

**California Regional Water Quality Control Board
San Diego Region**

Response to Comments Report

**Tentative Order No. R9-2015-0013
NPDES NO. CAG919003**

***General Waste Discharge Requirements for
Groundwater Extraction Discharges to
Surface Waters within the San Diego Region***

June 24, 2015

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

2375 Northside Drive, Suite 100, San Diego, California 92108
Phone • (619) 516-1990 • Fax (619) 516-1994
<http://www.waterboards.ca.gov/sandiego>

Documents are available at: <http://www.waterboards.ca.gov/sandiego>

**California Regional Water Quality Control Board
San Diego Region**

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This report was prepared under the direction of

David T. Barker, P.E., *Supervising Water Resource Control Engineer*,
Brandi Outwin-Beals, P.E., *Senior Water Resources Control Engineer*

By

Ben Neill, P.E. *Water Resources Control Engineer*

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Introduction

The California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) has prepared this Response to Comments Report on Tentative Order No. R9-2015-0013, NPDES No. CAG919003, *General Waste Discharge Requirements for Groundwater Extraction Discharges to Surface Waters within the San Diego Region*, (Tentative Order). This Report addresses written comments received from interested parties listed below on the Tentative Order. Public notice of the Tentative Order was published in the newspaper and the Tentative Order was made available for public review and comment on April 20, 2015 for 31 days, with the comment period ending on May 20, 2015.

| <u>Written comments were received from:</u> | <u>Page No.</u> |
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Comments and Responses

The summarized written comments and San Diego Water Board responses to the comments are listed in the table that follows. The comments are organized according to the party that made the comment. The table indicates if the Tentative Order was revised in response to the comment. All of the original comment letters are provided on the San Diego Water Board website at the following link:

http://www.waterboards.ca.gov/sandiego/board_info/agendas/2015/Jun/Jun24.shtml

| No. | Comment | Response | Action Taken |
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| County of San Diego, Mr. Todd E. Snyder, May 20, 2015 | | | |
| 1 | The County of San Diego supports the draft Tentative Order finding that groundwater extraction discharges from post-construction single-family residential structures or lots are not regulated by the Tentative Order due to potentially prohibitive costs associated with the requirements of the Tentative Order (Attachment F, pg. F-9). | Comment noted. As provided in the Fact Sheet of the Tentative Order (Attachment F, pg. F-9), groundwater extraction discharges from a post-construction single family residential home or lot are not regulated by the Tentative Order unless such a discharge has been determined to cause or contribute to a condition of pollution or nuisance. | No changes have been made to the Tentative Order. |
| 2 | <p>The County of San Diego submits that there are other residential land uses within the region that could also be considered as low volume groundwater dischargers, including duplexes and other multi-family structures, as well as the common recreational areas within these residential land uses. The County recommends that Section I.B.10 <i>Discharges Not Regulated by this Permit</i>, be revised as follows:</p> <p>"Groundwater extraction discharges from post construction residential areas including single-family residential homes or lots, duplexes and other multi-family homes and any common use areas associated with these residential areas single family residential home, unless such a discharge has been determined to cause or contribute to a condition of pollution or nuisance. This determination may be made by the San Diego Water Board or by the appropriate local agency with the San Diego Water Board's concurrence."</p> | Multi-family residences may vary widely in size and there is increased potential for these residences to discharge extracted groundwater that may impact receiving water quality. Based on these considerations, the Tentative Order has not been modified to reflect the change requested. | No changes have been made to the Tentative Order. |

| No. | Comment | Response | Action Taken |
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| County of Orange, Mr. Grant Sharp, May 20, 2015 | | | |
| 3 | <p>The Tentative Order would establish an instantaneous maximum value of 20 NTU (nephelometric turbidity units) as an effluent limitation for discharges to freshwater inland surface waters, which is based on the Basin Plan objectives in the San Juan Hydrologic Unit. In addition to the instantaneous maximum of 20 NTU, the discharge shall not exceed the ambient turbidity of the surface water at any time. Turbidity can be highly variable and affected by conditions unrelated to temporary groundwater extraction. It is recommended that turbidity be used as a trigger for follow-up action, such as evaluation of best management practices (BMPs), but that exceedances of the effluent limitation for turbidity not constitute an immediate violation of the Order.</p> | <p>As provided in the Fact Sheet of the Tentative Order in Attachment F at pages F-18 and F-19, the Clean Water Act generally requires NPDES permits to include technology-based effluent limitations and any more stringent limitations necessary to meet water quality standards (Title 40 of the Code of Federal Regulations (40 CFR) section 122.44). NPDES permits must also limit and control all pollutants that “are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality” (40 CFR section 122.44(d)(1)(i)). Further, under the California Water Code (Water Code), waste discharge requirements in the Tentative Order must implement applicable Basin Plan water quality objectives. (Water Code section 13263)</p> <p>Consistent with the applicable laws and regulations cited above, the turbidity requirements for discharges regulated under the Tentative Order to inland surface waters, including surface waters in the San Juan Hydrologic Unit, were established based on the requirements in the Water Quality Control Plan for the San Diego Basin (Basin Plan) (See Fact Sheet in Attachment F of Tentative Order, Table F-6 at Page F-37 and Basin Plan at page 3-12).</p> <p>The Fact Sheet of the Tentative Order provides in Attachment F at page F- 21 that extracted groundwater discharged to inland surface waters may contain inconsistent levels of settleable and suspended solids, impacting the ability to accurately evaluate reasonable potential to exceed applicable water quality objectives with limited data during the</p> | <p>No changes have been made to the Tentative Order.</p> |

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| | | <p>Discharger's Notice of Intent application process to obtain coverage under the Order. Based on this consideration, reasonable potential for ground water extraction discharges to exceed the 20 nephelometric turbidity unit (NTU) Basin Plan water quality objective in inland surface waters was presumed and a turbidity instantaneous maximum effluent limitation of 20 NTU is proposed in the Tentative Order.</p> <p>In addition to the instantaneous maximum effluent limitation of 20 NTU, the Tentative Order also provides that the discharge shall not exceed the ambient turbidity of the surface water at any time. By incorporating receiving water ambient conditions for turbidity into the effluent limitation, the Tentative Order adequately considers varied turbidity conditions in the receiving water and limits any increase in turbidity levels caused by the discharge of extracted groundwater.</p> <p>Based on all of these considerations, the Tentative Order has not been modified to reflect the change requested.</p> | |

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| 4 | <p>A total suspended solids (TSS) effluent limitation of 75 mg/L applies to groundwater discharges to surface waters outside of the Newport Bay Watershed in the Santa Ana Region (Order No. R8- 2009-0003) while the Los Angeles Region Water Board sets maximum daily and average monthly limits of 75 and 50 mg/L, respectively (Order No. R4-2014-0095). Order No. R9-2008-0002 established, and the Tentative Order would continue, an instantaneous maximum effluent limitation of 50 mg/L and an average monthly effluent limitation of 30 mg/L for TSS in the San Diego Region. For a public works organization that carries out regional transportation and flood control improvement projects that potentially have a need to temporarily discharge extracted groundwater to surface waters during construction, in all three aforementioned Regional Board jurisdictions, it is helpful to understand the basis for the lower TSS effluent limitations.</p> | <p>Consistent with federal anti-backsliding requirements, the Tentative Order carries forward the effluent limitations for total suspended solids (TSS) from the previous Order, Order No. R9-2008-0002. Title 40 of the Code of Federal Regulations (40 CFR) section 122.44(l) requires that effluent limitations in a renewed/reissued permit be at least as stringent as the effluent limitations in the previous permit unless one of several exceptions apply. In this case at this time, none of the exceptions applied with regards to TSS.</p> | <p>No changes have been made to the Tentative Order.</p> |
| 5 | <p>Water and sediment quality monitoring data collected in South Orange County between 2003 and 2013 has been assessed by the Orange County Stormwater Program and analysis indicates that metals are not a source of toxicity in wet or dry weather (2014 San Diego Region State of the Environment Report, page 34). At the same time, special studies have identified naturally occurring elevated concentrations of metals (cadmium, nickel, zinc) in groundwater of South Orange County dominated by marine sedimentary geologic formations. Total recoverable manganese and total recoverable iron have also been identified in areas of South Orange County at naturally occurring concentrations which exceed the instantaneous maximum effluent limitations of 0.05 mg/L and 0.3 mg/L, respectively. It is recommended that site specific effluent limitations for metals be allowed in areas where local geology has been determined to be a source of elevated metals concentrations in groundwater.</p> | <p>As provided in the Fact Sheet of the Tentative Order in Attachment F at pages F-18 and F-19, the Clean Water Act generally requires NPDES permits to include technology-based effluent limitations and any more stringent limitations necessary to meet water quality standards” (40 CFR section 122.44). NPDES permits must also limit and control all pollutants that “are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard including narrative criteria for water quality” (40 CFR 122.44(d)(1)(i)). Further, under the Water Code, waste discharge requirements in the Tentative Order must implement applicable Basin Plan water quality objectives (Water Code section 13263).</p> <p>Consistent with the applicable laws and regulations cited above, the effluent limitations in the Tentative</p> | <p>No changes have been made to the Tentative Order.</p> |

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| | | <p>Order for cadmium, nickel, and zinc applicable to discharges to inland surface waters in South Orange County are based on the federal California Toxics Rule, Aquatic Life Criteria and protocols established in the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (SIP). (See Fact Sheet in Attachment F of Tentative Order at Page F-15 and Table F-4 at Page F-37). The effluent limitations for iron and manganese in the Tentative Order are based on the water quality objectives for iron and manganese in the Basin Plan and would be applicable based on the result of a reasonable potential analysis. (See Fact Sheet in Attachment F of Tentative Order, Table F-6 at Page F-37 and Basin Plan at page 3-12.)</p> <p>The San Diego Water Board may consider amending the Basin Plan in the future to reflect site specific water quality objectives through a formal Basin Plan Amendment. Until such an amendment is made, the San Diego Water Board must establish effluent limitations and other requirements in the Tentative Order based on the current water quality objectives in the Basin Plan and water quality criteria contained in the federal California Toxics Rule.</p> | |

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| City of Oceanside, Katie Greenwood, May 19, 2015 | | | |
| 6 | For foundation drains and footing drains (sections. I.A.1b and d) add additional footnote or more information to existing footnote so that it is clear whether or not permanent groundwater drainage and seepage control projects designed to be located above the groundwater table to actively or passively extract groundwater are not regulated under the permit (i.e. coverage under permit for those systems does not have to be obtained) and are allowable discharges under Order No. R9-2013-0001, NPDES No. CAS0109266 (if draining through the City's municipal separate storm sewer system (MS4) and if found not to cause or contribute to a condition of pollution or nuisance (to be determined by local or state regulators)). | Section I.A.1, footnote 1 has been revised for clarity. | Tentative Order section I.A.1, footnote 1 has been revised. |
| 7 | Consider adding a footnote to crawl space pumps (section. I.A.1.c.), so that it is clear that discharges from crawl space pumps at single family residential homes are not regulated under permit. | Because section I.B.10 already exempts discharges from a post-construction single family residential home unless such a discharge has been determined to cause or contribute to a condition of pollution or nuisance, the requested change is not necessary. | No changes have been made to the Tentative Order. |
| 8 | If groundwater discharges from home owner associations (HOAs), multi-family units, and other residential communities are to be regulated under this permit, add to list of sources under section. I.A.1. | The list of sources in section I.A.1 is not by type of development but rather by type of activity. If any of the groundwater extraction activities, listed in section I.A.1, are discharged from a HOA or multi-family unit, then such a discharge will require coverage under the Tentative Order. | No changes have been made to the Tentative Order. |
| 9 | Need to define what a passive discharge is. Maybe add footnote to section I.B.3. or add under definitions in part 2 of Attachment A. | The definition for "extraction" in Attachment A has been revised to include active and passive extraction. | Tentative Order Attachment A has been revised. |
| 10 | Consider adding additional language to section II.A.4. requiring dischargers to not only demonstrate (through | MS4 operators throughout the San Diego Region may under their own authority request specific | No changes have been made to the Tentative |

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| | <p>the notice of intent (NOI)) that they have notified the MS4 operator of the point of the proposed discharge but that they have also provided the MS4 operator with the following:</p> <ul style="list-style-type: none"> i. Description of collection and discharge system (i.e. number of pumps, wells, vaults, etc.); ii. Estimated volume and/or flow of total discharge per day; and iii. Map of discharge point and receiving storm drain inlet. | <p>information regarding any proposed or existing groundwater extraction discharges to their MS4 system. The Tentative Order does not specify the information that a Discharger, when applying for coverage, must submit to the MS4 operator. The MS4 operator may request any specific information that is needed to evaluate the proposed or existing discharge into the MS4. Consistent with Water Code section 13002 and 40 CFR 122.5(c), the Tentative Order is not intended to affect any separate legal authority an MS4 operator may have to prohibit a discharge or to require the Discharger to obtain any permits or approvals from the MS4 operator before initiating discharges into the MS4. (See Fact Sheet section II.B.4 in Attachment F of Tentative Order, at Page F-10.)</p> | <p>Order.</p> |
| 11 | <p>Consider adding reporting requirements in section V. of Attachment E which require dischargers to provide MS4 operators with copies of monitoring data records at the same time state operators are provided records.</p> | <p>The monitoring reports are available for review upon request at the San Diego Water Board. Depending on their existing authorities in storm water ordinances, MS4 operators may also require submittal of the reports directly by the discharger.</p> | <p>No changes have been made to the Tentative Order.</p> |
| 12 | <p>In Attachment E, consider removing footnote 4 which states that monitoring for bacteria is only required if a discharge is associated with sewage collection or treatment or otherwise indicated since many water bodies (or specific portions) are impaired for bacteria levels and it is important to identify potential sources of bacteria (especially when not associated with discharge from sewage collection or treatment since it could indicate faulty piping systems nearby, improper grey water usage, etc.) so that they can be eliminated. Alternatively, additional language could be added to the footnote which states something to the effect of "if discharger has historic records (at least three years' worth) of monitoring data which indicates a pollutant is</p> | <p>Footnote 4 has been removed from the tables in Attachment E of the Tentative Order, as requested. Monitoring for bacteria is required when reasonable potential has been identified through the application process. The instructions in the reasonable potential analysis requires that reasonable potential is "presumptive – yes" for a pollutant discharge to a waterbody subject to a TMDL for such pollutant. i.e. Any groundwater extraction discharge to a waterbody subject to a TMDL for bacteria will be required to monitor for bacteria. In addition, the San Diego Water Board may specify increased monitoring requirements on a case-by-case basis in the NOA as necessary to ensure that applicable water quality</p> | <p>Tentative Order Attachment E, footnotes to tables E-2 through E-6 have been revised to remove footnote 4 and renumber remaining footnotes.</p> |

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| | not present in the discharge, the discharger may choose to either reduce frequency of monitoring for the pollutant or stop monitoring for the pollutant indefinitely". | objectives are maintained in the receiving waters. | |
| 13 | Same comment as Comment 12 above for footnote 1 in Table E-6 of Attachment E of the Tentative Order. | See response to comment no. 12. Footnote 1 has the same language regarding bacteria referenced as footnote 4 in response to comment 12. | Tentative Order Attachment E, footnote 1 has been removed and the remaining footnotes renumbered. |
| 14 | Have the pollutant effluent limitations listed in section V for discharges to freshwater inland surface waters (regardless of domestic and municipal supply (MUN) beneficial use) been calculated so that pollutant levels will not contribute to an impairment for which the water body is listed for on the [Clean Water Act section] 303(d) [list of impaired waterbodies]? Has the impact from combined discharges into one freshwater inland surface water body been considered? If not, consider adding language which states that a discharge (to freshwater inland surface waters) may be subject to more stringent effluent limitations for a pollutant for which the water body is impaired should regulators find that the discharge (or total combined discharges to one water body) is adding to an impairment in any segment of the water body. This may be especially important for discharges of bacteria to Buena Vista Creek or Buena Vista Lagoon which could contribute to indicator bacteria impairment in Buena Vista Lagoon. Also important for discharges of bacteria, nitrogen, and phosphorus to Loma Alta Creek or Loma Alta Slough which could possibly contribute to indicator bacteria and eutrophic impairments in Loma Alta Slough. | All Clean Water Act section 303(d) listings will be considered as part of the application process, consistent with the requirements in the SIP and the Ocean Plan for determining the potential of the discharge for causing or contributing to a water quality impairment. (See Fact Sheet section III.D and Attachment C, Notice of Intent.) | No changes have been made to the Tentative Order. |

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| City of San Diego, Drew Kleis, May 19, 2015 | | | |
| 15 | <p>San Diego Water Board staff has provided written guidance to City of San Diego staff indicating that enrollment of discharges from foundation and footing drains is only required where groundwater is pumped, under the current Order (Order No. R9-2008-0002). If San Diego Water Board staff intends to continue the practice of only requiring enrollment when groundwater is pumped, then the City of San Diego requests the following revisions to Footnote 1 to bring the language of the Tentative Order in line with practice and to avoid confusion:</p> <p>"Permanent groundwater drainage and seepage control projects are included if the system is designed to be located at or below the groundwater table to actively or passively extract groundwater <u>by pumping</u>"</p> | <p>The Tentative Order proposes to regulate specified pumped and passive groundwater extraction discharges. This is a change from the current Order (Order No. R9-2008-0002) which regulates only pumped groundwater extraction discharges. By making this change, the Tentative Order is aligned with the requirements of the Regional MS4 Permit, Order No. R9-2013-0001 pertaining to groundwater discharges into an MS4. Footnote 1 has been modified to more closely reflect the Regional MS4 Permit's requirements at section II.E.2.A.(1) of Order No. R9-2013-0001.</p> | <p>Tentative Order section I.A.1., footnote 1 has been revised.</p> |
| 16 | <p>MS4 operator approval should be required before allowing discharges to the MS4. The Tentative Order requires applicants proposing to discharge groundwater to a MS4 to provide documentation demonstrating that the operator of MS4 has been notified (Tentative Order, section II, item 4). This is a significant change from Order No. R9-2008-0002, which requires "prior approval from the local agency with jurisdiction over the MS4" (Order No. R9-2008-0002, section II, item D). The policy behind this requirement is sound: MS4 operators are held to a very high standard for minimizing pollutants in their discharges to receiving water, irrespective of the source of those pollutants.</p> <p>Additionally, groundwater discharges to open channels that are part of the MS4 system may cause increased vegetation growth and maintenance costs. The City of San Diego recommends replacing item 4 of the</p> | <p>The intent of the MS4 operator notification requirements in both the prior Order and the Tentative Order is to encourage communication between Dischargers enrolled under the Order and MS4 operators at the point of the proposed discharge and thereby reduce misunderstandings and concerns over the types of discharges covered by the Tentative Order. The proposed replacement of the requirement to obtain "local jurisdiction approval" with a requirement to "notify the MS4 operator" does not change but instead clarifies that the underlying intent of the requirements is to enhance communication.</p> <p>Furthermore, as stated in Attachment D, section I.E, the Tentative Order does not convey any property rights of any sort or any exclusive privileges. Consistent with Water Code section 13002 and 40 CFR section 122.5(c), the Tentative Order is not</p> | <p>No changes have been made to the Tentative Order.</p> |

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| | tentative order in its entirety with section II, item D of the previous order. | intended to affect any separate legal authority an MS4 owner may have to prohibit a discharge or to require the Discharger to obtain any permits or approvals from the MS4 owner before initiating discharges into the MS4. (See Fact Sheet section II.B.4 in Attachment F of the Tentative Order, at Page F-10.) | |
| 17 | <p>The list of specific discharge prohibitions in section IV of the Tentative Order does not include all of the San Diego Region's Total Maximum Daily Loads (TMDLs). Discharge prohibitions should be called out for all TMDLs. The City of San Diego requests the following missing TMDLs be added to this list:</p> <ul style="list-style-type: none"> • TMDLs for Dissolved Copper, Lead, and Zinc in Chollas Creek (Resolution R9-2007-0043) • The TMDL for Sedimentation in Los Penasquitos Lagoon (Resolution R9-2012-0033) <p>Additionally, the City of San Diego recommends revision of section IV, item H to specify dissolved copper instead of copper.</p> | The Tentative Order has been revised to more clearly address the TMDLs for Chollas Creek and Los Penasquitos Lagoon. | The Tentative Order has been revised as requested at section IV.L and M on page 11; and Attachment B, section VII, page B-9. |
| 18 | Annual assessment for reopeners to address new TMDL requirements is recommended. The Tentative Order includes detailed reopener provisions in section VIII, item H, stating: "Modification is warranted to incorporate a new or revised water quality objective that has come into effect or applicable requirements of a total maximum daily load (TMDL) that is adopted or revised" This is a critical piece of maintaining consistency with current regulations as they develop. The City recommends that a specified frequency of review for assessing the need for modification be added to the end of Section VIII, item H as follows: "An assessment shall be conducted to determine the need | <p>Irrespective of the TMDL requirements incorporated in the Tentative Order, all Clean Water Act section 303(d) water body impairment listings will be considered as part of the Discharger application process, consistent with the requirements in the SIP and the Ocean Plan for determining the potential of the discharge for causing or contributing to a water quality impairment.</p> <p>The identification of specific NPDES permits required to incorporate newly adopted TMDL requirements is typically documented in the TMDL implementation plan which is a standard element of the TMDL</p> | No changes have been made to the Tentative Order. |

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| | for this type of modification on an annual basis." | technical report. The San Diego Water Board will consider revision of the NPDES permit during its 5 year term to incorporate newly adopted TMDL requirements, taking into account factors such as available NPDES resources, staff and budget constraints, and other competing priorities. | |
| 19 | <p>In section IX, item K the Tentative Order discusses interpretation of toxicity test results. The Tentative Order states: "The San Diego Water Board will make a final determination as to whether a toxicity test result is valid, and may consult with the Discharger, USEPA, the State Water Board's Quality Assurance Officer, or the State Water Board's Environmental Laboratory Accreditation Program as needed." The City recommends inclusion of the jurisdiction in which the discharge is to take place by adding the following language:</p> <p>"The San Diego Water Board will make a final determination as to whether a toxicity test result is valid, and may consult with the Discharger, USEPA, <u>the MS4 operator for the jurisdiction in which the discharge occurs</u>, the State Water Board's Quality Assurance Officer, or the State Water Board's Environmental Laboratory Accreditation Program as needed."</p> | The authority for compliance determination with the provisions of the Tentative Order is held by the San Diego Water Board. In determining compliance with toxicity tests as with all provisions, the San Diego Water Board must be fair and consistent. Consulting with the local MS4 owner and operator may present a conflict of interest when determining compliance due to separate permits and authorities held by the local MS4 operator. Therefore, the requested change was not made. | No changes have been made to the Tentative Order. |

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| Kinder Morgan Energy Partners, L.P., Scott Martin, May 20, 2015 | | | |
| 20 | <p>Effluent limitations for iron and manganese should include higher values for hydrologic subareas 7.11 and 7.12 (table 6).</p> <p>Table 6 (Effluent Limitations for Discharges to Freshwater Inland Surface Waters without MUN Beneficial Use) includes instantaneous maximum effluent limits for total recoverable iron and manganese of 0.3 and 0.05 milligrams per liter (mg/L), respectively. The Tentative Order should be revised to add different effluent limits for Hydrographic Subareas 7.11 and 7.12, to match the Basin Plan's specific water quality objectives of 1.0 mg/L for iron and 1.00 mg/l for manganese for those waters. The Table 6 values are derived from Table 3-2 (page 3-14) of the Basin Plan, which lists these specific water quality objectives for iron and manganese while the Tentative Order does not.</p> <p>The specific water quality objectives for subareas 7.11 and 7.12 were accommodated in effluent limitations in a previous version of this general permit, Order No. R9-2001-0096, which included a footnote stating in part:</p> <p>“For the Mission San Diego (7.11) and Sycamore Canyon (7.12) Hydrographic Subareas, the effluent limitation for iron shall be 1.0 mg/L and the effluent limitation for manganese shall be 1.0 mg/L.”</p> <p>This footnote was not carried forward to the next general permit, Order No. R9-2008-0002, but discussion with San Diego Water Board staff at the time of that permit's adoption confirmed that failure to carry forward the footnote was not intentional and simply an oversight.</p> | The Tentative Order has been revised, as requested. | Tentative Order section V.A.2, Table 6, footnote 9 has been revised. |

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| | <p>The Tentative Order should be revised to add this footnote to Table 6 or other clear language setting effluent limitations of 1.0 mg/l for iron and 1.00 mg/l for manganese, for discharges to subareas 7.11 and 7.12.</p> | | |
| 21 | <p>The Tentative Order requires whole effluent testing (WET) tests to be analyzed using the Test for Significant Toxicity (TST) which relies on data from only two concentrations (a control group and an effluent-exposed group). This is not an approved Alternate Test Procedure (ATP) to be used in lieu of methods listed in Table IA of 40 CFR part 136.5. While the U.S. Environmental Protection Agency (EPA) initially approved the use of the TST method in their letter dated March 17, 2014, this approval was recently withdrawn in their letter dated February 11, 2015.</p> <p>The Tentative Order also states that dischargers "shall follow the methods for chronic toxicity tests as established in Code of Federal Regulations, title 40, section 136.3. The EPA method manuals referenced in section 136.3 include <i>Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms</i>, Fourth Edition (EPA-821-R-02-013)." According to EPA, "if EPA has approved (i.e. promulgated through rulemaking) standardized test procedures for a given pollutant, the NPDES permitting authority must specify one of the approved testing procedures or an EPA-approved alternate test procedure for the measurements required under the permit." The Tentative Order's requirements for WET testing should be revised accordingly.</p> <p>In light of EPA's decision, federal regulations require the discharger to evaluate compliance using one of the</p> | <p>The WET requirements in the Tentative Order, including the use of the TST statistical method, are consistent with all applicable rules and regulations, including 40 CFR section 136.3 and the test methods described in <i>Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms</i> (October 2002) (EPA-821-R-02-013).</p> <p>The San Diego Water Board in its role as the permitting authority has the discretion to select the statistical approach for analyzing WET test data that is most appropriate for use in a particular permit. (See Section 9.4.1.2 of <i>Short-term Methods</i>, October 2002, EPA-821-R-02-013 ("[T]he statistical methods recommended in the manual are not the only possible methods of statistical analysis.")) The San Diego Water Board has proposed the TST statistical approach for use in evaluating toxicity test data collected under the monitoring program for the Tentative Order.</p> <p>The February 11, 2015, letter from EPA to the State Water Resources Control Board (State Water Board) withdrew EPA's prior approval of the ATP for a modified test design method for determining compliance with toxicity effluent requirements associated with discharges to inland waterbodies based on procedural rulemaking, not substantive or scientific reasons.</p> | <p>No changes have been made to the Tentative Order.</p> |

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| | <p>procedures described in the above referenced method manuals. This does not prevent a discharger from simultaneously reporting results from the TST procedure, or from using the TST results to trigger appropriate follow-up actions. However, the unapproved TST procedure cannot be used in lieu of an approved method to certify that a permit violation has or has not occurred. This is especially true where results from the unapproved TST procedure support a different conclusion regarding the presence or absence of toxicity than results derived from one of the EPA-recommended statistical procedures identified when the WET test methods were originally promulgated under 40 CFR part 136.</p> | | |
| 22 | <p>The Fact Sheet for the Tentative Order states that the "San Diego Water Board will not consider a concentration-response pattern as sufficient basis to determine that a TST t-test result for a toxicity test is anything other than valid, absent other evidence." This statement should be deleted.</p> <p>Assuming that the test is correct even in the absence of a valid dose-response relationship, unless the lack of a dose-response relationship is also corroborated by other evidence, is contrary to the clear directives given in the promulgated method manuals for National Pollutant Discharge Elimination System (NPDES)-related WET testing.</p> <p>This statement is contrary to EPA guidance as follows:</p> <p>"The agency [EPA] is concerned that single concentration, pass/fail, toxicity tests do not provide sufficient concentration-response information on effluent toxicity to determine compliance. It is [EPA's] policy that all effluent toxicity tests include a minimum</p> | <p>USEPA's Method Guidance addressing concentration-response (aka "dose-response") evaluations, states that an "evaluation of the concentration-response relationship generated for each sample is an important part of the data review process that should not be overlooked." This guidance was promulgated in 2002, well before development of the TST statistical approach. The guidance assumes that either NOEC-LOEC (No Observed Effect Concentration – Lowest Observed Effect Concentration) hypothesis testing or a point estimation analysis will be used to evaluate multi-concentration WET test data. In that circumstance, evaluation of the concentration-response relationship is important to determine whether the assumptions underlying these statistical approaches are reflected in the data. These same assumptions are not relied upon by the TST statistical approach. A WET test is validated by reviewing the test acceptability criteria and quality assurance/ quality control (QA/QC) measures, such as:</p> | <p>No changes have been made to the Tentative Order.</p> |

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| | <p>of five effluent concentrations and a control.”</p> <p>... the use of pass/fail tests consisting of single effluent concentration (e.g. receiving water concentration or RWC) and a control is not recommended.”</p> <p>In the Fact Sheet, the Regional Board indicates that EPA's (2000) guidance on interpreting concentration-responses "does not apply to the statistical assumptions on which the TST is based." This statement is not explained and is inconsistent with EPA guidance. Guidance authored by Dr. Mount and Dr. Norberg-King, the two EPA scientists primarily responsible for developing the WET test methods in widespread use today, states as follows:</p> <p>"A predictable dose response curve is one of the mandatory requirements for a valid toxicity test. We would never accept analytical results from an instrument producing an abnormal standard curve. The predictable dose response curve, that is increasing toxicity with increasing concentration, is the analogue of the analytical standard curve and is of equal importance in toxicity testing.</p> <p>"The dose response curve is the basis for the validity of a toxicity test. The control serves as the starting point from which the dose response is evaluated. If a dose response is not obtained, then toxicity cannot be inferred."</p> <p>The fact that the promulgated method mandates a multi-concentration test, and the Tentative Order retains this requirement, proves that a valid dose-response relationship is an essential element of all toxicity testing irrespective of which statistical technique is employed</p> | <ul style="list-style-type: none"> • Performing and evaluating reference toxicant tests; • Evaluating various test condition components, such as water quality measurements (temperature, pH, DO, light intensity, etc.) to ensure that they are within the typically accepted range; • Examining effluent sampling and handling; and • Plotting control charts to track the lab's control performance and reference toxicant performance over time. <p>USEPA neither recommends nor requires review of the concentration-response pattern for a multi-concentration test <i>prior</i> to running the TST statistical analysis. The TST statistical analysis must be conducted regardless of the concentration-response pattern. Review of the concentration- response pattern should be conducted as a component of a broader quality assurance and data review and reporting process.</p> <p>The TST statistical approach is desirable over the status quo. In the executive summary of USEPA's <i>NPDES Test of Significant Toxicity Implementation Document (EPA 833-R-10-003, June 2010)</i>, USEPA states that "The traditional hypothesis testing approach under USEPA's <i>Technical Support Document for Water Quality-based Toxics Control</i> is still considered valid as applied; however, that approach can now be advanced through the TST approach by providing new incentives to permittees to provide valid, high quality WET data."</p> <p>Section 1.2 of USEPA's <i>NPDES Test of Significant Toxicity Implementation Document-June 2010</i></p> | |

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| | <p>to evaluate the data.</p> <p>"A corollary of the concentration-response concept is that every toxicant should exhibit a concentration-response relationship, given that the appropriate response is measured and given that the concentration range evaluated is appropriate. Use of this concept can be helpful in determining whether an effluent possesses toxicity and in identifying anomalous test results. The concentration-response relationship for each multiconcentration test must be reviewed to ensure that calculated test results are interpreted correctly ... All WET test results (from multi-concentration tests) reported under the NPDES program should be reviewed and reported according to USEPA guidance on the evaluation of concentration-response relationships."</p> <p>We disagree with the Regional Board's statement that application of EPA's 2000 guidance on concentration-response patterns "will not improve appropriate interpretation of TST results." In 2000, EPA relied heavily on such analysis to identify and reduce the number of false positives during their large-scale Interlaboratory Study of WET Variability. Reanalysis of this same data using the TST procedure, without consideration of the underlying dose-response relationship, shows that this technique nearly quadruples the rate of false positives (e.g. blank samples mistakenly identified as "toxic"). This is not surprising given the fact that the TST procedure uses an initial assumption (aka "null hypothesis") that the sample is toxic and requires a high level of statistical certainty to reject that presumption. Under the circumstances, observing a valid dose-response relationship becomes more important, not less relevant.</p> | <p>explains that "the current NPDES WET Program does not control for false negatives. Thus, the TST approach allows permitting authorities to minimize the occurrence of false negatives (i.e., declaring the IWC non-toxic when it is actually exhibiting unacceptable toxicity), while also minimizing the occurrence of false positives (i.e., declaring the IWC toxic when it is actually acceptable). The TST approach has the added advantage of providing permittees with a clear incentive to improve the precision of test results (e.g., decrease within-test variability and/or use more replicates within a WET test than the minimum required in the EPA WET test method) to reach a definitive conclusion as to whether unacceptable toxicity is observed in a test. Thus, using the TST approach, a permittee can in fact <i>prove a negative</i>, i.e., that their effluent is acceptable (non-toxic)."</p> <p>The Tentative Order also includes a reopener provision in the event of new or revised toxicity requirements or water quality standards applicable to toxicity.</p> | |

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| | <p>We agree that the absence of a valid dose-response relationship should not automatically "invalidate" the test. However, such an occurrence remains a well-established indication that the test data should be carefully interpreted before validating and certifying the results. The statement made in the Tentative Order that the San Diego Water Board's will assume the test is correct even in the absence of a valid dose-response relationship, unless the lack of a dose-response relationship is also corroborated by other evidence, is contrary to the clear directives given in the promulgated method manuals for NPDES-related WET testing, and should be deleted.</p> <p>This issue is of practical and legal importance to permittees. We concur with the Regional Board's statement that "unexpected concentration-response patterns should not occur with any regular frequency."</p> <p>However, in our experience, ionic imbalance can cause significant and consistent test interference. Careful evaluation of the dose-response relationship is an essential tool that helps to distinguish true toxicity from ionic interference when interpreting test results.</p> | | |
| Pure Effect, Inc., Michael E. Slaby, May 20, 2015 | | | |
| 23 | We like the fact that the two permits will be consolidated into one. This will make it easier for our applicants who are not familiar with understanding the inland vs. the inland surface water/bay permits. | Comment noted. | No changes have been made to the Tentative Order. |
| 24 | The method for expressing the potential constituents changed and it is very specific and leaves less to interpretation by using the Reasonable Potential Analysis (RPA) format. | Comment noted. | No changes have been made to the Tentative Order. |

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| 25 | <p>The monitoring and reporting program (MRP) requirements appear to have increased so the monthly and periodic costs associated with the sampling, analysis testing will increase; this will place an additional financial burden on enrollees in the order and result in higher costs for compliance. Is there a mechanism in place to allow a reduction in the MRP if the effluent has been in full compliance for more than 60 days?</p> | <p>For most constituents, the monitoring frequency has increased to monthly from quarterly. However, different from the previous Orders, the Tentative Order requires monitoring only for those constituents that have reasonable potential or presumptive reasonable potential to cause or contribute to an excursion above any State water quality standard including narrative criteria. The previous Orders required monitoring for all constituents with effluent limitations regardless of reasonable potential. The Tentative Order does provide a reduced monitoring frequency in footnote 2 to the monitoring tables in Attachment E of the Tentative Order which specifies: "If the pollutant is not detected in the effluent for six consecutive months, then the monitoring frequency for this pollutant may be reduced to once per quarter. Upon detection in the effluent, monitoring shall return to monthly."</p> | <p>No changes have been made to the Tentative Order.</p> |
| 26 | <p>In regards to the pesticides, PCB's (poly-chlorinated biphenyls), etc. is the San Diego Water Board going to require analysis to the levels expressed [i.e. PCBs sum 0.00017 µg/L]? There is a valid concern that these low levels are not achievable with current treatment methods, thus an enrollee may be in violation of the maximum discharge levels if they are detected above these levels.</p> | <p>Monitoring must be conducted according to USEPA test procedures approved under 40 CFR part 136. (See section I.B on page E-2 of Attachment E of the Tentative Order.) Minimum levels of analysis must be consistent with the requirements of the SIP and the Ocean Plan. For purposes of compliance, the Discharger shall be deemed out of compliance with effluent limitations if the concentration of the constituent in the monitoring sample is greater than or equal to the minimum level when the minimum level is higher than the effluent limitation. The discharger must treat the effluent to a level that is in compliance with the Tentative Order's provisions.</p> | <p>No changes have been made to the Tentative Order.</p> |