

THE CITY OF SAN DIEGO

November 19, 2014

VIA EMAIL TO: Laurie.Walsh@waterboards.ca.gov

Laurie Walsh, Water Resource Control Engineer
San Diego Regional Water Quality Control Board
2375 Northside Drive, Suite 100
San Diego, CA 92108

Subject: Comment Letter –Tentative Order No. R9-2015-0001, Place ID:658018LWalsh

Dear Ms. Walsh:

The City of San Diego (City) appreciates the opportunity to provide comments on the Amendment to the Regional Municipal Separate Storm Sewer System (MS4) Permit for the San Diego Region (Tentative Order No. R9-2015-0001, herein referred to as the “Draft Amendments”) to incorporate the County of Orange, several Incorporated Cities of South Orange County, and the Orange County Flood Control District as Copermittees. The City is committed to protecting and improving water quality in the San Diego Region. From this perspective, the City provides the following comments below. More detailed comments are included in Attachment 1.

- *The City supports the proposed changes to the Areas of Special Biological Significance and hydromodification management provisions.*
- *The Draft Amendments should include revisions to Provision A to establish a linkage between the implementation of Water Quality Improvement Plans (WQIPs) and compliance with the Receiving Water Limitations and Discharge Prohibitions.* The City is expending significant resources to develop and implement WQIPs that include timely implementation of strategies, control measures, and other actions to make progress towards attainment of water quality standards. Therefore, the City requests that the Draft Amendments include implementation of a WQIP as a valid mechanism for demonstrating

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compliance with Receiving Water Limitations and Discharge Prohibitions. The disconnect in the MS4 Permit between the WQIPs and compliance with Receiving Water Limitations raises several significant issues: (1) it undermines the stated intent of the Regional Board to encourage prioritization of pollutants; (2) it requires resource-intensive watershed planning efforts that have no benefit to the Copermittees' ability to comply with the Receiving Water Limitations and Discharge Prohibitions; and (3) it calls into question whether WQIPs are properly required under the MS4 Permit.

- *The Draft Amendments should include a definition of Prior Lawful Approval to clarify the Regional Board's intent in allowing some new development projects to comply with prior requirements.* The current language in the MS4 Permit is unclear. A definition of Prior Lawful Approval should: (1) Provide a clear, bright line; (2) Provide a backstop to ensure that projects with older approvals comply with new requirements unless those approvals confer vested rights; (3) Protect vested rights; and (4) preserve Copermittees' land use authority.
- *The Los Penasquitos Sediment TMDL requirements in the Draft Amendments should be modified to ensure consistency with the TMDL.* The City supported and led the third-party TMDL process, and the resulting TMDL was approved by the Regional Board with broad support from all stakeholders. The City is concerned, however, that the Draft Amendments are inconsistent with the TMDL and place a disproportionate burden on Phase I MS4 Copermittees. In the attached table, the City recommends revisions to reconcile incorrect incorporation of interim and final compliance targets, omission of several compliance pathways identified in the TMDL, and the assignment of the entire compliance obligation to Phase I MS4 Copermittees without acknowledging the requirements of other Responsible Parties named in the TMDL.
- *MS4 Permit Attachment E should be modified to allow individual jurisdictional compliance with the TMDLs.* The City is committed to protecting and improving water quality and achieving compliance with TMDLs via the implementation of Water Quality Improvement Plans. However, language throughout Attachment E appears to preclude any Copermittee from using the WQIP compliance pathway unless all other Copermittees also are in compliance. The City has no authority to compel other Copermittees to comply and cannot be held liable for the actions or inactions of other agencies. Under federal Clean Water Act regulations that have been incorporated into the MS4 Permit, a Copermittee is responsible only for conditions relating to the discharges for which it is an operator.

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Thank you for your time and consideration of these comments. If you have questions, please contact Ruth Kolb at (858) 541-4328 or at rkolb@sanidiego.gov.

Sincerely,



Drew Kleis
Deputy Director

DK\rk

Attachments: 1. City of San Diego Comment Table Regarding September 18, 2014 Revisions to
Order No. R9-2013-0001
2: Resolution No. R9-2012-0033 and Attachment A

cc: Tony Heinrichs, Deputy Chief Operating Officer
Kris McFadden, Transportation & Storm Water Department Director
Heather Stroud, Deputy City Attorney
Ruth Kolb, Program Manager, Transportation & Storm Water Department
Sumer Hasenin, Senior Engineer, Transportation & Storm Water Department
Mike Hansen, Director of Land Use and Environmental Policy, Office of the Mayor

Attachment 1: City of San Diego Comment Table Regarding September 18, 2014 Revisions to Order No. R9-2013-0001
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Permit Section	Permit Page (Original)	Section Title	Reason for Proposed Changes/Comments	Proposed Changes
General Comment	NA	NA	NA	The proposed amendments do not address any of the issues raised in the City's Petition for Review of San Diego Regional Water Quality Control Board (Regional Board) Order No. R9-2013-0001, filed on June 7, 2013. The City does not waive any of those arguments, and urges the Regional Board to address those issues as part of this permit amendment.
A. Prohibitions and Limitations				
A	13-16	Prohibitions and Limitations	Current permit language lacks linkage between Water Quality Improvement Plans (WQIPs) and compliance. Problems caused by current language: (1) it undermines the stated intent of the Regional Board to encourage prioritization of pollutants; (2) it requires resource-intensive watershed planning efforts that have no benefit to the Copermittees' ability to comply with the Receiving Water Limitations and Discharge Prohibitions; and (3) it calls into question whether WQIPs are properly required under the MS4 Permit. The City envisions WQIPs as the foundation for a BMP-based compliance approach for the Discharge Prohibitions and Receiving Water Limitations. However, the language in Provision A does not clearly link compliance with the iterative process set forth in the WQIPs. In essence, the language suggests that even if Copermittees expend significant resources to develop and fully implement WQIPs that are progressing toward attainment of water quality standards, they may still be found to be out of compliance for single exceedances. The iterative process is a fundamental aspect of MS4 programs, as envisioned by State Water Board Order 99-05 and later reconfirmed in Order WQ 2001-15 (BIA Order), and is the mechanism by which MS4 Copermittees should <u>demonstrate</u> compliance (i.e., implementation of the iterative process equals compliance). The WQIPs now provide a mechanism to "raise the bar" with regard to the detail and quantitative analyses used to identify pollutant sources, implement BMPs to address those sources, and increase the number or size of BMPs until water quality standards are attained. However, as Provision A.4 is written, the envisioned strategic compliance process falls short, and the WQIPs are simply documents that do not appear to have a meaningful linkage to MS4 compliance. An unintended but potentially significant consequence of this compliance uncertainty is that the City and other Copermittees may experience increased difficulty securing program funding because even substantial increases in funding would not lead to achieving	Revise Provision A to allow implementation of WQIPs to demonstrate compliance with Receiving Water Limitations and Discharge Prohibitions.

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			compliance.	
B. Water Quality Improvement Plans				
B.1	17	Watershed Management Areas	This NPDES Permit is applicable to discharges from Copermittee MS4s as stated in Section A.1. Discharges from other NPDES permits are governed by requirements within those permits.	Modify Section B.1 as follows: The Copermittees must develop a WQIP <u>for their MS4 discharges within</u> each of the Watershed Management Areas in Table B-1.
E. Jurisdictional Runoff Management Programs				
E	93	Structural BMP Approval and Verification Process	A definition of “prior lawful approval” is necessary. Regional Board counsel has indicated that “prior lawful approval” was intended to refer to an approval that conferred a vested right to proceed without complying with the new development requirements of the 2013 MS4 Permit. However, some stakeholders have argued that any approval is sufficient. The current permit language is unclear. A definition is necessary to ensure that the standard the Copermittees will be held to by the Regional Board is expressed in the permit language. Permit language should address the following: 1. Provide a clear, bright line of what constitutes prior lawful approval; 2. Provide a back stop to ensure that projects with older approvals that do not confer vested rights comply with new requirements; 3. Protect vested rights; and, 4. Preserve Copermittees’ land use authority.	Define “prior lawful approval.” This could be done in a footnote.
E	93	Structural BMP Approval and Verification Process	Including the date the BMP Design Manual will be updated would provide additional clarity and avoid having to read multiple sections of the Permit to determine the referenced date.	(a) Each Copermittee must require and confirm that, for all Priority Development Project applications that have not received prior lawful approval by the Copermittee by the time the BMP Design Manual is implemented <u>updated pursuant to Provision E.3.dDecember 24, 2015</u> , the requirements of Provision E.3 are implemented. For project applications that have received prior lawful approval before the BMP Design Manual is implemented <u>updated pursuant to Provision E.3.dDecember 24, 2015</u> , the Copermittee may allow previous land development requirements to apply.
Attachment A. Discharge Prohibitions and Special Protections				
A	A-5 to A-6	Compliance Plans for Inclusion in Storm Water Management Plans	The redline strikeout version of draft amendment indicates that the entire Area of Special Biological Significance (ASBS) section has been changed, but the proposed resolution indicates that the only change that was made was to reflect State Board Resolution 2012-0031, which changed the deadline for certain provisions from 4 to 6 years.	Support change to Attachment A, section 2.A.2.d.2.

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Permit Section	Permit Page (Original)	Section Title	Reason for Proposed Changes/Comments	Proposed Changes
Attachment E. Specific Provisions for Total Maximum Daily Loads Applicable to Order No. R9-2015-0001				
Attachment E, Sections 1.b(3)(d) 1.b(3)(d)(iv) 1.b(3)(d)(v) 2.b(3)(d)(iv) 2.b(3)(d)(v) 3.b(3)(d)(iv) 3.b(3)(d)(v) 4.b(3)(d) 4.b(3)(d)(iv) 4.b(3)(d)(v) 5.b(1)(a) 5.b(3)(d) 5.b(3)(e) 5.b(3)(f) 4.b(3)(g) 4.b(3)(g)(iv) 4.b(3)(g)(v) 5.c(1)(b)(iv) 5.c(1)(b)(v) 5.c(1)(b)(vi) 5.c(1)(b)(vii) 5.c(1)(b)(viii) 6.b(2)(b)(ii) 6.b(3)(d) 6.b(3)(e) 6.b(3)(f) 6.b(3)(f)(iv) 6.b(3)(f)(v) 6.c(2)(a)(i) 6.c(2)(a)(ii) 6.c(3)(d) 6.c(3)(e) 6.c(3)(f) 6.c(3)(g) 6.c(3)(h)	E-4 E-8 E-11 E-16 E-19 E-23 E-24 E-25 E-34 E-36 E-37 E-41 E-42 E-47	Final TMDL Compliance Determination	Compliance language requires all Copermittees to implement a WQIP for any of the Copermittees to utilize the WQIP based compliance approach for TMDLs. Copermittees have no authority to compel other Copermittees to implement BMPs and should not be held liable for the actions or inactions of others. Under 40 C.F.R. §§ 122.26(a)(3)(vi) and 122.26(b)(1), a Copermittee is responsible only for conditions relating to the discharges for which it is the operator.	Revise Attachment E Provisions to allow independent jurisdictional compliance. For example, revise Provisions E.1.b(3)(d) as follows: (d) The Responsible Copermittees <u>Copermittee</u> develop <u>develops</u> and implement <u>implements</u> the Water Quality Improvement Plan as follows: (iv) The Responsible Copermittees <u>Copermittee</u> continue <u>continues</u> to implement the BMPs required under Specific Provision 1.b.(2)(c), AND (v) The Responsible Copermittees <u>Copermittee</u> continue <u>continues</u> to perform the specific monitoring and assessments specified in Specific Provision 1.d, to demonstrate compliance with Specific Provisions 1.b.(3)(a), 1.b.(3)(b) and/or 1.b.(3)(c).
Attachment E, 7.b.2	N/A	Final Effluent Limitations	The Waste Load Allocation is incorrectly stated as an annual load. Instead, the Waste Load Allocation was calculated as loading from the critical wet period of Oct. 1 to Apr. 30, not the entire year. (TMDL Staff Report, Table 6). This error in the MS4 permit makes the Waste Load Allocation, and consequently, the	Modify Table 7.1 heading as follows: Final Effluent Limitations as Expressed as <u>Wet Season (October 1 to April 30) Loads</u>

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			Final Effluent Limitation, inconsistent with the TMDL. Some sediment loading may occur during the dry season (May 1 to Sept. 30) for Los Penasquitos Creek (historically flows year round) and for other creeks during significant rainfall events.	<u>from Responsible Parties</u> to Los Peñasquitos Lagoon Constituent Effluent Regarding “Responsible Parties” above, see comment below.
Attachment E, 7.b.2	E-53	Final Effluent Limitations	It is not appropriate to express a Waste Load Allocation that applies to all responsible parties under the TMDL as a numeric effluent limitation that applies only to the Copermittees. The result is that the other responsible parties would have zero allocation of sediment, but the recently adopted Caltrans, Phase II, and Industrial storm water permits do not subject those responsible parties to any numeric effluent limitations: - The General Industrial Permit adopted by the State Board on April 1, 2014, includes the general statement that “discharges addressed by this General Permit are considered to be point source discharges, and therefore must comply with effluent limitations that are consistent with the assumptions and requirements of any available waste load allocation for the discharge prepared by the state and approved by USEPA.” However, the General Industrial Permit has not yet incorporated specific TMDL compliance provisions, let alone effluent limitations. - Similarly, the General Phase II Permit adopted by the State Board on February 5, 2013, states generally that “discharges from Small MS4s are point source discharges subject to TMDLs,” and further states that “this Order requires Permittees to comply with all applicable TMDLs.” However, the TMDL provisions in Attachment G of the Phase II Permit do not impose any effluent limitations on Phase II MS4s. - The Caltrans storm water permit amendments to incorporate TMDL requirements, dated July 1, 2014, allow for BMP-based compliance instead of imposing numeric effluent limitations. Because of the disparity in the TMDL provisions in these NPDES permits, it is important to separate allocations for Caltrans, Phase II, and Industrial storm water permits so that future revisions of those permits can responsibly address their portion of the Wasteload Allocation.	Two changes are necessary to acknowledge the sediment loading contributions of other Responsible Parties listed in the TMDL: - The sediment loads stated as the final effluent limitation in Table 7.1 should include only the load specific to storm water runoff from Copermittees, and should not include loads associated with runoff from other Responsible Parties with separate NPDES permits (Resolution No. R9-2012-0033, Attachment A, Page 5 lists the other Responsible Parties as Phase II MS4 permittees, Caltrans, and the General Construction and General Industrial Storm Water NPDES permittees). Similar to methods used by Regional Board staff in other TMDLs, this separation of load can be calculated based on land area of each Responsible Party in the watershed. The percentage of the entire watershed area associated each Responsible Party’s area can be used as a multiplier times the entire Wasteload Allocation to determine individual sub-allocations. AND - Table 7.1 should include the footnote: “Responsible Parties include the following: Phase I Municipal Separate Storm Sewer Systems (MS4s) Copermittees (the County of San Diego, City of San Diego, City of Del Mar, and the City of Poway), Phase II MS4 permittees, and general construction storm water NPDES permittees, and general industrial storm water NPDES

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				permittees as presented in Resolution No. R9-2012-0033 Attachment A, page A-5.”” - Modify Section 7.b.(2)(c) as follows: (ii) The Responsible Copermittees must implement BMPs to achieve the receiving water limitations under Specific Provision 7.b.(2)(a) <u>or the Copermittee portion of</u> effluent limitations under Specific Provision 7.b.(2)(b) for Los Peñasquitos Lagoon.
Attachment E, Section 7.b(3)(a)	E-54	Final TMDL Compliance Determination	This provision is inconsistent with the TMDL for three reasons: (1) It appears to hold the Phase I Copermittees wholly responsible for Lagoon restoration, instead of recognizing that the other Responsible Parties named in the TMDL are also responsible for meeting this goal. R9-2012-0033 and TMDL Staff Report state that all watershed dischargers are responsible for achieving the Lagoon restoration target. (2) Restoration of 346 acres is not required under the TMDL. The requirement is to achieve 346 acres total of tidal and non-tidal salt marsh habitat. Based on the 2010 vegetation survey, there are currently 262 acres of salt marsh vegetation present, so 84 acres would need to be restored to achieve a total of 346 acres. (3) Language for final compliance determination is not consistent with TMDL (see page A-16 and footnote 1 in Resolution. R9-2012-0033, Attachment A).	Modify Provision 7.b.(3) as follows: (3) Final TMDL Compliance Determination Compliance with the final WQBELs, on or after the final TMDL compliance date may be demonstrated via one of the following methods: (a) <u>Successful restoration of Demonstration that there are a combined total of 346 total acres of tidal and non-tidal salt marsh vegetation in Los Peñasquitos Lagoon or demonstration that implementation actions are active and/or affecting 346 acres with continued monitoring to ensure target achievement; OR</u>
Attachment E, Section 7.b(3)(b)	E-54	Final TMDL Compliance Determination	The WQIP-based compliance option appears to reference the wrong section in two places.	Modify Section 7.b(3)(b) as follows: (b) The Responsible Copermittees must develop and implement the Water Quality Improvement Plan as follows: ... (ii) Include an analysis in the Water Quality Improvement Plan, utilizing a watershed model or other watershed analytical tools, to demonstrate that the implementation of the BMPs required under Provision 7.b.(2)(c)(ii) achieves compliance with Specific Provision 7.b.(32)(a),

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				... (v) The Responsible Copermittees must continue to perform the specific monitoring and assessments specified in Specific Provision 7.d to demonstrate compliance with Specific Provision 2.b.(32)(a).
Attachment E, Section 7.b(3)(b)	E-54	Final TMDL Compliance Determination	Final compliance options should be consistent with other TMDLs incorporated into the MS4 Permit in Attachment E. The language as currently drafted omits several compliance options that should be included.	Modify Section 7.b.(3) as follows: (b)(v) . . . : <u>OR</u> (c) <u>There is no direct or indirect discharge from the Responsible Copermittee's MS4 to the receiving water; OR</u> (d) <u>The final receiving water limitation under Specific Provision 7.b.(2)(a) is met.</u>
Attachment E, Section 7.c	E-55	Interim TMDL Compliance Requirements	The interim compliance requirements are inconsistent with the TMDL, which allows MS4 Permittees to "show progress in improving Lagoon conditions consistent with the specified targets" as an alternative to sediment load reductions (see Los Peñasquitos Lagoon Sediment TMDL Implementation Compliance Schedule on pages A-17 to A-19 in Regional Board Resolution R9-2012-0033, Attachment A).	Modify Section 7.c. as follows: c. INTERIM TMDL COMPLIANCE REQUIREMENTS <u>Compliance with the interim WQBELs, on or after the interim TMDL compliance dates, may be demonstrated via one of the following methods:</u> (a) <u>The Responsible Copermittee shows progress in improving the Lagoon conditions towards Specific Provision 7.b.(2)(a); OR</u>
Attachment E, Section 7.c	E-55	Interim TMDL Compliance Requirements	Interim compliance options should be consistent with other TMDLs incorporated into the MS4 Permit in Attachment E. The language as currently drafted omits several compliance options that should be included.	Further modify Section 7.c. as follows: (b) <u>There is no direct or indirect discharge from the Responsible Copermittee's MS4 to the receiving water; OR</u> (c) <u>The final receiving water limitation under Specific Provision 7.b.(2)(a) is met; OR</u> (d) The Responsible Copermittees must comply with the interim WQBELs, expressed as annual loads, by December 31 of the interim compliance year set forth in Table 7.2; There are no exceedances of the

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				<u>Copermittee portion of interim effluent limitations under Table 7.2 at the Responsible Copermittee's MS4 outfalls; OR</u> <u>(e) The Responsible Copermittee has submitted and is fully implementing a Water Quality Improvement Plan, accepted by the Regional Board, which provides reasonable assurance that the Copermittee portion of interim TMDL compliance requirements will be achieved by the interim compliance date.</u>
Attachment E, Table 7.2	E-55	Interim TMDL Compliance Requirements	For consistency with the Table 7.1 final effluent limitation expressed as a load, "associated percentage of reduction" should be removed from Table 7.2 for interim WQBELs. The percentages in Table 7.2 are not total percent reductions expected of the existing load, but are instead percentages of attaining the 67% load reduction to meet the waste load allocation. Therefore, the percentages listed in Table 7.2 lack context and are misleading because they indicate that substantial load reductions are required to meet interim compliance dates.	Delete Table 7.2, third column.
Attachment E, Table 7.2	E-55	Interim TMDL Compliance Requirements	The interim WQBELs were incorrectly stated as annual loads. Instead, the Waste Load Allocation and associated interim load reductions were calculated as loading from the critical wet period of Oct. 1 to Apr. 30, not the entire year. (TMDL Staff Report, Table 6). This error in the MS4 permit makes the Waste Load Allocation, and consequently, the Interim Effluent Limitations, inconsistent with the TMDL.	Modify Section 7.c as follows The heading on column 2 of Table 7.2 should be changed to "Interim Effluent Limitations (tons/year wet season)"
Attachment E, Table 7.2	E-55	Interim TMDL Compliance Requirements	It is not appropriate to express interim loads that apply to all responsible parties under the TMDL as a numeric effluent limitation that applies only to the Phase I Copermittees. The result is that the other responsible parties would have zero allocation of sediment, but the recently adopted Caltrans, Phase II, and Industrial storm water permits do not subject those responsible parties to any numeric effluent limitations (see detailed summary of the TMDL provisions of these permits above). It is important to separate loads for Caltrans, Phase II, and the General Construction and Industrial storm water permits so that future revisions of those permits can responsibly address their portion of interim load reductions.	Two changes are necessary to acknowledge the sediment load contributions of other Responsible Parties listed in the TMDL: The sediment loads stated as interim effluent limitations in Table 7.2 column 2 should include only loads specific to storm water runoff from Copermittees, and should not include loads associated with runoff from other Responsible Parties with separate NPDES permits (Resolution No. R9-2012-0033 lists these Responsible Parties as Phase II MS4 permittees, Caltrans, and the General Construction and General Industrial Storm Water NPDES permittees). Similar to methods used by Regional Board staff

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				in other TMDLs, this separation of load can be calculated based on land area of each Responsible Party in the watershed. The percentage of the entire watershed area associated each Responsible Party's area can be used as a multiplier times the entire Waste Load Allocation to determine individual sub-allocations. AND Table 7.2 should include the footnote: "Responsible Parties include the following: Phase I Municipal Separate Storm Sewer Systems (MS4s) Copermittees (the County of San Diego, City of San Diego, City of Del Mar, and the City of Poway), Phase II MS4 permittees, and general construction storm water NPDES permittees, and general industrial storm water NPDES permittees as presented in Resolution No. R9-2012-0033 Attachment A, page A-5."
Attachment E, Section 7.d(3)(c)	E-56	Assessment and Reporting Requirements	Provision 7.d(3)(c) states that the first reported average shall be calculated using the data collected in years 2014-2015, 2015-2016, and 2016-2017. This would require Copermittees to start Sediment TMDL compliance monitoring before the WQIP is completed and accepted by the Regional Board. The Sediment TMDL Compliance Monitoring is part of the Los Peñasquitos Monitoring and Assessment Program because the WQIP is serving as the Sediment Load Reduction Plan. This provision should be modified to require monitoring to start the first full wet season after the WQIP is accepted by the Regional Board.	(c) For assessing and determining compliance with the final effluent limitations under Specific Provision 7.b.(2)(b), the Responsible Copermittees must use the data acquired under Specific Provision 7.d.(1) to estimate sediment loading into Los Peñasquitos Lagoon. Sediment loading must be evaluated using a 3-year, weighted rolling average. The first reported average shall be calculated using data collected in the <u>3 years</u> 2014-15, 2015-2016, and 2016-2017 <u>wet seasons following Regional Board acceptance of the WQIP.</u>

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION**

RESOLUTION NO. R9-2012-0033

**A RESOLUTION AMENDING
THE WATER QUALITY CONTROL PLAN FOR THE SAN DIEGO BASIN (9) TO
INCORPORATE THE TOTAL MAXIMUM DAILY LOAD FOR
SEDIMENTATION IN LOS PEÑASQUITOS LAGOON**

WHEREAS, The California Regional Water Quality Control Board, San Diego Region (San Diego Water Board), finds that:

- 1. Water Quality Control Plan:** The federal Clean Water Act¹ (CWA) and state Porter-Cologne Water Quality Control Act² require the San Diego Water Board to establish water quality standards for each waterbody within its region. The water quality standards for coastal waters in the San Diego Region are established in the *Water Quality Control Plan for the San Diego Basin (9)* (Basin Plan) and in the *Water Quality Control Plan for Ocean Waters of California* (Ocean Plan). Water quality standards include beneficial uses, water quality objectives (WQOs), and the antidegradation policy. The Basin Plan contains programs of implementation to achieve water quality standards.³ Waterbodies that do not meet water quality standards are considered impaired.
- 2. Clean Water Act Section 303(d) List of Water Quality Limited Segments:** Pursuant to section 303(d) of the Clean Water Act, each state is required to identify impaired waters and establish a total maximum daily load (TMDL) at a level necessary to implement the applicable water quality standards.⁴ Each state is required to develop a list that identifies and establishes a priority ranking for those waters requiring TMDLs.⁵ The list is known as the CWA section 303(d) List of Water Quality Limited Segments or more commonly, the 303(d) List. For the specific purpose of developing information, states are also required to estimate TMDLs for all other waters that are not identified on the 303(d) List.⁶

¹ Clean Water Act section 303; U.S. Code section 1313

² California Water Code section 13240

³ See Water Code section 13050(j). A "Water Quality Control Plan" or "Basin Plan" consists of a designation or establishment for the waters within a specified area of all of the following: (1) Beneficial uses to be protected, (2) Water quality objectives and (3) A program of implementation needed for achieving water quality objectives.

⁴ Clean Water Act section 303(d)(1)(C); U.S. Code section 1313(d)(1)(C)

⁵ Code of Federal Regulations Title 40 section 130.7(b)(1)

⁶ Clean Water Act section 303(d)(3) states that "For the specific purpose of developing information, each State shall identify all waters within its boundaries, which it has not identified under paragraph (1)(A) and (1)(B) of this subsection and estimate for such waters the total maximum daily load with seasonal variations and margin of safety..."

Resolution No. R9-2012-0033

- 3. Purpose and Definition of Total Maximum Daily Load (TMDL):** The purpose of a TMDL is to restore an impaired waterbody to water quality conditions under which applicable water quality standards can once again be attained. This is done by establishing and implementing a TMDL for the impairing pollutant. Generally, when the TMDL, numeric targets and associated pollutant allocations are attained, water quality standards in the waterbody should be restored. A TMDL is both (1) a calculation of the maximum loading capacity of the impaired waterbody for each impairing pollutant; and (2) an implementation plan to guide actions necessary to cleanup the waterbody and restore water quality standards.
- 4. TMDL Basin Plan Amendment:** Upon establishment and approval of TMDLs, the state is required to incorporate TMDLs into the state water quality management plan.⁷ Along with various applicable statewide water quality control plans, the Basin Plan for the San Diego Region serves as the water quality management plan for the watersheds under the jurisdiction of the San Diego Water Board. Incorporating TMDLs into the Basin Plan requires an amendment to the Basin Plan and the development of an Implementation Plan. The Implementation Plan must include a description of the actions necessary to achieve the applicable water quality objectives, a time schedule for the actions to be taken, and a description of the monitoring to be undertaken to determine compliance with the objectives.⁸
- 5. Water Quality Impairment of Los Peñasquitos Lagoon:** As required by CWA section 303(d), the Los Peñasquitos Lagoon (Lagoon) was placed on the 1996 List of Water Quality Limited Segments due to sedimentation and siltation loads that exceeded water quality objectives. The beneficial uses that are most sensitive to increased sedimentation are estuarine habitat and preservation of biological habitats of special significance. Deposition of watershed sediment contributes to elevation increases within the Lagoon, which is a critical variable that determines the productivity and stability of these uses. Legacy sediments from construction activities within the lagoon (e.g., construction of the railway berms and construction and operation of access roads) also play a role in the Lagoon's sedimentation impairment.

Other beneficial uses listed in the Basin Plan for the Lagoon include contact water recreation, non-contact water recreation, wildlife habitat, rare, threatened or endangered species, marine habitat, migration of aquatic organisms, spawning, reproduction and/or early development, and shellfish harvesting.

Other impacts associated with increased and rapid sedimentation include: reduced tidal mixing within Lagoon channels, increased vulnerability to flooding for surrounding urban and industrial developments, increased turbidity associated with siltation in Lagoon channels, and constricted wildlife corridors.

⁷ Code of Federal Regulations Title 40 section 130.6(c)(1)

⁸ Pursuant to the requirements of Article 3, commencing with section 13240, of Chapter 4 of the Porter-Cologne Water Quality Control Act, as amended, codified in Division 7, commencing with section 13000, of the Water Code

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- 6. Water Quality Objective:** The water quality objective for sediment is contained in the Basin Plan. The Basin Plan states, *"The suspended sediment load and suspended sediment discharge rate of surface waters shall not be altered in such a manner as to cause nuisance or adversely affect beneficial uses."*
- 7. Numeric Targets:** One or more quantitative numeric targets must be selected to calculate a TMDL for an impaired waterbody. Numeric targets are derived from and must be able to interpret and implement water quality standards (beneficial uses, water quality objectives, and the antidegradation policy). This means that attainment of the selected numeric targets in the impaired waterbody represents attainment of applicable water quality standards in the waterbody; i.e., when the numeric targets are met, the TMDL should be met, WQOs should be met and the beneficial uses should be restored. While numeric targets and TMDLs are derived from, represent, interpret, and implement water quality standards, they are not water quality standards.

The narrative sediment water quality objective requires numeric targets to evaluate attainment of the objective. Consideration of various lines of evidence indicates that the Lagoon was likely achieving the water quality standard for sediment in the mid-1970s. Using land-use coverage and Lagoon mapping, a "reference condition" was developed to establish watershed and Lagoon conditions present during the mid-1970s.

The historic land use distribution was used to calculate the watershed numeric target, which is expressed as 12,360 tons of sediment per wet period (211 days) or 58.6 tons per day. Lagoon mapping was used to establish the Lagoon numeric target, which is expressed as an increasing trend in the total area of tidal saltmarsh and non-tidal saltmarsh toward 346 acres. This target acreage represents 80 percent of the total acreage of tidal and non-tidal saltmarsh present in 1973. As of the year 2010, 262 acres of tidal saltmarsh and non-tidal saltmarsh are present in the Lagoon. The calculation and interpretation of the numeric target as an increasing trend in acreage takes into account other factors impacting the salt marsh habitat in the lagoon, as well as the length of time necessary to successfully restore the biological, physical, chemical, and hydrological structural characteristics of salt marsh habitat. The final lagoon numeric target requires the successful restoration of tidal and non-tidal salt marsh to achieve a lagoon total of 346 acres. This can either mean:

1. Successful restoration of 80 percent of the 1973 acreage of lagoon salt marsh habitat (346 acres); or
2. Demonstrate that implementation actions are active on and/or affecting 346 acres with continued monitoring to ensure 80 percent target achievement.

- 8. Sources of Sediment:** Sources of sediment to the Lagoon include erosion of canyon banks, bluffs, scouring stream banks, and tidal influx. Some of these processes are exacerbated by anthropogenic disturbances, such as land

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development within the watershed. Land development transforms the natural landscape by exposing sediment and converting pervious surfaces to impervious surfaces, which increases the volume and velocity of runoff resulting in scouring of sediment, primarily below storm water outfalls that discharge into canyon areas. Sediment loads are transported downstream to the Lagoon during storm events causing deposits on the salt flats and in Lagoon channels. These sediment deposits have gradually built-up over the years due to increased sediment loading and inadequate flushing, which directly and indirectly affects Lagoon functions and salt marsh characteristics.

9. Watershed Point and Non-point Sediment Sources: There are two broad categories of sediment sources to the Lagoon: 1) watershed sources, and 2) the Pacific Ocean. The watershed sources consist of all point and non-point sources of sediment in the watershed area draining to Los Peñasquitos Lagoon. The total sediment contribution from all watershed sources is presented as the total wasteload allocation (WLA). The sediment contributions from the Pacific Ocean are considered a background source and are presented as the Load Allocation (LA). Hence, the responsible parties are assigned the total WLA and are jointly responsible for meeting the wasteload reductions required in this TMDL project.

10. Responsible Parties Identification: Responsible parties include the following: Phase I Municipal Separate Storm Sewer Systems (MS4s) copermitees (the County of San Diego, City of San Diego, City of Del Mar, and City of Poway), Phase II MS4 permittees, Caltrans, general construction storm water National Permit Discharge Elimination System (NPDES) permittees, and general industrial storm water NPDES permittees.

11. Linkage Analysis: Reducing watershed sediment loads from the year 2000 levels to historic levels is a necessary component for restoring and providing long-term protection of the Lagoon's beneficial uses. Deposition of watershed sediment contributes to elevation increases within the Lagoon, leading to an increase in height relative to mean sea level. Elevation is a critical variable that determines the productivity and stability of saltmarshes. The long-term existence of the saltmarsh depends on the success of the dominant plants, such as *Sarcoconia pacifica* (also referred to as *Salicornia virginica*) and *Frankenia salina*, and their close relationship to sediment supply, sea level change, and tidal range.

Reduced sediment loading consistent with the watershed numeric target will encourage the establishment of native vegetation in degraded areas. To represent the linkage between source contributions and receiving water response, models were developed to simulate source loadings and transport of sediment into the Lagoon. The models provide an important tool to evaluate year 2000 conditions, to evaluate historic conditions, and to calculate TMDL load reductions.

The Lagoon was capable of assimilating these historic sediment loads under historic Lagoon conditions. Because the Lagoon has evolved through time and accumulated

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over 40 years of watershed sediment loads, it cannot be assumed that the Lagoon, in the year 2010 conditions, can assimilate the same historic sediment loads. Evaluation of the extent of vegetation types in the Lagoon provides the necessary tool to assess how the Lagoon responds to watershed sediment load reductions and to establish a target Lagoon condition under which the Lagoon can again assimilate the historic sediment loads.

12. TMDL Allocations and Reductions:Wasteload Allocations to Watershed = 2,580 tons/year

As the primary point source to the Lagoon, a wasteload allocation (WLA) of 2,580 tons/year was assigned to the responsible parties. A 67 percent sediment load reduction from the Year 2000 load to the historical (mid-1970s) load is required of the responsible parties.

Load Allocations to Ocean = 9,780 tons/year

The ocean is a nonpoint source of sediment to the Lagoon and was assigned a load allocation (LA) of 9,780 tons/year. Because the ocean is a natural background source, load reductions are not required of the ocean.

Margin of Safety = Implicit

Conservative assumptions were used in selecting the TMDL numeric targets to provide an implicit margin of safety,

13. TMDL Implementation, Monitoring, and Compliance: The Responsible Parties must develop a Load Reduction Plan that will establish a watershed-wide, programmatic, adaptive management approach for implementation. The plan will include a detailed description of implementation actions, as identified and planned by the responsible parties, to meet the requirements of this TMDL. All responsible parties are responsible for reducing their sediment loads to the receiving waterbody or demonstrating that their discharges are not causing exceedances of the wasteload allocation.

Monitoring is required to assess progress towards achieving the wasteload and load allocations and numeric targets. Furthermore, the monitoring program must be capable of monitoring the effectiveness of implementation actions to improve water quality and saltmarsh habitat and remediation actions to remove sediment from the Lagoon.

Full implementation of the TMDL for sediment must be completed within 20 years from the effective date of the Basin Plan amendment. This timeline takes into consideration the planning needs of the responsible parties and other stakeholders to establish a Load Reduction Plan, time needed to address multiple impairments, and provides adequate time to measure temporal disparities between reductions in upland loading and the corresponding Lagoon water quality response.

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- 14. Scientific Peer Review:** The scientific basis for this TMDL has undergone external peer review pursuant to Health and Safety Code section 57004. The San Diego Water Board has considered and responded to all comments submitted by the peer review panel and has enhanced the Staff Report appropriately. As a result of the peer review process, changes were made to the TMDL including inclusion of the Lagoon numeric target and revision of the adaptive management approach.
- 15. California Environmental Quality Act Requirements:** Pursuant to Public Resources Code section 21080.5, the Resources Agency has approved the San Diego Water Board's basin planning process as a "certified regulatory program" that adequately satisfies the California Environmental Quality Act (CEQA) (Public Resources Code, section 21000 et seq.) requirements for preparing environmental documents [14 CCR 15251(g); 23 CCR 3782]. As such, the "substitute environmental documents" that support the San Diego Water Board's proposed basin planning action contain the required environmental documentation under CEQA [23 CCR 3777]. The substitute environmental documents include the environmental checklist, the detailed Staff Report, peer review and public comments and responses to comments, this resolution, and the Basin Plan Amendment. For CEQA purposes, the "project" is the adoption of a Basin Plan amendment establishing a TMDL for sediment in the Lagoon. The CEQA checklist and other portions of the substitute environmental documents contain significant analysis and numerous findings related to impacts.
- 16. Program and Project-Level CEQA Analysis:** In preparing the substitute environmental documents, the San Diego Water Board has considered the requirements of Public Resources Code section 21159 and California Code of Regulations, Title 14, section 15187, and intends those documents to serve as a tier 1 environmental review. This analysis is not intended to be an exhaustive analysis of every conceivable impact, but an analysis of the reasonably foreseeable consequences of the adoption of this regulation, from a programmatic perspective. The "Lead" agencies for tier 2 projects will assure compliance with project-level CEQA analysis of this programmatic project. Project level impacts will need to be considered in any subsequent environmental analysis performed by other public agencies, pursuant to Public Resources Code section 21159.2.
- 17. CEQA Findings:** The proposed Basin Plan amendment could have a potentially significant adverse effect on historical, archaeological, and paleontological resources. There are feasible mitigation measures that if employed, would substantially lessen the potentially-significant adverse impacts identified in the substitute environmental documents; however such mitigation measures are within the responsibility and jurisdiction of other public agencies, not the San Diego Water Board. When the parties responsible for implementing this TMDL determine how they will proceed, the parties responsible for those parts of the project can and should incorporate such mitigation into any subsequent projects or project approvals as part of the environmental review process. These mitigation measures are described in more detail in the substitute environmental documents included as

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Attachment 3 of the Staff Report and incorporated herein to this Resolution (14 CCR 15091(a)(2)). Where any subsequent project requires approval by the San Diego Water Board, the San Diego Water Board will include sufficient mitigation measures to substantially lessen the potentially significant adverse impacts.

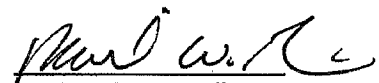
- 18. Statement of Overriding Consideration:** To the extent significant adverse environmental effects could occur, the San Diego Water Board has balanced the economic, legal, social, technological, and other benefits of the TMDL against the unavoidable environmental risks and finds that specific economic, legal, social, technological, and other benefits of the TMDL outweigh the unavoidable adverse environmental effects, such that those effects are considered acceptable. The basis for this finding is more fully set forth in the substitute environmental documents, included as Attachment 3 of the Staff Report and incorporated herein to this Resolution (14 CCR section 15093).
- 19. Economic Analysis:** The San Diego Water Board has considered the costs of the reasonably foreseeable methods of compliance with the load and wasteload allocations specified in this TMDL. The most reasonably foreseeable methods of compliance involve implementation of structural and non-structural controls. Surface water monitoring will be necessary to evaluate the effectiveness of these controls.
- 20. Necessity Standard [Government Code section 11353(b)]:** Amendment of the Basin Plan to establish and implement the sediment TMDL for the Lagoon is necessary because the existing water quality in the Lagoon does not meet applicable water quality objectives for sediment. Clean Water Act section 303(d) requires the establishment and implementation of a TMDL under the water quality conditions that exist at the Lagoon. The TMDL for sedimentation is necessary to promote attainment of applicable water quality objectives and restoration of water quality needed to support the beneficial uses designated for the Lagoon.
- 21. Stakeholder & Public Participation:** Interested persons and the public have had reasonable opportunity to participate in review of the proposed TMDL. Efforts to solicit public review and comment included a public workshop and CEQA scoping meeting on February 15, 2011, multiple meetings with the Stakeholder Advisory Group, a public review and comment period consisting of 46 days, and a public hearing on June 13, 2012. Notices for all meetings were sent to interested parties including cities and counties with jurisdiction in the Los Peñasquitos watershed. All of the written comments submitted to the San Diego Water Board during the review and comment periods have been considered.
- 22. Public Notice:** The San Diego Water Board has notified all known interested parties and the public of its intent to consider adoption of this Basin Plan amendment in accordance with Water Code section 13244.

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NOW, THEREFORE, BE IT RESOLVED THAT

1. **Environmental Documents Certification:** The substitute environmental documents prepared pursuant to Public Resources Code section 21080.5 are hereby certified, and the Executive Officer is directed to file a Notice of Decision with the Resources Agency after State Water Resources Control Board (State Water Board), and Office of Administrative Law (OAL) approval of the Basin Plan amendment, in accordance with section 21080.5(d)(2)(E) of the Public Resources Code and the California Code of Regulations, Title 23, section 3781.
2. **Amendment Adoption:** The San Diego Water Board hereby adopts the attached Basin Plan amendment as set forth in Attachment A hereto to establish a sediment TMDL for the Lagoon.
3. **Agency Approvals:** The Executive Officer is directed to submit this Basin Plan amendment to the State Water Board in accordance with Water Code section 13245.
4. **Non-Substantive Corrections:** If, during the approval process for this amendment, the San Diego Water Board, the State Water Board, or the OAL determines that minor, non-substantive corrections to the language of the amendment are needed for clarity or consistency, the Executive Officer may make such changes, and shall inform the San Diego Water Board of any such changes.

I, David W. Gibson, Executive Officer, do hereby certify the foregoing is a full, true and correct copy of a Resolution adopted by the California Regional Water Quality Control Board, San Diego Region, on June 13, 2012.



David W. Gibson
Executive Officer

**ATTACHMENT A
TO RESOLUTION NO. R9-2012-0033**

**AMENDMENT TO THE WATER QUALITY CONTROL
PLAN FOR THE SAN DIEGO BASIN (9) TO INCORPORATE
THE SEDIMENT TOTAL MAXIMUM DAILY LOAD (TMDL)
FOR LOS PEÑASQUITOS LAGOON**

This Basin Plan amendment establishes a sediment Total Maximum Daily Load (TMDL) and associated load and wasteload allocations for Los Peñasquitos Lagoon (Lagoon). This amendment includes a program to implement the TMDL and monitor its effectiveness. Chapters 2, 3, and 7 of the Basin Plan are amended as follows:

Chapter 2, *Beneficial Uses*

Table 2-3. *Beneficial Uses of Coastal Waters*

Consecutively number and add the following footnote to Los Peñasquitos Lagoon in Table 2-3:

Los Peñasquitos Lagoon is designated as a water quality limited segment for sediment pursuant to Clean Water Act section 303(d). A Total Maximum Daily Load has been adopted to address this impairment. See Chapter 3, *Water Quality Objectives*, section entitled "Water Quality Objectives for Sediment." See also Chapter 7, *Total Maximum Daily Loads*, section entitled "Sediment Total Maximum Daily Load for Los Peñasquitos Lagoon."

Renumber any footnotes in Table 2-3 displaced by this new footnote.

Chapter 3, *Water Quality Objectives*

Water Quality Objectives for Sediment:

Add a second paragraph as follows:

Los Peñasquitos Lagoon is designated as an impaired water body for sediment pursuant to Clean Water Act section 303(d). A Total Maximum Daily Load has been adopted to address this impairment. See Chapter 2, *Beneficial Uses Table 2-3. Beneficial Uses of Coastal Waters*, Los Peñasquitos Lagoon, Hydrologic Unit Basin Number 6.10. See also Chapter 7, *Total Maximum Daily Loads*, section entitled "Sediment Total Maximum Daily Load for Los Peñasquitos Lagoon."

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Chapter 7, *Total Maximum Daily Loads*

On June 13, 2012, the San Diego Water Board adopted ***Resolution No. R9-2012-0033, A Resolution Amending the Water Quality Control Plan For The San Diego Basin (9) to Incorporate the Sediment Total Maximum Daily Load for Los Peñasquitos Lagoon***. The TMDL Basin Plan Amendment was subsequently approved by the State Water Resources Control Board (State Board) on [Insert date], the Office of Administrative Law (OAL) on [Insert date], and the USEPA on [Insert date]. For purposes of state law, Resolution No. R9-2012-0033 became effective following OAL approval on [Insert date],

Technical TMDL Analysis

Component	Key Findings and Regulatory Provisions
<i>Problem Statement</i>	Under section 303(d) of the Clean Water Act (CWA), states are required to identify waters whose beneficial uses have been impaired due to specific constituents. Los Peñasquitos Lagoon was placed on the Section 303(d) list of Water Quality Limited Segments in 1996 for sedimentation and siltation with an estimated 469 acres affected. The Lagoon is subject to the development of a total maximum daily load (TMDL) (US EPA, 2009). The Lagoon is an estuarine system that is part of the Torrey Pines State Natural Reserve. In addition to its marine influence, the Lagoon receives freshwater inputs from an approximately 60,000-acre watershed comprised of three major canyons (Carroll Canyon, Los Peñasquitos Canyon, and Carmel Canyon). Given the status of "Natural Preserve" by the California State Parks, the Lagoon is one of the few remaining native saltmarsh lagoons in southern California, providing a home to several endangered species (California State Parks, 2009). The Lagoon is ecologically diverse, supporting a variety of plant species, and provides nursery grounds and habitat for numerous bird, fish, and small mammal populations. The Lagoon also serves as a stopover for the Pacific Flyway, offering migratory birds a safe place to rest and feed, as well as providing refuge for coastal marine species that use the Lagoon to feed and hide from predators. The San Diego Basin Plan states, "The suspended sediment load and suspended sediment discharge rate of surface waters shall not be altered in such a manner as to cause nuisance or adversely affect beneficial uses." Beneficial uses listed in the Basin Plan for the Lagoon include contact water recreation; non-contact water recreation (although access is not permitted in

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Component	Key Findings and Regulatory Provisions
	some areas per California State Parks); preservation of biological habitats of special significance; estuarine habitat; wildlife habitat; rare, threatened or endangered species; marine habitat; migration of aquatic organisms; spawning, reproduction and/or early development; and shellfish harvesting. The beneficial uses that are most sensitive to increased sedimentation are estuarine habitat (EST) and preservation of biological habitats of special significance (BIOL). Estuarine uses may include preservation or enhancement of estuarine habitats, vegetation, fish, shellfish, or wildlife (such as marine mammals or shorebirds). Impacts associated with increased and rapid sedimentation include: reduced tidal mixing within Lagoon channels, degraded and (in some cases) net loss of saltmarsh vegetation, increased vulnerability to flooding for surrounding urban and industrial developments, increased turbidity associated with siltation in Lagoon channels, and constricted wildlife corridors. The Los Peñasquitos Lagoon Enhancement Plan and Program (1985), San Diego Basin Plan, and Clean Water Act section 303(d) highlight sedimentation as a significant impact associated with urban development and a leading cause in the rapid loss of saltmarsh habitat in the Lagoon. Sediment reduction is a management priority. The Lagoon's 565 acres include 262 acres of tidal saltmarsh (including salt panne, tidal channels, and mudflats) and non-tidal saltmarsh and 132 acres of freshwater marsh, herbaceous wetland, and woody riparian (for example southern willow scrub and mulefat scrub) habitats. The remaining 171 acres of saltmarsh and brackish marsh vegetation are impaired by excessive sedimentation, which converted the coastal saltmarsh to <i>Lolium perenne</i> infested non-tidal saltmarsh, freshwater marsh, and woody riparian habitats. (California State Parks, 2011) The environmental processes that support wetland habitats in the Lagoon have been altered by urban development in three ways: 1) Increase in the volume and frequency of freshwater input, 2) Increase in sediment deposition, and 3) Decrease in the tidal prism. These factors have led to decreases in tidal and non-tidal saltmarsh habitats and increases in freshwater habitats and the abundance of non-native species.

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Component	Key Findings and Regulatory Provisions
Numeric Target	<u>Numeric Target</u> The sediment water quality standard applies to sediment loading to the Lagoon and the accumulation of sediment in the Lagoon. The minimum protective target would be to reduce watershed sediment loads to non-anthropogenic levels and return the Lagoon to non-anthropogenic conditions with consideration given to background loading and other factors that also lend to impairment of beneficial uses. The numeric targets are calculated upon the historic condition (mid-1970s) when the sediment water quality standard was once met. A historic coverage for the Los Peñasquitos watershed was developed for this period using US Geological Survey topographic maps from the 1970s. This land-use distribution was used to calculate the watershed numeric target using the LSPC watershed model. This historic (mid-1970s) sediment load of 12,360 tons per critical wet period (211 days), or 58.6 tons per day, represents the sediment TMDL watershed numeric target. An analysis of the vegetation types present in the Lagoon was developed for the mid-1970s using historic aerial photographs from which the Lagoon numeric target was calculated. The Lagoon numeric target is expressed as an increasing trend in the total area of tidal and non-tidal saltmarsh toward 346 acres. This target acreage represents 80 percent of the total acreage of tidal and non-tidal saltmarsh present in 1973.
Sources and Responsible Parties	<u>Watershed Point and Non-point Sediment Sources</u> Sources of sediment include erosion of canyon banks, exposed soils, bluffs, scouring stream banks, and tidal influx. Some of these processes are exacerbated by anthropogenic disturbances, such as land development within the watershed. Land development transforms the natural landscape by exposing sediment and converting pervious surfaces to impervious surfaces, which increases the volume and velocity of runoff resulting in scouring of sediment, primarily below storm water outfalls that discharge into canyon areas. Sediment loads are transported downstream to the Lagoon during storm events causing deposits on the salt flats and in Lagoon channels. These sediment deposits have gradually built-up over time due to increased sediment loading and inadequate flushing, which directly and indirectly affects Lagoon functions and salt marsh characteristics.

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Component	Key Findings and Regulatory Provisions
Linkage Analysis	There are two broad categories of sediment sources to the Lagoon: 1) watershed sources, and 2) the Pacific Ocean. The watershed sources consist of all of point and non-point sources of sediment in the watershed area draining to Los Peñasquitos Lagoon. The total sediment contribution from all watershed sources, currently, is presented as the total wasteload allocation (WLA). The watershed sources of sediment due to past historical activities that have resulted in accumulated sediment in the Lagoon over time are presented as the Watershed Load Allocation (LA). This source also includes, but is not limited to, in-Lagoon erosion and scouring. Since this loading could not be estimated given the limited data, the Lagoon numeric target is set as the compliance point for meeting this Watershed Load Allocation. The sediment contributions from the Pacific Ocean are considered a background source and are presented as the Load Allocation from the Ocean (LA). Hence, the responsible parties were assigned the total WLA and are jointly responsible for meeting the wasteload reductions required in this TMDL project. <u>Responsible Parties</u> Responsible parties include the following: Phase I Municipal Separate Storm Sewer Systems (MS4s) copermittees (the County of San Diego, City of San Diego, City of Del Mar, and City of Poway), Phase II MS4 permittees, Caltrans, general construction storm water NPDES permittees, and general industrial storm water NPDES permittees. <u>Linkage Analysis</u> Reducing watershed sediment loads from the year 2000 levels to historic levels is a necessary component for restoring and providing long-term protection of the Lagoon's beneficial uses. Deposition of watershed sediment contributes to elevation increases within the Lagoon, leading to an increase in height relative to mean sea level. Elevation is a critical variable that determines the productivity, diversity, and stability of saltmarshes. The long-term existence of the saltmarsh depends on the success of the dominant plants, such as <i>Sarcocornia pacifica</i> (also referred to as <i>Salicornia virginica</i>) and <i>Frankenia salina</i>, and their close relationship to sediment supply, soil salinity, sea level change, and tidal range. Reduced sediment loading consistent with the watershed numeric target will encourage the establishment of native vegetation in degraded areas. To represent the linkage between source

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Component	Key Findings and Regulatory Provisions
<i>TMDL, Allocations, and Load Reductions</i>	contributions and receiving water response, models were developed to simulate source loadings and transport of sediment into the Lagoon. The models provide an important tool to evaluate year 2000 conditions, to evaluate historic conditions, and to calculate TMDL load reductions. The Lagoon was capable of assimilating these historic sediment loads under historic Lagoon conditions. Because the Lagoon has evolved through time and accumulated over 40 years of watershed sediment loads, it cannot be assumed that the Lagoon, in the year 2010 conditions, can assimilate the same historic sediment loads. Evaluation of the extent of vegetation types in the Lagoon provides the necessary tool to assess how the Lagoon responds to watershed sediment load reductions and to establish a target Lagoon condition under which the Lagoon can again assimilate the historic sediment loads. <u>TMDL = 12,360 tons of sediment per year</u> The maximum load of sediment that Los Peñasquitos Lagoon can receive from all sources and still meet the sediment water quality objective is 12,360 tons per year. <u>Wasteload Allocations to Watershed = 2,580 tons/year</u> As the primary point source to the Lagoon, a wasteload allocation (WLA) of 2,580 tons/year was assigned to the responsible parties. A 67 percent sediment load reduction from the Year 2000 load to the historical (mid-1970s) load is required of the responsible parties. <u>Load Allocations to Ocean = 9,780 tons/year</u> The ocean is a nonpoint source of sediment to the Lagoon and was assigned a load allocation (LA) of 9,780 tons/year. Because the ocean is a natural background source, load reductions are not required of the ocean. <u>Watershed Load Allocations to Lagoon</u> Past historical watershed loading has led to accumulated sediment, erosion, and scouring in the Lagoon causing impairment to the Lagoon habitats. The Lagoon numeric target is set as the compliance for this LA: maintain at least 346 acres of tidal and non-tidal saltmarsh, represents 80 percent of the total acreage of tidal and non-tidal saltmarsh present in 1973.

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Component	Key Findings and Regulatory Provisions
<i>Critical Conditions</i>	<u>Margin of Safety = Implicit</u> Conservative assumptions were used in selecting the TMDL numeric targets to provide an implicit margin of safety. <u>Critical Location</u> Due to the variability and dynamic nature of conditions within the Lagoon (e.g., mouth closures, tidal fluctuations, sediment fate and transport, etc.), the entire modeled Lagoon area was assessed as the critical location. Load reductions for sediment were based on achieving the numeric TMDL target across the Lagoon. <u>Critical Condition</u> The wet season that includes the 1993 El Nino storm events (October 1, 1992-April 10, 1993) was selected as the critical condition time period for TMDL development. This is one of the wettest periods on record over the past several decades. Because of the large amount of rainfall, sediment loads were significantly higher during this period than in other years with less rainfall.
<i>Seasonal Considerations</i>	<u>Seasonal Considerations</u> Sources of sediment are similar for both dry and wet weather seasons (the two general seasons in the San Diego region). Despite the similarity of wet/dry sources, transport mechanisms can vary between the two seasons. Throughout the TMDL monitoring period, the greatest transport of sediment occurred during rainfall events. It is recognized that dry weather will contribute a de minimis discharge of sediment; however, model calibration and TMDL development focused on wet weather conditions as sediment transport is dramatically higher during wet weather.
<i>Margin of Safety</i>	<u>Margin of Safety (MOS)</u> An implicit MOS was incorporated through application of conservative assumptions.

Implementation Plan

Component	Key Findings and Regulatory Provisions
<i>Implementation Actions</i>	<u>Actions San Diego Water Board May Take</u> The San Diego Water Board may exercise any of its authorities under the Water Code to compel responsible parties to comply with this TMDL.

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Component	Key Findings and Regulatory Provisions
	<u>Responsible Parties Identification</u> Under this TMDL, the responsible parties are collectively assigned a single WLA, which they are responsible for meeting. An aggregate WLA allows for flexibility in achieving the load reduction required to meet the TMDL and improve Lagoon conditions. Responsible parties include: Phase I MS4 copermittees (the County of San Diego, City of San Diego, City of Del Mar, and the City of Poway), Phase II MS4 permittees, Caltrans, and the General Construction and General Industrial Storm Water NPDES permittees. The San Diego Water Board encourages cooperation among all the responsible parties. All the responsible parties in the Los Peñasquitos watershed must reduce their collective sediment load. Responsible parties include, but are not limited to, specific identification of General construction and industrial stormwater permittees, such as sand and gravel operation facilities in the watershed <i>that have capacity for long-term potential loadings into the watershed.</i> The San Diego Water Board recommends all parties enter into a Memorandum of Understanding (MOU), or a similar formal joint effort, to collaboratively and more successfully implement the adaptive management framework. All responsible entities identified must submit a Comprehensive Load Reduction Plan (CLRP) or SWPPP as appropriate and are strongly encouraged to jointly submit a CLRP to the San Diego Water Board within 18 months of the effective date of the TMDL. The San Diego Water Board expects responsible parties to cooperate in TMDL implementation (e.g., load reduction, lagoon monitoring, lagoon restoration) as necessary to achieve compliance with this TMDL. Responsible Parties that have or are likely to cause or contribute to the CWA Section 303(d) listed impairment for sediment, and are not participating in TMDL implementation, shall be compelled to meet their compliance obligations through other regulatory authorities of the San Diego Water Board. Any Responsible Party identified is required to develop pollutant reduction plan that includes description and schedule for implementing BMPs to reduce sediments from being discharged from their facility, property, etc. The plan must describe how the

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Component	Key Findings and Regulatory Provisions
	facility plans to meet the water quality objectives and pollutant reductions set forth in the TMDL. Any Responsible Party as identified for this TMDL shall contribute information regarding the amount of sediments/sedimentation from their facility/entity. This may be produced from existing monitoring plans or by developing a monitoring plan for those entities that currently do not have any discharge monitoring on site. The TMDL has identified a "collective" wasteload allocation that includes several sources of sediments into the watershed. By developing individual site/permittee monitoring plans for flow and TSS discharges, it will be feasible to estimate individual site contributions in the future. Monitoring should address, at minimum, representative values of flow rates and TSS concentrations from the individual permittee's site(s) whenever long-term discharges occur. Individual industrial facilities and construction sites are subject to regulation on two levels: (1) The San Diego Water Board is responsible for ensuring MS4 copermittees comply with the MS4 requirements in the MS4 storm water permit; and (2) each local municipality is responsible, under the MS4 storm water permit, for enforcing its own ordinances and permits (for violations of its ordinances/permits by an individual industrial facility or construction site within its jurisdiction). The San Diego Water Board is also responsible for enforcing the statewide General Industrial and Construction Storm Water NPDES Permits within its jurisdiction. The San Diego Water Board relies upon the municipality to enforce its ordinances/permits and then work with the municipality to coordinate information and actions to compel compliance. <u>Phased Implementation via the Adaptive Management Approach</u> A common problem in natural resource management involves a temporal sequence of decisions (or implementation actions), in which the best action at each decision point depends on the state of the managed system. Adaptive management is a structured iterative implementation process that offers flexibility for responsible parties to monitor implementation actions, determine the success of such actions and ultimately, base future management decisions upon the measured results of completed implementation actions and the current state of the system. This process enhances the understanding and estimation of predicted

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	outcomes and ensures refinement of necessary activities to better guarantee desirable results. In this way, understanding of the resource can be enhanced over time, and management can be improved. Adaptive management entails applying the scientific method to the TMDL. A National Research Council review of US EPA's TMDL program strongly suggests that the key to improving the application of science in the TMDL program is to apply the scientific method to TMDL implementation (NRC 2001). For a TMDL, applying the scientific method involves 1) taking immediate actions commensurate with available information, 2) defining and implementing a program for refining the information on which the immediate actions are based, and 3) modifying actions as necessary based on new information. This approach allows the Lagoon to make progress toward attaining water quality standards while regulators and stakeholders improve the understanding of the system through research and observation of how it responds to the immediate actions. Implementation actions to achieve the required WLA and improve the specified numeric targets will be implemented via an iterative process, whereby the information collected at each step will be used to inform the implementation of the next phase. The project will be adjusted, as necessary, based on the latest information collected to optimize the efficiency of implementation efforts. Ultimately, the path moving forward is to create the physical conditions related to remediating sediment impacts associated with this TMDL. The implementation effort can be divided into three primary phases for this TMDL, as described below: • Phase I Implementation includes elements to reduce the amount of sediment that is transported from the watershed to the Lagoon. An important component of Phase I will be to secure the relationships and agreements between cooperating parties and to develop a detailed scope of work with priorities. Phase I includes the following elements: - o Incorporate interim limits into WDRs and NPDES permits; - o Implement structural and nonstructural BMPs throughout the watershed; and - o Develop and initiate a comprehensive monitoring program, which includes compliance monitoring and targeted special studies.

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	If appropriate, the TMDL will be reconsidered by the San Diego Water Board at the end of Phase I to consider completed special studies or policy. - Phase II includes the implementation of additional watershed actions that are targeted to reducing sediment loads from high priority areas, as well as lagoon-specific actions that may be needed to facilitate recovery of beneficial uses that have been affected by various complex processes, including sedimentation, nuisance flows, reduced tidal circulation, and other factors. These actions may include Lagoon sediment remediation efforts, re-connecting the Lagoon's historic tidal channels, and maintenance of the Lagoon inlet in collaboration with State Parks, the San Diego Water Board, the Los Angeles-San Diego-San Luis Obispo (LOSSAN) Rail Corridor Agency, US EPA, and the watershed responsible parties. Phase II may also include additional upstream protections and BMP implementation to further reduce watershed sediment contributions. Responsible parties will develop, prioritize, and implement Phase II elements based on data from compliance monitoring and special studies. - Phase III includes implementation of secondary and additional remediation actions, as necessary, to be in compliance with the required WLA allocation by the end of the compliance schedule. <u>Develop and Submit a Load Reduction Plan</u> Responsible parties are required to prepare and submit for San Diego Water Board review, comment, and revision, a Load Reduction Plan that demonstrates how they will comply with this TMDL. The San Diego Water Board expects that Load Reduction Plans will be developed collaboratively by the responsible parties within the watershed. The Load Reduction Plan shall be submitted to the San Diego Water Board within 18 months of the TMDL effective date, and reviewed by the San Diego Water Board Executive Officer within six months of submittal (this period will likely include a round of revisions by the responsible parties based on San Diego Water Board staff comments). The Load Reduction Plan shall establish a watershed-wide, programmatic, adaptive management approach for implementation and include a detailed description of

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	implementation actions, identified and planned by the responsible parties, to meet the requirements of this TMDL. Implementation actions identified by the Load Reduction Plan may include source control techniques, structural and/or non-structural storm water BMPs, and/or special studies that refine the understanding of sediment and pollutant sources within the watershed. The Load Reduction Plan shall include a description and objective of each implementation action, potential BMP locations, a timeline for project or BMP completion, and a monitoring plan to measure the effectiveness of implementation actions. Storm Water Pollution Prevention Plans (SWPPPs) prepared by Phase II MS4s, Industrial Permittees, and Construction Permittees pursuant to their respective statewide general NPDES permits fulfill these entities responsibility to prepare a Load Reduction Plan. Permittees within the Los Peñasquitos watershed shall update their SWPPPs within 12 months of the TMDL effective date with any additional BMPs, monitoring, etc. to account for their site's potential to impact the receiving waterbody with respect to sediment. Sites identified through monitoring data or site inspections as posing an increased risk to the receiving water body may be directed to perform additional monitoring by the San Diego Water Board Executive Officer to quantify sediment load contributions to the receiving waterbody. Comprehensive Approach The comprehensive approach to the Load Reduction Plan requires that implementation efforts address all current TMDLs, current 303(d) listed waterbody/pollutant combinations, and other targeted impairments within the Los Peñasquitos watershed. A comprehensive approach to the Load Reduction Plan is consistent with implementation planning currently underway to address all of the impaired segments that were included in the approved bacteria TMDLs for San Diego Region Beaches and Creeks (San Diego Water Board, 2010). The comprehensive approach to the Load Reduction Plan allows the responsible parties to proactively address other listed impairments within the watershed, which requires special studies to investigate sources and the water quality improvements needed to address these pollutants. Such special studies may significantly alter current understanding and refine the TMDL loading and/or allocations. This can impact the selection of subsequent implementation actions and how they are prioritized

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	by responsible parties. A comprehensive approach to development of the Load Reduction Plan will provide a more cost effective and efficient approach for TMDL implementation and will have fewer potential environmental impacts associated with construction of structural BMPs (San Diego Water Board, 2010). Load Reduction Plan Framework With increased land development and inadequate management of runoff from impervious areas, increasing amounts of sediment are deposited into the Lagoon annually. To minimize the effects of runoff, proper sediment control can be achieved through the execution of implementation actions such as BMPs. Sediment implementation actions can be grouped into the four categories as summarized below. 1) <i>Preservation and Restoration</i>: Significant areas of land have been set aside for open space. Such land acquisition and preservation prevents natural areas from being developed and disturbed. Additionally, the restoration of riparian buffers and wetlands can include the stabilization of steep slopes with native riparian vegetation. This not only helps restore the habitat but also the natural function of the stream. 2) <i>Education & Outreach</i>: As a source control technique, education and outreach can function as pollution prevention to reduce or eliminate the amount of sediment generated at its source. Education and outreach can be targeted at specific land user groups and/or staff involved with site maintenance. As an example, implementation actions such as municipal incentives can be used to encourage proper irrigation and landscaping and can significantly reduce volumes of runoff. 3) <i>Retrofitting, New Development, & Site Management</i>: Land development (MS4 contribution) is the primary source of anthropogenic sediment contribution above historical conditions. Development can expose sediment and contribute excessive amounts of sediment to the Lagoon. Additionally, increased imperviousness associated with development can lead to increased storm water runoff and soil erosion or gully within the MS4 and receiving waters. Appropriate site management can partially or fully mitigate the effects of development. The Load Reduction Plan must identify and prioritize BMPs based on an analysis of opportunities and cost/benefit considerations. Furthermore, the Load Reduction Plan must detail BMP

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	projects and locations. Storm water BMPs can be implemented to reduce the effects of pollutant loading and increased storm water flows from development. Structural BMPs include incorporation of low impact development (LID) and storm flow hydrograph matching into new projects. The same structural BMPs can be utilized to retrofit existing sites or be applied as regional MS4 BMPs to treat pollutants and/or flows prior to discharge into receiving waters. 4) <i>Monitoring</i>: A coordinated monitoring plan is needed to establish existing watershed conditions (baseline conditions) from which future changes and anticipated improvement in water quality can be measured. Additional monitoring could focus on sensitive species, areas of saltmarsh coverage, extent of invasive plant species, BMP effectiveness, and/or reduction in impervious coverage. Additionally, monitoring is crucial in the assessment of implementation actions to gain an understanding of performance for future adaptive management actions. <u>Load Reduction Plan Implementation</u> The Load Reduction Plan must be implemented within 90 days upon receipt of San Diego Water Board comments and recommendation, but in any event, no later than 6 months after submittal. <u>Monitoring</u> Monitoring is required to measure the progress of pollutant load reductions and improvements in water and saltmarsh habitat acreage. The information presented below is intended to be a brief overview of the goals of the monitoring. Special studies may be planned to improve understanding of key aspects related to achievement of WLAs and LAs, restore the beneficial uses, and to assist in the modification of structural and non-structural BMPs if necessary. The goals of monitoring include: 1) To determine compliance with the assigned wasteload and load allocations. 2) To monitor the effect of implementation actions proposed by responsible parties to improve water and saltmarsh habitat quality including proposed structural and non-structural BMPs to reduce storm water run-off and sediment loading, and remediation actions to remove sediment from the Lagoon.

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	3) To monitor the extent of vegetation habitat acreages in the Lagoon and determine if additional implementation action should be required. 4) To implement the monitoring in a manner consistent with other TMDL implementation plans and regulatory actions within the Los Peñasquitos watershed. The proposed monitoring program shall be included in the Load Reduction Plan submitted to the San Diego Water Board Executive Officer for review. <i>Watershed Monitoring</i> Responsible parties must conduct suspended sediment, bedload, and flow monitoring to calculate total sediment loading to the Lagoon for each wet period (October 1 thru April 30) throughout the 20-year compliance period. The responsible parties must monitor enough storm events throughout to quantify sediment loading over each wet period. The compliance point for the WLA shall be the Lagoon as measured through the cumulative sediment loading from Los Peñasquitos, Carroll Canyon, and Carmel Creeks prior to entering the Lagoon. The responsible parties must monitor as many stations as necessary to quantify sediment loading to the Lagoon. Because of the natural variability in sediment delivery rates, sediment loading shall be evaluated using a 3-year, weighted rolling average. The first average must be calculated following the third critical wet period after the TMDL effective date. Responsible parties are encouraged to collaborate or coordinate their efforts with other regional and local monitoring programs to avoid duplication and reduce associated costs. <i>Lagoon Monitoring</i> The responsible parties shall monitor the Lagoon annually in the Fall for changes in extent of the vegetation types. Aerial photos of the Lagoon must be acquired, digitized onscreen (at an approximate 1:2,500 scale), interpreted, and mapped into generalized classifications. Vegetation types must be classified as saltmarsh, non-tidal saltmarsh, freshwater marsh, non-tidal saltmarsh – <i>Lolium perrene</i> infested, freshwater marsh, southern willow scrub/mulefat scrub, herbaceous wetland, or upland land cover (urban, beach, dune, upland vegetation, etc.). Vegetation

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	type classifications are described in the <i>Sediment TMDL for Los Peñasquitos Lagoon Staff Report</i>. Ground truthing may be performed after aerial photo interpretation to distinguish between vegetation types. Compliance Schedule The implementation schedule for this TMDL follows the form of an adaptive management strategy, tracks implementation progress with established milestones or interim goals, and sets forth a final compliance date. It is impractical for land managers to actually measure sediment loading on a daily basis; thus, compliance with the TMDL is most appropriately expressed as an average annual load and should be evaluated as a long-term running average to account for natural fluctuations and inaccuracies in estimating sediment loads. Pursuant to State Board Resolution No. 2000-015 and 2000-030 a TMDL compliance schedule must be as short as practicable, but in no case shall it exceed 20 years from the effective date of the Basin Plan amendment. This timeline in Table {Insert Table number} takes into consideration the planning needs of the responsible parties and other stakeholders to establish a Load Reduction Plan, time needed to address multiple impairments, and provides adequate time to measure temporal disparities between reductions in upland loading and the corresponding Lagoon water quality response. Current studies and other implementation actions or projects are underway to reduce sediment loading to the Lagoon and to gain a better understanding of source contributions. A variety of such projects will continue throughout the development of the Load Reduction Plan, ensuring there are no gaps in implementation efforts throughout the process. At the end of the TMDL compliance schedule, as outlined in Table {insert table number}, waters must meet the Lagoon's sediment water quality standard and therefore, the Lagoon numeric target. The final lagoon numeric target requires the successful restoration of tidal and non-tidal salt marsh to achieve a lagoon total of 346 acres. This can either mean: 1. Successful restoration of 80 percent of the 1973 acreage of lagoon salt marsh habitat (346 acres); or 2. Demonstrate that implementation actions are active on and/or affecting 346 acres with continued monitoring to ensure 80 percent target achievement.

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	If at any point during the implementation plan, monitoring data or special studies indicate that WLAs or LAs will be attained but the Lagoon numeric target may not be achieved, the San Diego Water Board shall reconsider the TMDL to modify WLAs and LAs to ensure that the Lagoon numeric target is attained.			
	Table {Insert table number}. Los Peñasquitos Lagoon Sediment TMDL Implementation Compliance Schedule			
	Item	Implementation Action	Responsible Party	Date
	1	Obtain approval by OAL of Los Peñasquitos Lagoon Sediment TMDL = Establishes effective date of TMDL	San Diego Water Board, San Diego County, City of San Diego, City of Poway, City of Del Mar, Caltrans, General Storm Industrial and Construction permittees	Estimated June 2013
	2a	Issue, reissue, or revise general WDRs and NPDES requirements for Phase I MS4s, including Caltrans, to incorporate requirements for complying with TMDL and WLAs	San Diego Water Board and State Water Board	Completed during permit renewal - within 5 years of applicable permit date, and every 5 years thereafter.
	2b	Issue, reissue, or revise general WDRs and NPDES requirements for Construction and Industrial NPDES to incorporate requirements for complying with TMDL and WLAs	San Diego Water Board and State Water Board	Completed during permit renewal - within 5 years of applicable permit date, and every 5 years thereafter.
	2c	Issue, reissue, or revise general WDRs and NPDES requirements for Phase II NPDES permittees to incorporate requirements for complying with TMDL and WLAs	San Diego Water Board and State Water Board	Completed during permit renewal - within 5 years of applicable permit date, and every 5 years thereafter.
3a	Completion of Load Reduction Plans	Phase 1 MS4s and Caltrans	Within 18 months of OAL effective date	

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				for sediment TMDL
	3b	Approval of Load Reduction Plan	San Diego Water Board Executive Officer	Within 6 months of submittal
	3c	Phased, adaptive implementation of Load Reduction Plan	Phase 1 MS4s and Caltrans	In accordance with Load Reduction Strategy – ongoing throughout the implementation
	3d	Revision of SWPPPs	Construction, industrial, and Phase II Permittees	Within 12 months of OAL effective date for sediment TMDL
	4a	Submit annual Progress Report to the San Diego Water Board due January 31 each year	Phase 1 MS4s	Annually after reissuance of NPDES WDR
	4b	Submit annual Progress Report to the San Diego Water Board due April 1 each year	Caltrans	Annually after reissuance of NPDES WDR
	5	Enforcement Actions	San Diego Water Board	As needed
	6	Refine Load Reduction Plan	Phase 1 MS4s and Caltrans	As warranted by completion of special studies, additional monitoring and data compilation.
	7	Reopen and reconsider TMDL	San Diego Water Board	As defensible through the collection of additional data and significant findings by the watershed stakeholders.
	8	Meet Interim Milestone #1: Attain 20 percent required reduction in sediment loading (equivalent to 6691 tons of sediment per year) and/or show progress in improving Lagoon	MS4s and NPDES permittees	Within 5 years of approved TMDL

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		conditions consistent with the specified targets		
	9	Meet Interim Milestone #2: Attain 40 percent required reduction in sediment loading (equivalent to 5663 tons of sediment per year) and/or show progress in improving Lagoon conditions consistent with the specified targets	MS4s and NPDES permittees	Within 9 years of approved TMDL
	10	Meet Interim Milestone #3: Attain 60 percent required reduction in sediment loading (equivalent to 4636 tons of sediment per year) and/or show progress in improving Lagoon conditions consistent with the specified targets	MS4s and NPDES permittees	Within 13 years of approved TMDL
	11	Meet Interim Milestone #4: Attain 80 percent required reduction in sediment loading (equivalent to 3608 tons of sediment per year) and/or show progress in improving Lagoon conditions consistent with the specified targets	MS4s and NPDES permittees	Within 15 years of approved TMDL
	12	Meet Final Milestone: Achieve Lagoon numeric target: the successful restoration of tidal and non-tidal salt marsh to achieve a lagoon total of 346 acres. ¹	All Phase I, Phase II MS4s, Caltrans, and general construction and industrial NPDES enrollees, and other WDR and NPDES	Within 20 years of approved TMDL

¹ This can either mean:

1. Successful restoration of 80 percent of the 1973 acreage of lagoon salt marsh habitat (346 acres); or
2. Demonstrate that implementation actions are active on and/or affecting 346 acres with continued monitoring to ensure 80 percent target achievement.

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			permittees in the watershed ²	
	<i>Note: TMDL implementation schedule may be altered due to TMDL reconsideration; additionally, enforcement actions by the San Diego Water Board will be taken as necessary.</i>			

² For general construction and industrial permittees and other NPDES/WDR permittees, this applies to those facilities that have potential for long-term loadings into the watershed.