Response to Comments

LEO J. VANDER LANS WATER TREATMENT FACILITY ANDTHE ALAMITOS BARRIER RECYCLED WATER PROJECT
TENTATIVE WASTE DISCHARGE REQUIREMENTS AND WATER RECYCLING REQUIREMENTS

This Table describes all significant comments received from interested persons with regard to the above-mentioned tentative permit. Each comment has a corresponding response and action taken. Formal and informal comments on renewal of this WDR/WRR have been received between November of 2013 and the close of comments on May 15, 2014, resulting in extensive improvements in the presentation of facts, the tone of the descriptions and the form of the regulatory language. This successful collaborative process was possible because of the Regional Water Board's agreement to delay the hearing of this Order at the request of the Project Sponsors. The comments submitted below are formal comments which do not include changes made for purposes of clarity. WRD is Water Replenishment District, CSDLAC is County Sanitation Districts of Los Angeles County, CDPH is California Department of Public Health and HTB is Heal the Bay

This Response to Comments is organized as follows:

Table 1
- WRD May 15, 2014 comment letter
- WRD May 15, 2014 comment letter Attachment A (Table of Contents),
- WRD May 15, 2014 comment letter Attachment B (Talking Points)
- WRD May 15, 2014 comment letter Attachment C (Red line of Draft Tentative)
- WRD May 15, 2014 comment letter Attachment D (Comparison 2005 permit and CDPH GWRR)
- WRD May 28, 2014 email
- CSDLAC May 14, 2014 comment letter
- HTB May 12, 2014
- CDPH: April 29, 2014

Table 2
- WRD May 15, 2014 comment letter Attachments 1 though 9.1

Commenter	#	Comment	Response	Action Taken
WRD May 15, 2014 comment letter				
WRD May 15, 2014 Cover letter	Page 1 Para 2	We would like to take this opportunity to thank you and Los Angeles Regional Water Quality Control Board (Regional Water Board) staff for meeting with me and my staff on April 18th, May 2nd and May 12th, 2014, at the Regional Water Board office and discussing our concerns regarding the Revised Tentative Permit. We greatly appreciate the fact that, during the May 12th meeting, the Regional Water Board staff agreed to make changes to the Revised Tentative Permit to address our concerns, per our summary of talking points (Attachment B) and the red-lined edits (Attachment C) that were shared with your team on April 18th and May 12th, respectively.	Staff's revisions based on the comments are reflected in this RTC.	Refer to individual comments below
WRD May 15, 2014	Page 1 Para 3	The District requests that the Regional Water Board modify the Revised Tentative Permit based on the requests contained herein and the Attachments (A through D and 1 through 9.1). As requested, the District's comments are compiled in a tabular format in Attachment A, with supporting information and details included in the remaining attachments. Attachments D and 1 through 9.1 are being provided to add further clarity to the issues outlined in Attachment A but do not contain additional recommendations for changes or edits to the Revised Tentative Permit. The requested modifications are fully protective of receiving groundwater and avoid any future potential confusion with regards to implementing and enforcing the requirements of the Permit.	Staff has revised the Order to include the proposed language where indicated, and considered the supporting information and attachments submitted by WRD.	Refer to individual comments below
WRD May 15, 2014	Page 2 Para 2	The District, however, feels that the Revised Tentative Permit appears incongruent with the Regional Water Board's recent commitment to promote recycled water use to ensure local water supply sustainability in that it proposes terms that have a significant potential to adversely impact the use of recycled water for groundwater recharge, especially when a drought has been recently declared by the Governor. For example, the Revised Tentative Permit introduces many new unnecessary requirements and unwarranted	In drafting the Tentative Order, the Regional Board considered both the benefits of recycled water use for groundwater recharge and long-term protection of groundwater quality. The Regional Board disagrees that the Tentative Order includes terms that will adversely impact the use of recycled water for groundwater recharge. Particular comments on the	Refer to individual comments below

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		unfavorable depictions of the Project, in a manner contrary to the existing Permit (Order No. R4-2005-0061).	requirements and depictions of the Project in the Tentative Order are addressed in further detail below.	
WRD May 15, 2014	Page 2 Para 3	To WRD, the overarching tone of the Revised Tentative Permit is that it treats the Project as a disposal of waste rather than as a beneficial reuse of recycled water. Detailed examples and recommended changes are contained in Attachment B. The District feels that this treatment conflicts with a variety of State laws and policies that recognize the distinction between "waste" disposal and beneficial use of "recycled water," and therefore should be modified accordingly (*See, e.g.*, State Water Board Resolution 77-1, which finds that: "The California Legislature has declared that the people of the State have a primary interest in the development of facilities to reclaim water containing waste to supplement existing surface and underground water supplies"; the State Water Board's Recycled Water Policy that declares that "when used in compliance with this Policy, Title 22 and all applicable state and federal water quality laws, the State Water Board finds that recycled water is safe for approved uses, and strongly supports recycled water as a safe alternative to potable water for such approved uses"; *see also* Water Code sections 13510, 13512, and 13560).	The detailed examples and recommended changes are responded to separately, below. Most of the requested edits to the Tentative Order were already made in response to the Project Sponsors' review of a staff working draft in March 2014 and during three meetings between Regional Board staff and the Project Sponsors from April 18th to May 12th.	Refer to individual comments below
WRD May 15, 2014	Page 2 Para 4	Of major concern is the tone of some of the findings of the Revised Tentative Permit that the District has degraded water quality through the Project and therefore new requirements are necessary to prevent further degradation. The specific findings of concern include information that is lacking detail, and is over generalized or non-factual, and projects the impression that the current Project and the expansion have or will have a detrimental impact on groundwater, which is incompatible with the Project's water quality monitoring results, which have been submitted to the Regional Water Board and California Department of Public Health (CDPH). As is customary for the Regional Water Board when renewing existing water quality permits, the District requests that the Revised Tentative Permit be	Responses to the specific findings identified by the Project Sponsors are addressed separately, below. Most of the requested edits to the Tentative Order were already made in response to the Project Sponsors' review of a staff working draft in March 2014, and during three meetings between Regional Board staff and the Project Sponsors from April 18th to May 12th	Refer to individual comments below

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		based on the monitoring data from the most recent five years (i.e., 2009 through 2013), as older data (pre-2009 Spring) do not reflect important operational enhancements or repairs the LVLAWTF has undergone. Equally disconcerting are a number of technically unsupported requirements based on the use of incomplete or partial information. Such information should be deleted or appropriately revised. Specific examples and recommended changes are included in Attachment B.		
	Page 3 Para 1	Furthermore, the District is concerned that the Revised Tentative Permit contains redundant, enforceable requirements that are unnecessary and create dual liability, as well as provisions that are not consistent with the July 2013 CDPH Conditions, the June 2013 Draft Groundwater Replenishment Regulations, and State's Anti-degradation Policy (Resolution 68-16), as detailed in Attachment B. The Revised Tentative Permit findings and requirements should be streamlined and modified to accurately reflect the existing policies and regulations.	Responses to the specific findings identified by the Project Sponsors are addressed separately, below. Most of the requested edits to the Tentative Order were already made in response to the Project Sponsors' review of a staff working draft in March 2014, and during three meetings between Regional Board staff and the Project Sponsors from April 18th to May 12th	Refer to individual comments below
		WRD Attachments A and C (WRD May 15th Redline)		
WRD Att's A &C	A1	Title Per Talking Point #9 (Permit Treats Project as Disposal of Waste Versus Beneficial Use of Recycled Water), WRD requests that the permit be issued only as Water Recycling Requirement to recognize the advance treated recycled water is not a waste. Additional comments are Provided in Attachment 1.	Waste Discharge Requirements will be retained. See Response to Attachment 1 Paragraph 2 below	No Change
WRD Att's A &C	A2	Section I.3 Add Important factual information from the 2013 approved Engineering Report, which is hereby incorporated by reference; see http://www.wrd.org/engineering/reports/LVLWTF_Engineering_Report_Revised_Final_With_Appendices.pdf.	Change made.	Change Made
WRD Att's A &C	A3	Section I.5 Talking Point #6 (Inconsistent with CDPH Conditions and Draft Groundwater Replenishment Regulations) - the terminology used is not consistent with CDPH Findings of Fact and Conditions; please refer to	Change made. "Dischargers" deleted.	Change Made

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		Attachment 2, the cover letter and CDPH Findings of Fact and Conditions.		
WRD Att's A &C	A4	Section I.6 The City of Long Beach only has the rights to recycled water from the Long Beach WRP.	Change Made.	Change Made
WRD Att's A &C	A5	Section II.7 Recognizes the recent amendment - Order No. R4-2005-0061-A01 issued by the Regional Water Board on March 6, 2014.	Change Made.	Change Made
WRD Att's A &C	A6	Section II.10 Added <u>in Lakewood, California</u> to clarify the location of the hearing and that it was in proximity to the Project.	Change Made.	Change Made
WRD Att's A &C	A7	Section II.10 Inserted <u>and ensure that the Project will not degrade groundwater quality as a source of domestic water supply</u>. per Water Code section 13540 and CDPH's requirement to make a finding regarding degradation of groundwater quality as a source of domestic water supply.	Change Made.	Change Made
WRD Att's A &C	A8	Section II.11 Delete ~~Some findings are repeated in this Order for clarity and information.~~ No need to state. Our comments in this document endeavor to reduce the repetition and provide clarity..	Change Made.	Change Made
WRD Att's A &C	A9	Section III.13.b To be consistent with terminology in III.13.a replace ~~effluent~~ with <u>recycled water</u>.	Change Made.	Change Made
WRD Att's A &C	A10	Section III.13 Factual correction: Add a. <u>The discharge of that water to surface water is regulated under</u>. b. <u>The discharge of that water to surface water is regulated under</u> The production of recycled water is regulated under the 1997 Master Reclamation Permits for the WRPs. The discharge of wastewater to surface water is regulated under the two NPDES permits, and thus not applicable to the production of recycled water. This comment is supported by language in the NPDES permits. Order R4-2007-0047 distinguishes the production of recycled water as follows: "B. Reclamation Specifications – Discharge Point 001	Change Made.	Change Made

Commenter	#	Comment	Response	Action Taken
		1. The production, distribution, and reuse of recycled water are presently regulated under Water Reclamation Requirements (WRRs) Order No. 87-47, adopted by this Board on April 27, 1987, continued in Board Order No. 97-072, adopted on May 12, 1997. Pursuant to California Water Code section 13523, these WRRs were revised in 1997 and were readopted without change in Order No. 97-072, adopted May 12, 1997." See page 16. "VI. RECLAMATION MONITORING REQUIREMENTS The production, distribution, and reuse of recycled water are presently regulated under Water Reclamation Requirements (WRRs Order No. 87-47, adopted by this Board on April 27, 1987, continued in Board Order No. 97-072, adopted on May 12, 1997. Pursuant to California Water Code section 13523, these WRRs were revised in 1997 and were readopted without change in Order No. 97-072, adopted May 12, 1997." See page E-18. For Order **R4-2007-48**, the production of recycled water is described as follows: "B. Reclamation Specifications 1. The production, distribution, and reuse of recycled water are presently regulated under Water Reclamation Requirements (WRR) Order No. 87-51, adopted by this Board on April 27, 1987, continued in Board Order No. 97-072, adopted on May 12, 1997. Pursuant to California Water Code		
WRD Att's A &C	A11	Section III.15 Duplicative and somewhat inaccurate representation of CDPH Condition #9 on page 15 of Attachment 2; per CDPH Condition #9, WRD is required to calculate a monthly RWC under all operating conditions. This Condition does not belong in a permit finding section. Delete ~~The percentage of recycled water will be calculated based on the running monthly average recycled water contribution for the preceding period of 120 months during periods when less than 100% recycled water is discharged. The total amount of water injected into the aquifers will not change (up to 8 mgd).~~ Additional comments regarding Talking Point # 6 are	Change Made.	Change Made

Commenter	#	Comment	Response	Action Taken
		provided in Attachment 2; Additional comments regarding Talking Point #8 are provided in Attachment 3.		
WRD Att's A &C	A12	Section III.15 This statement is factually inaccurate. The inclusion of treatment enhancements is not to "maintain" the quality of the injected water, but to comply with the latest changes to the Draft Groundwater Replenishment Regulations. These requirements are intended to improve water quality by oxidizing constituents that are not well removed by RO. See CDPH Finding #7 on page 3 and Finding #10, on page 6 regarding AOP in Attachment 2. Suggest rewording: ~~To maintain the quality of the injected water, the expanded Vander Lans WTF will include treatment enhancements.~~ The expanded Vander Lans WTF will include some treatment enhancements and will continue to treat wastewater to meet drinking water maximum contaminant levels and other limits imposed on recycled water intended for groundwater replenishment.	Change Made.	Change Made
WRD Att's A &C	A13	Section III.16 This statement is not factually correct. The current AWTF does not provide advanced oxidation, only UV. As part of the expansion, and to be evaluated during start-up, WRD will add hydrogen peroxide upstream of UV so the treatment system provides advanced oxidation. This change is consistent with the findings in Amendment R4-2005-0061-A01. Suggest rewording entire paragraph as shown. ~~The Vander Lans WTF was designed to accommodate future expansion to produce up to 8 mgd of advanced treated recycled water. Prior to the commissioning of the future expanded facility in the fall of 2014, WRD plans to conduct a series of startup tests from approximately April to August 2014. Duration of the individual tests will vary from days to weeks, and the Advanced Water Treatment Facility (AWTF) will operate between 3 to 8 mgd intermittently during the startup testing. The treatment level provided during the startup testing will consist of the treatment train described above as required by Order No. R4-2005-061 with the addition of hydrogen peroxide immediately~~	Change Made.	Change Made

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		~~upstream and UV to create an advanced oxidation process, which will oxidize 1,4-dioxane and other organic chemicalsThe~~ Vander Lans WTF was designed to accommodate future expansion to produce up to 8 mgd of advanced treated recycled water. Prior to the commissioning of the future expanded facility in the fall of 2014, WRD plans to conduct a series of startup tests from approximately April to August 2014. Duration of the individual tests will vary from days to weeks, and the Facility will operate between 3 to 8 mgd intermittently during the startup testing. The treatment level provided during the startup testing in accordance with Amendment R4-2005-0061-A01 will consist of the treatment train described above as required by Order No. R4-2005-061 with the addition of hydrogen peroxide immediately upstream of UV to provide advanced oxidation for removal of organics and enhanced disinfection.		
WRD Att's A &C	A14	Section IV.20 This is a permit condition and does not belong in the permit finding section. Delete ~~Project Sponsors will provide the location and design for any new injection wells to CDPH and the Regional Water Board in accordance with the requirements specified in this Order.~~	Change Made.	Change Made
WRD Att's A &C	A15	Section IV.21 Add approved 2013 to clarify which report is being referenced.	Change Made.	Change Made
WRD Att's A &C	A16	Section IV.23 ~~Drinking water standards have not been exceeded at the nearest drinking water well, Seal Beach well SB-LEI as a result of the injection project, as shown by the Title 22 drinking water reports. However, r~~Based on groundwater modeling travel time analysis of 4.3 years to the nearest drinking water well SB-LEI, and project startup in October 2005, recycled water is thought expected to have reached the well by now ~~since injection began in 2005~~. Drinking water standards have not been exceeded at SB-LEI as a result of the injection project, as shown by the Title 22 drinking water reports. The SB-LEI well is perforated in both the I-Zone I, which is recharged by at the Barrier, and the deeper Main and	Change Made.	Change Made

Commenter	#	Comment	Response	Action Taken
		Lower Main Aquifers, which are is not recharged by the Barrier. ~~contains no recycled water.~~ As a result, it is likely possible that the water produced from the well is a blend ~~composite~~ of both the tapped aquifers tapped by the well. ~~I-Zone and the Main Aquifer resulting in a blended source water used for drinking water. changes to water quality from recycled water contributions have not been detected because of dilution from deeper horizons~~ Suggested wording [Finding 24] provides factual and unbiased information on groundwater quality and effects of recycled water on SB-LEI. Additional comments are Provided in Attachment 4		
WRD Att's A &C	A17	Section IV.24 As originally presented, this paragraph [Finding 24] and Table 1 implied the Project had negatively impacted groundwater. In fact, groundwater data do not suggest the Project has increased background concentrations for these select compounds. Suggested wording below. Additional comments are Provided in Attachment 4. The 2005 Order required collection of monitoring data before the start of injection of recycled water into the Barrier, and annual assessment of data collected thereafter. Of 230 constituents measured at ten monitoring wells (including two background wells and eight compliance monitoring wells), most stayed constant or improved in comparison to background groundwater quality information collected in 2005 and 2006. In general, water quality at the ten wells is within primary and secondary drinking water standards. ~~Aquifer concentrations of arsenic and selenium increased, from non-detect to a maximum of 22 mg/L (which is above the MCL of 10 mg/L) and from non-detect to a maximum of 61 mg/L (which is above the MCL of 50 mg/L), respectively. Chloride, total dissolved solids (TDS), and manganese all showed variations above and below background levels as water quality was restored with the prevention of sea water intrusion. Odor and total coliform appear at levels above background in the deepest aquifer receiving injected water in monitoring wells located a year of travel time from the Barrier. In addition, n-Nitrosodimethylamine (NDMA) concentrations rose in the wells at the Barrier after injection of recycled water began.~~ Exceedances of	Modified change made. See revision below. All of the constituents exceeding the MCLs were present during the 2005 initial background monitoring (pre-injection period) in similar concentrations except for arsenic and selenium, which have increased since 2005. Arsenic and selenium have consistently not been detected in the recycled water injected into the barrier.	Modified Change Made

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		MCLs were most commonly observed in the Recent Aquifer, the shallowest aquifer, which does not receive injection water. All of the constituents exceeding the MCLs were present during the 2005 initial background monitoring (pre-injection period) in similar concentrations except for arsenic and selenium, which have increased since 2005. Arsenic and selenium have consistently not been detected in the recycled water injected into the barrier. As such, elevated levels of arsenic and selenium concentrations in the Recent Aquifer are attributed to sources other than injected water, such as background concentrations. In the C-Zone, B-Zone, A-Zone, and I Zone Aquifers, manganese has been measured at elevated concentrations; however, the concentration ranges are similar to those observed in the 2005 initial background monitoring, and appear indicative of non-project related ambient conditions. In the Main Aquifer, which does not receive injection water, only chloride, specific conductance, and TDS were consistently observed at elevated concentrations, but the values generally show a decreasing trend from the 2005 initial background monitoring, indicating improved groundwater quality in the aquifer. Based on the review of the recycled water monitoring data for the past five years (2009-2013), arsenic, selenium, and coliform were never detected in the recycled water produced by the Facility. The highest concentration detected in the recycled water from 2009 to 2013 for chloride, total dissolved solids (TDS), manganese, and odor are 28 milligram per liter (mg/L), 110 mg/L, 2.7 microgram per liter (µg/L), and 4 threshold odor number (TON), respectively.		
WRD Att's A &C	A18	Section IV.24 Recommend deleting this table as currently constructed as there is no basis for any increases due to Project. Additional comments are Provided in Attachment 4	Change made with revisions: Table 1 has been deleted, but a requirement has been added to the Annual Report to evaluate the quality of the groundwater, to report the groundwater elevation and to discuss trends at MRPIII.2.m.as follows: A summary on monitoring results, reporting and trend analysis, to describe	Modifiied Change Made

Commenter	#	Comment	Response	Action Taken
			the changes in water quality and contrast them to background measurements for all constituents exceeding MCLs or where concentration trends increase after the addition of recycled water. Specifically describe studies or investigations made to identify the source, fate and transport path of constituents which exceed the MCL at the monitoring wells.	
WRD Att's A &C	A19	Section V.25 Change to Finding 25 recommended. Additional comments are provided in Attachment 4. ~~Based on the review of the recycled water monitoring data for the past five years (2009-2013), the highest concentration detected in recycled water for chloride ,TDS, manganese, and odor are 28 milligrams per liter (mg/L), 110 mg/L, 2.7 micrograms per liter (µg/L) and 4 threshold odor number (TON), respectively. Arsenic and selenium have not been detected in the recycled water injected at the Barrier.~~A total of 220 observation wells are currently operated at the Barrier. These wells are monitored by LACDPW for water levels and chloride concentrations to determine the effectiveness of the seawater barrier. The monitoring wells tap the Recent, C, B, A, and I aquifers. WRD monitors the movement of the injected recycled water using 21 observation wells at 8 locations. The 21 wells include the eight monitoring wells where routine water quality sampling is conducted pursuant to the existing WDRs/WRRs, and 13 tracer wells, whose primary function is to trace the movement of recycled water. Prior to project initiation, CDPH concurred with WRD that recycled water should be chemically distinct from previously injected potable water and native groundwater due to advanced treatment process, particularly RO that produces water with much lower mineral content than the other waters. Therefore, properties of the recycled water can be used as a groundwater tracer to follow recycled water movement and travel time. The tracer well program was terminated in December 2009 since it fully satisfied the 2005 WDRs/WRRs.	Change made.	Change Made

Commenter	#	Comment	Response	Action Taken
WRD Att's A &C	A20	Section VI.26 Impending Statewide Change in Potable Water Reuse Regulation and Permitting should take precedence over this permitting action. Revise text in Finding 26: Effective July 1, 2014 , the personnel in the CDPH Drinking Water Program working on recycled water will be organized under the new State Water Board as the new Division of Drinking Water. In addition, the Administration will propose language for the Legislature to consider that provides the Division of Drinking Water the authority to issue permits for potable reuse of recycled water. Revise text in footnote Effective July 1, 2014, the State Water Board Division of Drinking Water ~~Any successor agency to CDPH's responsibilities to oversee groundwater replenishment with recycled water in aquifers designated as sources of drinking water~~ shall be substituted in place of every reference to CDPH in the conditions and requirements of this Order, and in the findings of this Order where appropriate.	Change made in part. There is insufficient information to state whether the Division of Drinking Water will be granted the statutory authority to issue water reclamation requirements for potable reuse of recycled water. Furthermore, such a change would occur after the expected adoption of this Order.	Modified Change Made
WRD Att's A &C	A21	Section VI.27 Permit Treats Project As Disposal of Waste Versus Beneficial Use of Recycled Water. Delete ~~waste~~.	Change Made. See Response to Attachment 1 Paragraph 2 below	Change Made
WRD Att's A & C	A22	Section VI.28 To be consistent with the [Recycled Water] Policy, the finding should also include language that the Project will not cause dissolution of chemicals nor impact to contaminant plumes as identified in the Engineering Report. Additional comments are provided in Attachment 6. Insert: Because the same volume of water will be injected and because chemical stabilization will be applied to the final recycled water prior to injection, the Vander Lans WTF expansion will not affect the fate and transport of any contaminant plume or change the geochemistry of the recharged aquifers causing dissolution of constituents from natural geologic formations into the groundwater. Increases in groundwater aquifers, such as arsenic, are attributed to background conditions via saltwater intrusion.	Sufficient evidence has not been developed to make a finding concerning the source, fate and transport of the arsenic, selenium and magnesium seen in the monitoring wells. Additional analysis will be provided in the annual report if MCLs are exceeded, see MRP. Section III. 2. m. and responses to Attachment 4 and 6.	No Change

Commenter	#	Comment	Response	Action Taken
		Based on the information reviewed as part of WRD's Groundwater Contamination Prevention Program and because the same volume of water will be injected as part of the Project, the Facility expansion will not affect the fate and transport of any contaminant plume.		
WRD Att's A &C	A23	Section VI.29 Impending Statewide Change in Potable Water Reuse Regulation and Permitting, insert text: Effective July 1, 2014, provisions in the MOA may no longer be in effect pending legislation that provides the new Division of Drinking Water with the authority to issue permits for the potable use of recycled water.	Recommend the following modification to the language: There is insufficient information to state whether the Division of Drinking Water will be granted the statutory authority to issue water reclamation requirements for potable reuse of recycled water. Furthermore, such a change would occur after the expected adoption of this Order.	Modified Change Made
WRD Att's A &C	A24	Section VI.30 Impending Statewide Change in Potable Water Reuse Regulation and Permitting, insert text: Effective July 1, 2014, legislation proposed by the Administration will amend the Water Code provisions to provide the Division of Drinking Water with the authority to issue permits for potable reuse of recycled water.	Refer to response to Comment A23	Modified Change Made
WRD Att's A &C	A25	Section VI.32 For a comparison of the 2013 Draft Regulations and the Regulations in effect when the 2005 Order was adopted, please refer to Attachment D.	Provided for information only. Note Response to Comment on Attachment D below.	No Change Made
WRD Att's A &C	A26	Section VI.32 This finding [32] does not acknowledge that Section 60320 of Title 22 includes requirements for Groundwater Recharge projects, which were used by CDPH to approve the Project (see cover letter from CDPH to Sam Unger, dated July 12, 2013). In addition, Senate Bill 104 amends the Water code by adding Section 13562.5 that requires CDPH to adopt the groundwater replenishment regulations by June 30, 2014 as emergency regulations without review by the Office of Administrative Law. The last sentence in this finding seems out of place in that there are numerous requirements in the June 2013 Draft	Change made.	Change Made

Commenter	#	Comment	Response	Action Taken
		Groundwater Replenishment Regulations. The CDPH Findings make note of numerous provisions in the Draft Groundwater Replenishment Regulations including source control, the Operations Plan, pathogen control, response retention time, calculation of RWC, etc. Proposed modification to finding: Section 13523(b) of the Water Code provides that reclamation requirements shall be established in conformance with the uniform statewide recycling criteria established pursuant to Water Code section 13521. Section 60320 of Title 22 currently includes requirements for groundwater recharge projects. Water Code Sections 13562 and 13562.5 require ~~of the Water Code requires~~ CDPH to adopt uniform water recycling criteria for indirect potable reuse for groundwater recharge as emergency regulations without Office of Administrative Law review by June 30, 2014. CDPH has developed Draft Groundwater Replenishment with Recycled Water Regulations ~~draft Recycling Criteria for Groundwater Recharge Reuse~~ (Draft GWRR) (latest version is dated June 26, 2013). ~~The requirements of the Draft GWRR for virus reduction and response retention time – the time recycled water must be retained underground between recharge and extraction to allow a project sponsor ample time to identify treatment failures and implement appropriate actions to protect public health – are addressed in additional detail in CDPH's Findings of Fact.~~		
WRD Att's A &C	A27	Section VII.34 This Finding [34] establishes that secondary MCLs will be used to interpret the narrative Basin Plan objective, yet in the permit provisions, there are repetitive requirements for narrative secondary MCLs and the narrative Basin Plan objective. If secondary MCLs are not to be used to interpret the narrative objective, this Finding must be modified accordingly. Comments regarding repetitive permit requirements are Provided in Attachment 3.	The narrative Basin Plan objective has been removed from the Order as a condition. The recycled water is required to meet secondary MCLs by the CDPH Conditions which are incorporated into the Order by reference.	Modified Change Made

Commenter	#	Comment	Response	Action Taken
WRD Att's A &C	A28	Section VII.37 The purpose of this Section VII is to catalog applicable plans, policies and regulations. It is not to discuss the Order. It should be noted that compliance with some MCLs can be determined in locations other than the injected water. We suggest deleting the final sentence. ~~This Order promotes that policy by requiring injected water to meet MCLs designed to protect public health and ensure that water is safe for domestic use.~~ Consistent with other permits, we recommend that a finding be included to address the State Water Board's Sources of Drinking Water Policy. ***We recommend adding a finding here for that policy using the following language:*** "The Sources of Drinking Water Policy (Resolution No. 88-63) provides that all waters of the state, with certain exceptions are to be protected as existing or potential sources of municipal and domestic supply. Exceptions include waters with existing high dissolved solids (i.e., greater than 3,000 mg/L), low sustainable yield (less than 200 gallons per day for a single well), waters with contamination that cannot be treated for domestic use using best management practices or best economically achievable treatment practices, waters within particular municipal, industrial and agricultural wastewater conveyance and holding facilities, and regulated geothermal groundwaters."	Change made.	Change Made
WRD Att's A &C	A29	Section VII.38 The advanced treated water is not a waste and therefore it is not appropriate to have this paragraph [Finding 38].	See Response to Attachment 1 Paragraph 2 below	No Change
WRD Att's A &C	A30	Section VII.39 "Effluent" imparts a negative tone to the advanced treated recycled water. There is no authority to impose effluent limitations for a recycled water / groundwater recharge project in the Water Code. Effluent limitations are a NPDES term. To promote a positive tone to this high quality manufactured water, do not use "Effluent Limitations". We propose "Recycled Water Treatment Specifications" or "Recycled Water Discharge Specifications".	"Effluent Limitations" is revised to "Recycled Water Discharge Limits" and recommended text to delete has been removed.	Change Made

Commenter	#	Comment	Response	Action Taken
		~~This Regional Board terms these limits "effluent limitations" when included in waste discharge requirements for discharges to waters of the State. In this application, the term "effluent" means "something that flows out" and is not limited to treated wastewater. The advanced treated recycled water produced by the Vander Lans WTF is effluent by this definition. The effluent limitations in this Order are not "effluent limitations" as defined by the Clean Water Act and related federal regulations because they do not apply to discharges to waters of the United States. The effluent limitations in this Order are not enforceable under Chapter 5.5 of the Water Code, including section 13385, subdivisions (h) and (i), but are enforceable under other applicable sections of the Water Code, including but not limited to section 13350. See, e.g., Webster's Third New International Dictionary (1986).~~ ~~Section 502(11) of the Clean Water Act defines "effluent limitation" as "any restriction established by a State or the Administrator on quantities, rates, and concentrations of chemical, physical, biological, and other constituents which are discharged from point sources into navigable waters, the waters of the contiguous zone, or the ocean, including schedules of compliance." 40 C.F.R. section 122.2 defines "effluent limitation" as "any restriction imposed by the Director on quantities, discharge rates, and concentrations of pollutants which are discharged from point sources into waters of the United States, the waters of the contiguous zone, or the ocean." (internal quotation marks omitted).~~ Additional comments regarding Talking Point #4 are provided in Attachment 1.		
WRD Att's A &C	A31	Section VII.40 Reworded for more accuracy and to help support the reason for going to the 10 mg/L nitrogen limit – consistent with CDPH Condition #9 and no significant impact on basin nitrates based on modeling even if 10 mg/L were continually injected, which will not happen. Additional comments are provided in Attachments 7 and 7.1. <u>The Central Basin and West Coast Basin Stakeholders are preparing an SNMP for submittal to the Regional</u>	Revised text as follows: . A hydrology model was submitted during the development of the draft SNMP to predict the salt and nutrient changes in the Central Basin from all sources, including the use of recycled water for recharge through injection and spreading. The model runs support the use of recycled water with groundwater	Modified Change Made

Commenter	#	Comment	Response	Action Taken
		Water Board by August 31, 2014 in accordance with the May 6, 2014 letter from Samuel Unger, Regional Water Board Executive Officer. As part of the technical work conducted for the SNMP, ~~The Water Replenishment District and other participants have generated~~ a hydrology model was developed to calculate the salt and nutrient concentrations in the Central Basin from all sources, including ~~due to~~ the use of recycled water for recharge through injection and spreading. Based on model results, under normal operating conditions the Vander Lans Facility will not consume 10% of the assimilative capacity of total nitrogen in the sub-basin. An additional model run was performed to test the hypothetical injection of a continual 10 mg/L nitrate-nitrogen into the barrier. The model predicted ~~s~~ that if the Vander Lans Facility ~~can~~ injected water with 10 mg/L total nitrogen at the Alamitos Barrier for several decades ~~before consuming~~, 10% of the assimilative capacity for the entire sub-basin would still not be consumed. Therefore, the sub-basin is not at risk of significant degradation of total nitrogen from the Project. While the local water quality is expected to slightly increase from the sub-basin background concentrations of 1.1 mg/L total nitrogen, the overall water quality in the Central Basin is not expected to increase above the Basin Plan groundwater, surface water and drinking water ~~limits~~ objectives of 10 mg/L nitrogen as nitrate-nitrogen plus nitrite-nitrogen or 10 mg/L nitrate-nitrogen or 1 mg/L nitrite-nitrogen.	monitoring to confirm the model predictions.	
WRD Att's A &C	A32	Section VII.41 Language is not accurate [because of] Health and Safety Code provisions for Notification Levels and Response Levels, and the designation of NDMA as a carcinogen .Proposed language: CDPH established a N~~n~~otification L~~l~~evel of 10 nanograms per liter (ng/L) for NDMA in drinking water sources at which concentration a responsible water agency is required to notify the public. CDPH established a Response ~~reporting L~~level of 300 ng/L for NDMA, at which concentration CDPH recommends additional steps beyond notification ~~a responsible water agency is required to stop drinking water delivery~~. At	The language has been revised as follows: CDPH has established a notification level of 10 nanograms per Liter (ng/L) for NDMA. The notification level is the concentration level of a contaminant in drinking water delivered for human consumption that CDPH has determined based on available scientific information, does not pose a significant health risk but warrants notification. Notification levels are established as precautionary measures for	Modified Change Made

Commenter	#	Comment	Response	Action Taken
		this time, CDPH has not established a Maximum Contaminant Level (MCL) for NDMA. Per the U.S. EPA Integrated Risk Information System, NDMA is classified as B2, a probably human carcinogen. NDMA is identified by the Regional Water Board as a constituent of concern because it is created by the disinfection process and has a known cancer risk. Further, NDMA has been identified by the The State Water Board in the Recycled Water Policy includes NDMA as a health-based and treatment performance-based constituent~~chemical~~ of emerging ~~concern which~~concern (CEC), for monitoring ~~which should be sampled in~~ recycled water used for groundwater replenishment through injection ~~because of the human health risks~~.	contaminants that may be considered candidates for establishment of maximum contaminant levels, but have not yet undergone or completed the regulatory standard setting process prescribed for the development of maximum contaminant levels and are not drinking water standards. CDPH has established a response level of 300 ng/L for NDMA. The response level is the concentration of a contaminant in drinking water delivered for human consumption at which CDPH recommends that additional steps, beyond notification, be taken to reduce public exposure to the contaminant.	
WRD Att's A &C	A33	Section VII.41 This [NDMA] excursion was 6 years ago and WRD stopped the Facility to correct the condition. Since then, the Project has operated favorably. The expanded Facility incorporates AOP, which provides an additional barrier for reduction of NDMA. We recommend using only the last 5 years (2009-2013) of water quality data which is customary when renewing permits. Text recommendations include: WRD promptly investigated and eventually shut down the Facility to correct the ~~problem which~~problem, which was identified as an instrument communications error. , ~~and the communication error was corrected.~~ Since the completion of the repairs, NDMA in the recycled water has been consistently below the NL, except for one isolated exception marginally above the Notification Level at 17 ng/L. The resulting NDMA in the groundwater from the 2008 event ~~subsurface plume~~ is calculated to have arrived at the nearest drinking water well, SB-LEI, in 2012. NDMA has never been detected above the reporting limit of 2 ng/L in SB-LEI., ~~where the concentration was reduced through dilution from the main aquifer before delivery.~~	The reference to the NDMA excursions has been removed.	Change Made

Commenter	#	Comment	Response	Action Taken
WRD Att's A &C	A34	Section VII.41 No reason for this sentence and implies a negative tone towards the Project. Following all conditions of the Permit will ensure the Project is safe and protects groundwater. A special sentence here in the NDMA section is unwarranted..Delete: ~~WRD reports that operations were changed at the Facility to prevent a recurrence. Although no MCL has been established for NDMA, the Regional Water Board and CDPH agree that the Vander Lans WTF must prevent similar concentrations of NDMA from entering the groundwater~~	Change Made.	Change Made
WRD Att's A &C	A35	Section VII.44 [Finding 44 is] inconsistent with Anti-degradation Policy. Revise text per redline: On October 28, 1968, the State Water Board adopted Resolution No. 68-16, Statement of Policy with Respect to Maintaining High Quality of Waters in California (Resolution 68-16), establishing an anti-degradation policy for the State Water Board and Regional Water Boards. Resolution No. 68-16 requires that existing high quality waters be maintained through regulation that achieves the highest water quality consistent with maximum benefit to the people of the State, reasonably protects present and anticipated beneficial uses of waters, and ensures attainment of water quality prescribed in applicable policies. The Regional Water Board's Basin Plan implements, and incorporates by reference, the state anti-degradation policy. This Order is consistent with Resolution No. 68-16. As described in the Findings herein, WRD is implementing the best practicable treatment or control of the discharge. Compliance with this Order will protect present and anticipated beneficial uses, ensure attainment of water quality prescribed in applicable policies, and avoid any conditions of pollution or nuisance. ~~Compliance with the requirements of this Order is expected to prevent the degradation of high quality waters. To ensure that no degradation is occurring, the Project Sponsors are required by the MRP to submit a technical report after start-up testing of the expanded facility is completed and to regularly monitor the advanced treated recycled water and the receiving~~	The anti-degradation finding has been revised and is consistent with the Anti-Degradation Policy, as follows; On October 28, 1968, the State Water Board adopted Resolution No. 68-16, *Statement of Policy with Respect to Maintaining High Quality of Waters in California* (Resolution 68-16), establishing an anti-degradation policy for the State Water Board and Regional Water Boards. Resolution No. 68-16 requires that existing high quality waters be maintained unless a change is demonstrated to be consistent with maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial uses of waters, and will not result in water quality less than that prescribed in applicable policies. Resolution No. 68-16 also prescribes waste discharge requirements for discharges to high quality waters that will result in the best practicable treatment or control of the discharge necessary to assure that a pollution or nuisance will not occur and the highest water quality consistent with maximum benefit to the people of the State will be maintained. The Regional Water Board's Basin Plan implements,	Modified Change Made

Commenter	#	Comment	Response	Action Taken
		~~groundwater in proximity to the injection wells. If the information in these technical and monitoring reports indicates that the provisions in this Order are not sufficient to prevent degradation of the groundwater, the Regional Board may reopen these WRRs/WDRs to add additional terms and conditions.~~ ~~This Order requires the best practicable treatment or control necessary to assure that a pollution or nuisance will not occur and the highest water quality consistent with maximum benefit to the people of the State will be maintained. This Order requires the advanced treated recycled water to meet all drinking water standards and prohibits injection of water that would cause violation of any water quality objective within the aquifer, or operation of the wells in a matter that causes a condition of pollution or nuisance. This Order conforms with the directives of the State Water Board's Recycled Water Policy, the purpose of which is to increase the use of recycled water from municipal wastewater sources in a manner that complies with state and federal water quality laws~~	and incorporates by reference, the state anti-degradation policy. This Order is consistent with Resolution No. 68-16. Groundwater recharge with recycled water for later extraction and use in accordance with the Recycled Water Policy, and state and federal water quality laws, is to the benefit of the people of the state of California. Nonetheless, groundwater recharge projects using recycled water have the potential to lower water quality within a basin. The Regional Water Board finds that, based on available information and monitoring data, any change in the existing high quality of the groundwater basin as a result of groundwater recharge allowed by this Order will be consistent with maximum benefit to the people of the State, will not unreasonably affect beneficial uses, and will not cause exceedance of applicable water quality standards for the basin. As described in the findings herein, WRD is implementing the best practicable treatment or control of the recycled water to be injected into the basin for groundwater recharge. Compliance with this Order will protect present and anticipated beneficial uses of the groundwater, ensure attainment of water quality prescribed in applicable policies, and avoid any conditions of pollution or nuisance.	
WRD Att's A &C	A36	Provision I.1 Pretreatment Specifications] repeats CDPH Condition #8 that could lead to multiple permit violations for same issue and should be deleted. Revise ~~Pretreatment~~ Influent Specifications. Delete I.1	Deleted I.1. The following language is now included in the Additional Provisions of the permit The CDPH Conditions that are not explicitly included in this Order are	Modified Change Made

Commenter	#	Comment	Response	Action Taken
			incorporated herein by this reference, and are enforceable requirements of this Order. Any violation of a term in this Order, that is identical to a CDPH Condition, will constitute a single violation.	
WRD Att's A &C	A37	Provision I.2 [I.Pretreatment Specifications 2.] is new and was not part of the existing 2005 permit. Removal recommended since the influent criteria were not exceeded under the existing permit. Delete: ~~Upon a determination that the influent to the Vander Lans WTF exceeds the following limits, the Project Sponsors shall submit a technical report to the Regional Water Board within 90 days documenting the exceedances and response actions taken to maintain performance of the treatment facilities and compliance with the requirements in this Order :~~	These conditions are required by CDPH in the Findings of Fact and Conditions, and will be removed from the permit.	Change Made
WRD Att's A &C	A-38	Provision I.2.a and I.2.b [I.Pretreatment Specifications 2.a and b] The 15 mg/L BOD and TSS conditions listed have no regulatory basis as applied to treatment for water reclamation. Neither the Water Code, Title 22, nor the CDPH Draft Groundwater Replenishment Regulations require their imposition, and the values cited do not correlate to any prescribed definition of adequate oxidation. Metcalf & Eddy reports that BOD and TSS following activated sludge treatment with nitrification can be 25 mg/L for each parameter. [Metcalf & Eddy, 2007, Water reuse issues, technologies, and applications. New York, NY: McGraw Hill.] Orders adopted by the Regional Water Board not supported by the findings, or findings not supported by the evidence, constitute an abuse of discretion. Topanga Association for a Scenic Community v. County of Los Angeles, 11 Cal.3d 506, 515; California Edison v. SWRCB, 116 Cal. App.3d 751, 761 (4th Dt. 1981); see also In the Matter of the Petition of City and County of San Francisco, et al., State Board Order No. WQ-95-4 at page 10 (Sept. 21, 1995). Furthermore, imposition of unreasonable, unsupported, and/or unnecessary BOD and TSS limitations unfairly	Change Made	Change Made

Commenter	#	Comment	Response	Action Taken
		places the District in a difficult enforcement position, as a minor exceedance of these values may result in a technical violation or administrative action, but not result in, or represent, any problematic water quality condition. Such outcomes should be avoided. (See Water Code § 13000 Further, the requirements are even inconsistent with (and more stringent than) the discharge limits for the Long Beach and Los Coyotes WRPs NPDES permits that supply the source water for recycled water generation; in those permits, the monthly BOD limit is 20 mg/L and the monthly TSS limit is 15 mg/L. Those discharge limitations are already more stringent than federally mandated technology-based limits for discharges to surface waters (40 CFR Part 133) and represent conditions beyond what is considered to be "adequately oxidized." Delete Provisions I.2 a and b.		
WRD Att's A &C	A39	Provision II.2-5 Recycled Water Treatment Specifications could lead to multiple permit violations for same issue. Since the CDPH FOF and Conditions are attached and enforceable, provisions 2-5 are not necessary - they correspond to CDPH Conditions #3, #16, and #4. Delete Recycled Water Treatment Specifications provisions 2 thru 5.	Change Made.	Change Made
WRD Att's A &C	A40	Provision II.2-4 Inconsistent with CDPH Conditions and Draft Groundwater Replenishment Regulations. Delete conditions 2 thru 4. (Note, 4.a, b, c, and d are conditions for new membranes and not an ongoing requirement).	Change Made.	Change Made
WRD Att's A &C	A41	Provision II.5 Inconsistent with CDPH Conditions and Draft Groundwater Replenishment Regulations) for pathogen control. Delete condition 5. Additional comments are provided in Attachment 9.	Change Made.	Change Made
WRD Att's A &C	A42	Provisions III.1 There is no authority to impose effluent limitations for a recycled water / groundwater recharge project in the Water Code. Effluent limitations are a NPDES term. To not imply a negative tone to project related to wastewater, do not use "Effluent Limitations".	The Regional Board disagrees, but the term "effluent limitation" has been replaced with "recycled water discharge limits" throughout the Order.	Modified Change Made

Commenter	#	Comment	Response	Action Taken
WRD Att's A &C	A43	Provision III.1 Justification for averaging period for Basin Plan groundwater objectives. The Los Angeles Basin Plan does not include averaging periods for groundwater objectives for these constituents. If the daily maximum averaging period is applied, the Regional Water Board must provide justification as to why a daily maximum averaging period is technically and scientifically valid for these constituents in groundwater rather than a longer averaging period. The basis of the objectives was ambient groundwater conditions at the time the Basin Plan was developed. The basis of the objective was an average of available data at the time the objective was adopted. That approach supports a permit averaging period longer than a daily maximum to correspond to the derivation of the objective. Because the SNMPs are using annual averages for the analyses, and based on the approach used to derive the objectives, we recommend that the daily maximum averaging period be revised to an annual average..	CDPH requirements are no longer duplicated in the permit. Basin Plan limits in Recycled Water Discharge Specification Table (now Table 3) have been revised to correspond to the Basin Plan frequency.	Modified Change Made
WRD Att's A & C	A44	Provision III.1 [Table 7] repeats CDPH Conditions #1 (Flow) and TOC (#15) that could lead to multiple permit violations for same issue and should be deleted.	These limits have been removed from the Table.	Modified Change Made
WRD Att's A & C	A45	Provision III.1 Repeats CDPH Condition #11 that could unreasonably lead to multiple exceedances for the same issue, and should be deleted. Repetition of the same enforceable requirement could lead to overly aggressive enforcement and artificially elevated penalties. The District understands the Regional Water Board's desire to include the parameters in the table because they also are Basin Plan groundwater objectives; however, those objectives simply incorporated by referenced the MCLs that are already applied to the project via the CDPH Conditions Remove effluent limits for Cyanide to maximum contaminant level. Per CDPH Condition #11 this could lead to multiple permit violations for same issue and should be deleted.	The Table now includes only the limits that are based on Basin Plan objectives, and does not include requirements that are found in the CDPH Conditions.	Change Made

Commenter	#	Comment	Response	Action Taken
WRD Att's A & C	A 46	Provision III.1 Repeats CDPH Condition #6 that could unreasonably lead to multiple exceedances for same issue and should be deleted. Pathogen log reductions for virus are also achieve through retention time underground and therefore cannot be measured at the discharge point. CDPH Condition #6 establishes the approach. The Operations Plan will include the monitoring elements to evaluate log reductions in accordance with Section 13.8 of the Engineering Report. Per CDPH requirements , the information on achieving the pathogen reductions must be provided to CDPH on a monthly basis, and will be provided as well to the Regional Water Board. Plus cannot accept TBDs in permit. Delete from this table.	The limits for enteric virus, giardia, and cryptosporidium have been removed from the Table.	Change Made
WRD Att's A & C	A 47	Provision III.2 Repeats CDPH Condition #18 that could unreasonably lead to multiple exceedances for same issue and should be deleted.	See Response to Comment A36.	Change Made
WRD Att's A & C	A 48	Provision III.2 Based on requested delayed effective date of the Order, this provision is not necessary and should be deleted with regard to the startup testing. Per Talking Point #8 (Repetitive Permit Requirements), repeats CDPH Condition #11 regarding pH during full-scale operations that could unreasonably lead to multiple exceedances for same issue and should be deleted. Also, please note that the Regional Water Board's Basin Plan does not contain a numeric pH objective for groundwater. If the pH limit were to stay, we recommend a slightly expanded range (i.e., 6 to 9), based on the experiences of other comparable advanced water treatment facilities that have undergone similar expansions, where the pH of the final recycled water has been shown to fluctuate up to 9 while the treatment processes were being fine-tuned and optimized, which was true especially during the first year of operation. Note that Orange County Water District's barrier permit (Order No. R8- 2004-0002 for Interim Water Factory 21 and GWRS) contains a pH limit for recycled water of 6 to 9 pH units. Delete: ~~The pH of the advanced..~~	See Response to Comment A36. The pH limits have been removed from the text of the Order, and are incorporated by reference from the CDPH Conditions.	Change Made
WRD Att's A & C	A 49	Provision III.2 Change recommended as Inconsistent with	Change made.	Change Made

Commenter	#	Comment	Response	Action Taken
		[Amendment R4-2005-0061-A01] Delete ~~Project Sponsor, for up to one week. ….~~		
WRD Att's A & C	A 50	Provision III.3 Repeats CDPH Condition #11 that could unreasonably lead to multiple exceedances for same issue and should be deleted. Delete Provision III.3	See Response to Comment A36.	Change Made
WRD Att's A & C	A 51	Provision III.4 This is not a discharge specification or limit so does not belong in Section III. If desired to keep in, should move up to Findings with some additional edits as shown in Attachment 7.. Deleted text: ~~The total nitrogen effluent limit of 10 mg/L is higher than the 5 mg/L recycled water specification in the previous Order. The effluent limit of 10 mg/L is consistent with CDPH recommendations as describe in their Findings of Fact and Conditions. The increase in the CDPH recommended total nitrogen concentration from 5 mg/L to 10 mg/L is based on recent information about nitrite in drinking water wells. The increase in the effluent limit is also supported by the minimal overall change in the nitrogen concentrations in the Central Basin due to recycling predicted by the SNMP model described in section VII.3 and under development. The local background concentration of total nitrogen in the coastal pressure zone of the Central Basin averages 1.1 mg/L and the maximum groundwater concentration recorded in monitoring wells adjacent to the Barrier between 2007 and 2010 was 2.6 mg/L. Injection of recycled water with total nitrogen concentrations greater than the background level may change local groundwater conditions.~~	Change Made	Change Made
WRD Att's A & C	A52	Provision III.4 Technically unsupported requirements. Additional comments are shown in Attachment 7. Deleted text: ~~Even though the effluent limit has been changed to 10 mg/L to allow more operational flexibility, the Regional Board expects the quality of the groundwater to be optimized (with assistance of the predictive model and confirmatory monitoring) in order to manage any impacts per the SNMP and per antidegradation policy and principles. Additional monitoring, reporting and trend analysis for total~~	Change Made	Change Made

Commenter	#	Comment	Response	Action Taken
		~~nitrogen shall be applied to the monitoring data collected for the Alamitos Barrier Project and contrasted with the water quality changes predicted by model and documented in the first annual report. Should any groundwater monitoring well show an increase in the total nitrogen concentration of 10% over the value predicted by the Project Sponsors in the first annual report, additional studies shall be completed. These may include a diagnosis of the cause of the increased nitrogen discharge and description of the changes recommended to improve the barrier operation, or to update the local Alamitos Barrier model or the SNMP model. If wells continue to show a 10% deviation above the predicted quality for total nitrogen in two annual reports, the Order shall be re-evaluated.~~		
WRD Att's A & C	A 53	Provision III.5 Repeats CDPH Condition #11 regarding MCLs (including secondary MCLs) that could unreasonably lead to multiple exceedances for same issue and should be deleted. Finding 34 explains that this narrative Basin Plan objective is being translated to secondary MCLs. See earlier comment about Finding 34. Deleted text: ~~The advanced treated recycled water shall not contain taste or odor-producing substances in concentrations that cause nuisance or adversely affect the beneficial uses of the receiving groundwater.~~	Change Made.	Change Made
WRD Att's A & C	A 54	Provision III.5 Permit Treats Project As Disposal of Waste Versus Beneficial Reuse of Recycled Water. Revise ~~effluent limitations~~ to recycled water discharge specifications.	Change Made.	Change Made

Commenter	#	Comment	Response	Action Taken
WRD Att's A & C	A 55	Section IV.,1 part 1 Delete IV.1 of this section. Per Talking Point #4 (Unfavorable Depiction of Project), reflects unwarranted negative tone on project based one excursion of NDMA back in 2008. Since then, recycled water has consistently been below the Notification Level (except for one isolated and minimal event that occurred during the first quarter 2013 at 17 ng/L) demonstrating successful treatment at the plant. Advanced oxidation will also provide an additional treatment barrier for NDMA removal. Conditions of Successful Treatment will be demonstrated by meeting all conditions of the permit, not just of this section. Monitoring and compliance for NDMA is already in Monitoring Section IV - 5 and should not be repeated in this part of the permit. Deleted text: ~~Special Conditions for NDMA: This section of the Order adds additional treatment conditions due to concern about past levels of NDMA discharge and in recognition of the ongoing collaboration between the Project Sponsors and CDPH to maximize the removal of chemicals of emerging concern using the new Advanced Oxidation Process during the implementation of Order R4- 2005-0061-A01 through August 31, 2014. The Project Sponsors have operational choices which should allow the achievement of these treatment conditions. The Vander Lans facility can collect data on influent concentrations, treatment, Advanced Oxidation Process performance, and effluent quality so as to better allocate the product water for injection, or wasting to the sewer and even to temporarily halt operations. Treatment Conditions are used here to identify effluent water quality which might affect beneficial uses or exceed water quality objectives and which might be improved using operational or treatment methods. The constituents are not given an effluent limit due to the lack of an MCL; however, the Project Sponsors are directed to describe the reasons for poor results and provide a schedule for completion of corrective actions, allowing iterative treatment modifications in recognition of the value of such investigations in the long term management of chemicals of emerging concern and disinfection byproducts. Historically, sufficient groundwater supplies~~	Change Made	Change Made

Commenter	#	Comment	Response	Action Taken
		~~existed to dilute temporary or local water quality exceedances. In an abundance of caution and because full utilization of all aquifer supplies is being implemented, treatment conditions are used for this recycled water injection project to ensure ongoing improvements in recycled water use and protect future supplies without reliance on dilution.~~ ~~- Successful operation of the facility is conditional upon attainment of discharge concentrations of NDMA no greater than 10 ng/L. This concentration has been met in 70% of the highly treated recycled water produced by the current treatment practices at the Facility. Five quarterly values higher than 10 ng/L were reported in the earliest half of the reporting period, between 2007 and 2009. The new Advanced Oxidation Treatment Process implemented with this permit is expected to further reduce the NDMA load discharged. After start-up testing is completed, the Order may be reopened to establish a new treatment condition or effluent limit, if appropriate, as described in section VII.6.~~		
WRD Att's A & C	A 56	Section IV. 1 part 2 Repeats CDPH Condition #19 Delete text: ~~Notification of NDMA concentrations above the reporting limit are required, as specified in CDPH's Finding of Fact and Conditions. If the result of a sample of the advanced treated recycled water is greater than 10 ng/L for NDMA, within 72 hours of knowledge of the result, the Project Sponsors shall collect another sample as confirmation. If the average of the initial and confirmation sample is greater than 10 ng/L, or a confirmation sample is not collected and analyzed, the Project Sponsors shall initiate weekly monitoring for NDMA until the running four-week average is less than 10 ng/L. If the running four-week average is greater than 10 ng/L, the Project Sponsors shall describe the reasons for the results and provide a schedule for completion of corrective actions in the next quarterly report submitted to the Regional Board, with a copy provided to CDPH. If the running four-week average is greater than 10 ng/L for sixteen consecutive weeks, the Project Sponsors shall notify CDPH and the Regional Board within 48 hours of knowledge of the exceedance~~	Text deleted from Section IV, but similar text added to MRP IV.3. This text is required because CDPH Condition #19 states that additional sampling for NDMA may be required if the concentration exceeds 10 ng/L in the recycled water, but that additional study of NDMA is only required when requested by CDPH. For clarity, the Regional Water Board prefers to specify that additional monitoring and study is required every time NDMA exceeds 10 ng/L as a four-week running average, not just when directed by CDPH to do so.	Partial Change Made

Commenter	#	Comment	Response	Action Taken
		~~and, if directed by CDPH or the Regional Board, suspend injection of the advanced treated recycled water.~~		
WRD Att's A & C	A57	Section IV. These are monitoring requirements and do not belong under the limitations section. Recommend removal, as they are repeated under the MRP section IV.5.	This language has been revised as follows: The WDRs/WRRs may be reopened to modify limitations for constituents to protect beneficial uses and maintain existing high quality waters, based on new information not available at the time this Order was adopted.	Partial Change Made
WRD Att's A & C	A 58	Section VI. 2 Since the treatment plant expansion will not be completed until Fall 2014 and startup testing is ongoing, WRD requests that the effective date of the permit be [October 1, 2014] rather than upon adoption of this Order will allow a coordinated transition for implementation of the new provisions in the Order (for example full-scale AOP will not be in place until after construction and startup are completed), including the monitoring provisions. Based on our request for a delayed effective date, there is no need for this provision in the Order. If the Regional Water Board refuses to revise the effective date, then a provision must be added exempting WRD from those parts of the permit that can only be met after construction and startup are complete.	Change Made	Change Made
WRD Att's A & C	A 59	Section VI. 3 Deletion recommended per Talking Point #5 (Technically Unsupported Requirement). The requirement that the annual report be "approved by the Executive Officer" is confusing and sets a new precedent on how annual informational reports are handled by the RWQCB.	Change Made	Change Made
WRD Att's A & C	A 60	Section VII. Talking Point #10 (Impending Statewide Change in Potable Water Reuse Permitting). Additional comments are provided in Attachment 5.	Comment noted	No Change Proposed

Commenter	#	Comment	Response	Action Taken
WRD Att's A & C	A61	Section VII. 2, This language is not appropriate for this type of project as it is used for NPDEs permits. Recommend replacing with language consistent with Water Code section 13263 Text change: constituents ~~which show reasonable potential to cause or contribute to an exceedance of a Basin Plan water quality inconsistent with the Anti-degradation Policy~~ to protect beneficial uses, based on	Change Made	Change Made
WRD Att's A & C	A62	Section VII. 2, Suggestions for Clarity ~~inconsistent with the Anti-degradation Policy~~ to protect beneficial uses, based on ~~additional data~~ <u>new information not available at the time this Order was adopted.</u>	Change Made	Change Made
WRD Att's A & C	A63	Section VII. 4, Talking Point #10 (Impending Statewide Change in Potable Water Reuse Permitting). Talking Point #6 (Inconsistent with CDPH Conditions and Draft Groundwater Replenishment Regulations) for pathogen control. Revise: or upon completion of startup testing <u>regarding operation of the AOP system</u> ~~to incorporate operational or water quality limits as necessary, to ensure the inactivation of viruses in the recycled water.~~	Change Made	Change Made
WRD Att's A & C	A64	Per Talking Point #8 (Repetitive Permit Requirements), repeats VII.5 Delete VII.5, ~~This Order may be reopened upon completion of start-up tests~~…	Change Made	Change Made
WRD Att's A & C	A65	Section IX. WRD requests that the Permit become effective on October 1, 2014, which is the date that the full scale operation of the expanded LVLWTF is expected go online and would allow the Projector Sponsors to fully comply with the Permit requirements. If the Order takes effect upon adoption (or earlier than October 1st), the Project Sponsors risk violation of the following Permit provisions: CDPH Conditions – Treatment specifications (2, 3, 4, and 5); validation of pathogen reduction (6 and 7); TOC online analyzer monitoring (17); and operating at peak performance (21). Regional Water Board's Requirements: II (Recycled water treatment	Change Made	Change Made

Commenter	#	Comment	Response	Action Taken
		specification); IV.2 (CDPH conditions), and MRP - Continuous monitoring for conductivity and TOC using online analyzers upstream and downstream of RO (IV.2.C.iii); AOP measurements (IV.2.C.iv); calculation of pathogenic microorganism log reduction achieved each day (IV.2.C.v); and tabulation of monitoring results that do not meet the surrogate limits established to assure proper performance of RO/AOP (IV.2.D.iv)		
WRD Att's A & C	A66	MRP Section I. 1. Clarification for Factual Add: (Effective July 1, 2014, the State Water Board Division of Drinking Water shall be substituted in place of every reference to CDPH in the conditions and requirements of this Order, and in the findings of this Order where appropriate.):	Change Made	Change Made
WRD Att's A & C	A67	MRP Section I. 1. a. Permit Treats Project as Disposal of Waste Versus Beneficial Use of Recycled Water. Change: recycled water ~~effluent~~	Change Made	Change Made
WRD Att's A & C	A68	MRP Section II.b. Permit Treats Project as Disposal of Waste Versus Beneficial Use of Recycled Water. Change: recycled water ~~effluent~~	Change Made	Change Made
WRD Att's A & C	A69	MRP Section II.1.f. Technically Unsupported Requirement ,also comment associated with Table M-18. Delete: ~~f. The Project Sponsors shall collect and review total nitrogen data from the monitoring wells specified in Table M-18 on a quarterly basis .~~	Change Made	Change Made
WRD Att's A & C	A70	MRP Section II.11 Permit Treats Project as Disposal of Waste Versus Beneficial Use of Recycled Water. Change: recycled water ~~effluent~~	Change Made	Change Made
WRD Att's A & C	A71	MRP Section II.11 Permit Treats Project as Disposal of Waste Versus Beneficial Use of Recycled Water. Change: recycled water ~~effluent~~	Change Made	Change Made
WRD Att's A & C	A72	MRP Section III.1.a.viii Permit Treats Project as Disposal of Waste Versus Beneficial Use of Recycled Water. Change: recycled water ~~effluent~~	Change Made	Change Made
WRD Att's A & C	A73	MRP Section III.1.c Talking Point #8 (Repetitive Permit Requirements) that are already included in other provisions. Graphical	Change Made	Change Made

Commenter	#	Comment	Response	Action Taken
		reporting requirement for quarterly reporting is new (not in the existing Order) and excessive, without a corresponding benefit (required as part of annual report) –Delete: ~~c. Verification of compliance with the UV Power level recycled water minimum treatment requirements, presented in numerical and graphical formats~~ ~~d. Verification of compliance with the Hydrogen Peroxide concentration and injection rate, presented in numerical and graphical formats~~ ~~e.c. Verification of compliance with the MCLs for drinking water as listed in Order section III.4 and Tables M-6, M-7, M-8, M-9, M-9, M-10, M-11, M-12 and M-13, presented in numerical and graphical formats~~		
WRD Att's A & C	A74	MRP Section III.1.h Permit Treats Project as Disposal of Waste Versus Beneficial Use of Recycled Water. Change: recycled water effluent	Change Made	Change Made
WRD Att's A & C	A75	MRP Section III.2.c.ii Permit Treats Project as Disposal of Waste Versus Beneficial Use of Recycled Water. Change ~~municipal waste~~ water	Change Made	Change Made
WRD Att's A & C	A76	MRP Section III.2.h Permit Treats Project as Disposal of Waste Versus Beneficial Use of Recycled Water. Change ~~municipal waste~~ water	Change Made	Change Made
WRD Att's A & C	A77	MRP Section III.4 Talking Point #8 (Repetitive Permit Requirements) that are already included in other provisions Recommend removal. Delete: ~~4. Five-Year Engineering Report: Five years after the startup of the expanded Vander Lans WTF and every five years thereafter, the Project Sponsors shall update the engineering report to address any project changes and submit the report to the Regional Water Board and the CDPH. The Five-Year Engineering Report Update shall include, but not be limited to:~~	Specific report requirements are not duplicated in the CDPH Finding of Fact and Conditions.	No Change Made
WRD Att's A & C	A78	MRP Section III.4.a. Talking Point #6 (Inconsistent with CDPH Conditions) - see CDPH Condition #2: A numerical model and tracer study has been completed, whose results	Change Made	Change Made

Commenter	#	Comment	Response	Action Taken
		verified the retention and response time is adequate prior to the recycled water reaching the nearest domestic water supply well. Delete: ~~a. Evidence that the requirements associated with retention time have been met (Note: This may be done using past tracer studies.); and~~		
WRD Att's A & C	A79	MRP Section III.4.b.vii. Talking Point #5 (Technically Unsupported Requirement). This is an additional, unnecessary requirement, not in the existing Order. . Delete: ~~An estimate of hydrological conditions at small-system and other active production wells shall also be described.~~	Change Made	Change Made
WRD Att's A & C	A80	MRP Section IV.1.b. Permit Treats Project as Disposal of Waste Versus Beneficial Use of Recycled Water. Change: <u>recycled water</u> ~~effluent~~	Change Made	Change Made
WRD Att's A & C	A81	MRP Section IV.1.b. Changes made, to be consistent with the existing Order. The date and time of sampling shall be reported with the analytical values determined. Table M-2 constitutes the ~~pretreatment specifications~~ <u>influent</u> monitoring program.	Change Made	Change Made
WRD Att's A & C	A82	MRP Section IV.1.b. Per the comment on Order I.2 a and b: The 15 mg/L BOD and TSS conditions listed have no regulatory basis for water reclamation treatment. Neither Title 22 nor the CDPH Draft Groundwater Replenishment Regulations define what constitutes adequate oxidation. Metcalf & Eddy reports that BOD and TSS following activated sludge treatment with nitrification can be 25 mg/L for each parameter. [Metcalf & Eddy, 2007, Water reuse issues, technologies, and applications. New York, NY: McGraw Hill.] requirements are not even consistent with the discharge limits for the Long Beach and Los Coyotes WRPs NPDEs permits where the monthly BOD limits are 20 mg/L; the TSS monthly limits are 15 mg/L. Limits for BOD and TSS in these permits are more stringent that federally mandated technically based limits and therefore represent conditions beyond what is considered to be "adequately oxidized." The addition of these requirements presents added compliance liability,	Change Made	Change Made

Commenter	#	Comment	Response	Action Taken
		which is fully addressed as part of the Long Beach and Los Coyotes NPDES permits. We therefore recommend that they be deleted.		
WRD Att's A & C	A83	MRP Section IV.2.a.iii Permit Treats Project as Disposal of Waste Versus Beneficial Use of Recycled Water. Change: ~~wastewater~~ recycled water	Change Made	Change Made
WRD Att's A & C	A84	MRP Section IV.2.a.iv Talking Point #8 (Repetitive Permit Requirements) - encompassed in 2.a.i. Delete: ~~Determine if effluent limits are attained..~~	Change Made	Change Made
WRD Att's A & C	A85	MRP Section IV.2.a. Table M3 Talking Point #8 (Repetitive Permit Requirements) - already included in subsection c "Evaluation of Pathogenic Microorganism Removal" on MRP-18. Delete: ~~Samples shall be collected from the channel downstream of the treatment location, where data collection is most likely to represent performance. Should the need for a change in the sampling station(s) arise in the future, the Project Sponsors shall seek approval of the proposed station by the Executive Officer prior to use.~~ ~~Table M-3 – Recycled Water Treatment Specifications~~ ~~Parameter~~ ~~Unit~~ ~~Frequency~~ ~~UV power level % TBD~~ ~~Hydrogen Peroxide ml/min TBD~~ ~~Hydrogen Peroxide mg/L TBD~~	Change Made	Change Made
WRD Att's A & C	A86	MRP Section IV.3. Permit Treats Project as Disposal of Waste Versus Beneficial Use of Recycled Water Delete: ~~a. Highly treated recycled water monitoring is required to:~~ ~~i. Determine compliance with the Permit conditions;~~ ~~ii. Identify operational problems and aid in improving facility performance;~~ ~~iii. Provide information on recycled water characteristics and flows for use in interpreting~~	Recycled Water Discharge Limits are added here, so language is maintained but now references limits, not specifications. CEC monitoring is required by CDPH conditions and monitoring requirements are included here. .	Modified Change Made

Commenter	#	Comment	Response	Action Taken
		~~water quality and biological data; and~~ ~~iv. Determine if effluent limits are attained.~~		
WRD Att's A & C	A87	MRP Section IV.1.b. Talking Point #8 (Repetitive Permit Requirements) leads to confusion. The requirements pertaining to CECs and corresponding surrogates appear later in the MRP in Tables M-14 and M-15, and therefore, recommend removal to avoid confusion. Samples shall be collected from the channel downstream of the sodium hypochlorite injection point, with the exception of constituents specified in Tables M-14 and M-15Chemicals of Emerging Concern (CEC) s and surrogates, whose sampling locations are determined by the State Water Board's Recycled Water Policy, amended on January 22, 2013. The amendment to the Recycled Water Policy Attachment A states that the effluent shall be sampled for the constituents in Table M-4. Should the need for a change in the sampling station(s) arise in the future, the Project Sponsors shall seek approval of the proposed station by the Executive Officer prior to use.	Change Made	Change Made
WRD Att's A & C	A88	MRP Section IV.1.b Talking Point #9 (Permit Treats Project as Disposal of Waste Versus Beneficial Reuse of Recycled Water). recycled water ~~effluent~~	Recycled Water Discharge Limit Monitoring is title for consistency with Order	Modified Change Made
WRD Att's A & C	A89	MRP Section IV.1.b. Changes made, to be consistent with the existing Order. A Table M-5: Recycled Water Discharge Specifications ~~Effluent~~ Monitoring	Change Made	Change Made
WRD Att's A & C	A90	MRP Section IV.1.b. Talking Point #6 (Inconsistent with CDPH GWR Regulations). The log reductions include treatment as well as underground retention time. The appropriate monitoring requirements are presented in 3.c. ~~Enteric Virus~~ ~~Giardia~~ ~~Cryptosporidium~~	Change Made	Change Made
WRD Att's A & C	A91	MRP Section IV.1.b. Talking Point #5 (Technically Unsupported Requirement). Not a CDPH requirement, not part of the	Monitoring of nitrogen species is necessary as they are Basin Plan requirements	No Change Made

Commenter	#	Comment	Response	Action Taken
		existing Order. These are covered under MCL monitoring. Recommend deletion. ~~Nitrate-N~~ ~~Nitrite-N~~ ~~Nitrate plus Nitrite~~		
WRD Att's A & C	A92	MRP Section IV.1.b. Talking Point #8 (Repetitive Permit Requirements), already covered under inorganic primary MCLs, same monitoring frequency. Recommend deletion. ~~Fluoride~~	Change Made	Change Made
WRD Att's A & C	A93, 95, 96	MRP Section IV.2. Table M12 Talking Point #6 (Inconsistent with the CDPH approved 2013 Engineering Report) that states: *As for these newly added constituents, the WRD proposes to monitor them quarterly for the first year and starting the second year, decrease to annual monitoring for constituents that were consistently less than the RL. HMX, RDX TNT quarterly/ annually	Change Made to Annually	Modified Change Made
WRD Att's A & C	A94	MRP Table M 12 Footnote 23 - Excessive frequency (monthly, weekly) unwarranted based on last five years of monitoring data. Recommend removal of footnote. Delete footnote 23.	Change Made	No Change Made
WRD Att's A & C	A97	MRP Section IV.2. Talking Point #8 (Repetitive Permit Requirements) and Talking Point #6 (Inconsistent with CDPH Conditions) - see CDPH Condition #16. Delete: ~~ii. MF (Vander Lans WTF): For each day of operation, the membrane integrity test (MIT) sampling shall be performed, the value, and the daily "Pass" or "Fail" and "Repaired" or "Off-line" results shall be reported ;~~	Change Made	Change Made
WRD Att's A & C	A98	MRP Section IV.2 Talking Point #8 (Repetitive Permit Requirements) - see CDPH Condition #17. Delete: ~~RO (Vander Lans WTF): Conductivity and TOC shall be continuously measured upstream of the RO feedwater and downstream of the RO product water using online analyzers, and for each day of operation, the following shall be reported for both conductivity and TOC - daily minimum, maximum, average, and percent reductions based on daily average values;~~	Change Made	Change Made

Commenter	#	Comment	Response	Action Taken
WRD Att's A & C	A99	MRP Delete Section IV.3.d Pilot Test Based on the suggested October 1, 2014 effective date of the permit - some parts of this section may not be relevant (i.e. already completed) so the language may require a modification.	Pilot Test to Demonstrate Oxidation Process deleted due to revisions in Effective Start Date	Modified Change Made
WRD Att's A & C	A100	MRP Section IV.3.d. Talking Point #8 (Repetitive Permit Requirements) - see CDPH Condition #5. Delete: iv. ~~Each quarter, the Project Sponsors shall tabulate the percent of the quarter's monitoring that did not meet the surrogate limits established to assure proper on-going performance of the RO and UV/AOP. If the value is more than ten percent, within 30 days after the end of the quarter, the Project Sponsors shall:~~ ~~[1]. Submit a report to the CDPH and Regional Water Board describing the corrective actions planned or taken to reduce the percent to ten percent or less; and~~ ~~[2].[1]. Consult with the CDPH and, if required, comply with an alternative monitoring plan approved by the CDPH.~~	Change Made	Change Made
WRD Att's A & C	A101	MRP Section IV.4 Talking Point #5 (Technically Unsupported Requirement). Based on the most recent 5 years of monitoring data, this requirement is deemed excessive and unnecessary since NDMA in recycled water was consistently below 10 ng/L (except for one isolated and minimal event that occurred during the first quarter 2013 at 17 ng/L) and given that the expansion will include an AOP. Delete: ~~1. Treatment Conditions~~ ~~a.Monitoring of treatment conditions is required to:~~ ~~i. Determine compliance with the Permit conditions;~~ ~~ii. Identify operational problems and aid in improving facility performance; and.~~ ~~iii. Provide information on wastewater characteristics and flows for use in interpreting water quality and biological data.,~~ ~~Samples from recycled water shall be collected from the channel downstream of the sodium hypochlorite~~	Order Section IV.4 has been removed but the "If a sample of the advanced recycled water…" paragraph has been retained and moved to IV.3. Refer to response to Comment A56.	Modified Change Made

Commenter	#	Comment	Response	Action Taken
		~~injection and before injection into the groundwater. Sampling described under treatment conditions section IV.1, shall be collected as described below. Should the need for a change in the sampling station(s) arise in the future, the Project Sponsors shall seek approval of the proposed station by the Executive Officer prior to use. Table M-17 Treatment Conditions NDMA If a sample of the advanced treated recycled water is greater than 10 ng/L for NDMA, within 72 hours of knowledge of the result, the Project Sponsors shall collect another sample as confirmation. If the average of the initial and confirmation sample is greater than 10 ng/L, or a confirmation sample is not collected and analyzed, the Project Sponsors shall initiate weekly monitoring for NDMA until the running four-week average is less than 10 ng/L. If the running four-week average is greater than 10 ng/L, the Project Sponsors shall describe the reasons for the results and provide a schedule for completion of corrective actions in the next quarterly report submitted to the Regional Board, with a copy provided to CDPH. If the running four-week average is greater than 10 ng/L for sixteen consecutive weeks, the Project Sponsors shall notify CDPH and the Regional Board within 48 hours of knowledge of the exceedance and, if directed by CDPH or the Regional Board, suspend injection of the advanced treated recycled water~~		
WRD Att's A & C	A102	MRP Section IV.5 Talking Point #8 (Repetitive Permit Requirements) and Talking Point #6 (Inconsistent with CDPH Conditions) - see CDPH Condition #19. Talking Point #5 (Technically Unsupported Requirement). Based on the most recent 5 years of monitoring data, this requirement is deemed excessive and unnecessary since NDMA in recycled water was consistently below 10 ng/L (with one isolated minimal exception at 17 ng/L) and given that the expansion will include an AOP. Revise: Upon an exceedance of 10 ng/L for NDMA in monitoring samples in groundwater wells 502BW, 502BXx, 503BF or 503 BE, and within 30 days, the Project Sponsors shall notify CDPH and the Regional	Change Made	Change Made

Commenter	#	Comment	Response	Action Taken
		Board and begin monthly sampling of groundwater for NDMA from the well with the exceedance. Groundwater sampling may return to the frequency stated in this MRP if the average of three consecutive monthly samples is 10 ng/L or below. ~~The Project Sponsors shall propose a study for approval by the Executive Officer, which will identify the sources of the NDMA, and propose specific operational or facility changes to prevent a recurrence. After approval, the study shall be completed within no more than a year. During the completion and approval of the study, the Project Sponsors will continue monthly groundwater sampling for NDMA.~~		
WRD Att's A & C	A103	MRP Section IV.5 Talking Point #5 (Technically Unsupported Requirement). Modeling shows no impact of concern for nitrogen. Delete: ~~Additional monitoring, reporting and trend analysis for total nitrogen shall be applied to the monitoring data collected for the Alamitos Barrier Project and contrasted with the water quality changes predicted by model and documented in the first annual report. Should any groundwater monitoring well show an increase in the total nitrogen concentration of 10% over the value predicted by the Project Sponsors in the first annual report, additional studies shall be completed. These may include a diagnosis of the cause of the increased nitrogen discharge and description of the changes recommended to improve the barrier operation, or to update the local Alamitos Barrier model or the SNMP model. If wells continue to show a 10% deviation above the predicted quality for total nitrogen in two annual reports, the Order shall be re-evaluated.~~	Proposed deleted text replaced with the following: Upon the approval of the SNMP, the Executive Officer may require additional confirmation monitoring to confirm the water quality changes predicted by the model and documented in the first annual report.	Modified Change Made
WRD Att's A & C	A104	MRP Section IV.5 Talking Point #5 (Technically Unsupported Requirement) and Talking Points #9 (Permit Treats Project as Disposal of Waste Versus Beneficial Reuse of Recycled Water). Based on the monitoring data for the recycled water, almost all of the constituents are not detected (see section 7 of the 2013 approved Engineering Report) and therefore do not pose a concern. The rationale is questionable for this new requirement, which places a significant resource and	Change Made	Change Made

Commenter	#	Comment	Response	Action Taken
		financial burden on the Project Sponsor without a corresponding benefit. Delete: ~~The modified groundwater monitoring frequency approved by CDPH shall be maintained for each well until 6 months before the arrival of recycled water is anticipated by modeling estimates. At that time, the Project Sponsors shall begin the quarterly monitoring for all constituents listed in Table M-20. After four quarters of sampling, a discussion of the findings in the annual report and the absence of unexpected results, the Project Sponsors may resume the monitoring frequency approved by CDPH in 2007 .~~		
WRD Att's A & C	A105	MRP Section IV.Table M19 Talking Point #5 (Technically Unsupported Requirement) and Talking Points #9 (PermitTreats Project as Disposal of Waste Versus Beneficial Reuse of Recycled Water). Based on the monitoring data for the recycled water, almost all of the constituents are not detected (see section 7 of the 2013 approved Engineering Report) and therefore do not pose a concern. The rationale is questionable for this new requirement, which places a significant resource and financial burden on the Project Sponsor without a corresponding benefit. Delete ~~Footnote 29 CDPH allowed a reduction in groundwater monitoring frequency based upon the performance between 2007 and 2012, when the recycled water injection volume was 50% or less. The modified groundwater monitoring frequency approved by CDPH is included in this table, and shall be maintained for each well until 6 months before the arrival of recycled water is anticipated by modeling estimates. At that time, the Project Sponsors shall begin the quarterly monitoring of all those constituents listed in Table M-20. After four quarters of sampling and confirmation that the results are not unexpected, the Project Sponsors may resume the monitoring frequency approved by CDPH in 2007.~~	Change Made	Change Made
WRD Att's A & C	A106	MRP Section IV.Table M 20 What does *** mean- there is no note for the table? This table appears identical to Table 13-16 from the	Change Made	Change Made

Commenter	#	Comment	Response	Action Taken
		2013 approved Engineering Report. If so, *** associated with Table 13-16 was used to note the following: "The March 23, 2007 letter from the CDPH approved semi-annual monitoring; however, starting 2007, constituent has been consistently ND. Remove ***		
WRD Att's A & C	A107	MRP Section IV.Table M 20 Need a footnote to be consistent with Table M-12 and the 2013 approved Engineering Report: "As for these newly added constituents, the WRD proposes to monitor them quarterly for the first year and starting the second year, decrease to annual monitoring for constituents that were consistently less than the RL." 2,4,6-Trinitrotoluene (TNT) quarterly	Change to annually is acceptable	Modified Change Made
WRD Att's A & C	A108	MRP Section IV.Table M 20 Need a footnote to be consistent with Table M-12 and the 2013 approved Engineering Report: "As for these newly added constituents, the WRD proposes to monitor them quarterly for the first year and starting the second year, decrease to annual monitoring for constituents that were consistently less than the RL." HMX quarterly	Change to annually is acceptable	Modified Change Made
WRD Att's A & C	A109	MRP Section IV.Table M 20 Need a footnote to be consistent with Table M-12 and the 2013 approved Engineering Report: "As for these newly added constituents, the WRD proposes to monitor them quarterly for the first year and starting the second year, decrease to annual monitoring for constituents that were consistently less than the RL." RDX quarterly	Change to annually is acceptable	Modified Change Made
WRD Att's A & C	A110	MRP Section IV.Delete Table M 21 Talking Point #5 (Technically Unsupported Requirement) – This is an onerous new requirement, and it is unclear why this is being added. WRD does not own these drinking water wells. The closest drinking water well, SB-LEI's Title 22 monitoring data are already required to be included in the Annual Report. Recommend removal.	Change Made	Change Made
WRD Att's A & C	A111	MRP Delete Section V. WRD recommends that this Order take effect after the Startup testing is completed; the reporting of the startup testing results to the regulatory agencies is covered	Change Made	Change Made

Commenter	#	Comment	Response	Action Taken
		under R4-2005-0061-A01; therefore, this provision is deemed not relevant and thus recommend removal. Delete V: Startup Testing		
		WRD 5 15 2014 Attachment B (Talking Points)		
WRD 5 15 2014 Attachment B (Talking Points)	Attach B Talking Point 1	**Introduction** The new April 14, 2014 Draft Tentative Order has many organizational improvements from the earlier draft versions and is much easier to follow. WRD appreciates the efforts put in to improve the document. However, there are some major issues that remain problematic for WRD that we would like to highlight below. Of major concern is the tone of some of the findings that WRD has degraded water quality through the VanderLans Project and therefore new requirements are necessary to prevent further degradation. Other comments are related to consistency with State policies on antidegradation, the Recycled Water Policy, and supporting recycled water reuse as a benefit instead of referring to the highly treated water as a "waste". Detailed comments will be provided during the 30-day review period.	These are duplicates of WRD's comments in the cover letter with responses above.	Refer to individual comments above
WRD 5 15 2014 Attachment B (Talking Points)	Attach B Talking Point 2	**Inconsistent with State Drought Policy.** In keeping with the Governor's January 2014 Drought Proclamation regarding recycled water, the State Water Board states on its website that in response to the drought: "The State and Regional Boards are expediting permitting to safely use recycled water." Expediting permits involves more than just quickly releasing and adopting a permit. It also includes insuring that the provisions in a permit are not arbitrary or capricious and that they promote and do not create obstacles to the use of recycled water. When we first discussed issuance of a permit for the expanded Alamitos Barrier Project (Project) with the California Department of Public Health (CDPH) and RWQCB beginning in 2010 with a follow up meeting in 2012, it was conceived to be a simple amendment of the existing Order that would be placed on the Board's consent calendar. In fact, Finding 31 of the April 14,	These are duplicates of WRD's comments in the cover letter with responses above.	Refer to individual comments above

Commenter	#	Comment	Response	Action Taken
		2014 Order states "…CDPH determined that 'provided that WRD meets all of the above conditions and findings of fact, the Department [CDPH] finds that the ABRWP [Barrier Project] can provide injection recharge water that will not degrade groundwater basins as a source of water supply for domestic purposes.'" [Emphasis added]. For reasons we cannot understand, it has transformed into a complicated and contentious permit process with unsound provisions, with much time being spent by staffs of WRD and RWQCB on comments and revisions and attempts to make it work. The VanderLans project has proven successful since 2005 in helping to stop degradation of the basin from seawater by injecting high quality advanced treated recycled water. The expansion is just an increase in the volume of highly purified recycled water for a successful groundwater replenishment project with additional enhanced advanced treatment provided. We don't understand why we continue to be in this antagonistic process, which is contrary to the intent of actions being taken by state agencies to address the drought.		
WRD 5 15 2014 Attachment B (Talking Points)	Attach B Talking Point 3	**Inconsistent with Anti-degradation Policy.** The April 14, 2014 draft Order is inconsistent with the State's Anti-degradation Policy (Resolution 68-16). The most obvious example can be found in Finding 44, which states: "Compliance with the requirements of this Order is expected to **prevent** the degradation of high quality waters. **To ensure that no degradation is occurring**, the Project Sponsors are required by the MRP to submit a technical report after start-up testing of the expanded facility is completed and to regularly monitor the advanced treated recycled water and the receiving groundwater in proximity to the injection wells." [Emphasis added] Resolution 68-16 does not require that a condition of no degradation occur – it allows for a change in water quality if it is consistent with the maximum benefit to the people of the state, will not unreasonably affect present and anticipated beneficial uses, and will not result in	The provision of the Order that addresses the requirements of Resolution 68-16 has been revised.	Refer to individual comments above

Commenter	#	Comment	Response	Action Taken
		water quality less than prescribed in the policies, all of which will be met by the Project. With regard to Finding 44, WRD believes that the RWQCB should make the appropriate anti-degradation findings (as already enunciated in Resolution 68-16 and the Recycled Water Policy for this type of project) to acknowledge some minor changes in water quality in comparison to ambient conditions may occur as evidenced in the modeling performed as part of the Central Basin and West Coast Basin Salt Nutrient Management Plan and groundwater data collected for the Project and WRD's regional groundwater monitoring program; however, such changes are not significant and are consistent with the maximum benefit to the people of the state, will not unreasonably affect present and anticipated beneficial uses, and will not result in water quality less than prescribed in the policies.		
WRD 5 15 2014 Attachment B (Talking Points)	Attach B Talking Point 4	**Project Mischaracterization Leading to an Unwarranted Unfavorable Depiction of the Project.** The April 14, 2014 draft Order includes information that is lacking detail, and is over generalized or non-factual, thereby leaving the impression that the current Project and the expansion have or will have a detrimental impact on groundwater. One example includes how arsenic and selenium are characterized in groundwater and recycled water per Finding 24 (with Table 1) and Finding 25. These findings (specifically, Table 1) are misleading and do not provide sufficient detail to explain historical and current groundwater quality conditions and the lack of impact on water quality as a result of the Project. Injection does not occur into the Recent Aquifer, yet increases in arsenic and selenium are cited. Though at the end of Finding 25, RWQCB says that "Arsenic and selenium have not been detected in the recycled water injected at the Barrier". Other constituents are cited as increasing, yet their concentrations are lower than background concentrations before the Project started. Coliform is cited as increasing, although coliforms have never been detected going into the barrier water. For this and similar reasons, Table 1 should be modified or deleted.	These are duplicates of WRD's comments in the cover letter with responses above.	Refer to individual comments above

Commenter	#	Comment	Response	Action Taken
		We are not sure what benefit it provides and it only leads to an unwarranted negative tone for the Project. Further, the findings fail to explain or consider (1) the number of samples, data ranges, standard deviations of data, etc.; (2) which groundwater zones receive or do not receive injected water to put the information into context; (3) if analytical detection levels or reporting levels have changed during the monitoring periods that would impact judgments regarding if a trend is occurring or not; and (4) if differences in data are even statistically significant. RWQCB has ignored our requests to include readily available information in the approved 2013 Engineering Report that provides sufficient detail and analysis and can easily be converted into more appropriate permit findings.		
WRD 5 15 2014 Attachment B (Talking Points)	Attach B Talking Point 5	**Technically Unsupported Requirements.** The April 14, 2014 draft Order includes new provisions from earlier versions that are not technically supported. For example, provision VI.3 (related primarily to nitrogen) states that: "A 10% change in the water quality sampled at any of groundwater monitoring wells in Table M-20, over that predicted in the Project Sponsors' first annual report and approved by the Executive Officer, shall trigger further analysis to be included in each subsequent annual report. These studies shall include a diagnosis of the cause of the increased nitrogen discharge and description of the changes recommended to improve the barrier operation, or to update the local Alamitos Barrier model or the SNMP model. If wells continue to show a 10% deviation above the predicted quality for total nitrogen in two annual reports, the Order shall be re-evaluated. A reopener clause is provided in section VII." The major form of nitrogen that will be detected in groundwater is nitrate. Per the work done for the Central Basin and West Coast Basin Salt Nutrient Management Plan, including technical memos that have been reviewed by all stakeholders including the RWQCB, the baseline nitrate concentration in the Central Basin Pressure area where the Project is located is 0.10 mg/L. A 10% change in concentration would be 0.01 mg/L. This *de minimis* change (please note the water quality	The modeling was completed by the Project Sponsor and has not been adopted by the Regional Board as a Salt and Nutrient Management Plan.	Refer to individual comments above

Commenter	#	Comment	Response	Action Taken
		objective is 10 mg/L) in concentrations is not statistically relevant nor does it present a water quality issue worthy of "further analysis." Further, the requirement that the annual report be "approved by the Executive Officer" is confusing and sets a new precedent on how annual informational reports are handled by the RWQCB.		
WRD 5 15 2014 Attachment B (Talking Points)	Attach B Talking Point 6	**Inconsistent with CDPH Conditions and Draft Groundwater Replenishment Regulations.** The April 14, 2014 draft Order includes provisions that are not consistent with the July 2013 CDPH Conditions or the June 2013 Draft Groundwater Replenishment Regulations. For example, RWQCB continues to try and establish effluent limitations for pathogens, which is not the intent or approach prescribed by CDPH (see draft Order II.5 and Table 6 that set minimum treatment requirements for UV power and hydrogen peroxide dose; and III.1 and Table 7 – that set effluent limits for specific pathogens). Instead, the pathogen log reductions required per CDPH Conditions #6 and #7 incorporate treatment performance of primary and secondary processes at the Long Beach Water Reclamation Plant; microfiltration, reverse osmosis, and UV advanced oxidation at the VanderLans Advanced Water Treatment Facility (AWTF); and for virus, six months of underground retention time. In accordance with CDPH conditions, WRD will update the existing Operations Plan to describe the different monitoring parameters and testing that will be done to validate log reductions from the different treatment components. This complex multi-barrier approach cannot be transformed into simplistic end-of-pipe limits. In fact, CDPH has repeatedly told RWQCB to not take this approach, yet it remains in the permit.	The Order has been revised to be consistent with and to avoid duplication of provisions in the July 2013 CDPH Findings of Fact and Conditions. Because the 2013 Draft Groundwater Replenishment Regulations are draft regulations that have not completed the necessary process to become binding legal requirements, the Regional Board did not rely on these draft regulations. The pathogen log reductions have been removed from the Order as end-of-pipe limitations.	Refer to individual comments above
WRD 5 15 2014 Attachment B (Talking Points)	Attach B Talking Point 7	**Permit Requirements Inconsistent with Previous Approvals.** The April 14, 2014 draft Order includes language that is not consistent with prior permit amendments. For example, in March 2014, the RWQCB adopted permit amendment R4-2005-0061-A01 that allowed for start-up testing of the advanced treatment system. Permit Amendment Provision 1 stated: "The pH of the product water for injection or recharge water shall	The start date for this Order has been changed and language added to ensure that the requirements of the Amendment and the revised Order will not contradict.	Refer to individual comments above

Commenter	#	Comment	Response	Action Taken
		be, at all times, within the range of 6.5 to 8.5 pH units, except during the AWTF expansion startup testing (per Section IV.6 of the accompanying Monitoring and Reporting Program) during which the pH of the product water shall be within the range of 6 to 9 pH units." Yet, this same language is not used in the April 14, 2014 draft Order. Effluent Limitation III.3. states that: "The pH of the advanced treated recycled water shall be, at all times, within the range of 6.5 to 8.5 pH units, except during the Vander Lans WTF expansion startup testing, when the pH of the advanced treated recycled water may be within the range of 6 to 9 pH units, under specific and necessary operational conditions as defined by the Project Sponsor, **for up to one week**." [Emphasis added] The highlighted language was not in the approved permit amendment and changes the compliance period for the modified pH limits without justification.		
WRD 5 15 2014 Attachment B (Talking Points)	Attach B Talking Point 8	**Repetitive Permit Requirements That Should Be Streamlined**. The April 14, 2014 draft Order contains repetitive, enforceable requirements that are unnecessary and create dual liability, an issue that has been repeatedly brought to the attention of the RWQCB, but remain in the permit. A key example is repeating and imposing compliance with maximum contaminant levels (MCLs) in recycled water in multiple places in the permit by listing numeric MCL-based limits, narrative requirements for MCLs that refer to compliance with drinking water regulations, or referring to CDPH Conditions that address compliance with MCLs (for example see draft Order provisions II.1, III.1 and Table 7, III.4, and IV.2). MCL based recycled water specifications only need to be mentioned in one place in the permit and preferably using the language from CDPH Condition #11.	These are duplicates of WRD's comments in the cover letter with responses above.	Refer to individual comments above

Commenter	#	Comment	Response	Action Taken
WRD 5 15 2014 Attachment B (Talking Points)	Attach B Talking Point 9	**Permit Treats Project As Disposal of Waste Versus Beneficial Reuse of Recycled Water.** In California, "recycled water" is defined as "water which, as a result of treatment of waste1, is suitable for a direct beneficial use or a controlled use that would not otherwise occur and is therefore considered a valuable resource." (Water Code § 13050(n)). It is the high level of treatment in accordance with CDPH requirements that transforms water from being legally considered a "waste," to being considered "recycled water" for regulatory purposes. WRD employs such treatment as recognized by CDPH; however, RWQCB continues in the April 14, 2014 Draft Order to treat the water used for groundwater injection as a "waste" (and "recycled water" – it cannot be both). See Order Finding 38 for example, in addition to the Order title as "Waste Discharge Requirements". This position conflicts with a variety of State laws and policies that recognize the distinction between "waste" disposal and beneficial use of "recycled water," and meant for those distinctions to have meaning (*See, e.g.*, State Water Board Resolution 77-1, which finds that: "The California Legislature has declared that the people of the State have a primary interest in the development of facilities to reclaim water containing waste to supplement existing surface and underground water supplies"; the State Water Board's Recycled Water Policy that declares that "when used in compliance with this Policy, Title 22 and all applicable state and federal water quality laws, the State Water Board finds that recycled water is safe for approved uses, and strongly supports recycled water as a safe alternative to potable water for such approved uses"; *see also* Water Code sections 13510, 13512, and 13560). Increasing the acceptance, and promoting the use, of recycled water is a recognized means for achieving sustainable local water supplies; thus, the State, the State and Regional Water Boards, and local governments all seemingly share the same goal of promoting recycled water use via protective, but *reasonable,* requirements."	These are duplicates of WRD's comments in the cover letter with responses above. Refer to Response to Attachment 1 Comments	Refer to individual comments above

Commenter	#	Comment	Response	Action Taken
WRD 5 15 2014 Attachment B (Talking Points)	Attach B Talking Point 10	10. Impending Statewide Change in Potable Water Reuse Regulation and Permitting. Within three months, there will be statewide changes that will affect approval and permitting of groundwater replenishment projects. Effective July 1, 2014: (1) the CDPH Drinking Water Program, including recycled water responsibilities, will be moved to the State Water Resources Control Board's (State Water Board's) new Division of Drinking Water per the March 2014 *Drinking Water Reorganization Transition Plan*; (2) In accordance with Senate Bill 104, CDPH must adopt the groundwater replenishment regulations by June 31, 2014 as emergency regulations without Office of Administrative Law review; and (3) it is expected that legislation will be adopted providing the new State Water Board Division of Drinking Water with the authority to issue potable reuse permits by July 1, 2014. There are ongoing discussions at the State Water Board level on how potable reuse permitting will be implemented. Given the future of groundwater replenishment projects under a new regime and our concerns regarding fundamental shortcomings in the April 14, 2014 Draft Order, it is premature and inadvisable to move forward with the Alamitos Barrier Order (in its current form) at this time.	Refer to Response to Attachment 5 Comment	Refer to individual comments above
WRD 5 15 2014 Attachment D (comparison of 2005 and 2013 WDR)		Attachment D Comparison of 2005 Groundwater Recharge with Recycled Water Regulations (GWRR) and June 2013 Proposed GWRR It is the District's understanding that the Board agenda package for this tentative Permit will address the differences in the 2013 draft GWRR and the regulations in place at the time the Order was issued in 2005. The following information is provided to assist the Regional Water Board staff with the comparison of the two versions of the GWRR and to summarize how the Alamitos Barrier Recycled Water Project will be able to comply with the requirements.	Comment Noted. The regulations in place in 2005, as represented in the Alamitos Barrier Permit were not state-wide requirement authored by CDPH, but Findings of Fact, for that proposal alone.	Refer to individual comments above
WRD, May 28, 2014 email				
WRD May 28, 2014 email		MRP, section IV.5, page MRP-23 5. Groundwater monitoring "….If any of the monitoring results indicate that an MCL has been exceeded or coliforms are present in the monitoring wells at the Alamitos Barrier, the Project Sponsors shall notify the CDPH and Regional Water	March 27, 2013 Amended Title 22 Engineering Report, page 13-18 requires "If any of the monitoring results indicate that an MCL has been exceeded or coliforms are present as a result of the recycled water injected at the Alamitos	**Change Made**

Commenter	#	Comment	Response	Action Taken
		Board within 72 hours of receiving the results and make note of any positive finding in the next monitoring report submitted to the Regional Water Board." Comments We request that the above referenced provision be removed or modified, as shown below, for reasons outlined below: Option 1 (remove the entire provision that is based on now outdated 2004 CDPH Conditions) 5. Groundwater monitoring "….If any of the monitoring results indicate that an MCL has been exceeded or coliforms are present in the monitoring wells at the Alamitos Barrier, the Project Sponsors shall notify the CDPH and Regional Water Board within 72 hours of receiving the results and make note of any positive finding in the next monitoring report submitted to the Regional Water Board." or Option 2 (insert the trigger language from the 2004 CDPH Conditions) 5. Groundwater monitoring "….If any of the monitoring results indicate that an MCL has been exceeded or coliforms are present in the monitoring wells at the Alamitos Barrier as a result of the use of recycled water, the Project Sponsors shall notify the CDPH and Regional Water Board within 72 hours of receiving the results and make note of any positive finding in the next monitoring report submitted to the Regional Water Board." Reasons 1 The above referenced requirement is a carryover of a similar requirement (section IV.5.B) from the existing 2005 Permit, and this 2005 Permit requirement was based on the 2004 CDPH Conditions (condition #27, see attached for 2004 CDPH conditions) but did not accurately capture the trigger for the notification and reporting (i.e., "as a result of the use of recycled water"; for additional details, see explanation in the attached WRD letter to LARWQCB, dated 4/21/2011).	Barrier,.". The MRP has been revised to include <u>as a result of the use of recycled water</u>	

Commenter	#	Comment	Response	Action Taken
		2 This notification requirement pertaining to groundwater results is no longer part of the 2013 CDPH Conditions. 3.There have not been MCL exceedances or positive coliform detections in the recycled water. Past MCL exceedances or coliform detections observed in groundwater were not related to the use of recycled water but were indicative of pre-existing conditions and/or conditions in the shallow aquifers not subject to recycled water injection (see attached WRD letter dated 4/21/2011).		
		CSDLAC May 14, 2014		
CSDLAC May 14, 2014	1 Pg1	The Sanitation Districts' name in Section I.6 should be consistent with our official name and be edited as follows: the Los Angeles County Sanitation Districts of Los Angeles County (County Sanitation Districts).	Change made.	Change Made
CSDLAC May 14, 2014	2 Pg 1	Section I.6 states that the City of Long Beach owns the rights to the recycled water produced at both the Long Beach and Los Coyotes Water Reclamation Plants (WRPs). This is incorrect. The City of Long Beach only owns the right to the recycled water produced at the Long Beach WRP. This should be corrected.	Change made.	Change Made
CSDLAC May 14, 2014	3 Pg1	The Revised Tentative Permit treats the project as a disposal of waste rather than as a beneficial reuse of recycled water. For instance, Section III is entitled "Effluent Limitations." The term limitations" is typically not used to regulate recycled water as the term is associated with limitations on discharges to surface waters regulated by the federal Clean Water Act and the National Pollutant Discharge Elimination System (NPDES) permit program. Instead, requirements on the treatment and quality of recycled water are referred to as "Recycled Water Specifications." (For reference, see Orders No. R4-2003-0134, R4-2005-0061, and R4-2006-0069, which regulate three local seawater intrusion barrier projects.) Such terminology is important in helping to distinguish reuse of valuable recycled water from waste. The California Regional Water Quality Control Board, Los Angeles Region (Regional Board) has indicated that it highly encourages use of recycled water, and it can help to further the use of recycled	Change made. See also response to Attachment 1 Paragraph 2, below.	Change Made

Commenter	#	Comment	Response	Action Taken
		water by using terminology that helps promote its use. All references to effluent in the Revised Tentative Permit should be changed to reference recycled water.		
CSDLAC May 14, 2014	1 Pg 2	The Revised Tentative Permit appears to incorrectly characterize the current Project and the expansion as projects that will have a detrimental impact on groundwater. One example includes how arsenic and selenium are characterized in groundwater and recycled water per Finding 24 (with Table 1) and Finding 25. These findings (specifically, Table 1) are misleading and do not provide sufficient detail to explain historical and current groundwater quality conditions and the lack of impact on water quality as a result of the Project. Injection of recycled water does not occur into the Recent Aquifer (the uppermost aquifer) yet increases in arsenic and selenium are cited despite the fact that "arsenic and selenium have not been detected in the recycled water injected at the Barrier", as mentioned at the end of Finding 25. Other constituents are cited as increasing in groundwater, yet their concentrations are lower than background concentrations before the Project started. Coliform is cited as increasing, although coliforms have never been detected going into the barrier water. For this and similar reasons, Table 1 should be modified or deleted. The intent of including Table 1 is unclear since it only leads to an unwarranted negative tone for the Project, especially since the Revised Tentative Permit does not offer a comprehensive characterization of the quality of the recycled water produced at the Leo J. Vander Lans Advanced Water Treatment Facility (LVLAWTF).	The table of groundwater concentrations, Table 1, will be removed. However, a requirement is added to the Annual report to evaluate the quality of the groundwater and to report the groundwater elevation and to discuss trends.	Change Made
CSDLAC May 14, 2014	2 Pg2	The Revised Tentative Permit includes new provisions that are not technically supported. For example, Section VI.3 (related primarily to nitrogen) states that: "A 10% change in the water quality sampled at any of groundwater monitoring wells in Table M-20, over that predicted in the Project Sponsors' first annual report and approved by the Executive Officer, shall trigger further analysis to be included in each subsequent annual report. These studies shall include a diagnosis of the cause of the increased nitrogen discharge and description of the changes recommended to improve the	Change made.	Change made

Commenter	#	Comment	Response	Action Taken
		barrier operation, or to update the local Alamitos Barrier model or the Salt Nutrient Management Plan (SNMP) model. If wells continue to show a 10% deviation above the predicted quality for total nitrogen in two annual reports, the Order shall be re-evaluated. A reopener clause is provided in section VII." The major form of nitrogen that will be detected in groundwater is nitrate. Per the work done for the Central Basin and West Coast Basin SNMP and additional modeling conducted looking at the effect of injecting recycled water at a concentration of 10 mg/L nitrate-N (the California Department of Public Health [CDPH] total nitrogen condition and the Basin Plan objective), the predicted change in assimilative capacity for nitrate in the Central Basin Pressure area where the Project is located would be 0.15 mg/L as nitrogen. Ten percent of this value is 0.015 mg/L, which is an inconsequential change and certainly not worthy of further action. Further, the requirement that the annual report be "approved by the Executive Officer" is confusing and sets a new precedent on how annual informational reports are handled by the Regional Board. This provision should be deleted.		
CSDLAC May 14, 2014	2 Pg3	Sections I, II, III, and IV of the Revised Tentative Permit contain a number of requirements that are duplicative of the Conditions required by CDPH (incorporated into the Revised Tentative Permit by reference under Section IV.2). To avoid unintended changes to the requirements specified by CDPH, to avoid potential confusion in implementing and enforcing the Permit requirements, and to avoid creating dual liability for the Project Sponsors, the Permit should not duplicate the CDPH Condition	Change made.	Change Made
CSDLAC May 14, 2014	1 Pg 3	Pathogen reduction requirements for enteric virus, Giardia, and Cryptosporidium specified in CDPH Conditions 6 and 7 are inappropriately included as effluent limits in Table 7 of the Revised Tentative Permit. These conditions were intended and written as treatment performance indicator of primary and secondary processes at the Long Beach Water Reclamation Plant; microfiltration, reverse osmosis, and ultraviolet (UV) advanced oxidation at the LVLAWTF;	Change made.	Change Made

Commenter	#	Comment	Response	Action Taken
		and for virus, six months of underground retention time. Therefore, they should be deleted from Table 7. Also, only one specification for each requirement should be included in the permit. For specifications based on CDPH Conditions (Section IV.2), the Permit should only include the specific CDPH Condition.		
CSDLAC May 14, 2014	2 Pg3	The Revised Tentative Permit contains excessive monitoring requirements for groundwater. As an example, Footnote 29 associated with Table M-20 of the Monitoring and Reporting Program (MRP) states, "The modified groundwater monitoring frequency approved by CDPH is included in this table, and shall be maintained for each well **until 6 months before the arrival of recycled water** is anticipated by modeling estimates. At that time, the Project Sponsors shall begin the quarterly **monitoring of all those constituents listed in Table M-20**. After four quarters of sampling and confirmation that the results are not unexpected, the Project Sponsors may resume the monitoring frequency approved by CDPH in 2007." [emphasis added] Typically, advanced water treatment processes similar to those employed at the LVLAWTF are capable of producing pure water, in which almost all of the contaminants listed in Table M-20 are not detected. Therefore, the merit of the requirement to accelerate the frequency of groundwater monitoring for 188 chemicals on the basis of anticipated arrival of recycled water though most of the contaminants are not present in the recycled water injected is questionable. Such excessive and technically unsupported requirements unnecessarily increase the cost of the Project and discourage other similar projects from moving forward in the future. It is recommended that this requirement be removed from the MRP. Furthermore, each requirement of the MRP should be examined carefully as to its necessity. Any monitoring requirements beyond those required in the existing permit should be individually justified.	The proposed monitoring frequency has been revised to equal that approved by CDPH and implemented today, so it is not considered excessive.	Change Made
		Heal the Bay May 12, 2014 Letter		
HTB May 12, 2014	1 Pg1	However, we are concerned that several of the proposed limits are not stringent enough to ensure human health protection. The draft Permit's total nitrogen effluent limitation of 10 mg/L is less stringent	CDPH is charged with protection of public health and drinking water supplies. The Recycled Water Policy directs the regional water boards to	No Change

Commenter	#	Comment	Response	Action Taken
		than the 2005 permit's 5 mg/L nitrogen requirement. We are concerned that this relaxation may degrade current water quality in the Central Basin. How can we be sure this nitrogen relaxation will not degrade the groundwater basin in the long term? Modeling data is not included in the Permit; therefore we are unable to review SNMP model conclusions.	appropriately rely on the expertise of CDPH for the establishment of permit conditions needed to protect human health. The Regional Board incorporated the July 2013 Conditions adopted by CDPH in this Order. The July 2013 Conditions include a limit of 10 mg/L of total nitrogen in the recycled water to be injected into the aquifer, while the approval by CDPH for the prior permit included a limit of 5 mg/L of total nitrogen. The change in the condition imposed by CDPH is the reason for the relaxation of the limit in this Order. The water quality objective for groundwater set by the Basin is 10 mg/L for total nitrogen. The Recycled Water Policy allows a project proponent to demonstrate that a project is in compliance with Resolution No. 68-16 by demonstrating that the project utilizes less than 10 percent of the available assimilative capacity in the basin/sub-basin. Although the modeling data for the SNMP for the Central Basin has not yet been fully reviewed by the Regional Board, the information submitted by the Project Sponsors support the conclusion that a 10 mg/L limit on total nitrogen will utilize less than 10 percent of the available assimilative capacity in the basin.	
HTB May 12, 2014	2 Pg1	Further, it is encouraging to see additional groundwater monitoring, reporting, and trend analysis requirements for total nitrogen added to the Permit. However, we feel the duration of additional analysis should not be limited to one year, as it is estimated to take 4.3 years for injected water to reach the closest domestic well. Thus, we recommend that the monitoring, reporting, and trend analysis requirements be extended to five years. Lastly, we believe if a 10% deviation above predicted quality for total nitrogen in two annual reports is observed within the proposed *five year study period*, the order should be	This approach to nitrogen review has been removed. See response to HTB 1 Pg 1.	No Change

Commenter	#	Comment	Response	Action Taken
		re-evaluated to account for potential impacts of nutrients on the Basin.		
HTB May 12, 2014	1 Pg2	We are also concerned that the draft Permit does not include a numeric effluent limit for NDMA. The Vander Lans facility failed to prevent the injection of high concentrations of NDMA, above constituent reporting limits, in May of 2008. High concentrations of NDMA pose human health risks in high concentrations. Although the Permit requires "special conditions" for NDMA, such as documentation of high concentrations events and a schedule for completion of corrective action, these provisions are inadequate to protect human health. As written, the Permit would allow high concentrations of NDMA to be injected into groundwater supplies for upwards of 16 weeks without action by the CDPH. Additionally, there is no NDMA concentration trigger requiring immediate suspension of recycled water injection in the event that NDMA concentrations pose human health risks. This is concerning as a discharge of NDMA could allow degradation of a municipal water supply in which millions of Angelenos depend upon daily. To protect this water resource, the Permit should include an effluent limitation of 10 ng/L1 for NDMA, at a minimum. Moreover, the Permit should include a 300 ng/L2 NDMA threshold for injected water; if this threshold is exceeded, injection of advanced treated recycled water shall cease and be discharged to the MS4 system. Recycled water injection should only resume once NDMA concentrations fall below 300 ng/L for a certain number of days. Of note, the draft Permit released January 2014 included a performance goal of 10 ng/L for NDMA; why was this changed in the most recent Permit?	NDMA monitoring was required in the existing permit and is also required by CDPH. CDPH is charged with protection of public health and drinking water supplies. The Recycled Water Policy directs the regional water boards to appropriately rely on the expertise of CDPH for the establishment of permit conditions needed to protect human health. CDPH prescribed monitoring for constituents such as NDMA that have been assigned notification levels, in its July 2013 Conditions for the project. CDPH did not include a limit on concentration of NDMA in the recycled water to be injected into the aquifer.. Therefore, a limit is not included in this Order. The CDPH July 2013 Conditions do authorize CDPH to direct that injection be suspended if high levels of NDMA are consistently detected in the recycled water.	No Change
HTB May 12, 2014	2 Pg2	Finally, we believe a comprehensive monitoring program must be included in the Permit for influent, effluent, and groundwater to ensure water quality is not compromised. When compared to the 2005 permit, pH, turbidity, TOC, and NDMA are proposed to be discontinued from influent monitoring. What was the reasoning for removing these constituents from influent monitoring in the Permit?	The influent water must meet requirements contained in the water reclamation requirements for the Long Beach WRP (Order No. 97-07206) and Los Coyotes WRP (97-07204). These requirements include monitoring for pH and turbidity. Treated wastewater that is discharged to surface water produced by these facilities is subject to	No Change

Commenter	#	Comment	Response	Action Taken
			monitoring for TOC and NDMA pursuant to their respective NPDES permits. To the extent that the monitored wastewater is representative of the influent water to the Vander Lans WTF, influent levels of TOC and NDMA can be identified with this data. Monitoring for all of these constituents in the advanced treated recycled water to be used for injection is required by the Tentative Order.	
HTB May 12, 2014	3 Pg2	Furthermore, we are concerned with the proposed quarterly NDMA effluent monitoring frequency in the Permit. Although the Permit requires monthly effluent monitoring for NDMA during the first year of the Permit (reduced to quarterly after first year), we feel the reduced frequency may not capture all future discharging scenarios. Therefore, we urge the Regional Board to require monthly NDMA effluent monitoring for the entire permit cycle.	The Order requires quarterly monitoring of NDMA. CDPH is charged with protection of public health and drinking water supplies. The Recycled Water Policy directs the regional water boards to appropriately rely on the expertise of CDPH for the establishment of permit conditions needed to protect human health. The effluent monitoring required by the Order is consistent with the July 2013 Conditions adopted by CDPH.	No Change
CDPH April 29, 2014				
CDPH: April 29, 2014	1	Page MRP-12, Table M-5, the Enteric virus calculation needs to be conducted daily.	Change made.	Change Made
CDPH:	2	Page MRP-12, footnote 19 and Page MRP-17 footnote 25, continuous online analyzers daily minimum, maximum and average values need to be reported.	Change made.	Change Made
April 29, 2014	3	Page MRP-19, c. iii, The last sentence needs to include the total UV power applied.	Change made.	Change Made

Response to Comments
Table 2

Attachment 1 through 9 in WRD's Comment Letter of May 15, 2014.

LEO J. VANDER LANS WATER TREATMENT FACILITY AND THE ALAMITOS BARRIER RECYCLED WATER PROJECT
TENTATIVE WASTE DISCHARGE REQUIREMENTS AND WATER RECYCLING REQUIREMENTS

This Table gives a response to Attachments 1 through 9 in WRD's May 15, 2014 letter. Each Attachment is also referenced in WRD's Attachment C, which is a redline of the Draft Tentative Order. The response to each comment below was considered in staff's responses to proposed changes in Attachment C.

#	Comment	Response
Attachment 1 Paragraph 1	**Introduction and WRD's Request to Remove "Waste" References in Draft Order:** The State of California, through its repeated Legislative and regulatory mandates, has made clear that substantially augmenting the use of recycled water in California is crucial to providing for and sustaining local water supplies. Increasing the acceptance, and promoting the use, of recycled water is a recognized means for achieving those sustainable local water supplies; thus, the State, the State and Regional Water Boards, and local governments all share the same duty to promote recycled water use via protective, but *reasonable,* requirements. (*See* Water Code§13000) In this case, however, the Draft Order fails to further the goals of the State as the Draft Order proposes to regulate the Alamitos Barrier Recycled Water Project ("Project") as one that involves the disposal of "waste," a characterization that will likely have a chilling effect on recycled water projects throughout the region at a time when recycled water use has the ability to decrease the impact of drought conditions. Though State law, regulations, and policies related to recycled water require only the issuance of "water reclamation requirements" to regulate its beneficial reuse, the Draft Order is unnecessarily presented as both "waste discharge requirements" issued pursuant to Water Code section 13263 and "water reclamation requirements" issued via Water Code section 13523, a confusing regulatory approach given disposal of "waste" and the beneficial reuse of "recycled water" are mutually exclusive activities as defined by the Water Code. For the reasons set forth below, the District objects to the characterization of the project as one that involves the disposal of "waste," rather than the beneficial use of "recycled water." All references to "waste" and "waste discharge requirements" should be removed from the Draft Order, and the Draft Order should be amended to exclude elements of "waste discharge requirements" that are not appropriate or necessary to regulate the beneficial reuse of "high quality advanced-treated recycled water.1" (*See* Draft Order at Finding 4.):	The Regional Board does not disagree with the majority of the comments submitted by the Water Replenishment District in Attachment 1. Augmenting the use of recycled water in California is crucial to providing and sustaining local water supplies; and the Regional Board seeks to promote the use of recycled water through reasonable requirements on treatment and use that will protect human health and the quality of waters of the State.

#	Comment	Response
Attachment 1 Paragraph 2	**Draft Order Provisions at Issue** While the Draft Order repeatedly describes the Project as one involving beneficial reuse of high quality recycled water, the Draft Order nonetheless includes the provisions cited below that instead attempt to regulate the project as the disposal of "waste." Curiously, though, the Draft Order never specifically identifies how or why the recycled water could be or is considered a "waste," or attempts to explain why waste discharge requirements or "waste"-related provisions are included. Instead, authority from the Water Code that solely authorizes water reclamation requirements is heavily cited as the basis for the Draft Order. (*See* Draft Order at Findings 27 –32.) The Draft Order simply assumes, without justification or explanation, that the form of the permit and the references below are supported when, in fact, legal, technical and/or factual basis is lacking. Orders adopted by the Regional Water Board not supported by the findings, or findings not supported by the evidence, constitute an abuse of discretion. *Topanga Association for a Scenic Community v. County of Los Angeles,* 11 Cal.3d 506, 515; *California Edison v. SWRCB,* 116 Cal. App.3d 751, 761 (4th Dt. 1981); *see also In the Matter of the Petition of City and County of San Francisco, et al.,* State Board Order No. WQ-95-4 at page 10 (Sept. 21, 1995).	The District incorrectly alleges that the Regional Board has identified the advanced treated recycled water that is produced at the Vander Lans Facility as "waste." To the contrary, there is no doubt that this highly treated recycled water is a valuable resource for enhancing the region's potable water supply. Yet, as is true of even highly treated water, the water contains some pollutants that can impact water quality, beneficial uses, and human health when concentrated. These pollutants are "waste" that is discharged to waters of the State when recycled water is injected into the aquifer. The Water Code defines "waste" to include "sewage and any and all other waste substances, liquid, solid, gaseous, or radioactive, associated with human habitation, or of human or animal origin, or from any producing, manufacturing, or processing operation, including waste placed in containers of whatever nature prior to, and for purposes of, disposal." (Water Code § 13050(d)). Accordingly, even water that is of sufficient quality for a beneficial use, including potable water that meets drinking water standards, contains some measure of waste. (See, e.g., WQ Order 2012-0010 (*General Waste Discharge Requirements for Aquifer Storage and Recovery Projects*)(imposing waste discharge requirements on the injection of potable water for groundwater recharge); WQ Order 2001-0015 (*Building Industry Association of San Diego County)*("[I]t is the waste or pollutants in the runoff that meet these definitions of "waste" and "pollutant," and not the runoff itself."); *Lake Madrone Water Dist. v. State Water Resources Control Bd.* (1989) 209 Cal. App.3d 163, 168-171 (finding that sediment flushed through a dam is "waste" within the meaning of the Porter-Cologne Act).) When this water is mixed with waters of the State, a discharge of waste occurs that is subject to waste discharge requirements. As described by the District, waste discharge requirements and water recycling requirements are two distinct regulatory schemes. The regulatory scope of waste discharge requirements and water recycling requirements are overlapping, but not coextensive. Because each regime serves a different purpose, both are necessary where, as here, the beneficial use of recycled water includes a discharge to waters of the State. In recognition of the need for both regulatory tools to regulate certain recycled water uses, master reclamation permits incorporate both waste discharge requirements and water recycling requirements into one master permit that may be used to regulate suppliers or distributors of recycled water. (Water Code § 13523.1).

#	Comment	Response
		The regional water boards impose waste discharge requirements to implement the region's water quality control plan, protect beneficial uses, and maintain water quality objectives. The purpose of the requirements is to protect the quality of waters of the State and prevent contamination or nuisance. In contrast, the regional water boards impose water recycling requirements to ensure that the beneficial use of recycled water is not injurious to human health. The Water Code and the Recycled Water Policy instruct the regional boards to rely on the California Department of Public Health to establish necessary conditions for inclusion in water recycling requirements to protect human health. In many instances, recycled water use does not involve a discharge to waters of the State. Because there is no potential impact to the quality of waters of the State, only water recycling requirements are necessary. Examples of recycled water uses that do not require waste discharge requirements include consumptive uses of recycled water where there is no discharge; uses of recycled water that discharge into a sewer system for treatment; and in some cases, application of recycled water at agronomic rates for irrigation where waste is not expected to leach into the groundwater. But in most cases, beneficial uses of recycled water involve the discharge of waste to a water of the State. Waste discharge requirements are therefore necessary to protect the existing quality of the receiving water. This Order appropriately includes both waste recycling requirements and waste discharge requirements. The water recycling requirements are based on the conditions adopted by CDPH in its July 2013 Findings of Fact and Conditions, which are incorporated into the Order. The purpose of these provisions is to ensure that the use of recycled water for groundwater recharge will not detrimentally impact human health. The waste discharge requirements in this Order are necessary to protect the quality of the groundwater for beneficial uses and prevent degradation of existing water quality. The waste discharge requirements include end-of-pipe limits on the recycled water that are based on water quality objectives in the Basin Plan, and monitoring requirements to track impacts to groundwater quality that may be caused by the project. The District argues that the term "waste discharge requirements" as applied to recycled water use negatively impacts the public's

#	Comment	Response
		perception of recycled water for indirect potable use. This may be true. On the other hand, the regulatory requirement is no different as applied to recycled water as to other potable water supplies. (See, e.g., WQ Order 2012-0010 (*General Waste Discharge Requirements for Aquifer Storage and Recovery Projects*); R4-2003-0108 (*Waste Discharge Requirements for Discharges from Potable Water Supply Wells to Surface Waters*).) But even if true, "waste discharge requirements" is the term found in the Porter-Cologne Act and it is the term that the Regional Board must use. The Regional Board has, however, eliminated unnecessary use of the term "waste" and "wastewater" from the Order as requested by the District.
Attachment 1 Paragraph 2 Bullet 1	Title of Draft Order – the title includes the term "Waste Discharge Requirements." This phrase should be removed.	As detailed above, "waste discharge requirements" is the term used by the Water Code and is the appropriate regulatory mechanism to regulate discharges to waters of the State. Therefore, the title of the Draft Order is retained unchanged.
Attachment 1 Paragraph 2 Bullet 2	Finding 26 – the final sentence states, "[t]he State Water Board and Regional Water Boards are responsible for issuing waste discharge requirements and water reclamation requirements for water that is used or proposed to be used as recycled water." No authority is cited for this assertion, and none exists, with the exception of Water Code section 13253.1, which applies only to master recycling permits, not at issue here.	This finding has been revised as follows: "The Regional Water Boards are responsible for issuing water reclamation requirements for the beneficial use of recycled water. The State Water Board and Regional Water Boards are responsible for issuing waste discharge requirements for the beneficial use of recycled water that includes a discharge to waters of the State."
Attachment 1 Paragraph 2 Bullet 3	Finding 38 – this finding states, "[p]ursuant to Water Code section 13263(g), discharges of waste into waters of the state are privileges, not rights. Nothing in this Order creates a vested right to continue the discharge. Water Code section 13263 authorizes the Regional Water Board to issue waste discharge requirements that implement any relevant water quality control plan." This citation presumes a discharge of "waste," which has not been established in the Draft Order, because the permitted activity is the beneficial reuse of "recycled water."	As detailed above, the beneficial use of recycled water for groundwater recharge necessarily involves a discharge of waste to waters of the State because all recycled water, no matter how highly treated, contains some pollutants. Therefore, this finding is applicable to the permitted activity.
Attachment 1 Paragraph 2 Bullet 4	Finding 39 and Effluent Limitation Section III – this finding states, "[t]his Order includes limits on quantities, rates, and concentrations of chemical, physical, biological, and other constituents in the advanced treated recycled water that is injected into groundwater. This Regional Board terms these limits "effluent limitations" when included in waste discharge requirements for discharges to waters of the State. …" This finding is problematic on several levels; first, it presumes that regulation in addition to that prescribed by Title 22 regulations for this type of project is needed, ostensibly due to the presumption within the Draft Order that a discharge of "waste" is occurring. Second, the Draft Order attempts to borrow terms and requirements (specifically, the term "effluent	The term "effluent limitation" has been removed from the Order.

#	Comment	Response
	limitation") from the inapplicable federal Clean Water Act NPDES permitting program, and based thereon, imposes end-of-pipe waste discharge restrictions. The term "effluent limitation" is not cited in the Water Code except in Chapter 5.5 of the Porter-Cologne Water Quality Control Act, which applies to solely to federally regulated discharges to surface waters of the United States, and a handful of other statutes that involve discharges to or through federal waters (*e.g.*, Water Code section 13263.72). Rather, term is derived from the Clean Water Act and federal regulations cited in footnote 5 of the Draft Order. Thus, no legal, technical, or factual basis exists for terming requirements in the Draft Order as "effluent limitations," and doing so will simply create confusion in the regulatory arena. While Finding 39 attempts to state that the term "effluent limitation" as used in the Draft Order is not akin to the term used by the Clean Water Act, instead citing to Webster's Dictionary for support, the parallels are impossible to ignore, and this circumstance should be corrected by removing any reference to "effluent limitation."	
Attachment 1 Paragraph 2 Bullet 5	Findings 42 and 43 – these findings cite Water Code section 13267(b) as the statute authorizing the Regional Water Board to require technical or monitoring reports; however, as is evident from the quoted paragraphs, section 13267(b) applies only in the context of a discharge of "waste." Thus, citation to section 13267(b) should be removed from a permit governing the beneficial reuse of recycled water.	The Regional Board agrees that Water Code section 13267(b) applies only in the context of a discharge, or suspected discharge, of "waste." As detailed above, the injection of recycled water into the aquifer includes the discharge of waste. Therefore, the Regional Board may require technical or monitoring reports related to the discharge pursuant to 13267(b).
Attachment 1 Paragraph 2 Bullet 6	Finding 45 – this finding refers to the District's recycled water as "recycled *waste*water," a term not defined or used in the Water Code. The term "recycled water" should be used instead because it is the term used in the Regional Water Board's statute/regulations. (*See* Water Code §13050(n).)	The term "recycled wastewater" has been revised to "recycled water."
Attachment 1 Paragraph 2 Bullet 7	Pretreatment Specifications Section I.1.a. – this provision refers to the District's recycled water as "recycled municipal wastewater," a term not defined or used in the Water Code. The term "recycled water" should be used instead because it is the term used in the Regional Water Board's statute/regulations. (*Id.*)	The term "recycled wastewater" has been revised to "recycled water."
Attachment 1 Paragraph 2 Bullet 8	Additional Provisions VI.12 – this provision attempts to attach and incorporate by reference, the Regional Water Board's *Standard Provisions Applicable to Waste Discharge Requirements*. Rather than incorporating Standard Provisions that are inapplicable to the beneficial reuse of recycled water, the Regional Water Board should instead adopt Standard Provisions for Water Reclamation Requirements, or simply import relevant terms of the existing Standard Provisions directly into the District's water reclamation requirements.	As detailed above, the injection of recycled water into the aquifer includes the discharge of waste. Therefore the Standard Provisions Applicable to Waste Discharge Requirements are appropriately incorporated by reference into this Order. Most permits issued by the Regional Board for the beneficial use of recycled water incorporate the Standard Provisions Applicable to Waste Discharge Requirements by reference (see, e.g., Order Nos. 91-100; 94-055; 95-163; 95-164; 96-038; 97-071; 99-039; 00-099; 00-167; 2002-028; 2003-0025; 2003-0134; 2004-0057; 2005-0061; 2007-0006; 2008-0083; 2009-0049; 2011-0033; 2011-0079; 2013-0140).
Attach	Monitoring and Reporting Provisions III.2.c.ii. and h. – these reporting	The term "recycled municipal wastewater" has been replaced with

#	Comment	Response
ment 1 Para graph 2 Bullet 9	requirements refer to “recycled municipal wastewater”; the term “recycled municipal wastewater” is not defined or used in the Water Code. The term “recycled water” should be used instead because it is the term used in the Regional Water Board’s statute/regulations. (*Id.*)	the term “recycled water.”
Attach ment 1 Para graph 3	**Appropriate Regulation of Recycled Water Projects:** In California, “waste” is defined as “sewage and any and all other waste substances, liquid, solid, gaseous, or radioactive, associated with human habitation, or of human or animal origin, or from any producing, manufacturing, or processing operation, including waste placed in containers of whatever nature prior to, and for purposes of, disposal.” (Cal. Water Code §13050(d)). “Recycled water” is defined as “water which, as a result of treatment of waste, is suitable for a direct beneficial use or a controlled use that would not otherwise occur and is therefore considered a valuable resource.” (Cal. Water Code §13050(n) (emphasis added).) Importantly, “waste” cannot be “recycled water,” and “recycled water” by definition is not a “waste.” Therefore, for purposes of regulatory actions, the Regional Water Board must define the activity as one or the other, and regulate accordingly.	See Response to Attachment 1 Paragraph 2 above
Attach ment 1 Para graph 4	The Water Code creates two distinct regulatory schemes for regulating “waste” disposal and the beneficial reuse of “recycled water.” “Waste” disposal is regulated by Chapter 4, Article 4 of the Porter-Cologne Water Quality Control Act (Water Code sections 13260 – 13275), with Water Code section 13263 prescribing the issuance of “waste discharge requirements” (“WDRs”) for regulation and control. Beneficial reuse of “recycled water” is regulated by an entirely separate section of Porter-Cologne; specifically, Chapter 7, Article 7 (amongst other articles), with Water Code section 13523 prescribing the issuance of “water reclamation requirements” for recycled water projects. A significant difference between the two schemes is that the California Department of Public Health (“CDPH”) plays a major role in the definition of what constitutes “recycled water,” and the regulation of recycled water projects, as CDPH is the state agency charged with adopting regulations to address all aspects of recycled water conditions, treatment, operations, and use restrictions. (See Water Code §§ 13520, 13521 (authorizing CDPH to establish uniform statewide recycling criteria), 13523 (requiring water reclamation requirements be in conformance with CDPH’s recycling criteria), 13562 (authorizing CDPH to establish uniform water recycling criteria for indirect potable reuse for groundwater recharge), and 13563- 13566 (authorizing CDPH to investigate the feasibility of developing uniform water recycling criteria for direct potable reuse).) It is the prescribed level of treatment required by CDPH pursuant to the uniform recycling criteria that transforms domestic wastewater from being legally considered a “waste” to being considered “recycled water” for regulatory purposes. (See CDPH’s recycling criteria at www.cdph.ca.gov/HealthInfo/environhealth/water/Pages/Waterrecycling.aspx).	See Response to Attachment 1 Paragraph 2 above

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	The District employs such a high level of treatment, the water produced is clearly "recycled water" as that term is defined in the Water Code, and is safe for indirect potable reuse as was determined by CDPH in its July 2013 Findings of Facts and Conditions adopted for the Project ("Conditions"). (See Draft Order at Findings 4 (describing the water produced by the District as "high quality advanced-treated recycled water") and 10 (referencing CDPH's Conditions).)	
Attachment 1 Paragraph 5	Per the Legislature's expressly adopted language, if a recycled water project meets CDPH's requirements and is acceptable based on protection of human health, the recycled water project should proceed without obstacle; in fact, water reclamation requirements may not even be required if both agencies (CDPH and the Regional Water Board) see no need to add to the existing regulatory requirements imposed by CDPH on a specific project. (*See* Water Code §13523(b) ("each regional board, after … [consulting with CDPH] … shall, if in the judgment of the board, it is necessary to protect the public health, safety, or welfare, prescribe water reclamation requirements for water that is used or proposed to be used for recycled water."); *see also* Draft Order at Finding 28, *citing* the Recycled Water Policy, State Water Resources Control Board Resolution No. 2009-0011, ("Regional Water Boards shall appropriately rely on the expertise of CDPH for the establishment or permit conditions needed to protect human health.") Here, the CDPH has issued its Conditions for the Project, to which the District will comply so as to protect the groundwater resources while providing a public benefit. Troubling, then, is the Draft Order, which conflicts with the Legislature's clear distinction between the regulation of "waste" disposal and beneficial use of "recycled water," and uses the concept of regulating "waste" as a justification for additional, unnecessary layers of regulatory requirements. The District presumes the Legislature's repeated proclamations of the safety of recycled water (*see, e.g.,* Water Code § 13576) and the regulatory/permitting distinctions between "waste" disposal and "recycled water" use, are meaningful and should be upheld.	See Response to Attachment 1 Paragraph 2 above
Attachment 1 Paragraph 6	Moreover, the distinction between "waste" disposal and beneficial reuse of "recycled water" is critical to securing public acceptability of increased recycled water use. Given previous Legislative goals for water recycling, and the State Water Resources Control Board's recently enunciated goal, as stated in the Recycled Water Policy, to increase the use of recycled water in the state over 2002 levels by at least 1,000,000 acre-feet per year by 2020 and by at least 2,000,000 acre-feet per year by 2030, promoting the safety and acceptability of recycled water is crucial. (*See* Water Code §§13560(a), 13577.) Refraining from calling recycled water a "waste" would aid in the pursuit of the State Water Resources Control Board's goals, while at the same time ensuring consistency with law.	See Response to Attachment 1 Paragraph 2 above
Attachment 1	Other similarly situated projects have been permitted solely by water reclamation requirements. For example, in the Los Angeles region, water	See Response to Attachment 1 Paragraph 2 above

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Paragraph 7	reclamation requirements were issued to the District, among others, for the groundwater recharge project at the Rio Hondo and San Gabriel River Spreading Grounds. (*See* Regional Water Board Order No. 91-100.) In the Santa Ana Region, after CDPH issued its Findings of Fact and Conditions, the Santa Ana Regional Water Board issued water reclamation requirements to the Orange County Water District for the Orange County Ground Water Replenishment System project, which did not include any reference to "waste" or impose "waste discharge requirements." (*See* Order No. R8-2004-0002, as amended by R8-2008-0002). Thus, the District's position enunciated in these comments is consistent with other regulatory actions taken throughout the State.	
Attachment 1 Bullet 1	**Additional Support for the District's Rationale and Requests:** Water Code section 13511 states "[t]he Legislature finds and declares that a substantial portion of the future water requirements of this state may be economically met by beneficial reuse of *recycled water*." (emphasis added) Water Code section 13512 declares that "[i]t is the intention of the Legislature that the state undertakes all possible steps to encourage development of water recycling facilities so that *recycled water* may be made available to help meet the growing water requirements of the state." (emphasis added).	See Response to Attachment 1 Paragraph 2 above
Attachment 1 Bullet 2	In 1996, CDPH and the State Water Resources Control Board entered into a Memorandum of Agreement (MOA) regarding the use of reclaimed water. One of the primary missions of CDPH was "advising RWQCBs in the drafting of water reclamation requirements (permits)," and regional water boards were charged with the "issuance and enforcement of water reclamation requirements to producers and users of reclaimed water." (*See* MOA at pg. 2.) This MOA stated that "[p]lanned indirect potable reuse of reclaimed water is commonly practiced in California through artificial ground water recharge with reclaimed water." (*See* MOA at pg. 4.) Notably, the issuance of waste discharge requirements was not discussed.	See Response to Attachment 1 Paragraph 2 above
Attachment 1 Bullet 3	In 1996, CDPH and the State Water Resources Control Board entered into a Memorandum of Agreement (MOA) regarding the use of reclaimed water. One of the primary missions of CDPH was "advising RWQCBs in the drafting of water reclamation requirements (permits)," and regional water boards were charged with the "issuance and enforcement of water reclamation requirements to producers and users of reclaimed water." (*See* MOA at pg. 2.) This MOA stated that "[p]lanned indirect potable reuse of reclaimed water is commonly practiced in California through artificial ground water recharge with reclaimed water." (*See* MOA at pg. 4.) Notably, the issuance of waste discharge requirements was not discussed.	See Response to Attachment 1 Paragraph 2 above
Attachment 1 Bullet 4	The State Water Resources Control Board adopted a Strategic Plan Update for 2008- 2012, which included a priority to increase, by 2015, the amount of sustainable local water supplies (*e.g.*, recycled water) available for meeting existing and future beneficial uses by 1,725,000 acre-feet per year.	See Response to Attachment 1 Paragraph 2 above

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Attachment 1 Bullet 5	In 2009, the State Water Resources Control Board adopted a statewide Recycled Water Policy (State Water Board Resolution No. 2009-0011) intended to ensure statewide regulatory consistency for recycled water projects and support the recycled water priorities set forth in the Strategic Plan. The Recycled Water Policy declares that "when used in compliance with this Policy, Title 22 and all applicable state and federal water quality laws, the State Water Board finds that recycled water is safe for approved uses, and strongly supports recycled water as a safe alternative to potable water for such approved uses." (*See* State Water Board Resolution No. 2009-0011) (emphasis added)	See Response to Attachment 1 Paragraph 2 above
Attachment 1 Bullet 6	The Recycled Water Policy expressly states that: "Groundwater recharge with recycled water for later extraction and use in accordance with this Policy and state and federal water quality law is to the benefit of the people of the state of California."	See Response to Attachment 1 Paragraph 2 above
Attachment 1 Bullet 7	In 2010, the Legislature adopted the Direct and Indirect Potable Reuse Law. (Water Code §§ 13560, *et seq.*) This law determined that the "use of recycled water for indirect potable reuse [IPR] is critical to achieving the state board's goals for increased use of recycled water in the state" and that if "direct potable reuse [DPR] can be demonstrated to be safe and feasible, implementing direct potable reuse would further aid in achieving the state board's recycling goals." (Water Code §13560(c).)	See Response to Attachment 1 Paragraph 2 above
Attachment 1 Bullet 8	In January 2014, Governor Brown declared a Drought State of Emergency, and released a new Water Action Plan that encourages more effective management of sustainable water supplies. In April 2014, Governor Brown issued an Executive Order to strengthen the state's ability to manage water and habitat effectively in drought conditions. The District's Project will aid the Governor's goals.	See Response to Attachment 1 Paragraph 2 above
Attachment 2	CDPH Findings of Facts and Conditions	Comment Noted. Staff has incorporated this document into the Order by reference.
Attachment 3	The Draft Order imposes a variety of unnecessarily duplicative or contradicting requirements applicable to the operation and use of the District's recycled water facilities by both incorporating CDPH's July 2013 Findings of Facts and Conditions (*see, e.g*., Draft Order at Section II), and then either separately prescribing the same conditions or prescribing distinct conditions that may create confusion in implementation and/or enforcement. This action is not reasonable, and thus contradicts the overriding mandate set forth in Water Code section 13000. Further, such action unnecessarily exposes the District to escalated enforcement for the same circumstance, as each provision of the permit is independently enforceable.	The Order has been revised to eliminate repetitive or conflicting requirements and avoid duplicate liability for violations of identical terms.
Attachment 4 Point 1	"Finding 23. Drinking water standards have not been exceeded at the nearest drinking water well, Seal Beach well SB-LEI as a result of the injection project, as shown by the Title 22 drinking water reports. However, recycled water is thought to have reached the well since injection began in 2005. The SB-LEI	The Order has been revised per the suggested edits provided in the attached redline of the Tentative Order. Staff agrees that "the produced water is blended with the water from

<table>
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<tr><td></td><td>well is perforated in both Zone I, which is recharged at the Barrier, and the Main Aquifer, which contains no recycled water. As a result, it is possible that changes to water quality from recycled water contributions have not been detected because of dilution from deeper horizons.” Comment: The information regarding SB-LEI perforations and comingling of recycled water is incorrect. Well SB-LEI is screened across the I aquifer, which receives recycled water, and the Main and Lower Main aquifers, which do not receive recycled water. Thus the produced water is blended with the water from all three aquifers thereby reducing the recycled water concentration at the well head. Section 10.4.1 of the 2013 Engineering Report states: “The shallowest aquifer is the Recent Aquifer; no water is injected into this aquifer and no drinking water is extracted from this aquifer. The other underlying aquifers, in order of increasing depth, are the C-Zone, B-Zone, A-Zone, and I-Zone, followed by the Main and Lower San Pedro Aquifers. Drinking water from the nearest production well, City of Seal Beach Well SB-LEI, is pumped from the I-Zone, Main, and Lower San Pedro Aquifers.” See page 10-16</td><td>all three aquifers thereby reducing the recycled water concentration at the well head.”</td></tr>
<tr><td>Attachment 4 Point 2</td><td>“Finding 24. The 2005 Order required collection of monitoring data before the start of injection of recycled water into the Barrier, and annual assessment of data collected thereafter. Of 230 constituents measured at ten monitoring wells, most stayed constant or improved in comparison to background groundwater quality information collected in 2005 and 2006. Aquifer concentrations of arsenic and selenium increased, from non-detect to a maximum of 22 mg/L (which is above the MCL of 10 mg/L) and from non-detect to a maximum of 61 mg/L (which is above the MCL of 50 mg/L), respectively. Chloride, total dissolved solids (TDS), and manganese all showed variations above and below background levels as water quality was restored with the prevention of sea water intrusion. Odor and total coliform appear at levels above background in the deepest aquifer receiving injected water in monitoring wells located a year of travel time from the Barrier. In addition, n-Nitrosodimethylamine (NDMA) concentrations rose in the wells at the Barrier after injection of recycled water began.
<table>
<tr><th colspan="6">Table 1 – INCREASES IN GROUNDWATER CONCENTRATION MEANS</th></tr>
<tr><th>Constituents (MCLs or other standard)</th><th>Units</th><th>2012</th><th>2011</th><th>2010</th><th>2005 or 2006 Background</th></tr>
<tr><td colspan="6">3 month travel time in Recent aquifer</td></tr>
<tr><td>Arsenic (10)</td><td>µg/L</td><td>17</td><td>22</td><td>16</td><td>ND</td></tr>
<tr><td>Selenium (50)</td><td>µg/L</td><td>61</td><td>53</td><td>35</td><td>ND</td></tr>
<tr><td>Chloride (500)</td><td>mg/L</td><td>7025</td><td>6275</td><td>5475</td><td>5407</td></tr>
<tr><td>TDS (1,000)</td><td>mg/L</td><td>13500</td><td>13000</td><td>9925</td><td>13350</td></tr>
<tr><td colspan="6">3 month travel time in C-Zone</td></tr>
<tr><td>Manganese (50)</td><td>µg/L</td><td>101</td><td>108</td><td>97</td><td>94</td></tr>
</table></td><td>The Order has been revised per the suggested edits provided in the attached redline of the Tentative Order.

The water quality information presented by WRD in the 2013 approved Engineering Report does not provide sufficient detail to fully characterize the ongoing changes in the aquifer. With continued monitoring and reporting, long-term changes in water quality within the aquifer can be better summarized. It is desirable for the Project Sponsors to investigate the origin, fate and transport of groundwater constituents, which are not present in the recycled water, but are present at elevated concentrations to ensure the constituents concentrations are not related to recycled water injection. As referenced by the Project Sponsors, some chemicals may be related to pre-existing aquifer conditions or modified aquifer conditions. In either case, assurance of the long term success of the injection program relies on accurate prediction of the future concentrations of such constituents.</td></tr>
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Odor(3)	TON	11	2	3	4
3 month travel time in B-Zone					
Manganese (50)	µg/L	62	62	61	68
Odor(3)	TON	3	2	1	4
Total Coliform(1.1)	MPN/100mL	ND-1.1	ND	ND	ND
3 month travel time in I-Zone					
Odor	TON	14	3	3	5
1 year travel time in C Zone					
Manganese (50)	µg/L	101	113	98	95
Odor(3)	TON	3	2	3	7
1 year travel time in B Zone					
Manganese (50)	µg/L	63	66	63	77
Odor	TON	3	2	3	6
1 year travel time in I Zone					
Odor(3)	TON	3	2	1	4
Total Coliform(1.1)	MPN/100mL	ND-1.1	ND	ND	ND

Finding 25. Based on the review of the recycled water monitoring data for the past five years (2009-2013), the highest concentration detected in recycled water for chloride, TDS, manganese, and odor are 28 milligrams per liter (mg/L), 110 mg/L, 2.7 micrograms per liter (µg/L) and 4 threshold odor number (TON), respectively. Arsenic and selenium have not been detected in the recycled water injected at the Barrier.

Comment: Findings 24 and 25 imply that recycled water has adversely impacted groundwater; disregarding and/or misrepresenting information presented in the 2013 approved Engineering Report. These finding do not provide sufficient detail to summarize the monitoring well water quality data, and in some cases is misleading by (1) not delineating that there are two wells that continue to monitor background conditions, (2) not explaining or taking into consideration the number of samples, data ranges, standard deviations of data, etc.; (2) not clarifying which zones receive do and do not receive injected water to put the information into context; (3) not considering if analytical detection levels or reporting levels have changed during the monitoring periods that would impact judgments regarding if a trend is occurring or not; and (4) not considering if differences in data are statistically significant.

In addition, we do not understand what is meant by “stayed constant or improved in comparison to background groundwater quality information.” A considerable amount of information on recycled water and groundwater quality was presented in the approved 2013 Engineering Report for regulated constituents and Notification Levels. As described in Section 7.1 of the 2013 approved Engineering Report, recycled Water has met MCLs and Basin Plan objectives. 3 “A review of the 2007 - 2011 water quality data for the recycled water showed that all primary and secondary MCLs have been consistently

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	met, with the exception of perchlorate on a single isolated occasion. In November 2007, a recycled water sample reported 11 µg/L of perchlorate, above the newly established MCL of 6 µg/L. The sample was re-analyzed and was below the RL of 4 µg/L; however, the sample had exceeded the hold time. Other than this anomaly, which may have been due to a laboratory error, recycled water fully complied with all primary and secondary MCLs. Perchlorate has not been detected in the groundwater monitoring wells associated with the ABP or at the nearest domestic water supply well, City of Seal Beach Well SB-LEI." See page 7-4 "A review of the 2007 - 2011 water quality data for the recycled water showed that all WDR/WRR limits based on the LARWQCB's Basin Plan Objectives have been consistently met, with the exception of pH on a few occasions. The recycled water has a pH limit of 6.5 to 8.5. All pH results have since been within the limit, except for a short duration in the first quarter of 2007, during a plant restart following a brief shutdown for repair. The RO Pilot Study results had one pH result below 6.5; however, the samples were collected prior to pH adjustment, which is part of the LVLWTF treatment process. Therefore, the recycled water produced at the expanded LVLWTF is expected to consistently achieve the pH limit of 6.5 to 8.5. To date, mineral constituents (TDS, sulfate, chloride, and boron) in the recycled water have not exceeded the limits based on the Basin Plan Objectives, and total coliform has not been detected in the recycled water." See page 7-4 As described in Section 10.4, Appendix B-7, and Appendix B-9 of the 2013 approved Engineering Report, the groundwater quality has been improved by the Project: "A detailed review of groundwater quality data in Appendix B-7 for the ABP area indicates that in general, water quality is within primary and secondary drinking water standards. Exceedances were most commonly observed in the Recent Aquifer, the shallowest aquifer, which has never received recycled water. Specifically, chloride, TDS, sulfate, turbidity, specific conductance, color, arsenic, iron, manganese, and selenium were present in elevated concentrations (i.e. levels above the corresponding MCLs or limits based on LARWQCB's Basin Plan Objectives) in the Recent Aquifer. All of these constituents were present during the 2005 initial background monitoring (pre-injection period) in similar concentrations except for arsenic and selenium, which have increased since 2005. Arsenic and selenium in the recycled water has consistently not been detected. As such, elevated levels of arsenic and selenium concentrations are attributed to sources other than injected water such as background concentrations. In the C-Zone, B-Zone, A-Zone, and I Zone Aquifers, manganese has been measured at elevated concentrations, however in concentration ranges similar to the 2005 initial background monitoring, thus indicative of ambient conditions. In the Main Aquifer, only chloride, specific conductance, and TDS were consistently observed at elevated concentrations (indicative of influence of seawater	

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<tr><td></td><td>intrusion) but generally showing a decreasing trend from the 2005 initial background monitoring, thus indicative of improved groundwater quality in the aquifer as a result of the injection project." See page 10-17
Appendix B-9 in the approved 2013 Engineering Report provides the Title 22 data for Well SBLEI for calendar years 2007 to 2011, collected and reported by the water purveyor to CDPH. Based on a detailed review of the data, water from Well SB-LEI is of high quality and has consistently met the applicable drinking water standards, with a few minor exceptions for color and/or odor in 2007, 2008, and 2011 as shown in the table below. However there is no substantive difference in water quality between pre-injection conditions (as represented by years 2007 and 2008) and post injection (as represented by year 2011).

<table>
<tr><th>Secondary MCL</th><th>Limit</th><th>2007</th><th>2008</th><th>2011</th></tr>
<tr><td>Color, Units</td><td>15</td><td>35</td><td>13</td><td>20</td></tr>
<tr><td>Odor, TON</td><td>3</td><td>8</td><td>4</td><td>2</td></tr>
<tr><td colspan="5">TON= Threshold Odor Number</td></tr>
</table>

Based on this information, Table 1 is incorrect, as there is no basis for any increases in groundwater concentration due to the Project, and should be deleted.
Monitoring Wells
As currently drafted, Findings 24 and 25 do not provide sufficient detail on the monitoring well network and the tracer work previously conducted that eliminates the need for WRD to conduct additional tracer studies as discussed in CDPH Finding #22.</td><td></td></tr>
<tr><td>Attachment 5</td><td>Effective July 1, 2013, provisions in the MOA may no longer be in effect pending legislation that provides the new Division of Drinking Water with the authority to issue permits for the potable use of recycled water. Comment: These findings and footnote 3 do not acknowledge impending changes that will affect approval and permitting of groundwater replenishment projects. Effective July 1, 2014: The California Department of Public Health (CDPH) Drinking Water Program, including recycled water responsibilities, will be moved to the State Water Resources Control Board's (State Water Board's) new Division of Drinking Water per the March 2014 Drinking Water Reorganization Transition Plan (Transition Plan) http://www.waterboards.ca.gov/drinkingwater/docs/transition_plan_fullversion.pdf, hereby incorporated by reference. As a result of the reorganization, the MOA for potable reuse projects would no longer be valid. As stated in the Transition Plan: "The creation of the Division of Drinking Water within the State Water Board creates a unique opportunity to combine these responsibilities in one agency to achieve the State's water recycling goals." See page 20 "The</td><td>The Order has been revised to reflect the pending relocation of the CDPH Drinking Water Program to the State Board's new Division of Drinking Water, expected to be effective July 1, 2014. The Order also references the statutory requirement directing CDPH to adopt criteria for groundwater recharge projects using recycled water, by June 30, 2014. The reopener provisions allow the Order to be reopened to incorporate new regulatory requirements. At this time, there is insufficient information about the forthcoming regulations from CDPH or other changes to the permitting of recycled water projects for indirect potable reuse, to predict whether this Order should be reopened at a later date.</td></tr>
</table>

#	Comment	Response
	personnel in the Drinking Water Program working on recycled water issues would be organized under the new Division of Drinking Water, providing continued public health management. Under the State Water Board, the Recycled Water public health recommendations would continue to be coordinated into Water Board permits. In addition, the Administration will propose language for the Legislature to consider that provides the Division of Drinking Water the authority to issue permits for potable reuse of recycled water; Task Force members expressed support for this concept." See page 20 In accordance with Senate Bill 104 that adds section 13562.5 to the Water Code, CDPH must adopt the groundwater replenishment regulations by June 31, 2014 as emergency regulations without Office of Administrative Law review. See http://www.leginfo.ca.gov/pub/13-14/bill/sen/sb_0101-0150/sb_104_bill_20140301_chaptered.pdf Per a meeting held on May 9, 2014, with CDPH, WateReuse, and recycling stakeholders, CDPH intends to revise specific sections of the June 2013 Draft Regulations as part of the emergency regulations (including compliance with Notification Levels). Thus, after June 30, 2014, the Order should be reopened to include the adopted CDPH groundwater replenishment regulations. Before the tentative permit is considered by the Regional Water Board, it is expected that legislation will be adopted providing the new State Water Board Division of Drinking Water with the authority to issue potable reuse permits by July 1, 2014. There are ongoing discussions at the State Water Board level on how potable reuse permitting will be implemented. As stated in the Transition Plan: "The Administration proposes to give the Deputy Director of the Division of Drinking Water the authority to grant or deny potable water reuse permit applications; Task Force members expressed support for this proposal." With regard to the Reopener Provisions in the tentative Order, WRD would appreciate a response from the Regional Water Board on how permit reopeners will be administered given the forthcoming changes in permitting responsibility as described above. WRD would want this Order to be consistent with other groundwater replenishment Orders administered by the Division of Drinking Water. Recommended Revisions: see redline edits in revised tentative order	
Attachment 6	Inconsistency with Recycled Water Policy Finding 28 Comment: The finding does not address relevant elements of the Recycled Water Policy in terms of (1) the impact of the Project related to dissolution of chemicals; and (2) the impact of the Project on contaminant plumes, both of which were addressed in the 2013 approved Engineering Report Dissolution of Chemicals As discussed in the approved 2013 Engineering Report: "Because the same volume of water will be injected and because chemical stabilization will be applied to the final recycled water prior to injection, the LVLWTF expansion will not affect the fate and transport of any contaminant plume or change the geochemistry of the recharged aquifers causing dissolution of constituents from natural geologic formations into the groundwater." See page 12-9 Increases in groundwater	The Recycled Water Policy states at paragraph 8.d. that "[n]othing in the Policy shall be construed to prevent a Regional Water Board from imposing additional requirements for a proposed recharge project that has a substantial adverse effect on the fate and transport of a contaminant plume or changes the geochemistry of an aquifer thereby causing the dissolution of constituents, such as arsenic, from the geologic formation into groundwater." The Policy does not require the Regional Board to make findings regarding the potential impacts of a project on the fate and transport of contaminant plumes or the dissolution of constituents, but rather, clarifies that the Regional Board may impose additional

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	aquifers, such as arsenic, are attributed to salt water intrusion as discussed in Section 10.4.1: "A detailed review of groundwater quality data in Appendix B-7 for the ABP area indicates that in general, water quality is within primary and secondary drinking water standards. Exceedances were most commonly observed in the Recent Aquifer, the shallowest aquifer, which has never received recycled water. Specifically, chloride, TDS, sulfate, turbidity, specific conductance, color, arsenic, iron, manganese, and selenium were present in elevated concentrations (i.e. levels above the corresponding MCLs or limits based on LARWQCB's Basin Plan Objectives) in the Recent Aquifer. All of these constituents were present during the 2005 initial background monitoring (pre-injection period) in similar concentrations except for arsenic and selenium, which have increased since 2005. Arsenic and selenium in the recycled water has consistently not been detected. As such, elevated levels of arsenic and selenium concentrations are attributed to sources other than injected water such as background concentrations. In the C-Zone, B-Zone, A-Zone, and I Zone Aquifers, manganese has been measured at elevated concentrations, however in concentration ranges similar to the 2005 initial background monitoring, thus indicative of ambient conditions. In the Main Aquifer, only chloride, specific conductance, and TDS were consistently observed at elevated concentrations (indicative of influence of seawater intrusion) but generally showing a decreasing trend from the 2005 initial background monitoring, thus indicative of improved groundwater quality in the aquifer as a result of the injection project." See page 10-17 Impact on Contaminant Plumes As discussed in Section 12.5 of the approved 2013 Engineering Report, as part of an effort to manage and protect the basins, WRD established its Groundwater Contamination Prevention Program. Elements of this program include the (a) Central and West Coast Basin Groundwater Contamination Forum, (b) identification of the high-priority contaminated sites within the District, and (c) the Abandoned Wells program. Under the Groundwater Contamination Prevention Program, WRD has been working with regulatory agencies including the Regional Water Board, U.S. Environmental Protection Agency, and the California Department of Toxic Substances Control for each of the high-priority contaminated groundwater sites to keep abreast of their status, offer data collection, review and recommendations as needed, and facilitate progress in site characterization and cleanup. Based on information generated as part of this effort, there is no evidence to suggest any adverse impact of the Alamitos Barrier Project on contaminant plumes. Because the same volume of water will be injected, the Facility expansion will not affect the fate and transport of any contaminant plume. Recommended Revision: see redline edits in revised tentative order	requirements if warranted. In accordance with the information provided in the 2013 Engineering Report, the Regional Board has determined that such additional requirements are not necessary at this time.
Attachment 7	Attachment 7 and data Todd Groundwater – Model Run Based on 10 mg/L Nitrate (as N) from the Expanded Leo J. Vander Lans Advanced Water Treatment Facility (Facility) Finding 30 and New Finding for III.4, Provision	The Regional Board agrees that the weight of the evidence indicates that the project will not consume more than 10% of the assimilative capacity of the sub-basin for total nitrogen within a reasonable

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	IV.3, MRP IV.3 With regard to long term impacts on groundwater quality if recycled water from the Facility was injected at the Alamitos Gap Barrier (AGB) at a nitrate concentration of 10 mg/L-nitrogen, Todd Groundwater conducted a specific modeling run using the Central Basin and West Coast Basin Salt Nutrient Management Plan (SNMP) mixing model, which was reviewed by the Los Angeles Regional Water Quality Control Board (RWQCB). This work was in addition to modeling conducted for the SNMP and associated memos, which are hereby incorporated by reference.1 There are four worksheets (see Attachment 7.1) that present the results of the modeling: 1. AGB Calc – shows the flow-weighted average nitrate-N concentration from 2010 through 2025 for the AGB. The concentration of 10.0 mg/L nitrate-N is assumed for years 2026 through 2050. 2. Central Basin (CB) Pressure Area – shows simulated groundwater nitrate-N concentrations for the Central Basin Pressure Area through 2050 for pertinent scenarios. The Central Basin Pressure Area is the sub-basin that is affected by the AGB. 3. Central Basin – shows simulated groundwater nitrate-N concentrations for the Central Basin through 2050 for pertinent scenarios. 4. Charts – plots the tabulated values for the Central Basin Pressure Area and Central Basin through 2050. Todd Groundwater ran three scenarios, each incorporating the flow-weighted average nitrate-N concentration for the AGB. These scenarios are designated with an "X" and include the individual seawater barrier scenario (4X), and the lower and upper ends of the combined scenarios (8X and 11X). Scenario 8X includes increased recycled water irrigation at the baseline average nitrate-N concentration used for the SNMP and the Groundwater Reliability Improvement Project (GRIP) Option A.2 Scenario 11X includes increased recycled water irrigation at nitrate-N concentration of 10 mg/L and GRIP B.3 Both of the combined scenarios include increased desalter pumping in the West Coast Basin (which does not have a significant effect on the Central Basin) and minor background changes in future water supply conditions and spreading at the Dominguez Gap Spreading Grounds. Assimilative Capacity was calculated for CB Pressure Area and Central Basin worksheets using the following	period of time. Revisions to the Order have been made; including deletion of the trigger for additional action should nitrogen concentrations in the groundwater exceed the value predicted by the Project Sponsors in their first annual report by more than 10%. The Recycled Water Policy encourages recycled water dischargers to participate in the development of Salt and Nutrient Management Plans (SNMP), which will be used to guide basin-wide decisions about nutrient discharges to groundwater. The modeling referenced by the Project Sponsors was completed as part of that effort. While staff predicts that the modeling material presented by the Project Sponsor will be important in the generation of the final SNMP, the plan is not yet complete. The SNMP will be considered during a forthcoming Board adoption process.
Attachment 8	Information Regarding NDMA Finding 41 The description of Notification Levels and Response Levels (Reporting Level is not the correct term) is inaccurate. Per Health and Safety Code section 116455 (c)(3), *"Notification level"* means the concentration level of a contaminant in drinking water delivered for human consumption that CDPH has determined, based on available scientific information, does not pose a significant health risk but warrants notification pursuant to this section. NLs are nonregulatory, health-based advisory levels established by CDPH for contaminants in drinking water for which MCLs have not been established. NLs are established as precautionary measures for contaminants that may be	The description of notification levels and response levels, and other aspects of Finding 41, have been revised

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	considered candidates for establishment of MCLs, but have not yet undergone or completed the MCL regulatory standard setting process and are not drinking water standards. Per Health and Safety Code Section 116455 (c)(4), *"Response level"* means the concentration of a contaminant in drinking water delivered for human consumption at which CDPH recommends (*not requires*) that additional steps, beyond notification pursuant to this section, be taken to reduce public exposure to the contaminant (*CDPH does not require water systems to be taken out of service*). Response levels are established in conjunction with NLs for contaminants that may be considered candidates for establishment of MCLs, but have not yet undergone or completed the MCL regulatory standard setting process and are not drinking water standards. Toxicity information does not demonstrate that NDMA is a "known" human carcinogen. In establishing the Public Health Goal for NDMA, the Office of Environmental Health Hazard Assessment used the occurrence of bile duct tumor incidence in rats to estimate the dose associated with a 10% incidence of tumors. This information was extrapolated and corrected to a 10-6 cancer risk level and corrected to human dose equivalents based on the ratio of human and rat body weight to the ¾ power. Per the U.S. EPA Integrated Risk Information System, NDMA is classified as B2, a probable human carcinogen, based on induction of tumors in rodents and non-rodent mammals by various routes (http://www.epa.gov/iris/subst/0045.htm). Under the 1986 EPA Guidelines, EPA used the following classifications: A (Human carcinogen) B1 (Probable human carcinogen - based on limited evidence of carcinogenicity in humans and sufficient evidence of carcinogenicity in animals) B2 (Probable human carcinogen - based on sufficient evidence of carcinogenicity in animals) C (Possible human carcinogen) D (Not classifiable as to human carcinogenicity) E (Evidence of non-carcinogenicity for humans) With regard to the Recycled Water Policy Monitoring Requirements, CEC indicators are placed in two categories: Those CECs of toxicological relevance to human health, which are referred to as "health-based CECs" as determined through a screen process used by the State Water Board's expert panel. The health-based monitoring trigger thresholds (MTLs) used by the expert panel were deemed to be conservative and only used for the purpose of prioritizing CECs for monitoring. The panel emphasized that if a measured concentration of a CEC exceeded its respective MTL, it did not necessarily indicate the existence of public health risks. See Anderson, P., Denslow, N., Drewes, J. E., Olivieri, A., Schlenk,D., Snyder, S. (2010) *Monitoring Strategies for Chemicals of Emerging Concern (CECs)in Recycled Water: Final Report*, Sacramento, CA, hereby incorporated by reference: http://www.sccwrp.org/ResearchAreas/Contaminants/ContaminantsOfEmergingConcern/RecycledWaterAdvisoryPanel.aspx. CECs determined not to have	

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	human health relevance, but useful for monitoring treatment process effectiveness, which are referred to as “performance indicator CECs.” Health-based CECs, such as NDMA, may also serve as a performance indicator CEC. Recommended Revisions to Finding 41: see redline edits in revised tentative order	
Attachment 9 and 9.1	Talking Point #6 (Inconsistent with CDPH Conditions and Draft Groundwater Replenishment Regulations) – Pathogen Control Provisions II.5, III.1, VII.5 As presented by CDPH at the December 2011 stakeholder meetings on the draft Groundwater Replenishment Regulations (see Attachment 9.1), the Pathogenic Microorganism Control provisions in Section 60320.208 were intended to ensure that pathogens would not exceed the tolerable risk dose in drinking water. The approach was to set a log reduction requirement from raw sewage to useable groundwater for the following log reductions: 12-log virus 10-log *Giardia* 10-log *Cryptosporidium* The starting point for virus and *Giardia*, was the highest concentrations from Table 3-9 from Metcalf & Eddy, 2007.1 For *Cryptosporidium*, CDPH used the highest (rounded) concentrations from studies they had obtained from Australia and Norway. The endpoint selected was the U.S.EPA allowable drinking water density (modified for Cryptosporidium infectious dose and exposure) to achieve a one in 10,000 (10-4) annual risk of infection goal. CDPH elected to require three barriers for reliability to achieve the log reductions. Each barrier must achieve at least 1.0-log reduction and cannot be credited with more than 6-log reduction; for virus only, a Project Sponsor can receive 1-log reduction per month based on a validated tracer study (in the case of the Alamitos Barrier this has been done using an intrinsic tracer); the log reductions must be verified using a procedure approved by CDPH for the different barriers. Per CDPH Condition #13, these are the barriers identified and approved for the Project. **Pathogen Log Removal/Inactivation Requirements** **Pathogen** | **2013 Draft GWR Regulations** | **Proposed Pathogen LVLWTF Treatment Credits** | **Total Credits** Min | WRP[a] | MF | RO | UV/AOP | Travel time Giardia | 10 | 2[b] | 2.7[c] | 1.5[c] | 6[d] | 0 | 12.2 Cryptosporidium | 10 | 1[b] | 2.7[c] | 1.5[c] | 6[d] | 0 | 11.2 Viruses | 12 | 2[b] | N/A | 1.5[c] | 6[d] | 6[e] | 15.5	The Order has been revised to incorporate the pathogen control provisions in the July 2013 CDPH Conditions by reference, and the end-of-pipe limits for pathogen control have been removed from the Order, except for total coliform limits which are required by the Basin Plan.

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	Notes: a. WRP refers to the LBWRP and LCWRP. b. To be conservative, WRD has only claimed pathogen removal credits associated treatment processes from influent through secondary treatment using the data shown in Table 5-3.a through Table 5-3.c in the final amended Title 22 Engineering Report. c. Per discussions with the Department, based on membrane integrity and concomitant minimum reductions. Pathogen reduction credit for MF includes potential impact of backwash water recycle. d. To be further confirmed by completing a limited scope phage study for the existing UV train. e. The closest production well is greater than 6 months travel time. Validation/monitoring of treatment barrier performance is function of specific unit process parameters. For the Project, these were accepted by CDPH in Section 13.8 of the 2013 approved Engineering Report (see below) and to be included in the approved Project Operations Plan per CDPH Conditions #6 and #7. "13.8 Evaluation of Pathogenic Microorganism Removal For the purpose of evaluating the performance of the following treatment facilities/units with regards to pathogenic microorganism removal, WRD will include the results of the monitoring specified below in its quarterly compliance monitoring reports: A. LBWRP (and LCWRP, if the effluent is used as a source water): For the purpose of demonstrating that the log reductions assumed in Section 5 are achieved at the WRP(s), WRD will report the daily average and maximum turbidity, percent of time more than 5 NTU, and daily coliform results associated with the WRP(s); B. MF (LVLWTF): For each day of operation, MIT will be performed, and the daily "Pass" or "Fail" results will be reported; C. RO (LVLWTF): Conductivity and TOC will be continuously measured upstream and downstream of the RO using online analyzers, and for each day of operation, the following will be reported for both conductivity and TOC - daily minimum, maximum, average, and percent reduction based on daily average values; D. AOP (UV and hydrogen peroxide at LVLWTF): For each day of operation, WRD will report the calculated daily peroxide dose (based on the peroxide pump speed and bulk feed concentration), percent reduction based on daily average of chloramine (via total residual chlorine) measured upstream and downstream of AOP, and the applied UV power will be reported. For UV, WRD will report the UV system dose (expressed as greater than a certain threshold such as 300 milli-joules/cm2), UV transmittance (daily minimum, maximum, and average), and UV intensity for each reactor (daily minimum, maximum, and average); and E. Based on the calculation of log reduction achieved each day by the entire treatment system, WRD will report "Yes" or "No" for each day as to whether the necessary log reductions (i.e. 10-logs for Giardia, 10-logs for Cryptosporidium, and 12-logs for virus) have been attained. An overall log reduction calculation will be provided only for those days when a portion of the treatment system does not achieve the credits proposed in Table 5-1." See pages 13-26 through 13-27" As discussed with CDPH and Regional Water Board staff on several instances after the release of the January 2014 tentative order, the pathogen control requirements were	

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	never intended to serve as or be converted to end-of-pipe limits given the unit process and retention time components of the multi-barrier approach. WRD is required to ensure that the barriers are working as intended based on the monitoring described above and to take action if a critical barrier fails and cannot achieve the intended log reductions, with failure as described per CDPH Condition #7. For these reasons, the pathogen control requirements included in the Order by the Regional Water Board are incorrect, not in conformance with CDPH Conditions, and must be deleted. Recommended Revisions: see redline edits in tentative order.	