMDL. The TMDL's use of ERL as sediment targets results in an incorrect indicator of sediment health and grossly underestimates the actual sediment quality of the Harbor. As stated by Long and Morgan (1990), "ERLs were not intended for use in regulatory decisions or any other similar applications." Instead, as specified by Long et al. (1995) and NOAA (2010), ERL and Effects Range Median (ERM) were designed to be informal, screening-level tools that could be used to evaluate areas that might need further investigation. (Comment Table 2, Items 25 and 26, and Attachment 3.)

SQOs and not ERLs should be utilized in the final TMDL. The SQO standard is set forth in the Water Quality Control Plan For Enclosed Bays and Estuaries - Part 1 Sediment Quality (SQO Part 1) adopted by the State Board on August 25, 2009. SQOs are based on three lines of evidence, specifically: sediment chemistry, sediment toxicity, and benthic community condition. (Final Staff Report at p. 37.) According to SQO Part 1, SQO consists of "scientifically-defensible sediment quality objectives for bays and estuaries, which can be consistently applied statewide to assess sediment quality, regulate waste discharges that can impact sediment quality, and provide the basis for appropriate remediation activities." (State Board Resolution No. 2008-0070 at ¶ 14.)

SQO Part 1 has been adopted pursuant to Water Code section 13393, which requires the State Board to develop SQOs for toxic pollutants for enclosed bays and estuaries. This statutory requirement was upheld by the Superior Court of Sacramento County in August 2001, which led to the creation and adoption of SQO Part 1 by the State Board. (State Board Resolution No. 2008-0070 114.) The State Board developed SQOs pursuant to Water Code sections

13240-13247 which require, among other factors: (1) consideration of past, present, and probable future beneficial uses of estuarine and bay waters that can be impacted by toxic pollutants in sediments; (2) environmental characteristics of waters; (3) water quality conditions that can reasonably be achieved through the control of all factors affecting sediment quality; and (4) economic considerations.

As they are based on statutory requirements that have been upheld in court, application of SQOs in this TMDL is mandatory, and adoption of another method would be in conflict with this legal requirement. Beyond this, as the aforementioned factors will indicate in comparison to ERLs, SQOs are the superior alternative in this case. SQOs were developed precisely because the legislature recognized the need to develop a better means of regulating sediment impairment in bays and estuaries. (Water Code § 13393.5.) ERLs are preliminary screening-level values that do not consider all of the confounding and contributing factors associated with understanding the conditions at a particular site. Therefore, ERLs are not adequate to be the basis for the protection of California's bays. The SQOs, on the other hand, take into account site-specific conditions and are designed to adequately consider all the factors pertinent to the protection of the bays and estuaries.

ERLs do not provide a threshold for chemical concentrations in sediment above which the probability of impairment shows an abrupt increase. There is no basis for assuming that multiple concentrations above an ERL will increase the probability of toxicity or alterations to the benthic community. ERLs are merely the 10th percentile on an ordered list of concentrations in sediment found in scientific literature that co-occur with some biological effects. It is not a threshold below which sediment impairment is impossible and above which it is likely. Rather, ERLs are a concentration at the extreme low end of a continuum roughly relating bulk chemistry with toxicity.

Categorizing sediments on the basis of whether their chemical concentrations include one or more ERL exceedances leads to unfounded conclusions and misperceptions of the actual probability that sediments are toxic. ERLs have insufficient predictive ability for setting remedial goals because of the significant frequency of false positives and false negatives (exceedances of the ERL with no biological effects, and concentrations below the ERL in the presence of effects, respectively). (Long et al., 1995; Long et al., 1998; NOAA, 2010; Field et al., 1997; O'Connor et al., 1998; Shine et al., 2003; and Vidal and Bay, 2005.) This is illustrated with data from the Los Angeles and Long Beach Harbor itself. Sediment chemistry data collected within the Harbor indicate numerous ERM and ERL exceedances with little corresponding toxicity or benthic effects. (See comparison of ERL exceedance map and benthic health map in Attachment 1.) (Comment Table 2, Items 25 to 27, and Attachment 3.)

In the TMDL, the Board relies on the 303(d) listing policy, which states that the ERM values, not ERL values as an acceptable method of determining sediment impairment when toxicity is present. However, the State Board has made it clear that this particular aspect of the 303(d) listing policy is all but eliminated in the wake of the development of SQOs. SQO Part 1 states that "the section 303(d) listing policy was adopted prior to the development of SQOs and without the benefit of the scientific evidence supporting their development. The State Water Board recognizes the need to ensure that the listing policy and this plan are consistent." (State Board Resolution No. 2008-0070 it 10.) The State Board now uses the SQOs, which provide an integrated assessment of concentration of selected chemicals, measured toxicity, and alterations in benthic organism assemblages for the evaluation of sediments quality. Therefore, the Board should abandon ERLs in favor of SQOs in the final TMDL.

An examination of the comparison between the estimated volumes in cubic yards of dredged materials in TMDL Table 7-3 indicates the extreme difference between the amount of sediment that would have to be dredged in the Harbor using the ERLs as thresholds and an SQO approach, respectively. (Staff Report at p. 125.) Adoption of the sediment targets would, in fact, result in the dredging of an additional 25,000,000 cubic yards of sediments that currently support healthy marine communities in the harbor, whereas SQO would require dredging certain "hot spots" that are far more likely to result in an improved marine habitat. (See Attachment 9.)

Language added to the Basin Plan Amendment states that, for the sediment management plan, "Prioritized sites shall include known hot spots, including but not limited to Consolidated Slip and Fish Harbor. For these prioritized sites, the sediment management plan shall include concrete actions and milestones. . . to remediate these priority areas and shall demonstrate that actions to address prioritized hot spots will be initiated and completed as early as possible during the 20-year TMDL implementation period." (Basin Plan Amendment at p.31.) Though this language suggests added concern about hot spots, it does not specify that these will be the only places where dredging will occur. Depending on the effect of the ERL-derived limits, it is still entirely possible that the entire harbor will have to be dredged. Just because hot spots are to be considered a "priority" does not mean other locations will not be required to be dredged in the future, especially of hot spot-only dredging does not achieve the TMDL's unnecessarily strict, potentially destructive numeric targets. (See Comment Responses at p. 33.)

Furthermore, under Water Code section 13241(c), the Regional Board is required to consider the "[w]ater quality conditions that could reasonably be achieved through the coordinated control of all factors *which affect water quality in the area.*" SQOs are a drastically superior way of meeting this statutory requirement. In fact, compared to ERLs that do not consider area-specific conditions at all, SQOs are the best scientifically sound currently available way

to meet this requirement. Given these facts, the use of ERLs rather than SQOs simply cannot be justified in this instance.

The TMDL should be revised to reflect SQO Phase 1 as the sediment target (inclusive of chemistry, benthic community effects, and toxicity) as is required by California law. If a numeric chemical number is needed to complete elements of the TMDL (i.e., LAs and WLAs), time should be allowed in the implementation schedule to derive the values through the SQO Phase 1 approach, based upon an understanding of site-specific conditions, and not set at the ERL level.

b. In Lieu Of Using SQOs, The TMDL Should, In Accordance With State Policy, Use ERM And Not ERL

The State Board has identified Effect Range Median (ERM), not ERL, as the appropriate measure to list and delist water segments within the State. While ERL corresponds with 10th percentile values indicative of the concentration below which adverse effects rarely occur, ERM corresponds with the 50th percentile values indicative of the concentration above which adverse effects are more likely to occur.

The 303(d) listing guidelines, the *Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List* (SWRCB 2004a) presents the policy for listing and delisting water segments, as well as guidance with which to implement these policies. Although the guidance provides the user several numeric guidelines to evaluate marine, estuarine or freshwater sediments, with respect to the use of ERLs versus ERMs, the guidance is clear:

> "Only those sediment guidelines that are predictive of sediment toxicity shall be used (i.e., those guidelines that have been shown in published studies to be predictive of sediment toxicity in 50 percent or more of the samples analyzed)." (SWRCB 2004a at p.20.)

The description above, "*...predictive of sediment toxicity in 50 percent or more of the samples...*" correlates directly with the derivation of the ERM values as described by Long et al. (1995) and not ERLs. The Regional Board offered no clear justification for using ERL rather than ERM. (See Comment Response at pp. 30-36.) Accordingly, the State Board should, in the alternative to using SQO as outlined above, require the Regional Board to use ERM rather than ERL in the TMDL.

c. The Interim Sediment Targets Are Flawed And Must Be Revised

Like the final targets, the interim sediment targets in the TMDL are based on chemistry alone. In response to this fact, the Regional Board has stated that the interim sediment targets are based on the current sediment values. (Comment Responses at pp. 35-36.) This is of little comfort to the Port as it is tantamount to the Regional Board justifying its faulty interim targets by citing to the TMDL's faulty sediment values. The Regional Board additionally pointed out that the Basin Plan Amendment has been modified to allow for compliance with interim sediment allocations by compliance with SQOs. (Comment Responses at p. 36.)

While the Port believes this latter modification is a step in the right direction, it does not fix the problems with the interim sediment targets themselves. The interim sediment targets still: (1) were not calculated correctly, (2) include mathematical errors, (3) do not reflect current conditions of the harbor sediments as intended, and (4) artificially split listed water bodies. Rather than ensuring no further degradation, the listed targets would result in exceedances of the TMDL on the day of adoption. If enforced, the interim targets could require dredging and result in the destruction of marine habitats that currently support healthy marine life. Adding a separate, more reasonable basis for demonstrating compliance does not fix the real problem with the interim targets. Accordingly, the interim sediment targets should not be included in the TMDL. While the Port firmly believes that interim sediment targets should not be used, corrected interim numbers (using the methodology prescribed in the TMDL), are included in Attachment 8.

d. Methodologies Used To Create The TMDL Are Flawed And Not Based On Accurate Or Current Data

A TMDL may only be established when the pollutant at issue is "suitable for calculation," which occurs when enough is known about the pollutant within the actual water-body environment such that a load allocation can be established at a level "*necessary* to result in attainment of all applicable water quality standards." (33 USC § 1313(d)(1)(C); 40 C.F.R. § 130.7(c)(1) (emphasis added); see also, 43 Fed. Reg. 60662.) By utilizing ERL to formulate its targets, the Regional Board has shown it lacks a sufficient basis to calculate load allocations *necessary* to achieve water quality objectives in the Harbor. Not knowing enough to create appropriate targets, the Regional Board has decided the best tactic is to err on the side of extreme caution by using an unjustifiably strict standard, a fact which is ironically poised to cause more environmental damage than good by potentially mandating a massive, highly destructive dredging operation in the Harbor.

The Regional Board did not address the Port's comment that the TMDL does not take into account the fact that the latest data indicates that conditions in the Harbor are better now than they were 20 years ago and that the TMDL does not factor in the actual conditions present in

the Harbor. The Board's responses to these comments only state that: (1) ERL is not meant to estimate conditions in the Harbor, but to present an ideal goal for levels of sediment contaminants; (2) the TMDL allows for site-specific studies that can be conducted to develop new targets; (3) though there have been improvements, the Harbor still does not meet water quality standards allegedly determined under the SQO; and, most disturbingly, that (4) ERLs are a valid method for attaining compliance with water quality objectives. (Comment Responses at p. 31-33.) These responses do not address the Port's concerns. The Regional Board's attempt to explain that it does not have to consider site-specific conditions in devising the TMDL's enforceable targets is noteworthy as it is not only contrary to law, it is affirmatively bad policy. (33 USC § 1313(d)(1)(C); 40 C.F.R. § 130.7(d) and 40 C.F.R. §§ 130.2 (c)(1), (i), (f).) Furthermore, the possibility of fixing the flawed TMDL in the future is no justification for adopting it now, especially given the fact that this same faulty methodology has been used to calculate interim targets.

EPA's *Guidance for Developing TMDL's in California* clearly establishes that the Regional Board's apparent lack of concern about addressing the actual conditions in and sources of contamination in the Harbor is improper and states:

> "An understanding of pollutant loading sources and the amounts and timing of pollutant discharges is vital to the development of effective TMDLs. The TMDL document must provide estimates of the amounts of pollutants entering the receiving water of concern or, in some cases, the amount of pollutant that is bioavailable based on historic loadings stored in the aquatic environment. These pollutant sources or causes of the problem need to be documented based on studies, literature reviews or other sources of information. Because the source analysis provides the key basis for determining the levels of pollutant reductions needed to meet water quality standards, and the allowable assimilative capacity, TMDL, wasteload allocations, and load allocations, quantified source analyses are required."

(EPA Region 9, *Guidance for Developing TMDLs in California* (Jan 7, 2000) (2000 EPA Guidance) at 4.)

The TMDL fails to accurately summarize the current condition of the Harbor, and instead is developed from inaccurate and outdated information. (Comment Table 2, Items 1 through 24.) This is particularly true because the Harbor has shown vast improvement in water quality in recent years. (Attachments 1 and 2.) Moreover, in developing the TMDL, insufficient weight was given to the most recent and reliable data. (*Id.*) When evaluated using the methodologies set out in SQO Part 1, the current sediment condition is healthy with some isolated areas requiring more study. (See SQO map in Attachment 1A.)

As fully detailed in Comment Tables 1 to 3 and the attachments, every stage in the development and calculations of this TMDL is fundamentally flawed and must be corrected,

prior to issuing the final Basin Plan Amendment. Specifically, Attachment 7 describes how the TMDL does not provide an adequate, comprehensive, science-based assessment of the source of contaminants to the Harbor impairments, does not provide adequate linkage analyses to link pollutant sources to the Harbor, and does not consider assimilative capacity. Furthermore, Attachment 7 explains how it is not possible for the methodology presented in the TMDL to differentiate which specific watershed sources are contributing to Harbor sediments, and therefore, is it not possible to develop allocations. Finally, Attachment 7 demonstrates that the modeling efforts are not sufficient to establish linkages between specific sources and specific impairments. The TMDL also misinterprets the model results, leading to an arbitrary selection of allocations. This is confirmed by the resulting negative allocations for sediments in the Harbor, which contradict the definition of an allocation (i.e., the portion of the pollutant an entity is allowed to discharge).

A TMDL must describe the relationship between numeric targets and identified pollutant sources, and estimate total assimilative capacity (loading capacity) of the water body for the pollutant of concern. (40 C.F.R. 130.7(d) and 40 C.F.R. 130.2 (i) and (f).) The TMDL fails completely in this regard as the linkage analyses were not sufficient to support LAs made for air deposition, which assumes that all of the contaminants from air deposition on the surface of each water body deposits in the sediment bed of the same water body. This assumption does not take into account the assimilative capacity of the water body. In addition, no site-specific linkage analysis was conducted to link fish tissue concentrations with the sediment contaminant concentrations that were used to determine the polychlorinated biphenyls (PCB) numeric target. Further, with other sources of PCBs and DDTs in the region, including the PV Shelf, there is evidence that the fish tissue impairments could be the result of sources outside of the harbor waters. In response, the Regional Board points out that they perceive the negative allocation as a zero allocation. (Comment Responses at 38.) This response, however, completely glosses over the methodological errors that led to the development of the negative allocation to begin with. Furthermore, the Regional Board suggests it chose ERL was chosen over a biota-sediment accumulation factor ("BASF") for determining DDT and PCB allocations because it is "more protective of wildlife." (Comment Responses at 38.) This, again, indicated strongly that the target was developed not as one "necessary" to attain water quality standards, it is rather a low-ball figure developed in light of the fact that the pollutants in the Harbor were not "suitable for calculation." (33 USC § 1313(d)(1)(C); 40 C.F.R. § 130.7(c)(1); see also, 43 Fed. Reg. 60662.)

Finally, the conclusions and data contained in the TMDL were not properly subjected to scientific peer review. For example, the sediment fish targets from San Francisco Bay were not peer reviewed for appropriateness for use in the Los Angeles and Long Beach Harbors. Additionally, the development of the linkage analyses and load allocations were not peer reviewed. Therefore, the Regional Board failed to comply with Health and Safety Code section 57004. The fact that the Functional Equivalent Document (FED) may have been peer

reviewed does not satisfy this requirement. (FED Appendix B at B-3.) No evidence is provided in the TMDL or related documents which indicates that the Board complied with Health and Safety Code section 57004 in drafting or adopting the TMDL.

e. Targets Regarding Fish Tissue Are Not Environmentally Sound And Require Significant Revision

The Regional Board has kept fish tissue targets based on the OEHHA guidance document in the Final Basin Plan Amendment, despite the well-placed comments of the Port and other commenters. (See Basin Plan Amendment at p. 5 and Comment Responses at p. 39.) The TMDL revisions have not altered the numerical standards that will be applied regarding fish tissue targets. (Compare Draft Basin Plan Amendment at p.5 with Basin Plan Amendment at p. 5.)

Nevertheless, it remains the case that the Fish Contaminant Goals (FCGs) used in the TMDL were not intended to be used as numeric targets. (OEHHA, Development of Fish Contaminant Goals and Advisory Tissue Levels for Common Contaminants in California Sport Fish: Chlordane, DDTs, Dieldrin, Methylmercury, PCBs, Selenium, and Toxaphene (OEHHA 2008).) In addition, the technical basis for applying these FCGs as the fish tissue numeric targets for DDTs and PCBs has not been established. Throughout the 2008 document, OEHHA indicates that FCGs were not intended to be used as screening values or numeric targets and that other agencies intending to use these numbers should either consult OEHHA for advice in their application or modify the tissue concentrations on a project and site-specific basis. (OEHHA 2008 and Attachment 5A.)

The TMDL provides no evidence that OEHHA was consulted for advice or that the tissue concentrations were modified to account for site-specific conditions. The TMDL incorrectly attempts to justify the use of the FCGs, without consultation or site-specific modifications, by stating "Fish tissue targets for DDT and PCBs are selected from 'Fish Contaminant Goals and Advisory Tissue Levels for Common Contaminants in California Sport Fish. . . ,' which are recently developed by OEHHA in June 2008 to assist other agencies to develop fish tissue-based criteria with a goal toward pollution mitigation or elimination and protect humans from consumption of contaminated fish or other aquatic organisms." (TMDL, p. 51.) This statement incorrectly implies that the purpose of the 2008 FCGs is to provide other agencies with fish-tissue based criteria to use for their programs. The full statement, however, on page 1 of the OEHHA documents states that:

> "Fish Contaminant Goals (FCGs) are estimates of contaminant levels in fish that pose no significant health risk to individuals consuming sport fish at a standard consumption rate of eight ounces per week (32 g/day), prior to cooking, over a lifetime and can provide a starting point for OEHHA to assist other agencies that wish

> to develop fish tissue-based criteria with a goal toward pollution mitigation or elimination." (OEHHA 2008, p. 1.)

The Regional Board's response to the Port's comments regarding the FCGs contends that the OEHHA document does not prevent it from using FCGs as screening values or numeric targets. (Comment Responses at p. 39.) This statement is inaccurate as the full quote above demonstrates that on page one, as throughout the OEHHA document, OEHHA is clear that the FCGs are provided as a starting point for further development—with the assistance of OEHHA—of site-specific criteria and should not be used as an end point, as they were applied in the TMDL. The Regional Board further tries to explain its actions by pointing out that FCGs have been used in other TMDLs in Southern California. (Comment Responses at pp.39-40.) Just because this mistake has been made in the past, however, does not support making it in this TMDL. The Regional Board should not be allowed to justify its present failure by pointing out it has engaged in identical failures in the past.

The TMDL sets generic, non site-specific sediment targets that bear no relationship to the fish tissue target in this TMDL for PCBs and DDT. As stated, EPA Region 9's *Guidance for Developing TMDLs in California* states that "[t]he TMDL document must describe the relationship between numeric target(s) and identified pollutant sources." (2000 EPA Guidance at p. 4.) However, no relationship between sediment bio-accumulative—i.e., PCBs and DDTs—concentrations and the fish tissue numeric target have been demonstrated.

Instead, the sediment target described to be in association with the fish tissue target for total PCBs in the TMDL was taken from a San Francisco Bay food web bioaccumulation model, which looked at linkages between tissue concentrations in San Francisco Bay organisms and associated sediment concentrations (Gobas and Arnot 2010.) The sediment target (provided in association with the fish tissue target) for total DDT is the low sediment threshold for DDT effects on human health, based on data collected from Newport Bay Harbor. (SFEI 2007.)

Thus, the sediment targets in the TMDL were established specifically for other sites which have different assemblages of organisms, food webs, circulation patterns, sources, and sediment and water column concentrations. They also bear no relationship to the selected fish tissue targets. The total PCB fish tissue target is based on OEHHA guidance and the total PCB sediment target is taken from a San Francisco Bay bioaccumulation study. Likewise, the total DDT target is based on an OEHHA guidance fish tissue value of 0.021 mg/kg (Table 3-8), while the total DDT sediment target is based on low tissue threshold level of 0.0098 mg/kg from a study in Newport Bay. Accordingly, the required link between the sediment and fish tissue targets is wholly absent from the TMDL.

Furthermore, there is no scientific link between ERLs, which were derived based on data related to direct toxicity to benthic organisms, and fish tissue concentration. This is improper

under 40 C.F.R. §§ 130.7(d) and 40 C.F.R. §§ 130.2 (i) and (f). The only justification given for use of ERLs as a target for addressing fish tissue is the following: "For DDT, chlordane, and dieldrin, the ERL value is lower and more protective than BSAF values. For PCBs, the BSAF value is lower and more protective that the ERL value" (Staff Report at p. 91; Comment Responses at p. 38.) This justification clearly implies an arbitrary selection of the lowest published value regardless of applicability.

For the bioaccumulatives (PCBs and DDTs, primarily), because the currently proposed TMDL uses non-site specific numerical targets for sediments to address fish tissue impairments, the TMDL overrides the SQO Part 1 approach, and all sediment remedial actions, associated environmental impacts, and costs will likely be driven by the sediment PCB and DDT targets of 3.2 ppb and 1.9 ppb respectively. As local data (e.g. fish movement, tissue concentrations) is not considered for fish tissue, and compliance is only determined by meeting a numerical target where a specific linkage to fish tissue impairments in the San Pedro Bay has not been established, this approach will most likely result in significant harm to areas within the Harbor waters currently exhibiting a healthy benthic community, without any clear indication whatsoever that fish tissue will be improved.

Finally, the linkage analyses conducted to establish sediment targets for fish tissue are not sufficient to demonstrate that sediment contaminant flux is the major nonpoint source of pesticides and PCBs to the greater harbor waters; the relative contributions between the watershed source and the re-suspension/redistribution of existing bed contaminants cannot be differentiated. More importantly, the linkage between sediment and fish is a key to setting a sediment concentration target to protect fish consumers. It is premature to determine the necessary reductions in sediment bioaccumulative compound concentrations prior to understanding what proportion of fish body burdens are derived from harbor sediments. (See Comment Table 2, Items 31, 32, and 47 to 50, and Attachment 5.) Given that this TMDL does not identify the current sources of PCBs in fish tissue, further study will be required to identify the sources and establish the proper linkages before a sediment target can be established.

Complying with the current sediment targets for fish tissue would require dredging every inch of the two harbors, resulting in an estimated 38 million cubic yards of dredged sediments, totaling over 2.6 million truck trips through nearby neighborhoods, significant air, noise, traffic and human health impacts, the destruction of marine habitat, and cost upwards of $9 billion dollars. The magnitude of this remediation would be 10 times greater than the largest sediment remediation ever conducted, and this does not even consider the remediation which would be required for eastern San Pedro Bay. That is why it is imperative that the full SQO process be incorporated into this TMDL, and the current, inappropriate targets be revised.

For the reasons summarized above and detailed in the documents submitted herewith, the Port is deeply concerned that the TMDL is wrong in its assessment of the current conditions of the Harbor and has improperly assigned targets, LAs, and WLAs that, if not addressed, will result in a TMDL that could potentially cause remedial actions to be taken that will cause greater environmental harm than benefit. Therefore, the Port supports changes that allow for the incorporation of Phase II SQOs once completed.

f. The TMDL Fails To Demonstrate Necessary Linkages

The TMDL must describe the relationship between numeric targets and identified pollutant sources, and estimate total assimilative loading capacity of the water body for the pollutant of concern. (2000 EPA Guidance at 4; 40 C.F.R. § 130.7(d); and 40 C.F.R. §§ 130.2 (i) and (f).) Based on the TMDL documentation, the following linkage analyses were not conducted to establish the required relationships between numeric targets, pollutant sources, and loading capacities. These linkages analyses should be conducted prior to setting TMDLs.

i. The linkage between sediment numeric targets and pollutant sources needs to be demonstrated.

ii. The linkage between existing sediment bed sources and sediment bed concentrations needs to be demonstrated.

iii. The linkage between water column concentrations (e.g., California Toxic Rule (CTR) and sediment concentrations (i.e., benthic impairment)) needs to be demonstrated.

iv. The site-specific linkage between fish tissue targets and sediment numeric targets needs to be demonstrated.

The Regional Board failed to address these problems in the final adopted TMDL. On Page 43 and 44 of the Regional Board's responses to all comments, the Regional Board defends its linkage analysis and makes the claim that language has been added to the staff report to address these concerns. (See Comment Responses at pp. 43-44 and Linkage Memorandum in Comment Package.) The added language, which can be found at pages 58-59 of the Final Staff Report, consists of nothing more than a few simple, non-site specific diagrams and the same justification for the linkage analysis as it was in the Draft Staff Report. (Staff Report at pp. 58-59.) These diagrams do not constitute an adequate demonstration of the above mentioned linkages, which must be established for the Harbor itself.

2. The TMDL Requires Modification In Terms Of Measuring And Achieving Compliance

a. The TMDL Should State That Sediment Targets Are Not Intended To Be Remedial Action Goals, Cleanup Levels, Or Levels To Which Individual Dredging Projects Will Be Held

The Port is very encouraged to see SQO Part 1 incorporated into the Draft Implementation and Sediment Monitoring Program. The Port believes that many of the concerns raised in our general and specific comments can be addressed through the establishment of a clear and comprehensive SQO-based Sediment Management Plan. However, the Port is very concerned that the TMDL does not adequately ensure that all required sediment management actions will be determined through this process and that specific cleanup actions or dredging cleanup goals will not be issued based on the sediment targets. The TMDL must clearly state that the numerical sediment targets are not remedial action goals, cleanup levels, or levels to which individual dredging projects will be held. Again, merely stating that such standards are "not intended" to constitute such enforceable standards is inadequate.

b. Compliance For NPDES Measured At The Point Of Discharge Is Inappropriate

Until appropriate linkages between contaminants and specific water body impairments are completed, compliance for NPDES permits measured at the point of discharge is inappropriate. Furthermore, CTR values are designed to establish ambient water quality criteria to be protective of aquatic ecosystems and human health. CTRs are designed to be compared against monitoring data in the water column, not monitoring data related to samples collected at the end-of-pipe. Therefore, achieving CTRs at end-of-pipe should not be used for the NPDES discharges. Further, since CTRs are related to human health and aquatic life exposures, they are not linked to protection of sediment quality or prevention of sediment impairments. As the data demonstrates, there are no water column CTR exceedances in the Harbor. Therefore, there is no evidence that establishes a link between achieving the TMDL water column targets for these sources and addressing the impairments.

The Regional Board's response is essentially that it has created the TMDL with the best data currently available and that "each water body-pollutant combination is required to be addressed through TMDL development." (Comment Responses at p. 46.) Yet again, the Regional Board's response is to restate the problem and then offer as a solution the possibility that the TMDL can be fixed in the future. Claiming to remedy the problem in the future offers no justification for adopting a wholly deficient TMDL now.

The Port requests that the language provided in the Recommended Rewrites be inserted into Section 7.5. If site-specific stressor and source identification studies determine that specific discharge points are impacting sediment quality, NPDES permits should be modified accordingly to control those particular sources for the identified stressors.

c. Fish Tissue Targets Should Not Be Included In The TMDL Until Site-Specific Linkages Have Been Established

The assessment of indirect impacts of sediment contamination via bioaccumulation is currently under development by the State Board and the Southern California Coastal Water Research Project (SCCWRP) as part of the State's Sediment Quality Plan — Part 2. Site-specific scientific information obtained through the application of this assessment tool will be appropriate for determining the relationship between concentrations of bioaccumulatives in sediments and local fish species. Until the SQO Part 2 assessment tool is adopted or a similar approach is applied, the extent to which sediment concentrations need to be reduced to comply with the TMDL is uncertain, and thus it is not possible to allocate the necessary load reductions for bed sediments.

For final WLAs, the SQO Part 2 assessment or similar approach will assist in the development of site-specific sediment levels necessary to achieve site-specific fish tissue targets. Following the site-specific linkage analysis, attainment of these bioaccumulative TMDLs may be achieved via two different means: (1) meet fish tissue targets for trophic level-4 (TL-4) species, or (2) demonstrate attainment through the SQO Part 2 evaluation or similar approach.

Therefore, interim WLAs for addressing fish tissue impairments, determined either as loads or water column concentrations, should not be established in the TMDL or used in setting permit levels until such time as the final SQO Part 2 methodology is available, and site-specific attainment conditions are established.

As stated above, instead of waiting to develop more appropriate targets using the SQO Part 2 methodology, the Regional Board continues to insist on including fish tissue targets based on the OEHHA guidance document, through changes to the Basin Plan Amendment regarding demonstrating compliance through SQO-based standards. (See Basin Plan Amendment at p. 5 and Comment Responses at p. 39.)

In response to the Port's comments regarding the use of more appropriate and advanced fish tissue targets through the use of SQO Part 2, the Regional Board states "See Response to Comment 20.3." (Comment Responses at p. 46.) This comment response, discussed above, amounts to the Regional Board stating that the OEHHA document does not prevent it from using FCGs as screening values or numeric targets. (Comment Responses at p. 39.) As stated above, this is an inaccurate argument given that the OEHHA document affirmatively states that FCGs are only meant to be a starting point toward the development of site-specific numeric targets. (2008 OEHHA at p. 1.)

d. The State Board Should Remand The TMDL To The Regional Board To Incorporate Palos Verdes Shelf Fish Tissue Numbers

The PV Shelf adjacent to the Harbor and the Consolidated Slip inside the Harbor are part of the "Montrose NPL Site." The Montrose NPL Site is a Superfund Site that was listed for drastic exceedances of PCBs and DDT coming from industrial operations in the City of Los Angeles. (*United States v. Montrose Chemical Corporation*, No. CV 90-03122 (C.D. Cal. 1999) (August 19, 1999 Amended Consent Decree at pp. 24-25).) Regarding fish tissue, the cleanup goals for the targets identified in the TMDL are 20 times more stringent than those for Montrose NPL site, which includes the PV Shelf. This outcome is not scientifically defensible given the fact that there is presently inadequate data as to (1) the movement patterns of fish between the PV Shelf and the Harbor; and (2) the origin of PCB and DDT in fish. Given the fact that the Montrose consent decree dealt specifically with these contaminants existing primarily in the PV Shelf and the Dominguez Channel, it stands to reason that the locus of exposure is in the PV Shelf and the Dominguez Channel and not the Harbor. Thus, it is entirely possible that a fish with tissues that have become contaminated by pollution from the Montrose Superfund Site could swim into the Harbor and cause a violation for the Port, despite the fact that the same fish would not violate the targets set by the Consent Decree for the PV Shelf. This is an absurd result.

Further, there is no rational scientific basis to conclude that meeting the TMDL sediment targets for fish tissues within San Pedro Bay would result meeting the TMDL fish tissue targets in the Harbor, given the other local sources of contamination. This discrepancy between the two targets is inappropriate given the proximity of these sites. There are grave environmental and economic ramifications associated with attempting to achieve these targets. The TMDL should be consistent with the targets provided for the PV Shelf.

3. The TMDL Is Structurally And Conceptually Flawed, To Such An Extent That It Is Unachievable, Will Not Result In The Restoration Or Protection Of Beneficial Uses, And Cannot Be Fixed Through Special Studies, Better Data, Or Further Model Development

The goal of this TMDL is to restore and protect beneficial uses through both sediment remediation of legacy contamination and pollutant load reduction/source control from ongoing pollution sources. While both sediment remediation and pollutant load reduction/source control approaches have been used in previous TMDLs, this has been accomplished through separate evaluations. This TMDL, unlike any other TMDLs to-date, makes the irreparable error of attempting to combine both sediment remediation and pollutant load reduction approaches into a single TMDL objective. This combined method results in a fundamentally flawed TMDL, as detailed below.

Typically, TMDLs are applied to the water column to determine acceptable loads to the water body. However, TMDL calculations have also been applied to in-place sediments through two possible methods depending upon the desired outcome of the TMDL: (1) protection of sediments through control of ongoing sources or (2) remediation of legacy contaminated sediments. Though TMDLs are not proper regulatory mechanisms for remediating legacy pollutants, water boards may have nonetheless done so in past TMDLs without legal challenge. For instance, the Machado Lake Pesticides and PCBs TMDL separates the source control and remediation approaches into two separate calculations.

In the sediment protection or source control approach, in-place sediments are identified as the receiving body, which receives pollutants from other sources (e.g. storm drain discharges). Then, the TMDL is set as the maximum amount of pollutants that the sediments can receive from all sources, while still meeting the water quality objectives. The allowable pollutant loads defined by TMDL to the sediments are then divided amongst all pollutant sources, identified as Load Allocations (LAs) and Waste Load Allocations (WLAs). Each pollutant source must meet their individual allocation to limit the amount of pollutants making it into the receiving body (i.e. sediments). Thus, the sediments are being protected by controlling the amount of pollutants that are being inputted into the sediments from all of the sources.

In the legally incorrect legacy contamination or remediation approach, sediments are identified as an on-going source of pollutants to a separate receiving body, typically the water column. Then, the maximum total amount of pollutants that the receiving body can receive from all sources, while still meeting the water quality objectives, is determined (i.e. the TMDL). Allocations are assigned to all of the pollutant loads, including the sediments, to limit the amount of pollutants that is allowed to pass into the receiving body. Remedial action (e.g., dredging, capping, assisted natural recovery) of the in-place sediments can then be taken to reduce the pollutant load from the sediments to the receiving body to meet the assigned allocation. Therefore, legacy contamination in the sediments is addressed as a pollutant source in order to reduce loading from the sediments to a separate receiving body.

The illegality of using a TMDL to force remediation of legacy pollutants aside, it is not technically possible to combine these two approaches into a single TMDL equation relating the TMDL to Waste Load and Load Allocations. As discussed above, in each approach the sediments must be treated differently and identified as either a receiving body or a pollutant source. It is neither physically possible nor logical for the sediments to be both a receiving body and a pollutant source at the same time. Furthermore, a "load" is the amount of a pollutant from a source that is introduced into the receiving body. Therefore, the source by definition must be separate and distinct from the receiving body; the pollutant source and the receiving body can't be one in the same which is how the current TMDL is set up.

Unfortunately, this Harbor TMDL makes an irreparable error of identifying sediments as both a source and a receiving body. In this case, the sediments were first identified as the receiving body, with the goal of protecting the sediments from ongoing sources. Then, the total amount of pollutants that the sediments could receive from all sources, while still meeting the water quality objectives, was determined (i.e. the TMDL). Next, the allocations from the various pollutant sources (i.e. air deposition, MS4s and POTWs) were assigned. The difference between the TMDL and the sum of the Waste Load and Load Allocations was calculated. This mathematically derived number represents the amount of excess loading to the bedded sediments each year. However, the TMDL writers arbitrarily assigned this excess loading to bedded sediments; thus making the sediment both the receiving body and a pollutant source. This is not a valid approach. There is no physical relationship or linkage between the actual bedded sediments and the excess loading that was assigned to bedded sediments.

This flawed approach is highlighted by the fact that for some constituents, any change in pollutants within the bedded sediments will neither assist nor hamper achievement of the TMDL. Consider the hypothetical scenario where all impacted bedded sediments are completely removed from the system (through dredging or capping, making the pollutant loading from bedded sediments equal to zero) and all other allocations are met. Logically then, according to the equation TMDL = LA + WLA, the TMDL should be achieved if all allocations are met, but in this case, it is not achievable because on-going sources (e.g. air deposition and waste load allocations) are greater than the TMDL, thus illustrating there is no physical relationship between the load allocation assigned to the bedded sediments and the actual legacy sediments, their complete removal from the system does not aid in achievement of the TMDL. This is further explained in the following example, using specific allocations and the TMDL for the Inner Harbor for DDT:

> Example: DDT TMDL for Inner Harbor
>
> Equation: TMDL = WLA + LA
> Specific to DDT in the Inner Harbor, this TMDL makes the following assignments for the TMDL and the WLAs and LAs:
> DDT TMDL = 3.56 g/yr
> MS4 WLA = 0.066 g/yr
> LA for air deposition = 129 g/yr
> LA for bed sediment = -125 g/yr
> Hence, the DDT TMDL equation for Inner Harbor is:
> 3.56 g/yr = 0.066 g/yr (WLAs) + 129 g/yr (LA air deposition) – 125 g/yr (LA bedded sediments)
> Assuming all WLAs and LAs are met, and bedded sediments are completely removed or capped, thus making their load equal to zero, then:

TMDL = 0.066(WLAs) + 129(LA air dep.) + 0(LA bedded sediments) =
129.66
$3.56 \neq 129.99$

Therefore, even when all allocations are met and complete removal of bedded sediment occurs, total loading to the system is 126.1 g/yr DDT over the TMDL of 3.56 g/yr DDT.

Clearly, this TMDL does not protect sediments from ongoing sources, requires indefinite continual removal of excess loadings through continual dredging and does not address bedded sediments or hotspots. This is a critical flaw in the conceptual model and framework of the TMDL. Therefore, unless the structure of the TMDL is corrected, no amount of special studies, modeling improvements, or time, will be able to resolve this issue and the TMDL will never achieve its stated goals.

B. The CEQA Document Does Not Adequately Analyze The Impacts And Thus Does Not Inform The Decision Makers Of The Significant Impacts Of The TMDL

In December 2010, the Regional Board released for public review the SED for the TMDL pursuant to its certified regulatory program. The Port submitted comments on the draft SED during the public review period. A revised draft SED was released by the Regional Board in May 2011, in response to the comments received during the public review period. After reviewing the revised draft SED, it is clear that very few comments from the Port and other commenters were addressed and incorporated into the revised draft. Furthermore, copies of the written responses to public comments were not provided to responsible agencies at least 10 days prior to the Regional Board's approval of the SED as required by 23 C.C.R. §3779(d). Written responses were posted on April 29, 2011, only 7 days prior to the Regional Board's approval of the SED on May 5, 2011.

The SED adopted by the Regional Board does not adequately analyze the environmental impacts of the TMDL under the CEQA and therefore does not provide the decision makers, other regulatory agencies, and the public with the required understanding whether the environmental benefits of the proposed TMDL outweigh the significant and unavoidable environmental impacts.

In ***City of Arcadia v. State Water Resources Control Board***, 135 Cal.App.4th 1392 (2006), a number of permittee cities challenged the Regional Board's adoption, and the State Board's approval, of a trash TMDL concerning the Los Angeles River and its surrounding watershed. The court held, in part, that the Regional Board failed to prepare an Environmental Impact Report (EIR). The Regional Board's completion of a CEQA checklist in a manner supporting a negative declaration was not sufficient, particularly in light of evidence in the record concerning potential adverse environmental impacts that could arise from the TMDL

(despite its water quality enhancement purposes). The court concluded that the Regional Board had not performed the requisite analysis by checking off boxes on a CEQA checklist form and summarily concluding that there were no significant potential environmental impacts. The court found that the Regional Board ignored impacts likely to be experienced during the implementation of the TMDL, including soil disruption and displacement, an increase in noise levels, changes in traffic circulation, and effects on air quality. Even though these impacts would only occur temporarily and would ultimately result in environmental benefits, the court held that the TMDL was not lawfully adopted in compliance with CEQA and that a full EIR and alternatives analysis, or their functional equivalent, were necessary. Because the Regional Board did not conduct a thorough analysis of the temporary environmental impacts that some public commenters had opined would result from the implementation of the TMDL, nor consider mitigation measures or alternative approaches, the court held that adoption of the TMDL failed to comply with CEQA.

There is evidence in the record here that the TMDL and its implementation plan may have a significant physical adverse impact on the environment, even if only temporary in duration, which requires adequate CEQA analysis by the agency.

Because the objective of the TMDL is to protect and restore fish tissue and sediment quality in Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters, the environmental analysis should take into account the environmental impacts from feasible implementation measures required within the general vicinity of the Ports of Long Beach and Los Angeles to meet the TMDL. As stated on page 8 of the SED and in the California Code of Regulations (23 C.C.R. § 3777):

> "The environmental analysis shall take into account a reasonable range of environmental, economic, and technical factors, population and geographic areas, and **specific sites**."

If the TMDL is enforced as written, dredging or dredging then capping are the only implementation alternatives that would achieve the sediment targets in the implementation timeframe. Therefore, the lead agency can reasonably foresee that specific large scale dredging will be required. The SED *must* adequately and quantitatively analyze the environmental impacts of dredging/capping within the Los Angeles/Long Beach Harbor and San Pedro Bay to meet the TMDL.

In addition, other landside implementation methods such as infiltration systems, vegetative swales, and low-flow diversion systems are infeasible within the ports and therefore will not adequately achieve the California Toxics Rule (CTR) target set in the TMDL for General NPDES discharges, or the WLA for Municipal Storm Sewer Systems (MS4). The only available method to feasibly approach achieving compliance with water quality WLAs at the ports is treatment control Best Management Practices (BMPs). (Attachments 11B and 11C.)

Therefore, the lead agency can reasonably foresee that the specific implementation measure of storm water treatment and the SED must adequately and quantitatively analyze the impacts associated with the installation of treatment control BMPs throughout the Port complex and the watershed.

All potential environmental impacts from the project have not been properly addressed, analyzed, and mitigated. The SED fails in many respects to comply with the requirements of CEQA. While certified regulatory programs may use the SED, the Regional Board is required to comply with all the substantive requirements of CEQA. This SED does not accurately identify or analyze the significant environmental impacts that would result from this project. Further, it fails to provide sufficient mitigation for impacts that it does identify, and fails to consider alternatives that would effectively protect the environment, while causing less environmental and economic costs to implement.

Given the unavoidable regional and local impacts of the proposed project, it is especially important that the SED contain the necessary analysis to enable both the decision makers and the public to understand the significant environmental repercussions of the project. Because there can be no meaningful public review of the project due to the following inadequacies, the Board should correct the deficiencies to provide a complete discussion of the environmental issues at stake.

1. Inadequate Descriptions Of Structural Implementation Alternatives Result In Underestimated Environmental Impacts

By underestimating the magnitude of the amount of sediment needed to be removed by dredging to comply with the TMDL, and the compliance methods of achieving CTR and WLAs, the existing environmental analysis does not fulfill the Regional Board's obligation under CEQA. The SED lacks an adequate discussion of the numerous environmental impacts associated with dredging and storm water treatment alternatives, as well as an accurate and complete assessment of air and transportation impacts resulting from a dredging project of this size. These numerous impacts are not provided to the public for review, and do not give the public a true indication of the significant environmental impacts of the project.

The SED incorrectly describes dredging to be small in scale. Based on this inaccurate assessment, the environmental analysis incorrectly assumes most dredging impacts to be less than significant or no impact. According to the Staff Report, it is estimated that 11 to 35 million cubic yards of sediment would have to be removed within the Ports and San Pedro Bay to meet the requirements of the TMDL. (Staff Report, Table 7-3 at p. 122.) In order to comply with fish tissue targets stated in the TMDL, approximately 38 million cubic yards of material would need to be dredged. (Attachment 9.) This is a monumental and unprecedented amount of material that would need to be dredged within a span of 15 years

(the time period estimated by the Port to complete this effort) and would have significant adverse impacts in a number of resource areas such as air quality, plant life, animal life, climate change, traffic, etc. (Comment Table 4, Items 8 through 33 and Attachment 9D.) The environmental impacts of dredging have been grossly underestimated in each of the resource areas, and the SED needs to be revised to rectify these deficiencies.

For a proper CEQA analysis to be performed, detailed assumptions need to be discussed and analyzed such as the amount of material likely to be dredged, length of time of required dredging, methods of dredging (clamshell and hydraulic), methods of disposal (truck or rail), and disposal areas (upland and port landfill). Additionally, the option of capping is inadequately analyzed and there is neither discussion nor any assumptions about capping in the project description to allow the public to understand what is involved with the capping option. Capping is a major undertaking and also needs to be properly analyzed for environmental impacts.

2. The Following Analyses Are Deficient Because No Impact And Less Than Significant With Mitigation Determinations Are Not Supported By Substantial Evidence

Further analysis needs to be performed to determine potential significant impacts and appropriate mitigation measures. The CEQA analysis inappropriately dismisses any likelihood of impacts or determines that impacts will be less than significant with mitigation. Additionally, potential mitigation measures are vague and there is no substantial quantitative evidence to support how the mitigation measures will actually ensure that significant impacts will be reduced to less than significant with mitigation. Provided below are the major analyses that are deficient, and in which further analysis needs to be performed to determine potential significant impacts and appropriate mitigation measures. (Comment Table 4, Items 8 through 33.)

a. Air Quality And Greenhouse Gases (2.a, 2.c)

If the TMDL is enforced as written, large scale dredging and transport or dredging and capping are the reasonably foreseeable implementation alternatives that would achieve the sediment targets in the implementation time frame. (Anchor 2011.) The Port of Long Beach is concerned that significant air quality impacts associated with the Regional Board's proposed remediation effort have not been properly addressed, analyzed, and mitigated, as required by CEQA.

The document incorrectly states that the project will have temporary, short-term impacts to air quality and that these impacts can be mitigated and that the project would not be significant to cause climate change. Dredging up to 38 million cubic yards of sediment within 15 years to meet the TMDL would cause adverse impacts in air quality in terms of the

continuous, long-term duration of dredge operations, as well as truck trips to dispose of the sediment. It would take 2.6 million round trip truck trips to dispose of 38 million cubic yards of material. (Comment Table 2, Item 94.) The estimated air emissions and greenhouse gas emissions from truck trips and from the dredge equipment need to be quantified. There is no substantial evidence supporting the statement that mitigation measures will reduce air quality impacts to less than significant levels without a quantitative analysis. Additionally, there is no substantial evidence supporting the statement that the emissions from implementation of the TMDL would not have a significant negative effect on climate change and would not conflict with the State's ability to meet Assembly Bill 32's greenhouse gas emission (GHG) reduction goals without a quantitative analysis.

Additionally, storm water treatment systems capable of achieving the water quality targets and WLAs set in the TMDL will be large-scale construction projects that can result in substantial air quality impacts and greenhouse gas impacts from construction and operation. These impacts also need to be properly analyzed.

This section provides an evaluation of SED methodology and findings as they relate to air quality impacts, provides a framework for analyses required to adequately assess air quality and associated health impacts, and provides a screening-level analysis of regional air quality impacts from remediation efforts necessary to achieve the TMDL.

i. SED Evaluation And Required Analyses

The remediation effort would result in air quality emissions and impacts, primarily from the use of diesel-fueled dredging equipment and the subsequent transport of dredged materials to upland and out-of-state landfills. Impacts from the remediation effort must be adequately described and evaluated under CEQA to provide decision makers and the general public with a means to understand the significant environmental repercussions of the project.

1. Environmental Criteria

The California Code of Regulations requires SEDs to include a "Completed Environmental Checklist." (23 C.C.R. §3777(a)(2).) A sample checklist is presented as Appendix A to California Code of Regulations Title 23, Division 3, Chapter 27, Article 6. The SED uses an environmental checklist that differs significantly from the checklist in Appendix A. The SED checklist is not consistent with the Appendix A checklist, does not identify the source of its criteria, does not provide an explanation of how the checklist criteria were selected, does not address key air quality and health impacts, and in general lacks the rigor associated with adequate environmental analyses. In this case, the Regional Board has provided no indication of the appropriateness of the deviation from the Appendix A checklist that exists in the SED checklist. (23 C.C.R. §3777(a)(2).) In particular, Table 1 below identifies

discrepancies and omissions in the SED checklist. The table shows that the SED is inadequate in addressing the basic criteria of an air quality assessment.

Table 1. Comparison of SED and Appendix A Environmental Checklists

Appendix A Checklist	SED Checklist
Air Quality	
Would the project conflict with or obstruct implementation of the applicable air quality plan?	Would the project result in substantial air emissions or deterioration of ambient air quality?
Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?	
Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	Not addressed in SED
Would the project expose sensitive receptors to substantial pollutant concentrations?	Not addressed in SED
Would the project create objectionable odors affecting a substantial number of people?	Would the proposed project result in the creation of objectionable odors?
Greenhouse Gases/Climate Change	
Not part of Appendix A	Would the proposed project result in the alteration of air movement, moisture or temperature, or any change in climate, either locally or regionally?
Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	Partially addressed in SED
Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Not addressed in SED

2. Thresholds Of Significance And Determination Of Significance

The Appendix A checklist specifies that, where available, the significance criteria established by the applicable air quality management or air pollution control district be relied upon to make the determinations in the checklist. The South Coast Air Quality Management District (SCAQMD), the local air pollution control district, has set significance thresholds for CEQA projects. It is common practice that projects subject to the National Environmental Policy Act (NEPA) in the Port area also follow the same significance thresholds.

Table 2 presents SCAQMD significance thresholds for CEQA projects. It should be noted that although the Appendix A checklist recommends that agency significance thresholds be used, under CEQA, a lead agency can develop its own significance thresholds. The Regional Board, however, failed to either establish its own thresholds or to use SCAQMD thresholds of significance in making significance determinations in the SED.

Table 2. Thresholds of Significance

SCAQMD Thresholds of Significance		SED Thresholds of Significance
Criteria Pollutant Mass Daily Thresholds (lb/day)		No thresholds identified in SED
NO_X: 100 VOC: 75 PM10: 150 PM2.5: 55	SO_X: 150 CO: 550 Lead: 3	
Ambient Air Quality Standards for Criteria Pollutants		No thresholds identified in SED
NO_2 1-hour average: 0.18 ppm (state) annual arithmetic mean: 0.03 ppm (state) and 0.0534 ppm (federal)		
PM10 24-hour average: 10.4 $\mu g/m^3$ annual average: 1.0 $\mu g/m^3$		
PM2.5 24-hour average: 10.4 $\mu g/m^3$ (construction)		
SO_2 1-hour average: 0.25 ppm (state) & 0.075 ppm (federal – 99th percentile) 24-hour average: 0.04 ppm (state)		
Sulfate 24-hour average: 25 $\mu g/m^3$ (state)		

SCAQMD Thresholds of Significance	SED Thresholds of Significance
CO 1-hour average: 20 ppm (state) and 35 ppm (federal) 8-hour average: 9.0 ppm (state/federal)	
Lead 30-day Average: 1.5 $\mu g/m^3$ (state) Rolling 3-month average: 0.15 $\mu g/m^3$ (federal) Quarterly average: 1.5 $\mu g/m^3$ (federal)	
Toxic Air Contaminants (TACs), Odor, and GHG Thresholds	No thresholds identified in SED
TACs (including carcinogens and non-carcinogens) Maximum Incremental Cancer Risk ≥ 10 in 1 million Cancer Burden > 0.5 excess cancer cases (in areas ≥ 1 in 1 million) Chronic & Acute Hazard Index ≥ 1.0 (project increment)	
Odor Project creates an odor nuisance pursuant to SCAQMD Rule 402	
GHG 10,000 mty CO_2e for industrial facilities	
Notes: Criteria pollutants are: NO_X = nitrogen oxides NO_2 = nitrogen dioxide VOC = volatile organic compounds PM10 = particulate matter with aerodynamic diameter less than 10 microns PM2.5 = particulate matter with aerodynamic diameter less than 2.5 microns	SO_X = sulfur oxides SO_2 = sulfur dioxide CO = carbon monoxide GHG = green house gases mty = metric tons per year CO_2e = CO_2 equivalent

In lieu of analyzing project impacts and comparing those impacts to significance thresholds, the SED makes a qualitative determination by stating that "The potential implementation of alternatives may result in short-term construction impacts related to air quality. Once construction of the project has been completed, the on-site activities would return to preexisting levels." (SED at p.43). Although the SED stipulates an overall implementation schedule for achieving the TMDLs, the SED does not quantify the actual number of years required to dredge the Harbor. Based on the amount of required dredging, the Port has determined that it would take approximately 15 years to complete the remediation effort. During this time dredging and associated activities would occur on a daily basis. It is

unreasonable to assert that 15 years constitutes a "short-term" period. It is likely that dredging and supporting activities over a 15-year period would result in chronic health impacts; daily remediation activities would result in both regional and localized air quality impacts as well as acute health impacts. The SED has failed to adequately determine air quality and health impacts associated with remediation efforts.

Furthermore, although the SED provides a discussion of GHG regulations, it draws a qualitative determination that GHG impacts would not be significant without quantifying GHG emissions and without comparing GHG emissions to significance thresholds. In lieu of a quantitative analysis, the SED makes the argument that the project's GHG emissions would be less than CARB's 25,000 metric tons of CO_2 per year (mty) reporting threshold. It should be noted that the 25,000 mty is a regulatory reporting threshold for cement plants, oil refineries, fossil-fueled electric-generating facilities, and other major stationary point sources; it is not a recognized GHG significance threshold for environmental programs. Moreover, it is impossible to determine the accuracy of the SED's assertion without a quantitative analysis.

Finally, it is unclear whether the SED is using 25,000 mty as a significance threshold. If so, then it is likely that, given the volume of dredge material requiring transport, GHG emissions would in fact easily exceed this threshold and thereby result in a determination of significance. The SED has failed to adequately analyze GHG emissions and impacts and should be revised to include both quantification of GHG emissions and either the development of a GHG threshold or the use of an established threshold. As currently written, the SED fails to provide the level of information disclosure and analysis required by CEQA.

3. Required Analyses

The criteria in Table 1 and thresholds of significance in Table 2 set the framework of required environmental analyses. At a minimum, the project should be evaluated for regional and localized impacts associated with criteria air pollutants as well as health impacts from diesel particulate matter and other toxic air contaminants (TACs). The SED does not provide analyses for regional air impacts or localized air impacts. The SED also does not provide analyses for health impacts such as cancer risk, non cancer chronic impacts, or acute impacts.

These analyses, at a minimum, are required in order to provide decision makers and the public impacted by the proposed project with meaningful understanding of the impacts. Therefore, the SED, as written, is inadequate and fails to provide a meaningful understanding of air quality impacts.

ii. Screening-Level Analysis

A screening-level analysis of potential air quality impacts associated with the remediation effort was performed by the Port. The analysis estimates potential air emissions and regional impacts associated with the remediation effort. The scope is limited to regional impacts; localized impacts and health impacts constitute a larger effort and would need to be analyzed as part of a full air quality analysis. This analysis is not intended as a comprehensive determination of air quality impacts and is not to be regarded as a substitute for appropriate environmental documentation. A detailed analysis of anticipated emissions and air quality impacts should have been performed by the Regional Board and assessed in the SED to appropriately determine the full extent of the impacts. Appropriate mitigation measures cannot be recommended to reduce significant impacts without performing a proper detailed air analysis in conformance with CEQA.

1. Potential Activities And Sources

Remediation effort activities identified in the SED would include dredging and transport of dredged materials to offsite disposal locations. It is estimated that approximately 38 million cubic yards of sediment would need to be dredged over a 15-year period from the Port of Long Beach harbor (Anchor 2011).

Dredging is typically conducted via hydraulic or mechanical dredging, depending on anticipated dredging volume, disposal options, nature of the sediments, and site conditions. Hydraulic dredges remove and transport sediment in the form of a high-water and low solids content slurry and for a large scale project, such as the one identified in the SED, would result in a correspondingly large volume of slurry. The management of this slurry and excess water would be a significant consideration as it would require the construction of dewatering sites near the harbor. Very large new upland or aquatic fill sites close to the dredge site would be necessary to discharge the material. Sites further than 1 mile away would require the addition of booster pumps to the discharge line. (Anchor 2011.) The construction of dewatering sites, operation at these sites, and burning fuel necessary to power booster pumps would all contribute to project emissions.

In contrast to hydraulic dredging, mechanical dredging has a key advantage for the purposes of this project; mechanical dredging does not necessitate the use of slurry to transport dredged material from the dredging location to land and therefore produces a significantly smaller volume of material requiring dewatering, storage, and final transport. (Anchor 2011.) For these reasons, mechanical dredging with a typical clamshell dredge configuration was considered in this screening analysis.

In addition to dredging equipment, ancillary harbor craft would be required to position dredge barges and push material-laden barges to a berth for off-loading, as well as to bring

crew and supplies to the dredging barges. In addition, approximately 475 trucks would be required daily to transport dredged material to upland and out-of-state landfills. Ancillary land-side activities would be required to unload barges and load trucks. Finally, construction of dewatering and/or truck loading sites may be necessary.

The following sources of air emissions were considered in this analysis:

- Dredging equipment;
- Tugboats used to position/tender dredge barges;
- Tugboats used to transport barges to a berth location;
- Crew/supply vessels;
- Trucks used to transport dredged material to upland disposal sites.

The following sources of air emissions were noted, but not addressed in this analysis due to a lack of specific information at the time of this analysis; these sources have the potential to contribute to regional impacts and should be addressed in the appropriate environmental impact documentation:

- Equipment used to off-load dredged material from transport barges to trucks;
- Contractor vehicles;
- Construction equipment such as excavators, graders, compactors, and other typical construction equipment, used to construct dewatering and/or truck loading sites.

2. Methodology And Assumptions

Emissions from clamshell dredging equipment and harbor craft were calculated based on a zero-hour emission rate for the engine model year, which is the emission rate in the absence of any malfunction or tampering of engine components, plus a deterioration rate. The deterioration rate reflects the fact that base emissions of engines change as the equipment is used due to wear of various engine parts or reduced efficiency of emission control devices. California Air Resource Board's (ARB) deterioration factors, useful life, and zero-hour emission factors for commercial harbor craft were used for all pollutants except sulfur oxides (SO_X). (ARB 2007.) SO_X emissions were quantified based on brake-specific fuel consumption and a sulfur fuel content of 15 ppm, which is the sulfur content limit for California harbor craft, in accordance with California Diesel Fuel Regulations. Harbor craft emission factors were deemed appropriate for dredger engines per ARB guidance. (Starcrest

2011.) Based on the quantity of materials that would need to be dredged, it was determined that two dredgers would need to operate concurrently.

Emissions from on-road, heavy-duty diesel trucks used to transport dredged material to offsite disposal locations were calculated using emission factors generated by ARB's EMFAC2007 on-road mobile source emission factor model for a truck fleet representative of the South Coast Air Basin (SCAB). Table 3 summarizes assumptions used to calculate emissions for each source category. The table also summarizes local policy requirements that were included in calculations as part of project conditions.

Table 3. Source Assumptions

Dredging equipment
Methodology ARB methodology using zero emission factors and deterioration factors (ARB 2007). Assumptions Equipment type and activity were based on typical dredging equipment operating at the Port. Two clamshell dredgers would operate on any given day. Dredging equipment and harbor craft would operate simultaneously. Engine power requirements, load factors, useful life parameters, and activity were provided by Starcrest (Starcrest 2011). Specific Local Policy Requirements Considered Part of the Project It was assumed that clamshell dredgers would use diesel-fueled engines. However, a scenario using electrified main engines and diesel auxiliary engines was also evaluated.
Harbor craft
Methodology Tier 2 engine standards and ARB methodology using zero emission factors and deterioration factors (ARB 2007). Assumptions Two tender tugboats would be required to position and tender each dredge barge. Two tugboats would be required to transport a barge laden with dredged material to a berth for unloading. One crew/survey vessel would be required to transport workers and equipment and conduct surveys in support of dredging operations. Equipment engine ratings and age were determined based on the average engine population as presented in the Port 2009 Air Emissions Inventory (POLB 2010). Engine load factors were determined based on the ARB Methodology. Emission factors for NO_X and PM were based on ARB 2010 Tier 2 engine standards.

Emission factors for other criteria pollutants were calculated using zero emission factors and deterioration factors. Dredging equipment and harbor craft would operate simultaneously. Specific Local Policy Requirements Considered Part of the Project None applicable.
Trucks
Methodology ARB EMFAC2007 was used to quantify emissions during idling and transit. Assumptions Trucks with a capacity of 15 cy would be used to transport dredged material to landfills. Approximately 475 trucks per day would be necessary to transport the dredged material. EMFAC2007 generated average fleet of heavy duty haul trucks within the SCAB. Criteria pollutant emissions were estimated for trucks traveling to the SCAB border. Green house gas (GHG) emissions were estimated for trucks traveling to the California border. Specific Local Policy Requirements Considered Part of the Project Not applicable.

3. Emissions And Preliminary Impacts

Regional Impacts

The remediation effort would pose a significant impact under CEQA and NEPA if criteria pollutant emissions exceed regional significance thresholds as defined by the SCAQMD. (SCAQMD 2011.) Table 4 presents emissions associated with the remediation effort and shows that emissions would exceed significance thresholds for volatile organic compounds (VOC), carbon monoxide (CO), NO_X, particulate matter with aerodynamic diameter less than 10 microns (PM10), and particulate matter with aerodynamic diameter less than 2.5 microns (PM2.5).

Table 4. Preliminary Project Emissions (pounds/day)

Emission Source	VOC	CO	NO_X	SO_X	PM10	PM2.5
Thresholds	75	550	100	150	150	55
Dredging equipment	148	538	1,854	1.29	97	89

Emission Source	VOC	CO	NO_X	SO_X	PM10	PM2.5
Harbor craft	19	163	356	0.24	21	20
Truck transport	298	1,639	3,680	3.89	202	185
Total Daily Emissions (lb/day)	465	2,339	5,890	5.4	320	295
CEQA Impacts						
CEQA Baseline Emissions	0	0	0	0	0	0
Project Minus CEQA Baseline	465	2,339	5,890	5	320	295
CEQA Significant?	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**Yes**
NEPA Impacts						
NEPA Baseline Emissions	0	0	0	0	0	0
Project Minus NEPA Baseline	465	2,339	5,890	5	320	295
NEPA Significant?	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**Yes**

General Conformity

In accordance with the General Conformity Rule, activities using federal funds or requiring federal approval must not cause or contribute to any new violation of a National Ambient Air Quality Standard (NAAQS), increase the frequency or severity of any existing violation, or delay the timely attainment of any standard, interim emission reduction, or other milestone. Based on the present NAAQS attainment status of the SCAB, a federal action would conform to the State Implementation Plan if its annual emissions remain below 100 tons of CO and PM2.5, 70 tons of PM10, and 10 tons of NO_X and VOCs. These de minimis thresholds would apply to the proposed dredging and associated activities. If the total direct and indirect emissions of any pollutant from the federal action were to exceed one or more of the de minimis thresholds, the action would be considered regionally significant and the federal agency would be required to make a determination of general conformity.

It was assumed that the federal action for the remediation effort, as defined per the General Conformity Rule, would be represented by in-water work only; on-land activities would not be considered either a direct or indirect federal activity, since the federal agency would have no authority over on-land activities such as truck transit. Table 5 presents a comparison of

annual emissions, associated with the federal action, to de minimis thresholds. The table shows that the proposed federal action emissions would likely exceed the conformity de minimis threshold for VOC, CO, and NO_X, thereby requiring a determination of general conformity.

Table 5. Preliminary Conformity Determination - Prior to Mitigation (tons/year)

	VOC	CO	NO_X	SO_X	PM10	PM2.5
Conformity Thresholds	10	100	10	na	70	100
Dredging equipment	27	98	338	0.24	18	16
Harbor craft	3	30	65	0.04	4	4
Total Annual Emissions (ton/yr)	30	128	403	0.28	22	20
NEPA Baseline	0	0	0	0	0	0
Exceeds Conformity De Minimis?	**Yes**	**Yes**	**Yes**	**na**	**No**	**No**

4. Greenhouse Gas Impacts

GHG emissions associated with the remediation effort were estimated and compared to SCAQMD's threshold of significance. (SCAQMD 2008.) Because GHGs are not geographically bound pollutants, it is appropriate to consider the total combined project GHG emissions in determining significance. GHG emissions were estimated based on the specific methodologies presented in Table 3. GHG emissions are presented in metric tons of CO_2e, where methane (CH_4) and nitrous oxide (N_2O) emissions were converted to CO_2e using their respective global warming potentials (21 for CH_4 and 310 for N_2O).

Table 6 presents a comparison of annual GHG emissions to the SCAQMD threshold. The table shows that GHG emissions would exceed the SCAQMD's GHG threshold.

Table 6. GHG Emissions (mton/year)

	CO_2e
SCAQMD Threshold	10,000
Dredging equipment	31,950

Harbor craft	3,674
Truck transport	167,504
Total Annual Emissions (mton/yr)	203,128
CEQA Significant?	**Yes**

b. Earth (1.a, 1.b, 1.c, 1.d)

The document incorrectly states that dredging would not be to the depth or scale to cause unstable conditions or changes in geological substructures; result in disruptions or displacement of soil/sediment; impact topography or ground surface relief features; and result in the destruction, covering, or modification of unique geologic features. In order to meet the TMDL targets, dredging and sediment capping would be large in scale, would affect most of the harbor, and would result in significant changes. This section needs to be revised to properly analyze the potential significant impacts of dredging and/or sediment capping and include a discussion on feasible mitigation measures or alternatives that would reduce potentially significant environmental impacts.

Additionally, the document incorrectly states that infiltration systems and vegetated swales would not be of the size or scale to result in a change in topography and ground surface relief figures. Providing adequate infiltration for large volumes of storm water would require substantial changes to the topography of the port. Therefore the level of analysis performed is insufficient and there is no substantial evidence supporting the statement that these alternatives would have no impact.

c. Plant (4.a, 4.b, 4.c) And Animal Life (5.a, 5.b, 5.c)

The document incorrectly states that significant impacts to plant and animal life from dredging and capping can be mitigated to less than significant. Further, the mitigation measure of limiting the extent and duration of dredging to lessen impacts to plant and animal life is infeasible. If sampling indicates that an area does not meet numerical sediment or fish tissue targets, dredging will need to be performed to remove the contaminated sediment. Dredging cannot be "sited" in another location to prevent impacts to plant and animal life. Because existing harbor conditions are healthy (Attachments 1 and 2), dredging may be more detrimental and destructive than beneficial since dredging/capping would destroy benthic habitat that is thriving and healthy. This is a significant impact. If this impact cannot be mitigated, it should be stated that this is an unavoidable significant impact.

d. Noise (6.a)

The document incorrectly states that increases in existing noise levels from the installation of structural BMPs will be reduced to less than significant once mitigation measures have been properly applied. Additionally, it is stated that noise levels from dredge equipment would indicate a significant noise impact and that mitigation measures may reduce noise impacts. There is no substantial evidence to back up these determinations. Without any quantitative analysis comparing the difference between baseline noise levels and future noise levels versus significance thresholds, it cannot be determined whether mitigation measures would reduce the impacts to less than significant. A quantitative analysis of noise impacts needs to be performed to support the determination that implementing proposed mitigation measures would reduce noise impacts to less than significant.

e. Transportation/Circulation (13.a, 13.c, 13.d, 13.e)

The SED incorrectly states that dredging operations and installation of structural BMPs will not result in the generation of substantial additional long-term vehicular traffic. The determination that impacts upon existing transportation systems, circulation or movement of people and/or goods, and alterations to rail or waterborne traffic can be reduced to less than significant with mitigation is also incorrect. Disposal of dredged sediment in a Port fill site is limited, and the majority of the sediment will need to be disposed of in an upland landfill, most likely out-of-state. It is estimated that 2.6 million round trip truck trips would be needed to dispose of 38 million cubic yards of sediment in an upland landfill. This is a substantial increase of truck trips within the vicinity of the port and the regional transportation network. In addition, there are not enough certified trucks available for that level of waste movement and so rail cars may be the only option for moving that volume of sediment, which could have significant impacts on the rail network.

Truck trips/rail trips resulting from dredging operations and installation of structural BMPs will not be limited and short-term. There will be substantial impacts upon the existing transportation systems and significant impacts to the circulation of people and goods. A traffic management plan is not an adequate mitigation measure to address the significant impact to transportation systems as a result of the project. Further analysis is needed and potential significant traffic impacts should be quantitatively and adequately analyzed.

This section provides a qualitative assessment of the potential effects on transportation and circulation in the Port of Long Beach and vicinity that could be expected if the Regional Board were to adopt the proposed TMDL. In order to achieve stated water quality objectives, the proposed TMDL would require the implementation of Structural BMPs and Non-Structural BMPs. Structural BMPs are described as physical facilities and activities to treat or divert water where it is generated or discharged, including infiltration systems, vegetated swales, storm water capture and re-use, sand/media filters, oil/water separators,

removal of contaminated sediment by dredging, low flow diversion, and catch basin inserts. Non-structural BMPs are described as educational and pollution prevention practices that do not involve permanent, fixed facilities, including housekeeping BMPs, public education and outreach, trash collection/street sweeping, and storm drain cleaning. The SED assesses the potential environmental impact of implementing both structural and non-structural BMPs in the watersheds leading to the Dominguez Channel and the harbors in San Pedro Bay. The SED concludes that the project could have potentially significant effects in each of the six issue areas listed below that are assessed under the general topic of Transportation/Circulation. It must be noted that the SED does not follow the current Appendix A, the CEQA checklist for SEDs:

a. Will the project result in generation of substantial additional vehicular movement?

b. Will the project affect existing parking facilities, or create demand for new parking?

c. Will the project result in substantial impacts upon existing transportation systems?

d. Will the project result in alterations to present patterns of circulation or movement of people and/or goods?

e. Will the project result in alterations to waterborne, rail, or air traffic?

f. Will the project result in increase in traffic hazards to motor vehicles, bicyclists, or pedestrians?

The analysis and discussion of these effects in the SED is at a programmatic level, given the role of the Regional Board, and subsequent project-level analysis would be required of the implementing agencies if the project were adopted and specific Structural and Non-Structural BMPs were used to achieve compliance. The Port is among the responsible agencies that would be affected by the project, and the qualitative analysis that follows focuses on the potential implications to local transportation/circulation of one of the structural BMPs: the removal of contaminated sediment by dredging the Inner Harbor, Outer Harbor, and portions of San Pedro Bay.

The SED states that:

> "Structural BMPs will not result in generation of substantial additional long-term vehicular movement. There may be additional vehicular movement during construction of structural BMPs and during maintenance activities. However, vehicular movement during construction , and excavation and

> disposal of dredge materials would be temporary during the duration of those activities, and vehicular movement during maintenance activities would be periodic and only as the vehicle passes through the area. This may generate minor additional vehicular movement. In order to reduce the impact of traffic related to construction and disposal of dredge material, a construction traffic management plan could be prepared for traffic control during any street closure, detour, or other disruption to traffic circulation. The plan could identify the routes that construction vehicles would use to access the site, hours of construction traffic, and traffic controls and detours. The plan could also include plans for temporary traffic control, temporary signage and stripping, location points for ingress and egress of construction vehicles, staging areas, and timing of construction activity which appropriately limits hours during which large construction equipment may be brought on or off site." (SED at pp. 80-81.)

While this discussion may be appropriate for many of the structural BMPs described in the project, it does not fully assess and disclose the implications of removing a large amount of contaminated soil from the Harbor. Based on written comments submitted by the Port, achieving the TMDL would entail dredging and disposal of up to 38 million cubic yards of material in a 15-year period. In order to dispose of the large quantity of material, a likely scenario would involve unloading the dredged material at a single consolidated location in the Port for storage, dewatering, and loading onto trucks for export to one or more upland disposal sites. Truck loading activity would occur 18 hours per day, 5 days a week. With a capacity of 15 cubic yards per truck, a total of 2.6 million truck loads (5.3 million truck trips including both inbound and outbound trips) would be required to haul the dredged material from the Port. Assuming that the loading of each truck requires approximately 15 minutes, the loading facility would need to accommodate 10 truck loading stations and would generate 1,440 truck trips per day. Spread evenly over an 18-hour workday, this equates to a continuous flow of 80 truck trips per hour on every weekday, excepting holidays, for 15 years. In order to account for the effect of these heavy trucks on the overall mix of traffic on the roadways, the Port's normal practice calls for applying a passenger car equivalent (PCE) factor of 2.0 to each truck trip, resulting in an estimate of 160 PCE trips per hour (80 inbound and 80 outbound) over long periods of each weekday. These estimates are for soil disposal only and do not include the additional trips that would be associated with two shifts of employees working at the site each day.

While no site has been identified for the storage, dewatering, and loading of dredged material, it is known that a single consolidated site would be used (due to the large area of vacant land needed for such a processing and loading facility). This means that all of the trips would be concentrated along a single haul route to reach the I-710 freeway. Upon departing the site, trucks would carry the contaminated soil to an appropriate disposal

location, likely beyond the California border, and would travel over I-710, SR 60, and I-10. The level of trips generated could exceed the thresholds of significance adopted by the Port, given the need to transport the dredged material continuously throughout the day to remove the total estimated volume of soil, any such impacts could not be avoided or reduced by a mitigation measure that limits truck trips to off-peak hours. In addition, the timeframe in which these trips would occur would overlap with a period of exceptional construction activity at the Port, as the construction of the Middle Harbor project and replacement of the Gerald Desmond Bridge occurs, which could result in significant cumulative impacts in the Port and the surrounding area.

The SED states that "Structural BMPs will not result in generation of substantial additional long-term vehicular movement. There may be additional vehicular movement during construction of structural BMPs and during maintenance activities." (SED at p. 80.) This mischaracterizes the likely transportation/circulation effects of dredging and disposing of up to 38 million cubic yards of contaminated soil. This quantity of material would require an estimated 160 PCE truck trips per hour continuously for 18 hours a day, 5 days a week, over 15 years in order to comply with the project. By any objective measure this would be considered "long-term" and could result in substantial and significant traffic impacts that could not be readily mitigated.

f. Human Health (17.a, 17.b)

There is no discussion in this section of the health impacts from diesel particulates from substantial increases in truck trips or rail operations needed to dispose of dredge material, or from heavy construction equipment for dredging and installation of structural BMPs. This section needs to be revised to properly and quantitatively analyze the potential significant public health impacts from toxic air contaminant emissions that would result from the project. Increase in human health risk is a significant concern for the already impacted communities near the ports. The ports have made substantial efforts and progress in addressing this concern through implementing air quality measures and reducing human health impacts from new projects. Consistent with these efforts, the ports have committed to reduce human health risk from port operations in the local communities and throughout the local area by 85% by 2020. The increased human health risk associated with meeting the requirements of this TMDL will run counter to those efforts and result in significant impacts. All recent Port development projects, which are not this large in magnitude, have included substantial Human Health Risk Assessment evaluations to justify alternatives. This impact should be adequately analyzed.

g. Economics

The document fails to consider the potential significant economic impact of these requirements to the ports of Los Angeles and Long Beach or other involved stakeholders.

The evaluation of economic impacts and a consideration of other alternatives that reduce the economic impact are required under CEQA.

h. Water Quality

The use of a small cutterhead dredge for a project of this size is infeasible. Creation of new fill sites to handle hydraulic slurry would have numerous tangential impacts, and typically require years to evaluate and permit. Impacts to water quality are not adequately described, as is any analysis of the impacts of dredging at this unprecedented scale. These impacts should be adequately analyzed.

i. Public Services

The SED does not address the stress on regional landfill capacity, or the effect of the project on the capacity of offshore disposal sites. The volumes proposed in this project would far surpass available capacity at available port fills, upland disposal sites, or offshore disposal sites.

3. The SED Fails To Provide Adequate Findings Of Significance

The SED states that potential impacts of the project will not cause significant degradation to the environment, significant cumulative impacts, or substantial adverse effects on human beings with appropriate implementation of available mitigation measures. Since there is no quantitative analysis of environmental impacts in the SED, however, there is no evidence that mitigation measures would reduce significant impacts to less than significant. There are significant impacts to plant and animal life, air quality, climate change, traffic, etc. that cannot be mitigated. Also the no impact determination, in terms of achieving short-term to the disadvantage of long-term environmental goals, is incorrect and unsupported by substantial evidence. While the project will have beneficial impacts to water quality over the short and long term, it may result in negative long-term impacts to the environment in terms of air quality and climate change. Discussions in this section are inadequate and unsupported by substantial evidence and need to be revised.

4. The SED Fails To Provide An Adequate Cumulative Impact Analysis Of The Project

The cumulative impact analysis is inadequate and needs to be revised. In terms of project cumulative impacts, only certain environmental impacts are addressed, and not others, such as biological resources (plant and animal life), GHGs, and human health risk. These areas will have significant cumulative impacts and need to be properly analyzed. Also, the areas discussed mention that due to mitigation measures being implemented there would be no significant long-term cumulative impacts from the project. There is no evidence that

mitigation measures would reduce significant impacts to less than significant, and there are significant impacts to plant and animal life, air quality, climate change, traffic, etc. that cannot be mitigated.

5. The Statement Of Overriding Considerations Is Inadequate

The statement of overriding considerations is inaccurate and inadequate. It states that the benefits of the project outweigh the unavoidable adverse environmental effects, but it does not specify what the unavoidable adverse environmental effects of the project are. Section 15126.2 (b) of the CEQA guidelines requires a discussion of the significant environmental impacts which cannot be avoided if the proposed project is implemented. There are significant impacts to plant and animal life, air quality, climate change, traffic, etc. that cannot be mitigated. Without a proper discussion on these unavoidable environmental impacts, it is difficult to determine whether a statement of overriding considerations sufficiently discusses how the benefits of the project outweigh the unavoidable environmental impacts of the project.

Consequently, the SED also states that there are a variety of alternative implementation measures and mitigation measures that would reduce environmental impacts to less than significant. This is not true because many of the mitigation measures identified are not feasible, and further, there was no evidence to support the determinations that the mitigation measures would reduce impacts to less than significant.

The statement of overriding considerations needs to be revised to provide the public and decision makers a clear picture of the unavoidable significant environmental impacts, and a sufficient justification on why the benefits of the project outweigh the negative environmental impacts of the project. Until this can be clearly described, the statement of overriding considerations is inadequate and the document fails to comply with CEQA.

6. The SED Is Inadequate As An Informative Document Under CEQA And Meaningful Public Review And Comment Could Not Be Performed

The SED does not adequately address the environmental impacts of the Project. The SED does not meet the objectives of CEQA which are to:

a. Disclose to the decision-making body and the public the potential environmental impacts of proposed activities.

b. Propose feasible alternatives or mitigation measures that avoid, eliminate, or reduce project-related environmental effects.

c. Describe the analytical process which led to the public agency's decision on the project.

The CEQA analysis does not meaningfully analyze the potential impacts of the implementation alternatives, nor does it provide any explanation of how proposed mitigation measures will lessen significant environmental impacts. It does not provide the necessary information and analysis to enable decision makers, other regulatory agencies, and the public to understand the significant environmental impacts of the project. The document deficiencies should be corrected and a revised SED should be re-circulated for public review to provide a complete discussion of the environmental issues at stake.

7. The SED's Evaluation Of Alternatives Is Inadequate And In Violation Of CEQA

a. The SED Must Evaluate Project Alternatives

The State CEQA Guidelines require an EIR to describe a range of reasonable alternatives to the project that would feasibly attain most of its basic objectives but would avoid or substantially lessen any of its significant effects, and to evaluate the comparative merits of the alternatives. (14 C.C.R. § 16126.6(a).)

The rules for evaluating alternatives also apply to substitute environmental documents prepared under the Regional Board's Certified Regulatory Program. (23 C.C.R. § 3777(b)(3).) The California Supreme Court has also held that an agency subject to a Certified Regulatory Program must evaluate alternatives. (*Mountain Lion Foundation v. Fish & Game Commission,* 16 Cal.4th 105 (1997).)

The Guidelines further provide that while an EIR need not consider every conceivable alternative to a project, it must consider a reasonable range of potentially feasible alternatives that will foster informed decision-making and public participation. The lead agency is responsible for selecting a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives. There is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason. (14 Cal. Code Reg. 15126.6(a); *Citizens of Goleta Valley v. Board of Supervisors*, 52 Cal.3d 553 (1990); and *Laurel Heights Improvement Association v. Regents of the University of California*, 47 Cal.3d 376 (1988).)

As set forth in the Regional Board's requirements for substitute environmental documents, an SED must identify ways to mitigate or avoid the significant effects that a project may have on the environment. (23 C.C.R. §3777(b)(3).) The discussion of alternatives should focus on alternatives to the project that are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the

attainment of the project objectives, or would be more costly. (14 C.C.R. § 15126(b).) The regulations include both the requirement to consider project alternatives and to consider alternative methods of compliance with the TMDL that would have less significant environmental impacts. (23 C.C.R. §§ 3777(b)(3) and (b)(4)(C).) The SED should also identify any alternatives that were considered by the lead agency but were rejected as infeasible during the scoping process and briefly explain the reasons underlying the lead agency's determination. Additional information explaining the choice of alternatives should be included in the administrative record. (See *Mountain Lion Foundation v. Fish & Game Commission*, 16 Cal.4th 105, 134 (1997).)

Additionally, an SED must include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project. (See *Id.*)

b. The SED's Project Alternatives

In the SED, the Regional Board purports to include three program alternatives. However, as explained further below, these do not represent a true range of alternatives to the Regional Board's proposed TMDL program as required by CEQA:

Alternative 1: The Regional Board's Proposed TMDLs. This alternative, which is actually the proposed project and not an alternative, represents the Regional Board's proposed TMDL. The TMDL includes WLAs and LAs (which are not specified in the SED), which would be established through an amendment to the Basin Plan. The WLAs would focus on reductions of sources of heavy metals and organic pollutants from municipal storm drains and discharges associated with regional, state, and federal discharge permittees. LAs would focus on reductions of local sources associated with runoff and drainage. Implementation would be through the choice of structural and non-structural projects to be implemented by local agencies (including the Port) over a 20-year period.

Alternative 2: EPA's Proposed TMDLs. This alternative is based on the same TMDL levels as Alternative 1 and the same choices for future structural and non-structural implementation measures, but would have to be implemented over a much shorter 5-year period. According to the SED, this alternative would have far greater impacts than the proposed project.

Alternative 3: the No-Project Alternative. Under this alternative, TMDLs would not be adopted, and it is assumed that toxic pollutants impairment of the Dominguez Channel, Los Angeles Harbor, and Long Beach Harbor would continue. According to the SED, this alternative is not feasible.

c. The SED's Purported Alternatives Are Inadequate

For the following reasons, the alleged alternatives discussed in the SED are inadequate and fail to meet the requirements of CEQA and its applicable regulations.

i. The Alternatives Are Not Adequately Described In The SED

The alternatives are insufficiently described and do not even include the specific standards established by the TMDLs for each relevant pollutant. The regulations state that the SED must contain "[a]n analysis of reasonable alternatives to the project and mitigation measures to avoid or reduce any significant or potentially significant adverse environmental impacts." (23 C.C.R. § 3777(b)(3).) Alternative 1 in the SED is actually the proposed project. The description of the project in Alternative 1 is wholly inadequate even under the broad standard described in the regulations, which state that the SED must contain "a brief description of the proposed project." (23 C.C.R. § 3777(b)(1).) Guidance regarding what is meant by a "a brief description" can be taken from elsewhere in CEQA, where it states that a Project Description must include "a general description of the project's technical, economic, and environmental characteristics, considering the principal engineering proposals if any and supporting public service facilities" (14 C.C.R. § 15124(c).) The description of the project in the SED falls well short of this standard, or for that matter, any other reasonable interpretation of the requirement set forth in 23 California Code Regulations Section 3777(b)(1). Thus, because the project is described as an alternative and because that description is inadequate, the SED simultaneously fails to adequately describe the project and to adequately describe a project alternative.

There are, in fact, significant problems with the descriptions of all three project alternatives discussed in the SED. While the specific standards for each relevant pollutant are described in various staff reports, that information is not carried forward into the SED as required by CEQA. (see Staff Report.) Since the specific quantitative standards are the fundamental components of TMDLs, the absence of this information in the SED deprives the public and decision makers of a meaningful understanding of the proposed project and of the other two alternatives, thereby thwarting one of the key purposes of CEQA: the clear identification and description of the project and of viable project alternatives. A reader should not have to go on a scavenger hunt through staff reports and/or technical studies to find information that is supposed to be fundamental to CEQA's disclosure purposes. (*Vineyard Area Citizens for Responsible Growth v. City of Rancho Cordova,* 40 Cal.4th 412 (2007).)

ii. The Alternatives In The SED Do Not Represent A True "Range Of Alternatives" As Required By CEQA

An SED must include an analysis of reasonable alternatives to the project and mitigation measures to avoid or reduce any significant or potentially significant adverse environmental impacts. (23. C.C.R. § 3777(b)(3).) Additionally, CEQA guidance requires that, to be adequate, the range of alternatives must include those that would meet the project objectives, avoid or substantially reduce one or more of the significant impacts, and be ostensibly feasible. (14 C.C.R. § 15126.6.)

Regarding the no-project alternative, although it is a requirement of CEQA, it is not one of the alternatives that should be considered part of the "reasonable range of alternatives." The no-project alternative is different from other alternatives because it does not meet any of the project's objectives (if it did, there would be no need for the proposed project).

Regarding Alternative 2, the SED acknowledges that there are no differences in the actual TMDL standards between Alternative 1 and Alternative 2—only the implementation schedules would be different. As a result, there are no meaningful differences between these two alternatives nor would Alternative 2 avoid or reduce any of the significant environmental impacts. Rather, the Regional Board admits that this alternative would have greater negative environmental impacts than Alternative 1. (SED p. 17). Therefore, Alternative 2 does not represent a true alternative to the proposed project.

At the same time, as discussed further below, the SED eliminated from consideration the possible alternative of less stringent TMDL standards.

Therefore, since neither the no-project alternative nor Alternative 2 represent true alternatives to the proposed project, the SED fails to contain the requisite "reasonable range of alternatives" as required by CEQA. In short, the SED does not present any meaningful alternatives to the proposed project: Alternative 1 is the project; Alternative 2 differs from the proposed project only in timing, not scope; and Alternative 3 is the statutorily required "no project" alternative. The SED fails to comply with CEQA by failing to provide and analyze a meaningful range of substantively significant alternatives.

d. Other Alternatives That Could Have Been Considered

i. Partial TMDL Alternative

The only other alternative that the SED considered but summarily eliminated was a partial TMDL. (SED p.15.) This alternative would achieve a 70–80% reduction in toxic pollutants based on numeric targets. This alternative was eliminated on the basis that it was unlawful because it would not meet water quality standards, despite being environmentally superior to

either Alternative 1 or Alternative 2. The SED contains no substantial evidence to support the assertion that the partial TMDL alternative would not meet water quality standards. There is no discussion of which numeric targets were applicable or why it would not achieve them.

Additionally, it is not appropriate to eliminate an alternative from consideration just because it does not meet all of the project objectives. To the contrary, CEQA provides that an environmental document should "focus on alternatives to the project which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly." (14 C.C.R. §15126(b).) This standard provides guidance for the consideration of project alternatives required of the SED. Indeed, the opposite conclusion would invalidate the entire purpose of considering project alternatives in the first place. Thus, the partial TMDL alternative should have been considered in the SED.

ii. The Use Of SQO Rather Than ERLs

The use of SQOs instead of ERLs as numeric targets for sediment. By using the SQO process, a site-specific numeric target can be developed for sediment and fish tissue. Effluent limits (WLAs and LAs) for storm water would be based on this site-specific target.

This alternative should be considered because it would fully meet the water quality objectives and goals of the TMDL while being more protective of the environment and resulting in less associated environmental impacts. The alternative would translate into more realistic and meaningful effluent limits for storm water and would allow more accurate identification of appropriate "hot spots" for management. As the Regional Board admits, in order to meet the proposed targets, approximately 38 million cubic yards of material (essentially the entire harbor) will need to be dredged. (Staff Report at p. 122, Table 7-3.) In comparison, approximately 2 million cubic yards will need to be dredged to meet SQO identified hot spots. (*Id.*) There is a considerable difference in the estimated amount of material that will need to be managed to meet water quality objectives. The use of site-specific targets for sediment and fish tissue will result in less dredging and fewer detrimental environmental impacts. Therefore, an alternative using SQOs or site-specific numeric targets should also be analyzed as a feasible alternative in the draft SED.

e. The SED Lacks Any Meaningful Analysis And Comparison Of Alternatives

Even assuming that the alternatives in the SED were reasonable, the SED lacks any meaningful evaluation or comparison of such alternatives. In the Environmental Checklist and accompanying impact discussions, only Alternative 1, the Regional Board's TMDLs, is addressed. There is no discussion of the impacts of either Alternative 2 or the no-project

alternative. Also, there is not any matrix or other approach to comparing the impacts of each alternative to the others. This deprives the public of any possibility of being informed about the differences between the alternatives and deprives the decision-makers of any possibility of making an informed decision, thus violating CEQA. Indeed, CEQA requires that if an alternative would "cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternative shall be discussed. . . ." (14 C.C.R. § 15126.6(e).)

f. The SED Must Be Revised And Recirculated For An Additional Public Review Period

i. CEQA Requirement To Recirculate

A lead agency is required to recirculate CEQA documents when significant new information is added to those documents after public notice is given of the availability of the draft documents for public review, but before certification. Recirculation is required when the CEQA document is changed in a way that deprives the public of a meaningful opportunity to comment on the substantial adverse environmental effect of the project or a feasible way to mitigate or avoid such an effect (including a feasible project alternative) that the project's proponents have declined to implement. "Significant new information" requiring recirculation includes, for example, a disclosure showing that:

> (1) A new significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented.
>
> (2) A substantial increase in the severity of an environmental impact would result unless mitigation measures are adopted that reduce the impact to a level of insignificance.
>
> (3) A feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the significant environmental impacts of the project, but the project's proponents decline to adopt it.
>
> (4) The draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded. (*Mountain Lion Coalition v. Fish & Game Commission*, 214 Cal.App.3d 1043 (1989).)

The rules regarding recirculation do not just apply to EIRs and MNDs, they also apply to substitute environmental documents prepared under certified regulation programs. (*Joy Road Area Forest & Watershed Association v. California Department of Forestry and Fire Protection,* 142 Cal.App.4th 656 (2006).)

ii. Recirculation Will Be Required Due To The Addition Of New Alternatives And Disclosure Of Additional Information

As explained previously, the SED is currently inadequate due to its failure to properly evaluate alternatives. When the Regional Board revises the SED to include additional alternatives, the inclusion of such alternatives will trigger the requirements to recirculate the document. The additional alternative suggested previously is likely to avoid or reduce significant environmental impacts disclosed in the SED. Therefore, if the Regional Board declines to adopt any additional alternatives, recirculation of the SED is still required. Furthermore, preparation of an adequate analysis pursuant to the appropriate checklist (Appendix A of Title 23, Division 3, Chapter 27) necessarily will present significant new information, and therefore recirculation will be required for this reason as well.

g. Conclusion As To CEQA Issues

In conclusion, for all of the reasons set forth above, the SED is inadequate and violates CEQA. In addition, as stated in the Port's comment table (attached to the February 22, 2011 comment letter), the SED also fails to adequately analyze the environmental impacts in several other resource areas. Without an accurate and detailed analysis of the environmental impacts of the proposed project, the proper mitigation measure to reduce such impacts cannot be identified. Therefore, the SED must be revised and recirculated for a new public review period before the Regional Board seeks to rely upon it. Failure to do so would deprive the public and decision makers of a meaningful understanding of the environmental impacts of the proposed TMDL program and its alternatives and would, therefore, be a violation of CEQA. The Port objects to the approval of the TMDL in its current form given the deficient environmental analysis, which fails to comply with CEQA in numerous respects.

C. The Port Was Denied Due Process

The Port has concerns regarding the hearing conducted by the Regional Board on May 5, 2011, related to the TMDL.

Given the monumental financial commitment at stake for the Port, the Port was not given a fair opportunity to fully address comments and receive clarification of comments made by other parties at the hearing. The Port was allowed to make a brief presentation, which occurred early at the hearing. During the course of the hearing, Regional Board staff made

comments that the Port believes are factually inaccurate, as follows: (1) staff members represented that the TMDL would not result in the dredging of the entire harbor; and (2) staff indicated that the linkage between measurements of toxicity in fish tissue and the remediation of sediments was firmly established.

Due to the fact that the Port is one of the primary entities affected by this TMDL, the Port was not provided with an adequate opportunity to meaningfully participate in this process. Government Code section 11346.8(a) states that "[i]f a public hearing is held, both oral and written statements, arguments, or contentions, shall be permitted. The agency may impose *reasonable* limitations on oral presentations" (emphasis added). The limitations on the Port's ability to present information to the Regional Board and receive clarification of staff and third party comments were not reasonable and deprived the Port of due process.

At the hearing, the Port requested an opportunity to address and receive clarification regarding the aforementioned comments made by Regional Board staff and others, but this request was denied. The California Code of Regulations provides that during quasi-legislative hearings held by the State and Regional Water Quality Control Boards: "[q]uestions from Board members, staff or legal counsel are in order at any time. Persons wishing to have prior evidence or comments clarified should request the Chairperson, presiding member, or hearing officer, to obtain the answer or clarification. The Chairperson, presiding member, or hearing officer, may allow additional answers to be given as appropriate. . . ." (23 Cal. Code Reg. §649.5.) The Port was not given the opportunity to address or seek clarification of the evidence presented by Regional Board staff or third parties, including Heal the Bay. Instead, the Port listened as erroneous evidentiary testimony was submitted to the Regional Board. This erroneous testimony ultimately contributed to the Regional Board adopting the TMDL. This denial of due process caused direct injury to the Port in that it led to the adoption of an excessively expensive TMDL that is not scientifically sound.

Beyond this, the rulemaking procedure set out in 23 California Code of Regulations, section 649, which the Regional Board utilized for the hearing, deprived the Port of due process. The adoption of the TMDL may not be proper subject matter for a quasi-legislative proceeding. In light of the substantial economic impact of this TMDL, the Port should have been given an opportunity to present evidence, address comments made by other parties at the hearing, and receive further clarification of those comments.

The Port is also concerned about the substantial eleventh-hour changes that were made to the Basin Plan Amendment late in the day at the hearing. Government Code section 11346.8(c) states:

> "No state agency may adopt, amend, or repeal a regulation which has been changed from that which was originally made available to the public pursuant

> to Section 11346.5 [setting out notice requirements for quasi-legislative hearings], unless the change is (1) non-substantial or solely grammatical in nature, or (2) sufficiently related to the original text that the public was adequately placed on notice that the change could result from the originally proposed regulatory action. If a sufficiently related change is made, the full text of the resulting adoption, amendment, or repeal, with the change clearly indicated, shall be made available to the public for at least 15 days before the agency adopts, amends, or repeals the resulting regulation. Any written comments received regarding the change must be responded to in the final statement of reasons required by Section 11346.9."

Substantial changes were adopted into the Basin Plan Amendment at the end of the hearing, just moments after they were made for the first time on the record without input by interested parties. The changes were recited orally and no documentation of such changes was provided by the Regional Board at the hearing. Government Code section 11346.8(c) requires the production of documentation indicating the proposed changes and a 15-day period in which comments to those changes can be made. The failure of the Regional Board to provide such notice potentially compromises the legality of these last minute changes to the Basin Plan Amendment.

We assume that the Regional Board will comply with the entire TMDL process again to the extent it attempts to revise any of the provisions in the TMDL. To the extent the Regional Board does not intend to do so and believes the language in the TMDL would allow the Regional Board to make changes without going through this process, the Port objects to any such language.

In short, the Port has serious reservations about the fairness of the hearing.

D. The TMDL May Not Comply With The Administrative Procedure Act

The California Administrative Procedure Act ("APA") requires a showing that any regulation adopted by the State meets the following standards: (1) necessity; (2) authority; (3) clarity; (4) consistency; (5) reference; (6) non-duplication. (Government Code § 11349.1.) The Port has concerns regarding the Regional Board's authority to impose historical remediation cleanup actions through the TMDL's Basin Plan Amendment. Furthermore, the Port questions the clarity of the TMDL, which attempts to impose numerous calculations, LAs and WLAs with calculations and means of compliance that are as much a mystery as is to whom they apply. The Regional Board has not made it clear how much dredging will occur, with estimates varying wildly. The TMDL documents also do not identify precisely which parties are responsible for various ongoing monitoring and reporting requirements. Statements to the contrary by the Regional Board to the effect that they have clarified the TMDL are blatantly incorrect. Finally, the TMDL is duplicative because it addresses the

remediation of legacy pollutants in the Harbor that have already been addressed through a CERCLA consent decree. Thus, because it lacks authority, clarity, and is illicitly duplicative, the TMDL violates the APA.

E. The TMDL Amounts To An Unconstitutional Unfunded Mandate

By imposing this new regulatory requirement, the Regional Boards is attempting to impose new programs and/or require a higher level of service of existing programs than are specifically mandated under the Clean Water Act or any federal regulations thereunder. The imposition of unfunded programs and mandates in the TMDL is inconsistent with the provisions of the California Constitution, specifically Article XIII B, Section 6, which requires a state agency which mandates a new program or a higher level of service to provide a subvention of funds to reimburse local governments for the costs of the program or increased level of service.

The TMDL does not fully consider the fiscal impact on the Port, especially considering the fiscal difficulties imposed on the Port by the current economic climate. The TMDL will require a substantial capital investment in a non-revenue-generating project at a scale that is above and beyond any previous capital investment, that individual agencies will have to fund despite the fact that the state will provide no funding mechanism nor any assistance, financial or otherwise, to the Port. The Port estimates that the TMDL will cost the Port and other regulated entities upwards of $9 billion for sediment remediation in greater San Pedro Bay and $500 million to $1.5 billion to treat storm water in the two ports over the next 10 years. (Attachments 9C and 11C.)

Article XIII B, Section 6 of the Constitution prevents the state from shifting the cost of government from itself to local agencies without providing a "subvention of funds to reimburse that local government for the costs of the program or increased level of service. . ." State agencies are not free to shift state costs to local agencies without providing funding, even if those costs were imposed upon the state by the federal government. If the state chooses to impose costs upon a local agency as a means of implementing a federal program, then those costs should be reimbursed by the state agency. *Hayes v. Commission on State Mandates* (1992) 11 Cal.App.4th 1564, 1593- 1594. If the state refuses to appropriate money to reimburse a city, the enforcement of the state mandate can potentially be enjoined by a court. *Lucia Mar Unified School District v. Honig* (1988) 44 Ca1.3d 830, 833-834.

The TMDL contains new programs and mandates imposed at the discretion of the Regional Board that go beyond the specific requirements of either the Clean Water Act or EPA's regulations implementing the Clean Water Act. Accordingly, these aspects of the TMDL constitute non-federal state mandates. (See *City of Sacramento v. State of California*, 50 Cal.3d 51, 75-76 (1990).) Furthermore, California's TMDL program was voluntarily assumed by the State, insofar as California had the option of allowing EPA to run the state's

303(d) program and declined that option. (See *Id.*) Accordingly, the Regional Board is incorrect that aspects of the TMDL do not amount to an unfunded state mandate because the TMDL program is a Federal program. (Comment Responses at pp. 62-63.) Indeed, the Court of Appeals has previously held that NPDES permit requirements imposed by the Regional Board under the Clean Water and Porter-Cologne Acts can constitute state mandates subject to claims for subvention. (*County of Los Angeles v. Commission on State Mandates*, 150 Cal. App. 4th 898, 914-16 (2007).)

The Regional Board also argues that the affected responsible parties have sufficient time to conduct planning and implementation activities, and to explore and select any necessary funding options, including loans, grants and revenue increases. Accordingly, the Regional Board states, without any citation to authority, that "the availability of such funding mechanisms precludes a claim for subvention." (Comment Responses at p. 63.) This is an incorrect statement of law. Time to plan plus the mere future possibility of obtaining funding from sources does not render a claim for subvention invalid. Such a rule would invalidate Article XIII B, Section 6, as it would preclude all subvention claims, as all unfunded state mandates could conceivably be funded by other means. (Cal. Const. Art. XIIIB, § 6.)

Finally, the Regional Board is incorrect that the TMDL's "requirements are not exclusive to municipalities, but apply with an even hand to all responsible parties, municipal and private alike." (Comment Responses at p. 63.) Though the TMDL affects both private and public entities, it would be manifestly false to say it provides blanket obligations that apply evenly to private and public entities alike. Rather, the TMDL imposes specific, costly requirements entirely unique to the Port and other impacted government agencies. Accordingly such requirements of the TMDL are ripe for a subvention claim under Article XIII, Section 6. (*County of L.A. v. Cal.*, 43 Cal. 3d 46, 49-50 (1987) ("the drafters [of Article XIII, § 6] and the electorate had in mind subvention for the expense or increased cost of programs administered locally and for expenses occasioned by *laws that impose unique requirements on local governments* and do not apply generally to all state residents or entities.").)

Accordingly, if the state wishes to impose this program, it needs to provide a means to pay for its implementation.

F. This TMDL May Not Be The Appropriate Regulatory Mechanism To Address Legacy Pollution In The Harbor

The Port questions whether this TMDL is essentially being used to engage in a Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) action. The purpose of a TMDL is to protect impaired water bodies by limiting the amount of a specified pollutant that can be discharged, or "loaded," into a water body from all sources. (*Pronsolino v. Nastri*, 291 F.3d 1123, 1127-1128 (9th Cir. 2002); 33 USC §§ 303(d)(1)(C), 1313(d)(1)(C) and (D); 40 C.F.R. §§ 130.2(g)-(i).) A TMDL is meant to

protect impaired water bodies against the future "loading" of specified pollutants. (*City of Arcadia v. State Water Resources Control Board*, 135 Cal.App.4th 1392, 1404 (2006).)

Nonetheless, a major component of this TMDL relates to the remediation of historic contamination of sediments already present in the Harbor. (See, e.g., Resolution R11-008 at ¶ 17; Basin Plan Amendment at 2.) The Harbor is described as a "reservoir of historically deposited pollutants" from myriad sources over the course of many decades. (Final Staff Report at 57.) The Regional Board determined that the sources potentially include storm water runoff from innumerable upstream sources, manufacturing, military facilities, fishing activities and facilities, wastewater and wastewater treatment plants, oil production facilities, shipbuilding and ship repair operations, port sources such as commercial vessels, port operations, and ships coming in and out of the Harbor. (Final Staff Report at 57.) DDT is a prime example of a pollutant for which the Port has not been a source, yet DDT is now found widespread in sediments throughout the Harbor.

There is a federal statute, the precise purpose of which is to remediate historically deposited contamination. It is not the Clean Water Act but CERCLA, which mandates "response actions" to "remedy" existing environmental hazardous waste contamination. (See 42 USC §§ 9601(23)-(25).) Instead of imposing a total maximum daily load of the enumerated contaminants for the Harbor, however, the TMDL could be interpreted in a manner that would essentially require a CERCLA response action to remediate historical contamination in the Harbor. CERCLA was designed precisely for this function; it applies liability only to responsible parties, allows responsible parties to seek cost recovery and contribution from other responsible parties, and allows for an equitable allocation of liability among responsible parties. (42 USC §§ 9607 (a)-(b), 9613.)

In response to this argument the Regional Board stated "compliance with TMDLs and related implementation plans does not constitute response action – either removal or remedial – and does not involve 'Response Costs,' as those terms are used in the [*Montrose* Consent Decree (discussed in further detail below)]." (Comment Responses at p. 3.) The Regional Board goes on to cite *City of Arcadia*, 135 Cal.App.4th at 1414-15, for the proposition that "[a] TMDL does not, by itself, prohibit any conduct or require any actions. Instead, each TMDL represents a goal that may be implemented by adjusting pollutant discharge requirements in individual NPDES permits or establishing nonpoint source controls..." (*Id.*)

A TMDL's proper regulatory function is to adjust pollutant discharge requirements from point sources and require non-point source controls to limit the amount of pollutants loaded into an impaired water body. By potentially requiring the remediation of contaminated sediments in the Harbor, the TMDL could be interpreted to impose a "response action" as defined by CERCLA insofar as such an action is defined to include "the clean up or removal of released hazardous substances from the environment." (42 USC § 9601(23).)

The Port takes its role as an environmental steward and trustee under the State Tidelands very seriously. However, the Port alone cannot shoulder the burden of mitigating the region's legacy of environmental contamination. Under CERCLA, such an effort would allow for the inclusion of all existing responsible parties and for the equitable allocation of liability to those entities on the basis of comparative fault. (See 42 USC §§ 9607 (a)-(b), 9613; *United States v. Atlantic Research Corp.*, 551 U.S. 128, 140 (2007).)

G. The TMDL Does Not Adequately Address The Fact That Certain Of Its Components May Have Been Funded By An Existing CERCLA Consent Decree

A primary component of the TMDL is the requirement to remove contaminated sediments from the harbors. (Basin Plan Amendment at 2.) Contaminated sediment work on certain parts the harbors and outlying waters to the west of the harbors was the precise subject dealt with by the Consent Decree entered in 1999 by the Environmental Protection Agency in the case *United States of America, et al. v. Montrose Chemical Corporation of California, et al.*, USDC Case No. CV 90-3122-AAH (JRx). The Consent Decree included a release of liability for "natural resource damages" under CERCLA or "any other federal, state, or common law." (Consent Decree at 30-31.) Natural resource damages are defined by the Consent Decree as including "restoration costs" and "response costs" with respect to any and all natural resources in and around the Superfund site's various "Operable Units." (Consent Decree at 26.) Furthermore, the Consent Decree includes a covenant not to sue or bring an administrative action for "natural resource damages" incurred in connection with the Montrose Superfund site. (Consent Decree at 42-43.)

The Port has already paid money into a fund maintained pursuant to the Consent Decree. This fund has thus far not been used for its purpose, the funding of the remediation of Harbor contaminants, as far as the Port is aware.

At the hearing, the Regional Board made last minute changes purportedly intended to address issues arising out of the Consent Decree. These changes only appear to provide a mechanism for the Executive Officer of the Regional Board to consider this Consent Decree in the future in determining whether to approve Contaminated Sediment Management Plans. The issues presented by the Consent Decree are not addressed by this minor modification.

H. The Regional Board Has Failed To Fully Consider The Economic Impact Of The TMDL

Water Code section 13000 mandates that the Regional Board's regulations must be "reasonable, considering all demands being made and to be made on those waters and the total values involved, beneficial and detrimental, economic and social, tangible and intangible." This general requirement to reasonably consider the economic ramifications of regulations applies with full force to the TMDL. Nevertheless, the Regional Board has failed

to fully and reasonably consider all the economic ramifications of the TMDL, which promises to have a multi-billion dollar impact.

Water Code section 13241 requires the Regional Board to consider a number of factors when adopting its regulations to achieve water quality objectives, including economic considerations. In the Resolution to the TMDL and the response to comments, however, the Regional Board has stated its belief that the standards set forth in section 13241 do not apply to the TMDL because the TMDL does not "establish" Water Quality Objectives (WQOs) but only "implements" those that have already existed. (Resolution at pp. 5, 6; Comment Responses at p. 6.) This argument is the same one that was most recently made by the State Board in *San Joaquin River Exchange Contractors Water Authority v. State Water Resources Control Bd,* 183 Cal.App.4th 1110, 1119- 1120 (2010). In that case, however, the Court of Appeal once again declined to hold that section 13241 does not apply to a TMDL.

Though the Court of Appeals in *San Joaquin River Exchange* noted that the distinction made by the State Board did have merit, it ultimately stated that it did not want to be accused of "splitting hairs" by distinguishing between WQOs that "established" water quality objectives and TMDLs that "implemented" them. (*Id.* at 1119.) Thus, instead of deciding the issue, the court instead found that the TMDL in question did consider the economic factors in section 13241 through a detailed analysis of each of the provision's requirements, including all of the economic considerations. (*Id.* at 1119-21.) This has been the same position other California courts, including the Supreme Court, have taken when considering whether section 13241 applies to TMDLs. *City of Arcadia v. State Water Resources Control Bd.*, 135 Cal.App.4th 1392, 1415 (2006) (refusing to accept State Board's argument that section 13241 did not apply to TMDL, instead siding with State Board because TMDL did comply with section 13241's requirements); *City of Burbank v. State Water Resources Control Bd.*, 35 Ca1.4th 613, 625 (2006) (holding that TMDLs complied with section 13241).

Thus, it would seem that the best course of action regarding this as-yet undecided issue would be to consider the factors in section 13241 in implementing the TMDL, as all the previous court cases that have addressed the issue have done. In considering the cost factors required by that statutory provision, the State Board should recognize that the TMDL constitutes a significant financial burden for the Port. As shown by the cost estimation study, Attachments 9C and 11C, the actual cost of implementation may be significantly higher than the Regional Board's estimates, despite their insistence otherwise. (Response to Comments at 7.) The estimates to comply with the TMDL as written in the harbor area alone are as high as $10 billion. Furthermore, with the proposed TMDL there are broad economic, social, and environmental impacts on the community that the Regional Board failed to consider. Final adoption of the TMDL requires a full economic analysis.

Furthermore, the TMDL contains numerous data collection requirements. These activities go beyond the requirements of EPA's regulations implementing the Clean Water Act. Any information collection demands mandated by federal regulations must be submitted for approval to the Office of Management and Budget under the provisions of the Paperwork Reduction Act. 44 U.S.C. §§ 3501 *et seq.*

Implementing the programs outlined in the TMDL would require the ports to collectively hire dozens of additional employees to implement these mandates. The Port does not believe that these additional burdens were contemplated by EPA, nor are they consistent with the requirements of the federal Paperwork Reduction Act. 44 U.S.C. §3507. Accordingly, these requirements are invalid for failure to comply with the Paperwork Reduction Act, the Clean Water Act, its implementing regulations, and the California Constitution.

It is not sufficiently clear from the TMDL documents and from subsequent comments made by Regional Board staff (RWQCB meeting related to the TMDL held February 7, 2011), which entities will ultimately be responsible for the implementation of remediation activities to achieve compliance in the harbor sediments. The impairments are the result of historic inputs into the harbor sediments from activities in the harbor and from activities upstream, throughout the watershed, that have resulted in contaminants being transported to the harbor and deposited in the sediments. Therefore, the Port is not solely responsible for the impairments and therefore should not be held solely responsible for remediating the sediments to address those impairments.

The Regional Board has completely failed to consider the indirect economic effects of the proposed plan, and in particular the potential for the substantial disruption of commerce in the nation's busiest port by a wide-scale dredging operation. The Regional Board did not address this issue in its response to comments, despite urging from commenters. This failure is substantial.

To reduce both costs and environmental impacts, the Regional Board used dredging volumes based on the SQO Part I hot spot analysis conducted by the Port, however, SQO Part 1 does not address PCBs and DDT (the fish issue) which are the drivers for determining what needs to be dredged. Because there is not a similar process for identifying PCB and DDT hotspots, the amount of dredging required for DDT and PCBs is 38 million cubic yards at a cost of $9 billion (not including eastern San Pedro Bay) based on the targets. The Regional Board has completely ignored this fact in both the SED and the purported cost estimates.

I. The TMDL Imposes Numerous Conditions That Do Not Constitute Maximum Daily Loads As Required By Law

In *Friends of the Earth v. EPA*, 446 F.3d 140 (D.C. Cir. 2006), the Court determined that the word "daily" in "total maximum daily load" means what it says: a TMDL is meant to impose

limitations on daily contaminant loadings and not on the basis of any other timeframe. The case involved a challenge to the Anacostia River TMDL for turbidity and dissolved oxygen. An environmental group challenged the adoption of the TMDL, arguing that the TMDL's *seasonal* and *annual* load targets for the discharge of oxygen-depleting pollutants were barred under the Clean Water Act. (*Id.* at 143.) The Court of Appeals agreed, holding that "[n]othing [in the language of the Clean Water Act] even hints at the possibility that EPA can approve total maximum "seasonal" or "annual" loads. The law says 'daily.' We see nothing ambiguous about this command." (*Id.* at 144.)

The TMDL contains numerous alleged LAs and WLAs that are not "daily" load targets, or even targets that are oriented toward any time frame. The prime examples of these derivations from legally proper TMDL "daily load" targets are this TMDL's "site specific cleanup criteria," the ERL-derived "sediment quality values," the numeric toxicity targets identified as "TUc," and, exactly like the deficient TMDL in *Friends of the Earth*, annual and concentration-based load allocations. (Basin Plan Amendment at pp. 29, 4, 2-3, 14, 17.) None of these measures constitute true "daily loads." Accordingly, they cannot be included in the TMDL.

In response, the Regional Board cites *Natural Resources Defense Council v. Muszynski*, 268 F.3d 91, 99 (2d Cir. 2001), wherein the Second Circuit Court of Appeals held, contrary to *Friends of the Earth*, that a TMDL could potentially be expressed by a measure of mass per time of something greater than a single day. But even if this case provides support for load allocations expressed in timeframes greater than one day, it lends no support to the aforementioned load targets based on "site specific cleanup criteria," the ERL-derived "sediment quality values," the numeric toxicity targets identified as "TUc," and concentration-based load allocations. (Basin Plan Amendment at pp. 29, 4, 2-3, 14, 17.) These requirements account for the majority of load allocation requirements in the TMDL and are completely unsupported by statutes or case law.

J. Conclusion

The Port respectfully requests that the TMDL not be incorporated into the Basin Plan until such time as the Regional Board and affected stakeholders can conduct a thorough scientific study on the effectiveness of the Regional Board's plan with respect to toxic pollutants in the Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters. Requiring stakeholders to comply with this plan without addressing the technical, legal, and economic issues with this TMDL would be an inefficient and unproductive use of public resources.

The Port is committed to dedicating the resources required to properly address and mitigate our fair share of legitimate issues associated with toxic pollutants in the waters in question. Prior to dedicating the significant amount of resources required for this undertaking, however, the Port asks that the State Board take the time to ensure that the prescribed remedy

is scientifically grounded to reasonably assure achievable results. The Port does not believe that the TMDL as it is presently written sufficiently addresses the assessed water quality impairments associated with toxic pollutants. In contrast, implementing the TMDL as written may result in greater environmental harm than exists under current conditions.

For this TMDL to be scientifically and legally sound and technically and economically feasible, the Port recommends that the State Board remand the TMDL to the Regional Board to adopt a TMDL that:

- Establishes a scientifically valid TMDL for sediment protection (source control) based on sediment endpoints (targets) derived through Sediment Quality Objectives (SQO) Phase 1 process for direct effects and PV Shelf cleanup goals as interim targets for bio-cumulative pollutants until site specific studies and/or the implementation of SQO Phase 2 can be established through a regional assessment that is inclusive of all sources of loading.

- Does not include fish tissue targets until a regional assessment that is inclusive of all coastal waters for which fish tissue are impaired (Santa Monica to Seal Beach) is conducted to ensure all potential sources of loading to fish tissue, including the PV Shelf, are evaluated.

- Includes an SED that is in full compliance with CEQA, ensuring that a full and complete environmental analysis of project impacts and alternatives was conducted, providing the decision makers, other regulatory agencies, and the public with the required understanding of whether the environmental benefits of the proposed TMDL outweigh the significant and unavoidable environmental impacts.

Given the obvious technical and legal inadequacies with this TMDL, absent a full reassessment of this TMDL, at a minimum the State Board should direct the Regional Board refrain from incorporation of the targets, WLAs and LAs into permits until after special studies can be completed to establish scientifically sound targets, interim or otherwise. In addition the State Board should ensure that all regional stakeholders are held accountable for all sediment remediation.

For all of the foregoing reasons, the Port respectfully requests that the State Board remand this TMDL to the Regional Board.

Very truly yours,

Richard D. Cameron
Director of Environmental Planning

Enclosure(s)

cc: Peter Kozelka, U.S. EPA, Region 9 (letter only via email, letter and CD via UPS)
Sam Unger, RWQCB (letter only via email, letter and CD via UPS)
L.B. Nye, RWQCB (letter only via email, letter and CD via UPS)
Tony Arevalo, City of Long Beach (letter only via email)
Dominic Holzhaus, City of Long Beach (letter only via email)

Attachment Summary

This TMDL comment package for the SWRCB includes the following in hard copy and electronically:

1. *October 2011, Port of Long Beach and Port of Los Angeles letters to State Board.*
2. *May 5, 2011 Port of Long Beach and Port of Los Angeles letters to RWQCB with comments.* These letters and comments were provided to the RWQCB on May 5, 2011. The RWQCB provided no response; therefore, the letter and all attached materials are provided here.
3. *Port of Long Beach and Port of Los Angeles testimony to RWQCB during May 5, 2011, RWQCB hearing.*
4. *February 22, 2011 Port of Long Beach and Port of Los Angeles letters to RWQCB with comments.* These letters and comments were provided to the RWQCB.
5. *Resubmission of February 2011 technical comments on RWQCB's response.* The comments provided to the RWQCB were largely left unaddressed. The stakeholders are required to provide a statement noting that the comments were not properly addressed or it will be assumed that the comments were addressed appropriately. Our responses detail which elements of the comment were not addressed and why the original comment is still relevant. The following technical comments are provided:
    a. Port of Long Beach Responses to All Comments
    b. Port of Los Angeles Responses to All Comments
    c. Table 1: Comments to the Basin Plan Amendment
    d. Table 2: Comments to the TMDL Staff Report
    e. Table 3: Comments to the TMDL Staff Report Appendices
    f. Table 4: Comments to the SED (CEQA)
    g. Recommended Rewrites
    h. Attachments 1 through 12: These documents provide materials and special analyses to support the comments provided.
6. *Port of Long Beach and Port of Los Angeles comments to RWQCB Staff testimony during May 5, 2011, RWQCB hearing.* New material from RWQCB staff was provided to State Board members without the opportunity for input from stakeholders. The ports will be provided comments on specific lines of testimony that we believe are false and potentially influenced the Board's decision to approve the TMDL. Specific testimony of concern regards the following:
    a. Fish Tissue Linkage to Sources and Recovery
    b. Financial Impact from Dredging to Satisfy the TMDL

7. *Port of Long Beach and Port of Los Angeles comments to RWQCB responses to the peer-review comments.* In February 2011, the USEPA provided peer-review comments on the TMDL. In May, 2011, the RWQCB responded to those comments. The response to comments were reviewed and evaluated to determine of RWQCB Staff.