RESPONSE TO COMMENTS CITY OF BURBANK, BURBANK WATER RECLAMATION PLANT TENTATIVE ORDER NO. R4-2023-XXXX NPDES NO. CA0055531

Comment Letter dated August 30, 2023 from City of Burbank

No.	Comment	Response	Action Taken
D1	WDRs: 4.1.1.a, Table 4, p. 8, Fact Sheet: p. F-42, Table F-8, p. F-44, Limitations for Trihalomethanes The Tentative Order (TO) makes a finding of reasonable potential (RP) for Total Trihalomethanes (TTHMs) based on the Technical Support Document (TSD) (see Table F-8), however the reasonable potential analysis (RPA) of TTHMs prepared by the Regional Board is not based on an evaluation of the effluent or receiving water data. Rather as noted in the calculation worksheet provided by Regional Board staff titled "RB File - 2023-07-11_B_Table_R1_RPA", limits for TTHMs are included because of the following: "Need limit TTHMs are a byproduct of the chlorine disinfection system. RP to exceed the Basin Plan WQO." While TTHMs are a byproduct of chlorine disinfection, the BWRP includes a process to decrease the formation of TTHMs. The City began chloramination disinfection in December 2007 in response to an increase in TTHMs due to the addition of ammonia removal process in 2003. The data for TTHMs from January 2008 to present, displayed in the below figure, confirms the City's disinfection process does not generate excessive concentrations of TTHMs. All concentrations measured through monthly monitoring of TTHMs over more than 15 years are well below the water quality objective of 80 μg/L.	The Burbank WRP has reasonable potential to cause or contribute to an exceedance of the TTHMs water quality objective because the discharge violated the 0.1 mg/L Maximum Daily Effluent Limitation (MDEL) for total residual chlorine on December 11, 2019, with a reported value of 1.4 mg/L. As stated in the comment, TTHMs are a byproduct of chlorine disinfection, so if excessive amounts of chlorine are added to the effluent and insufficient amounts of ammonia are added back, TTHMs will be formed. The Discharger's December 2019 self-monitoring report shows that the effluent was tested for TTHMs on December 2, 2019, and not on the day of the total residual chlorine MDEL violation. Therefore, the data in the figure presented by the Discharger cannot confirm that the water quality objective for TTHMs was not exceeded on those days where the chlorine residual MDEL was exceeded. Since there is insufficient data to determine whether the discharge exceeded the water quality objective for TTHMs when the chlorine residual effluent limitation was exceeded, an effluent	Revisions were made to the Order.

No.	Comment	Response	Action Taken
	In reviewing the recently adopted (December 2022) NPDES Permits for the Donald C. Tillman (DCT) and Los Angeles/Glendale (LAG) Water Reclamation Plants (WRPs), neither WRP were assigned effluent limits for TTHMs even though they use similar disinfection methods (i.e., disinfection by chlorination with the addition of ammonium hydroxide, and dechlorination). In fact, the draft DCT WRP permit included limits for TTHMs, but they were removed based on a revaluation of the dataset. In the Regional Board's response to the City of Los Angeles' comments on the draft DCT permit, the Regional Board stated: "The Los Angeles Water Board has updated calculations to include the corrected data and analysis shows there is no longer reasonable potential for the discharge to cause or contribute to an exceedance of the water quality objective for TTHMs. Therefore, the limitation for TTHMs has been removed in the Revised Tentative Order". The City requests that the TTHM effluent limitation be removed given that 1) the data do not support a finding of RP for TTHMs; 2) the current BWRP permit does not contain effluent limitations for TTHMs; and 3) the 15 years of data on the BWRP disinfection process demonstrates TTHMs are consistently less than half of the water quality objective.	limitation for TTHMs is appropriate. Future data will be reviewed, and the TTHMs reasonable potential analysis will be re-evaluated at the end of the next permit cycle. Section 4.3.2. of the Fact Sheet was updated to include the rationale for including the Average Monthly Effluent Limitation (AMEL) for TTHMs. With respect to comparing the Burbank WRP tentative NPDES Order with the adopted DCT WRP Order No. R4-2022-0341 and the LAG WRP Order No. R4-2022-0343, those facilities did not have violations of the total residual chlorine MDELs. So, removal of the TTHMs AMEL was justified for the DCT and LAG WRPs. Refer to the Compliance Summary sections of the DCT Fact Sheet page F-10 (https://www.waterboards.ca.gov/losangeles/boarddecisions/adopted orders/docs/5695 R4-2022-0341 WDR.pdf) and LAG Fact Sheet page F-8 (https://www.waterboards.ca.gov/losangeles/boarddecisions/adopted orders/docs/5675 R4-2022-0343 WDR.pdf).	

No.	Comment	Response	Action Taken
	Chloramination process completed in 2008 and since then maximum TTHM concentration was less than half the water quality objective TTHMs Objective OUZ Eff THMs BWRP Effluent Concentrations of TTHMs January 2008 through June 2023		
D2	MRP: 3.1 Table E-2, p. E-7; 4.1 Table E-3, p. E-10; 8.1.1 Table E-5, p. E-22; Fact Sheet: 7.2 Table F-13, p. F-71, Monitoring for TTHMs As neither TTHMs nor the individual TTHM constituents (Bromoforms, Chloroform, Dibromochloromethane, and Dichlorobromomethane) trigger RP, the monitoring frequency should be semiannually consistent with the current BWRP permit rather than monthly as required in the TO. This would be consistent with the sampling frequency in the DCT WRP Permit, where the TO was revised to reflect the lack of RP for TTHMs and the frequency of monitoring was also revised. As stated in the Regional Board's response to the City of Los Angeles' comments on the DCT TO: "Effluent limitations for TTHMs have been removed from Table 4 of the Order. Accordingly, the frequency of influent, effluent, and receiving water monitoring for TTHMs and each individual pollutant that make up the sum has been reduced to semiannually in	The monitoring frequency for TTHMs was not reduced from monthly to semiannually in response to this comment. As explained in response to Comment D1 above, the discharge has reasonable potential to cause or contribute to an exceedance of the water quality objective for TTHMs, and the Tentative Order includes an AMEL for TTHMs. Monthly monitoring is necessary to evaluate compliance with the AMEL.	None necessary.

No.	Comment	Response	Action Taken
	Tables E-2, E-3 and E-5 of the MRP, because each of these individual constituents were detected at levels below the CTR."		
	The City requests that the influent and effluent monitoring frequency for TTHMs and associated constituents (Bromoforms, Chloroform, Dibromochloromethane, and Dichlorobromomethane) be revised to semiannually, and the monthly receiving water monitoring requirement be removed. Note that receiving water monitoring would still be conducted semiannually under the provisions requiring monitoring other EPA Priority Pollutants. This request is consistent with the current BWRP permit monitoring requirements.		
D3	WDRs: 4.1.1.a, Table 4, p. 7 Sulfate Limitations Sulfate does not trigger RP following the Technical Support Document (TSD), or State Implementation Policy (SIP), methods and no justification is provided for the effluent limitation. Additionally, the maximum value observed is 129 mg/L (see Table F-2, page F-7), which is less than half the receiving water limitation of 300 mg/L. The City requests that the sulfate effluent limitation be removed.	The water quality objective for sulfate and other salts (TDS and chloride) are waterbody specific water quality objectives that vary within a watershed and between different segments of a waterbody, depending on background conditions and the beneficial uses. Table 3-10 in Chapter 3 of the Basin Plan specifies the water quality objectives for salts in each watershed or reach. The sulfate water quality objective in the Los Angeles River between the Sepulveda Flood Control Basin and Figueroa Street, including Burbank Western Channel, is 300 mg/L.	None necessary.
		The effluent limit for sulfate was retained to prevent backsliding and because the discharge has reasonable potential to contribute to an exceedance of the sulfate WQO considering that the Burbank WRP contributes most of the flow in the receiving water, the maximum upstream receiving water sulfate concentration was nearing the water quality objective at 280 mg/L in 2015,	

No.	Comment	Response	Action Taken
		the effluent is adding additional mass to the receiving water, the facility is not designed to remove sulfate, and sulfate concentrations are trending upwards in both the effluent and in the upstream receiving water, as shown by the graphs below:	
		Burbank Effluent Sulfate Concentrations (mg/L) 250 R ² = 0.1928 150 50 5/1/2017 5/1/2018 5/1/2019 5/1/2020 5/1/2021 5/1/2022	
		Burbank Upstream Receiving Water Sulfate (mg/L) 250 R ² = 0.2047 200 50 5/1/2017 5/1/2018 5/1/2019 5/1/2020 5/1/2021 5/1/2022	

No.	Comment	Response	Action Taken
D4	MRP: 4.1 Table E-3, p. E-9 / 8.1.1 Table E-5, p. E-21; Fact Sheet: 7.2 Table F-13, p. F-70 Sulfate Monitoring As sulfate does not trigger RP, the monitoring frequency should be semiannually rather than monthly in the MRP. The City requests that the monitoring frequency for sulfate be revised from monthly to semiannually in the Fact Sheet.	Since there were no exceedances of the sulfate water quality objective during the previous permit term, it is appropriate to reduce the monitoring frequency for sulfate in response to this comment, as follows: from monthly to semiannually in Table E-3, from quarterly to semiannually in Table E-5, and from monthly to semiannually in Table F-13. The rationale for the sulfate monitoring frequency reduction was also added to section 7.2 of the Fact Sheet.	Revisions were made to the Order.
D5	WDRs: Table 4, p. 8, Fact Sheet: Table F-8, p.F-44 / 7.2 Table F-13, p. F-70, MRP: 3.1 Table E-2, p. E-7 / 4.1 Table E-3, p. E-11 / 8.1.1 Table E-5, p. E-22. Individual PAH Limitations and Monitoring As noted in the Fact Sheet, Indeno(1,2,3-cd)pyrene, Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, and Dibenzo(a,h)anthracene are reported as non-detect with a method detection limit (MDL) greater than the water quality objective and are assigned effluent limitations. However, the SIP states (Section 1.3, step 8) that if all reported detection limits of the pollutant in the effluent are greater than the water quality objective, the regional water quality control board shall require monitoring in place of effluent limits. No justification is provided that supports a deviation from the SIP. Additionally, Table F-8 incorrectly indicates that MEC > C for Indeno(1,2,3- cd)pyrene. As such, the City requests that the Indeno(1,2,3-cd)pyrene, Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, and Dibenzo(a,h)anthracene effluent limitations be removed and the monitoring frequency be revised to semiannually.	Order No. R4-2017-0064 contained effluent limitations for indeno(1,2,3-cd)pyrene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, and dibenzo(a,h)anthracene because data collected during the permit term for Order No. R4-2012-0059 demonstrated that the effluent had reasonable potential to exceed the California Toxics Rule (CTR) criteria. The tentative Order retained the effluent limitations for indeno(1,2,3-cd)pyrene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, and dibenzo(a,h)anthracene because they were reported as not detected in the effluent, but at levels that exceeded the CTR criteria, during the permit term for Order No. R4-2017-0064. Footnote a of Table F-8 of the Tentative Order states that indeno(1,2,3-cd)pyrene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, and dibenzo(a,h)anthracene need effluent limitations	Revisions were made to the Order.

No.	Comment	Response	Action Taken
		because the Discharger did not use sufficiently sensitive methods to analyze these pollutants.	
		MRP Section I.I of Order No. R4-2017-0064 states, "The Permittee shall select the analytical method that provides a ML lower than the permit limit established for a given parameter, unless the Permittee can demonstrate that a particular ML is not attainable, in accordance with procedures set forth in 40 CFR part 136, and obtains approval for a higher ML from the Executive Officer, as provided for in section J, below. If the effluent limitation is lower than all the MLs in Appendix 4, SIP, the Permittee must select the method with the lowest ML for compliance purposes. The Permittee shall include in the Annual Summary Report a list of the analytical methods employed for each test."	
		40 CFR section 136.1(c) requires that in order to assure compliance with permit limitations, monitoring requirements must use sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR part 136 for the analysis of pollutants or pollutant parameters. This requirement is incorporated into Order No. R4-2017-0064 and the Tentative Order. However, when obtaining the analytical results for indeno(1,2,3-cd)pyrene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, and dibenzo(a,h)anthracene, the Discharger used insufficiently sensitive test methods, with detection limits greater than the effluent limitations for these pollutants, which is inconsistent with two of the requirements in Order	

No.	Comment	Response	Action Taken
		No. R4-2017-0064: Section IV.A.a.1 of the MRP and Section III.B of Attachment D, to conduct monitoring according to sufficiently sensitive test methods. The Discharger used EPA method 625 with a reporting level of 1 µg/L and a method detection level (MDL) of 4.8 µg/L. However, the Discharger's contract lab has the capability of running the analysis for polyaromatic hydrocarbons (PAHs) using EPA method 625.1 with triple quad (PAH 625 QQQ), which is a more sensitive test method than EPA 625, achieving a lower method detection limit of 0.005 µg/L. There are multiple labs who are certified to use the 625.1 to generate valid monitoring data for PAHs. Since there is a more sensitive method available to the Discharger, the Discharger is required to use the more sensitive method. Since it is unclear if these pollutants are present in the discharge below the more sensitive detection limits and an exception to the general prohibition on backsliding does not apply, the effluent limitations for these pollutants have been retained. At the end of the next permit cycle, after the Discharger submits valid effluent data at the lower detection limits, the reasonable potential analysis will be reevaluated.	
		Additionally, Table F-8 of the Tentative Order incorrectly stated the rationale for including the effluent limitation for indeno(1,2,3)pyrene and has been corrected from "MEC>C" to "Existing."	

No.	Comment	Response	Action Taken
D6	WDRs: 4.1.1.a, Table 4, p. 8, Attachment E. MRP: 3.1, Table E-2, p. E-7 / 4.1, Table E-3, p. E-10-11, Semi Volatile Organic Compounds (SVOC) Monitoring The five parameters Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Dibenzo(a,h)anthracene, and Indeno(1,2,3)pyrene are classified as SVOC. In Attachment E - Monitoring and Reporting Program (MRP), influent (INF-001) and Effluent (EFF-002) monitoring, are identified to be monitored using a "grab" sample. Since December 3, 1990, with the adoption of City of Burbank NPDES Order No. 90-164, SVOC monitoring priority pollutants, including those named above, have been based solely on 24-hour composite samples.	Los Angeles Water Board agrees. Environmental Laboratory Accreditation Program (ELAP) staff at the State Water Board confirmed that it is acceptable to use a 24-hour composite sample type for benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenzo(a,h)anthracene, and indeno(1,2,3)pyrene. The sample type was changed from "grab" to "24-hour composite" in MRP Tables E-2 and E-3.	Revisions have been made to the Order.
	Per the NPDES Permit Writers' Manual (2010), grab samples are used to monitor parameters not amenable to compositing and have a relatively short time period to conduct the analysis (40 CFR Part 136). These parameters include but are not limited to pH, temperature, and volatile organic compounds (VOC). For example, VOC samples must be collected with zero (air) headspace to prevent compounds volatilizing out of solution and compromise the integrity of the sample results. Unlike VOC, SVOC samples are amenable to 24-hour composite sampling, may be collected in a bottle with headspace, and have a seven-day period from the time of collection, without chemical preservation, before being prepared for analysis.		
	The NPDES Permit Writers' Manual (2010), composite samples might be more representative of the discharge than grab samples when a measure of the average pollutant concentration during the compositing period is needed and a measure of mass loadings per unit of time is needed. Both of the aforementioned measures are required for these SVOC		

No.	Comment	Response	Action Taken
	parameters. The four SVOC parameters previously mentioned are EPA Priority Pollutants and are presently listed in the tentative order's MRP to be collected using a sample type "grab". In contrast, there are 47 other SVOCs classified in the MRP as "Remaining EPA Priority Pollutants" (Pg E-7 and E-11) are required to be monitored on a 24-hour composite sample type. Finally, MRP Table E-3, Pg E-11 requires non-VOC pollutants (e.g., SVOC) to be monitored using a 24-hour composite sample type. The remaining SVOC EPA Priority Pollutants can be found at 40 CFR Part 423, Appendix A. Requiring the collection of both grab and manual composite samples will double the effort and costs for sampling and analysis of these samples.		
	The City requests the Influent (INF-001) MRP, Table E-2, and Effluent (EFF-002) MRP, Table E-3, be modified to reflect monitoring on a 24-hour composite sample type for Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Dibenzo(a,h)anthracene, and Indeno(1,2,3)pyrene.		
D7	WDRs: 4.1.1a, Table 4, p. 7, Fact Sheet: 4.3.2.i, p. F-39-40, Total Coliform Limitations and Monitoring Disinfection-based effluent limitations for total coliform are for human health protection and are consistent with disinfected tertiary treated RECYCLED WATER requirements established by the State Water Resources Control Board (SWRCB), Division of Drinking Water, Title 22 of the California Code of Regulations. SWRCB Regulations Related to Recycled Water, Title 22, article §60301.230, specifically regulates "Disinfected Tertiary Recycled Water" to which the City of Burbank Water	The effluent limitations for total coliform in the Tentative Order are carried over from Order No. R4-2017-0064 to prevent backsliding and are based on the requirement that the wastes discharged to water courses at all times be adequately disinfected, as stated in the Tentative Order, Table 4, footnote c. Section 2.4 of the Fact Sheet explains that in March and April of 2018, the Burbank WRP had three separate violations of the total coliform effluent limitations in Order No. R4-2017-0064.	None necessary.
	Reclamation Plant is regulated under Los Angeles Regional Water Quality Control Board Order No. R4-2016-0144. The SIP, Basin Plan, and Los Angeles River Bacteria TMDL do	Total coliform serves as an indicator of bacteria, and the effluent limits contained in the Tentative Order are established to provide an indication of	

No.	Comment	Response	Action Taken
	not regulate nor contain water quality objectives for total coliform. These documents regulate E. coli and subsequently, relative to the Basin Plan, SIP, and Bacteria TMDL, the tentative NPDES Order No. R4-2023-XXXX is also regulated for E. coli. The BWRP produces tertiary treated recycled water and is appropriately regulated for total coliform under Title 22, article §60301.230 via Order No. R4-2016-0144.	the effectiveness of the filtration and disinfection treatment process at the Burbank WRP and whether the Discharger is complying with Section 1.4 of Attachment D -Standard Provisions, which requires "The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Discharger to achieve compliance with the conditions of this Order." It is appropriate for the total coliform effluent limits to be based on the Title 22 Code of Regulations for disinfected tertiary recycled water standards, established for	
	The BWRP discharge to the Burbank Western Channel is regulated under the SIP, Basin Plan, and LA River TMDL for only E. coli. In comparison, tertiary treated recycled water is appropriately regulated Title 22, article §60301.230 for only total coliform.		
	The City requests removing total coliform limitations and monitoring requirements from NPDES Tentative Order R4-2023-XXXX, on the basis they are not regulated under the SIP, Basin Plan, and Los Angeles River Bacteria TMDL, and the discharge to the Burbank Western Channel is not a recycled waste stream.	the protection of human health, to determine whether there is adequate disinfection because Section 60301.230 contains tertiary treatment standards that must be met for filtered disinfected wastewater, to distinguish it from disinfected secondary wastewater.	
		The State Water Board's Bacteria Provisions, in Part 3 of the <i>Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California</i> (Bacteria Provisions) state that where an NPDES permit includes an effluent limitation or discharge requirement derived from a water quality objective, guideline, or other requirement to control bacteria that is a more stringent value than the applicable bacteria water quality objective in the Bacteria Provisions, that bacteria water quality objective shall not be implemented in the WDRs. (Section IV.E.1 of Bacteria Provisions at p.4). The total coliform effluent limitations in the Tentative Order are appropriate because it is based on a requirement to control	

No.	Comment	Response	Action Taken
		bacteria that is more stringent than the applicable bacteria water quality objective in Bacteria Provisions.	
		These limitations meet requirements of the Bacteria Provisions which allow existing, more stringent limitations to be used in lieu of the statewide limitations. This is also consistent with the bacteria limitations adopted by the Los Angeles Water Board in December 2022 for the LA-Glendale WRP (Order No. R4-2022-0343) and the D.C. Tillman WRP (Order No. R4-2022-0341).	
		Therefore, the existing effluent limits for total coliform will be retained for the protection of the beneficial uses, to ensure the facility continues to be properly operated and maintained, for consistency with the other Publicly Owned Treatment Works (POTWs) NPDES permits in the watershed, and for consistency with the intent of the Bacteria Provisions.	
D8	WDRs: 6.3.4.b, p. 21,MRP; 10.4.5, p. E-33, Fact Sheet: 3.5.1, p. F-20, Climate Change Plan The TO requires the completion of a Climate Change Effects Vulnerability Assessment and Mitigation Plan (Plan) that identifies "new or increased threats to the sewer system resulting from climate change that may impact desired levels of service in the next 50 years". The City utilizes a 20-year planning horizon when outlining capital improvements and would prefer to align climate change planning with other planning processes. Additionally, the requirement to complete the Plan in 12 months does not provide a reasonable amount of time for the City Public Works staff to obtain funding from City Council through the annual budget process; complete a	Submittal of a Climate Change Plan is a requirement for all municipal facilities within the Los Angeles Region. To align the Climate Change Plan with the Discharger's other planning processes, the Los Angeles Water Board agrees to reduce the planning horizon for the Climate Change Plan from 50 years to 20 years. The 12-month time frame to develop a Climate Change Plan is also standard in all municipal NPDES permits issued in the Los Angeles region. Other Dischargers have been able to prepare and submit the Climate Change Plan within the 12-month period, so the Los Angeles Water Board	Revisions have been made to the Order.

No.	Comment	Response	Action Taken
	request for proposal and selection process to obtain the services of a qualified consultant; compile and analyze the existing information; and complete the Plan. The City is acutely aware of the challenges posed by climate change and would prefer to take a thoughtful and informed approach to planning rather than rushing to meet a permit deadline.	finds this is a reasonable amount of time to develop a plan. In addition, preparing the facility for climate change related effects is crucial for ensuring the facility continues to be operational during and/or following extreme weather events.	
	The City requests that the planning horizon be revised from 50 years to 20 years and the completion on the Plan be revised from 12 months to 24 months.		
D9	WDRs: 6.3.6.b, p. 25, Spill Reporting Requirements, Monitoring, Total Coliform The 2019 Basin Plan classifies the Burbank Western Channel and Los Angeles River as Fresh Waters Designated for Water Contact Recreation (aka: REC-1). Basin Plan, Ch. 3, Pg 3-26, requires REC-1 waters to be monitored for only E. coli. Additionally, Basin Plan, Ch. 7, Pg 7-468 states, "as part of the Los Angeles River Bacteria TMDL, numerical targets are for E. coli only." Therefore, the Bacteria TMDL and Basin Plan do not require Total Coliform monitoring in the Los Angeles River. Furthermore, SSS General Order WQ 2022-0103-DWQ, Section 2.3.2. Receiving Water – Water Quality Sampling and Analysis, states appropriate bacterial indicator(s) are per the applicable Basin Plan water quality objectives. As mentioned above, the Basin Plan does not contain Total Coliform water quality objectives nor does the Los Angeles River Bacteria TMDL. The City requests that the reference to monitoring total coliform be removed and that the requirements for spills from the BWRP be revised to only include E. coli.	Since it is crucial to determine the extent of a sewage spill when one occurs, and total coliform is another bacterial indicator that can help determine the extent of a spill, the requirement to monitor spills for total coliform has been retained.	None necessary.

No.	Comment	Response	Action Taken
D10	WDRs 7.16 p. 35-36, Compliance with Gross Beta/photon Emitters Compliance with beta particle and photon radioactivity is regulated under 40 CFR section 141.66(d)(2) and California Code of Regulations Title 22, chapter 15, article 5, section § 64443. The TO states that if the gross beta particle activity minus the naturally occurring Potassium-40 beta particle activity exceeds the screening level (50 pCi/L), the Discharger must have the samples further analyzed for the individual nuclides. It further states "USEPA regulates 179 man-made nuclides", which are further referenced in the subsequent table "Derived Concentrations (pCi/L) of Beta and Photon Emitters in Drinking Water". If monitoring of individual nuclides is triggered, analyzing for the above referenced 179 man-made nuclides is unreasonable as the analysis is beyond the capabilities of any California Environmental Laboratory Accreditation Program (ELAP) laboratory or group of_laboratories. Furthermore, § 64443(d)(2) states "the concentration of man-made radionuclides shall be calculated". A protocol for calculating radionuclide concentrations is not contained in the regulation. As it stands the requirement is not implementable. The City requests that the reference "calculated", in § 64443(d)(2) be clearly defined and a reasonable protocol be established for complying with the gross beta/photon emitter MCL that does not include the analysis of 179 individual nuclides.	The Tentative Order contains a monitoring requirement for gross beta radioactivity to determine compliance with the water quality objective for the protection of the groundwater recharge (GWR) beneficial use of the groundwater basin. The water quality objective for this pollutant is the drinking water maximum contaminant level (MCL), which is 4 millirem/year. Since the MCL is expressed in millirem/year and the methods used for analysis of gross beta report the data in pCi/L. Only when this screening level is exceeded is the Discharger required to monitor for the 179 individual man-made nuclides. Since the individual nuclides are reported in millirem/year, these additional analyses are necessary to determine if the gross beta radioactivity MCL is exceeded. Section 7.16 of the Order already specifies that if the gross beta particle activity minus the naturally occurring Potassium-40 is less than or equal to 50 pCi/L, the facility is in compliance and the value (for gross Beta, sic) shall be reported as <4 millirem/year. Only if the gross beta particle activity minus the naturally occurring Potassium-40 beta particle activity exceeds the screening level (50 pCi/L), the Discharger must have the samples further analyzed for the individual nuclides. Thus, monitoring for the 179 man-made nuclides is required if and only if the 50 pCi/L threshold is exceeded. The calculation for the sum of the fractions is presented in subsequent pages of the Order. To	None necessary.

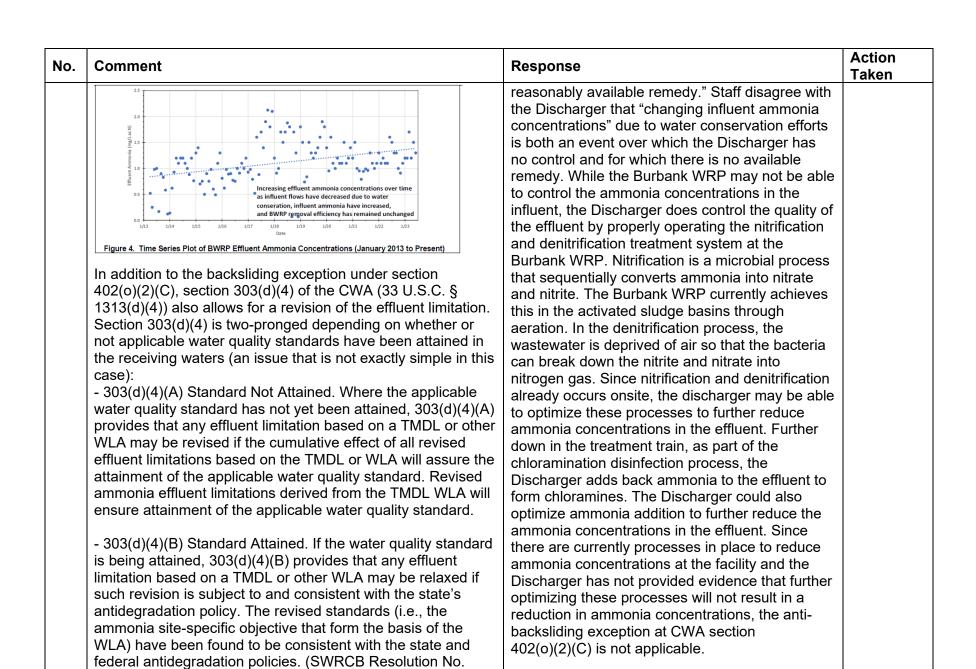
No.	Comment	Response	Action Taken
		clarify the screening level that triggers additional monitoring, "screening level" has been replaced with "50 pCi/L."	
		Footnote k in MRP page E-13 already acknowledges that "Although there is currently no ELAP accreditation available for some of the radiochemical methods described above using wastewater, the Discharger shall use an ELAP-accredited laboratory once ELAP accreditation becomes available for the method," so the discharger shall use the methods specified with a lab capable of conducting the analyses, but once ELAP accreditation becomes available the discharger must use an ELAP-accredited lab.	
D11	4.1.1.a, Table 4, p. 7, Fact Sheet: 4.3.2.h, p. F-37-F-39, Ammonia Effluent Limitations The Los Angeles River Nitrogen Compounds and Related Effects TMDL (Nutrient TMDL), which addresses ammonia, requires that effluent limitations shall ensure effluent concentrations do not exceed the level of water quality that can be reliably maintained by the facility's applicable treatment technologies existing at the time of permit issuance, reissuance, or modification unless anti-backsliding and antidegradation requirements are met. Neither the TMDL nor the associated Staff Report state that ammonia effluent limits cannot be increased due to changes in performance; rather, an increase in the effluent limitation for ammonia is expressly authorized under the TMDL if it is consistent with anti-	The ammonia effluent limitations are carried over from Order No. R4-2017-0064 and set to protect aquatic life, to prevent further degradation in the Los Angeles River, to implement the requirements of the Nitrogen Compounds TMDL, and to prevent backsliding. The Nitrogen Compounds TMDL only allows for a less stringent effluent limitation if anti-backsliding and antidegradation requirements are met, but in this case they will not be met as described below. The discharge from the Burbank WRP affects the downstream receiving waters. The highest and second highest ammonia concentrations in the receiving water downstream of the discharge, at	None necessary.
	backsliding in Clean Water Act (CWA) section 402(o) and antidegradation requirements.	downstream receiving water station RSW-002D were reported as 5.4 mg/L and 5.2 mg/L, on May 4, 2018 and August 17, 2022, respectively. While	

No.	Comment	Response	Action Taken
	Section 402(o) of the CWA (33 U.S.C. § 1342(o)) establishes anti-backsliding requirements that prohibit reissuance or modification of a permit to include effluent limitations which are less stringent than "the comparable effluent limitations in the previous permit" unless certain exceptions are met. One such exception is contained in section 402(o)(2)(C), which provides that a permit may be renewed, reissued, or modified to contain a less stringent effluent limitation if it "is necessary because of events over which the permittee has not control and for which there is no reasonably available remedy" As discussed below, the BWRP cannot reliably maintain ammonia effluent limitations based on the changing influent ammonia concentrations outside of its control. The TO proposes to maintain the previous permit performance-based limitations of AMEL 2.1 and MDEL 6.2 mg/L. While the treatment processes for the facility have not changed significantly since the issuance of the prior permit, those limits are no longer reflective of the BWRP performance due to the changed conditions of increased water conservation and increased influent ammonia concentrations. As water conservation is a desirable state-wide goal that is outside the City's ability to control, increasing the performance-based limitation (up to the SSO derived limitations) meets an exception to anti-backsliding requirements and, as discussed below, antidegradation requirements. Maintaining the TO limits presents compliance issues and would put the City in jeopardy of unnecessary mandatory minimum penalties, or construction of additional treatment processes at rate payer expense that will increase energy use, GHG emission, and air pollution for no environmental benefit. Monitoring data collected over the current permit term indicates an increase in PBELs is appropriate and warranted,	the corresponding concentrations of ammonia at the upstream receiving water station RSW 002U were 2.3 mg/L and 0.29 mg/L. This data suggests that the discharge from the Burbank WRP may be contributing to the elevated ammonia concentrations downstream of the discharge. Since the Burbank WRP contributes to the ammonia load to the Los Angeles River, an antidegradation analysis is required for this NPDES permit since the discharge may be reducing existing water quality. Under 40 CFR § 131.12 and State Water Board Resolution No. 68-16, Statement of Policy with Respect to Maintaining High Quality Waters in California (Antidegradation Policy) relaxing the ammonia effluent limit such that it may reduce the existing high quality water may occur only if the change in water quality will be consistent with the maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial use of such water, and will not result in water quality less than prescribed in state policies, e.g., water quality objectives. Additionally, the discharge must use the best practicable treatment or control of the discharge necessary to avoid pollution or nuisance and to maintain the highest water quality consistent with the maximum benefit to the people of the State. If the effluent limitations for ammonia were relaxed, it would improperly allow the Discharger to decrease treatment efficiency and not use the best practical treatment or control, and lead to increased pollutant loading into the receiving water. The commenter is correct that the	

No.	Comment	Response	Action Taken
	as BWRP had two effluent concentrations above the TO proposed AMEL of 2.1 mg/L (TO at Pg F-38). Both measured values above the 2.1 mg/L AMEL were below the TMDL WLA AMEL of 3.4 mg/L that is protective of beneficial uses. Figure 1 is the timeseries of influent flowrate showing the general downward trend of influent flows due to water conservation. Superimposed on the plot are periods of 5-year average flows corresponding to the past three permit terms, decreasing from 8.59 MGD, then 7.62 MGD, and to 6.62 MGD over the last permit term. The average influent flow over the May 2017 to January 2023 time period referenced in the TO is 6.50 MGD. As shown in Figure 1, there is a steady reduction of influent flow over time. As water conservation increases, decreasing influent flow, there is a corresponding increase in influent ammonia concentrations shown in Figure 2 (significant at p-value < 0.01). Additionally, there is a no significant relationship over time for ammonia removal efficiency, with an average rate of 96.5% as displayed on Figure 3, meaning that the BWRP is still maintaining the performance of the ammonia removal process. The increased influent concentration with constant removal efficiency results in increased effluent ammonia concentrations as shown on Figure 4 (significant at p-value 0.039). The BWRP is operating under different conditions as compared to five years ago and the BWRP's ammonia effluent concentration has been affected due to water conservation efforts that have led to an increase in ammonia influent concentrations.	determination of whether any change in water quality will be consistent with the maximum benefit to the people of the state is made on a case-by-case basis. To the extent that the commenter asserts that the consideration is limited to the protection of drinking water, the Regional Board disagrees. The existing and potential beneficial uses of the receiving waters include water contact recreation, non-contact water recreation (REC-2), and groundwater recharge. Although water conservation is beneficial for the people of the State, the change in receiving water quality due to increased pollutant loading to the tributaries of the Los Angeles River is not to the maximum benefit of people of the state because it would detrimentally affect their ability to fish and recreate in the waterbodies. The reduction in water quality is also not necessary to accommodate any important economic or social development in the area where the waters are located. Therefore, the ammonia effluent limitations must be retained because decreasing their stringency does not comply with the Antidegradation Policy. The ammonia effluent limitations are consistent with the Nitrogen Compounds TMDL and are protective of freshwater habitat in the Los Angeles River.	
		The Discharger's reported data shows that the Burbank WRP is consistently able to comply with the 2.1 mg/L ammonia AMEL, so it is not anticipated that the Burbank WRP will need to undergo major upgrades to continue meeting this effluent limitation. The Discharger recognized that	

Action Response No. Comment Taken the Burbank WRP effluent ammonia Influent flowrate is decreasing over time concentrations exceeded 2.1 mg/L twice during due to increased water conservation the last permit cycle. However, the two concentrations did not result in violations of the 2.1 mg/L AMEL or the 6.2 mg/L MDEL. On October 4, 2017, the ammonia concentration was reported as 3.4 mg/L but that did not exceed the - 5-yr Period May 2012 - Apr 2017 6.2 mg/L MDEL. The Discharger collected a second sample for ammonia on October 12. 2017, and reported it as 0.85 mg/L. The two Figure 1. Time Series Plot of Monthly Average Influent Flowrate to BWRP Spanning the Last Three values were averaged [(3.4 mg/L + 0.85 mg/L)/2Permit Terms (May 2007 to Present) Note: Data from April 2018 through August 2019 and from May 2022 through August 2022 were removed from each = 2.1 mg/L] and the end result was in compliance figure to not bias the averaging or trendlines. These data were removed from the analysis because they correspond to periods where approximately half of the influent flow was diverted to the Los Angeles/Glendale WRP due to operation with the AMEL. Hence, the 2.1 mg/L AMEL was not violated in October 2017. Similarly, on July 6, 2018, the ammonia concentration was reported Influent ammonia concentrations increasing over time is influent flowrate decreases due to water conservation as 2.3 mg/L, which exceeded 2.1 mg/L but did not exceed the MDEL. The Discharger collected a total of four samples in July 2018 all meeting the MDEL: 1.4 mg/L on July 2, 2 mg/L on July 5, 2.3 mg/L on July 6, and 1.8 mg/L on July 9. The four were averaged [(1.4 mg/L + 2 mg/L + 2.3 mg/L +1.8 mg/L/4 = 1.9 mg/L and the end result was in compliance with the AMEL. Hence, the 2.1 mg/L Figure 2. Time Series Plot of BWRP Influent Ammonia Concentrations (January 2013 to Present) AMEL was not violated in July 2018. No statistical change in ammonia removal efficience The antibacksliding exception cited by the Discharger, CWA section 402(o)(2)(C), does not apply because ammonia removal is within the discharger's control and can be remedied. CWA section 402(o)(2)(C) is an exception to the general prohibition against issuing a permit with a less stringent effluent limitation than the prior permit if the "less stringent effluent limitation is Figure 3. Time Series Plot of BWRP Ammonia Removal Efficiency (January 2013 to Present) necessary because of events over which the

permittee has no control and for which there is no



No.	Comment	Response	Action Taken
	2008-0004 at pg. 1, para. 3, and at pg. 2, para. 6.) Thus, effluent limitations derived from the SSO should similarly be found to comply with antidegradation policies. Given the Los Angeles River downstream of the BWRP is deemed "impaired" (i.e., listed on the State's 303(d) list) 303(d)(4)(A) could apply. Alternatively, as the Burbank Western Channel is no longer on the State's 303(d) list, 303(d)(4)(B) could apply. Regardless, a revision to the ammonia effluent limitations is authorized under 303(d)(4). Antidegradation The state antidegradation policy (State Water Board Resolution No. 68-16) has been interpreted to incorporate the federal policy where it applies. Under federal guidance, antidegradation analysis is not required for an NPDES permit where the proposed action will not reduce existing water quality. (Memorandum to Regional Board Executive Officers from William R. Attwater, Chief Counsel, Federal Antidegradation policy (Oct. 7, 1987), p. 3.) The antidegradation policy is not triggered where, as here, the TO does not authorize a new discharge, a significant increase in discharge flow rates, or a relaxation of requirements in a manner that will increase pollutant loadings. (Ibid.) Increasing the performance-based limitation up to the SSO will not lower water quality relative to the baseline, and so no further analysis is necessary, because the state and federal antidegradation requirements are satisfied. Regardless, revision of the effluent limitation would be consistent with the two-step antidegradation analysis. First, if the Regional Board finds that a lowering of current ambient water quality would likely occur due to the proposed revision, it can clearly be demonstrated that any change in water quality would:	The Discharger's argument that the effluent limitation can be less stringent than the limit in the prior permit because of the exception to backsliding in section 303(d)(4) of the Clean Water Act is also flawed. While it is true that the California 2018 Integrated Report (https://www.waterboards.ca.gov/water_issues/programs/tmdl/2018state_ir_reports_final/apx_c_state_factsheets/01109.shtml) recommends delisting the pollutant/waterbody combination of ammonia in the Burbank Western Channel and in Reach 3 of the Los Angeles River, the reason stated for doing so is that the applicable water quality standard has been attained through implementation of a USEPA-approved TMDL. Because the pollutant/waterbody combination is in attainment of water quality standards, CWA section 303(d)(4)(B) applies to the consideration of whether a less stringent effluent limitation than in the prior permit is permissible. Where, as here, effluent limitations are based on waste load allocations in a TMDL or a water quality objective, CWA section 303(d)(4)(B) provides that they may only be relaxed if doing so is consistent with the state antidegradation policy. As explained earlier in this response to comment D.11, relaxing the ammonia effluent limitation is not consistent with the state antidegradation policy. Based on the information provided by the Discharger, there is no evidence to support the discharger's assertion that retaining the ammonia effluent limitation would result in significant capital	

No.	Comment	Response	Action Taken
	(a) Be consistent with the maximum benefit to the people of the state (the change is due to water conservation, a desired state-wide goal); (b) Not unreasonably affect present and anticipated beneficial uses of such water (the revised limits comply with the SSO and TMDL); and (c) Not result in water quality less than prescribed in state policies (the revised limits comply with the SSO and TMDL). (Asociacion de Gente Unida por el Agua v. Central Valley Regional Water Quality Control Bd. (2012) 210 Cal.App.4th 1255, 1278 (AGUA), citing State Bd., Guidance Mem. (Feb. 16, 1995) p. 2; see also Environmental Law Foundation v. State Water Resources Control Bd. (2023) 89 Cal.App.5th 451, 500.) (a) Consistent With the Maximum Benefit to the People of the State: The determination of whether any change in water quality will be consistent with the maximum benefit to the people of the state is made on a case-by-case basis based on considerations of reasonableness, including "economic and social costs, tangible and intangible, of the proposed discharge compared to the benefits," and "the implementation of feasible alternative treatment or control methods." (AGUA, 210 Cal.App.4th at p. 1279.) In discussing the AGUA case, Chief Counsel of the State Water Board Michael Lauffer opined that as long as the water quality objectives are set to protect drinking water uses, the general public should not incur costs to treat drinking water supplies. (State Water Resources Control Board (SWRCB), February 22, 2013, Asociación De Gente Unida Por El Agua v. Central Valley Regional Water Resources Control Board Resolution 68-16, Memo from Michael A.M. Lauffer (Chief Counsel of Office of Chief Counsel) to Tom Howard (Executive Director of Executive Office)). The water quality objectives are below the	improvement and construction costs. The Burbank WRP already provides nitrification and denitrification, as discussed above. Therefore, there is insufficient evidence to suggest the public would incur significant costs and the <i>AGUA</i> argument is therefore not applicable. A memorandum dated August 26, 2016, signed by the former Supervisor of the Municipal NPDES Permitting Unit summarized the process that the Los Angeles Water Board-led workgroup underwent to determine how Performance Based Effluent Limitations (PBELs) would be calculated. The methodology used to determine the PBELs in Order R4-2017-0064 was reflective of the 2016 memo and consisted of selecting the AMEL as the sum of the maximum effluent concentration (MEC) plus a margin of safety factor (MOSF) reflective of plant performance. The MOSF was set equal to two times the standard deviation. Thus, the PBEL is less conservative because it was set at a value greater than what had been reported as the maximum effluent limitation. In summary, since relaxing the effluent limitations for ammonia is not consistent with the antidegradation policy or the anti-backsliding provisions and data suggests the facility can continue to meet these effluent limitations, less stringent effluent limitations are not appropriate for ammonia at this time.	

No.	Comment	Response	Action Taken
	drinking water standards, and the City's discharges meet these levels. Accordingly, given the high level of treatment undertaken by the City and the costs that would be imposed on ratepayers to meet the ammonia effluent limitation proposed in the TO (including not only monetary costs but also environmental impacts of the requisite construction, such as energy use, GHG emission, and air pollution), the "maximum benefit" requirement should be found to be met.		
	(b) No Unreasonable Effect to the Beneficial Uses of Water and (c) Compliance with Water Quality Objectives: The antidegradation requirement mandates that "[e]xisting instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected." (40 C.F.R. § 131.12(a)(1). However, where the quality of waters exceed levels necessary to support beneficial uses, the antidegradation policy authorizes some degradation as long as existing uses are protected and maintained. (40 C.F.R. § 131.12(a)(2); see also State Water Resources Control Board, Order No. WQ 86-8, at p. 29 [stating that the State Water Board's Antidegradation Policy is neither a no-degradation nor a "zero discharge" policy]; Order No. WQ 86-8 at 29-31 ["Resolution 68-16 does not mandate that [water] should have nondetectable levels of pollutants. Rather, State Board policy is to only allow changes or 'limited degradation' of water quality which will not unreasonably affect beneficial uses "]). State law explicitly recognizes that "it may be possible for the quality of water to be changed to some degree without unreasonably affecting beneficial uses." (Cal. Water Code, §13241.) Importantly, discharges of constituents will not contribute to violations of water quality objectives, which are set to protect beneficial uses (Wat. Code, §§ 13050(h), 13241), "if they are discharged at levels which do not exceed those objectives." (In re Petition of Environmental Health Coalition, SWRCB Order No. 91-10 at		

No.	Comment	Response	Action Taken
	7.) Because the revision requested by the City is based on the applicable water quality objectives, and these objectives are set to protect beneficial uses, the requirement to protect beneficial uses of water and compliance with water quality objectives should be found to be met.		
	Second, the best practicable treatment or control has been implemented by the City. (AGUA, 210 Cal.App.4th at p. 1278, citing State Bd., Guidance Mem. (Feb. 16, 1995).) "To evaluate the best practicable treatment or control method, the discharger should compare alternative methods of treatment or control; and/or consider the method currently used by the discharger or similarly situated dischargers. The costs of the treatment or control should also be considered, and would be considered in determining the 'maximum benefit to the people of the State." (Id. at p. 1278, citing State Bd., Guidance Mem. (Feb. 16, 1995) pp. 5–6.) There are no planned changes to the BWRP's treatment facilities or processes that would impact the concentrations of those constituents that have limitations in the discharged effluent. However, not increasing the ammonia effluent limitation would result in future construction costs to upgrade treatment processes that would be passed on to the ratepayers. Additionally, as noted, there would be intangible costs to the environment if construction is needed to comply with the TO effluent limitation for ammonia, including air quality and climate change-related impacts.		
	Lastly, CWA section 402(o)(3) provides an absolute limitation on backsliding. This section of the CWA prohibits the relaxation of effluent limitations in all cases if the revised effluent limitation would result in a violation of applicable effluent guidelines or water quality standards, including antidegradation requirements. As described herein, the		

No.	Comment	Response	Action Taken
	proposed revision complies with effluent guidelines and water quality standards.		
	The TO calculates the water quality based effluent limitations finding the controlling criterion being the 30-day average SSO early life stage absent criterion that included the explicit 10% margin of safety. Corresponding effluent limitations are AMEL of 3.4 mg/L as N and MDEL of 6.8 mg/L. Effluent meeting these limitations are protective of beneficial uses. The TO proposes to maintain the previous permit performance-based limitations of AMEL 2.1 and MDEL 6.2 mg/L. While the proposed limits reflected performance of the previous permit term, they are no longer reflective of the BWRP performance due to the changed conditions of increased water conservation and increased influent ammonia concentrations. Water conservation is a desirable and critical state-wide policy goal; however, it is outside the City's ability to control. Increasing the performance-based limitation (up to the SSO derived limitations) is appropriate and complies with antibacksliding and antidegradation requirements. Not increasing the limitation would put the City in jeopardy of unnecessary mandatory minimum penalties, or future construction of additional treatment processes at rate payer expense that will increase energy use, GHG emission, and air pollution for no environmental benefit.		
	The City requests that the Regional Board revise the AMEL and MDEL to 3.4 and 6.8 mg/L, respectively, as presented in Table F-7 of the Fact Sheet (Pg. F-39).		
D12	WDRs: 4.1.1.a, Table 4, p. 6-10, Fact Sheet: 4.3.5.b.ii-iv, p. F-47-49. Limitations for Metals Addressed by the Metals Total Maximum Daily Load (TMDL) The BWRP's current NPDES Permit incorporates the requirements of the Los Angeles River and Tributaries Metals TMDL (Metals TMDL) and only applies performance based	The following is the process used to determine the applicable final effluent limitations for metals. First, effluent limitations were calculated, using SIP procedures, for cadmium, lead, and zinc, consistent with the language in the	None necessary.

Action Comment Response No. Taken effluent limits (PBELs) to copper. The application of PBELs to Implementation Section of the Los Angeles River metals other than copper in the TO is inconsistent with the and Tributaries Metals TMDL. Second. the Metals TMDL and is not supported by the administrative performance-based limits were calculated as the record. The Regional Board originally adopted the Metals sum of the margin of safety factor (consisting of TMDL in June 2005 and readopted it in 2007 (2007 TMDL) in two standard deviations) and the maximum compliance with a writ of mandate issued by the Los Angeles effluent concentration (MEC) detected. Third, the County Superior Court. The wasteload allocations (WLAs) two sets of limits and the limits in Order R4-2017applicable to the City identified in the 2007 TMDL Basin Plan 0064 were compared to determine the Amendment (BPA) did not include a requirement for effluent appropriate effluent limitation. The most stringent limits to be based on a facilities performance, the Staff Report of the three values was used as the effluent limitation in the Tentative Order. did not include a discussion on the issue, nor did the environmental documentation consider the implications of For cadmium, the calculated performance-based such a limitation. The 2007 TMDL required Permittees to effluent limits were not considered because the meet the TMDL targets regardless of current performance. MEC was a detected but not quantified (DNQ) The first amendment of the Metals TMDL was adopted in value, so the calculated performance-based 2010 (2010 TMDL) to incorporate a copper Water Effect Ratio effluent limits were less than the method (WER) developed for the three Water Reclamation Plants detection limit. As a result, the cadmium effluent (WRP) in the LA River watershed (the City's BWRP and the limits from Order No. R4-2017-0064 were City of Los Angeles' Donald C. Tillman and Los retained in the Tentative Order. Since there have Angeles/Glendale WRPs). During the 2010 TMDL been no significant changes to the facility since amendment process. USEPA raised concerns in a March 11. the adoption of Order No. R4-2017-0064 and the 2010 letter to the Regional Board about the application of the facility has been able to meet the effluent copper WER to WRP effluent limitations. To address the limitations, the facility is expected to continue concerns raised by USEPA, a footnote was incorporated in meeting these effluent limitations for cadmium. tables in the BPA containing the copper WLAs for the three However, the Tentative Order does establish WRPs. As stated in the Regional Board's 2010 TMDL effluent limits for copper, lead, and zinc based on response to comments, "The footnote language proposed by performance and the Discharger is able to meet these performance-based effluent limits. This is staff in the tentative Basin Plan amendment is in direct response to EPA's comment letter and is necessary to ensure evident by comparing the MEC and the performance based effluent limits (PBELs) below: the application of the WER does not allow the degradation of existing water quality." USEPA's letter only referenced the **PBEL** PBEL copper WER, which was adjusted from the default of 1 to 3.96 Units MEC Pollutant AMEL MDEL based on a site-specific study. As such, in the 2010 TMDL, 22 Copper μg/L 29 39 the footnote (#2) was only applied to copper (see below for an

Action Response No. Comment Taken excerpt of the wet-weather WLA table from the 2010 TMDL Lead 3.3 4.9 9.1 µg/L BPA). Zinc μg/L 127 141 211 Chapter 7-13 of the Basin Plan states, POTW wet-weather WLAs (total recoverable metals): "Regardless of the WER, for discharges regulated CdCu Pb Tillman under this TMDL with concentrations below WER-Concentration-based adjusted allocations, effluent limitations shall WER¹x4.7 WER²x26 WER¹x10 WER¹x212 $(\mu g/L)$ ensure effluent concentrations do not exceed the Mass-based level of water quality that can be reliably WER¹x1.4 WER²x7.8 WER¹x 3.03 WER¹x64 (kg/day) Glendale maintained by the facility's applicable treatment Concentration-based technologies existing at the time of permit WER1x5.3 WER2x26 WER1x12 WER1x253 (ug/L) issuance, reissuance, or modification unless anti-Mass-based backsliding requirements in Clean Water Act WER¹x0.40 WER²x2.0 WER¹x0.88 WER¹x19 (kg/day) Burbank section 402(o) and antidegradation requirements Concentration-based are met. Permit compliance with anti-degradation WER¹x4.5 WER²x19 WER¹x9.1 WER¹x 212 $(\mu g/L)$ and anti-backsliding requirements shall be Mass-based documented in permit fact sheets." (See Table 7-WER1x0.15 WER2x0.64 WER1x0.31 WER1x7.3 (kg/day) 13.1. Los Angeles River and Tributaries Metals ¹WER(s) have a default value of 1.0 unless site-specific WER(s) are approved. TMDL). These antibacksliding and ² The WER for this constituent is 3.96. Regardless of the WER, effluent antidegradation requirements are not met. This limitations shall ensure that effluent concentrations and mass discharges do not exceed the levels of water quality that can be attained by performance of this statement is included for both the wet and dry facility's treatment technologies existing at the time of permit issuance, weather waste load allocations for cadmium, reissuance, or modification. copper, lead, and zinc and therefore applies to all four metals. The statement is not only limited to The second amendment of the Metals TMDL was adopted in copper because the intention of this requirement 2015 (2015 TMDL) to incorporate additional copper WERs is to ensure the discharge maintains the same and recalculated lead criteria. During the 2015 TMDL level of treatment if the discharge can achieve amendment process, the text of the footnote related to concentrations below the assigned waste load performance was revised for consistency with the LA River allocations. In addition, each metal is assigned a Nutrient TMDL and the location of the footnote in the WLA WER of 1.0 in the Basin Plan, unless a sitetable was moved (see below for an excerpt of the wet specific WER is approved. So, although all three weather WLA table from the 2015 TMDL BPA with the metals do not include a site-specific WER, they changes tracked).

are still assigned WERs.

No.	Comment	Response	Action Taken
	POTW wet-weather WLAs (total recoverable metals): Cd Cu Pb Zn Tillman Concentration-based (μg/L) WER¹x4.7 WER²x26 WER¹x4083 WER¹x212 Mass-based (kg/day) WER¹x1.4 WER²x7.8 WER¹x 3.0325 WER¹x64 Glendale Concentration-based (μg/L) WER¹x5.3 WER²x26 WER¹x42100 WER¹x253 Mass-based (kg/day) WER¹x0.40 WER²x2.0 WER¹x0.887.6 WER¹x19 Burbank Concentration-based (μg/L) WER¹x4.5 WER²3x19 WER¹x9.475 WER¹x 212 Mass-based (kg/day) WER¹x0.15 WER²3x0.64 WER¹x0.312.6 WER¹x7.3 ¹ WER(s) have a default value of 1.0 unless site-specific WER(s) are approved. ² The WER for this constituent is 3.967. ² The WER for this constituent is 4.75. Regardless of the WER, for discharges regulated under this TMDL with concentrations below WER-adjusted allocations, effluent limitations shall ensure effluent concentrations do not exceed the level of water quality that can be reliably maintained by the facility's applicable treatment technologies existing at the time of permit issuance, reissuance, or modification unless antibacksliding requirements in Clean Water Act section 402(o) and antidegradation requirements are met. Permit compliance with anti-degradation and anti-backsliding requirements shall be documented in permit fact sheets. Regardless of the WER, effluent limitations shall ensure that effluent concentrations and mass discharges do not exceed the levels of water quality that can be attained by performance of this facility's treatment technologies	Since the intention of this requirement in the Basin Plan is to ensure the quality of the discharge is maintained, the Tentative Order implemented performance based limits appropriately for copper, lead, and zinc.	
	The movement of the footnote related to performance was not meant to fundamentally change the intention of the TMDL. That is, the TMDL established WLAs based on the TMDL targets, except in instances where a site-specific WER was approved, in which case the WLAs required that performance be considered when setting effluent limits. The footnote was		

No.	Comment	Response	Action Taken
	moved to acknowledge that, in the future, WERs could be completed for the other metals, and, if approved, the WER based WLAs would be subject to the performance based requirements. There is nothing in the administrative record of the 2007, 2010, or 2015 TMDLs that supports the decision to apply performance based effluent to metals other than copper in the absence of a site-specific WER. In responding to comments during the 2015 TMDL adoption process, Regional Board staff rejected making additional changes to the TMDL requested by multiple commentors because, as stated in the response to comments on the 2015 TMDL, "The proposed revisions to the Los Angeles River Metals TMDL are limited to changes pertaining to the application of the results of the Copper WER Study and Lead Recalculation Report." Additionally, the Regional Board staff stated in their presentation to the Regional Board at the April 9, 2015 adoption hearing that no changes were being proposed to the TMDL as it applies to the other metals. Interpreting the movement of the footnote as an explicit decision to apply performance based limits to metals other than copper would have been a change to the 2010 TMDL. The BWRP's 2017 NPDES permit reflects the correct interpretation of the TMDL and applies performance-based requirements only to the copper effluent limitations, not cadmium, lead, or zinc. Changing the BWRP permit to incorporate PBELs for lead, cadmium, and zinc in the absence of a site-specific WER is not consistent with the TMDL or supported by the administrative record. The default WERs for metals other than copper should not be used to develop performance based effluent limitations in the TO. The City requests that the Regional Board calculate the effluent limitations in Table 4 for cadmium, lead, and zinc consistent with the 2017 NPDES Permit.		

No.	Comment	Response	Action Taken
D13	WDRs: 4.1.1.a, Table 4 p. 6, 4.1.2 p. 10, 5.1.1 p. 11, 6.3.7 p. 28, Fact Sheet: 3.5.9, p. F-25-26, 4.3.2.j, p. F-40-41, Revised Temperature Limitation The BWRP has had temperature effluent limits for at least 40 years, which have been revised on multiple occasions. The 1985 (85-001), 1990 (90-164), 1996 (96-050), and 1998 permits (98-052) all contained a limit of 100°F, which was revised in the 2006 permit (2006-0085) to 86°F and retained in the 2012 and 2017 permits (2012-0059 and 2017-0064, respectively). The revision of the limit from 100°F to 86°F in the 2006 permit was based on an interpretation of the current Basin Plan objective and a white paper developed by Regional Water Board staff entitled <i>Temperature and Dissolved Oxygen Impacts on Biota in Tidal Estuaries and Enclosed Bays in the Los Angeles Region</i> . The BWRP effluent has been consistently below the 86°F limit, except in instances where ambient air temperatures are high are raise both receiving water and effluent temperatures. As such, the revision of the limit from 100°F to 86°F did not require the BWRP to implement treatment controls for temperature. However, the revised interpretation of the Basin Plan's temperature objective resulting in the proposed 80°F effluent limitation has the potential for significant ramifications in terms of capital costs to build treatment to cool effluent and the impacts related to energy usage, greenhouse gas (GHG) emissions, and air pollution. Given that 1) the Regional Board has previously applied a temperature limit of 86°F to be protective of beneficial uses, 2) there has been no information provided to date indicating that the current limitation is resulting in impacts to beneficial uses, and 3) there are significant implications to not just the BWRP, but all water reclamation plants in the region, in terms of costs and other environmental impacts, the Regional Board should have	The established water quality objectives for temperature that are protective of the beneficial uses of the receiving water have been in effect since 1994 when the Basin Plan for the Los Angeles Region was comprehensively updated. NPDES permits are required to implement the Basin Plan. The temperature water quality objective in Chapter 3 of the Basin Plan for waters designated WARM (which is applicable to the Los Angeles River) states "water temperature shall not be altered by more than 5°F above the natural temperature. At no time shall these WARM-designated waters be raised above 80°F as a result of waste discharges." The new temperature effluent limitation of 80°F is based on a new interpretation of this water quality objective for the purposes of establishing requirements in this NPDES permit to achieve the temperature water quality standards, and it will ensure protection of the beneficial uses of the receiving water. The end-of-pipe 80°F limitation also ensures temperatures above 80°F in the receiving water are not due to POTW discharges. It is not possible to change water quality objectives through an NPDES permit, water quality objectives through an review process is underway and will address issues prioritized by the Board members. The triennial review process evaluates conditions in the region as a whole, while the temperature study proposed by the Discharger will focus on site specific conditions within the LA River	None necessary.

No.	Comment	Response	Action Taken
	implemented a regional stakeholder process prior to changing the interpretation. The stakeholder process could include all interested parties and scientific experts to identify the impacts of temperature on beneficial uses, the options for addressing identified impacts, and the potential environmental and social impacts of implementing those options. The Regional Board has considered evaluating the temperature objective in some form through the triennial review for over 10 years (2011, 2014, 2017, and 2020 triennial reviews). The 2020 triennial review was the first time the Regional Board adopted the reevaluation of the temperature objective as a priority and stated in the Staff Report that: Los Angeles Water Board staff have long recognized the need for a re-evaluation of the temperature objective and the re-evaluation was identified as a potential project in the 2014-2016 triennial review. However, it was not adopted as a priority project during that triennial review period as, given the complexity of the issue it would require significant staff resources which were limited, and attempts to secure funding for the project were unsuccessful. More recently, reconsideration of the temperature objectives has been frequently raised by staff from the Los Angeles Water Board's permitting program as a high priority that needs to be addressed in a timely manner. Therefore, re-evaluation of the temperature water quality objectives is identified as a potential project during the 2020-2022 triennial review. The City requests the following: Revise the effluent limitation in Table 4 of TO to reflect the BWRP's current temperature limit. Utilize the 2020 triennial review temperature project as an opportunity to conduct a stakeholder process to carefully and thoroughly evaluate potential temperature impacts and options to address identified impacts.	watershed. The tentative Order requires the Discharger to convene a Technical Advisory Committee and Stakeholder Committee (similar to the process described in the Discharger's comment) and submit a work plan proposal for review by the Los Angeles Water Board, and the results from the study conducted through this work plan may be used to re-evaluate the temperature water quality objectives in the Basin Plan. Because the temperature limit is a new interpretation of the temperature water quality objective, a compliance schedule is allowed per the statewide Policy for Compliance Schedules in [NPDES] Permits (Compliance Schedule Policy, State Water Board Resolution No. 2008-0025). The Compliance Schedule Policy states, "Under section 301(b)(1)(C) of the Clean Water Act, not later than July 1, 1977, National Pollutant Discharge Elimination System (NPDES) permits must include effluent limits as stringent as necessary to achieve water quality standards." The Compliance Schedule Policy also states "The State Water Board recognizes that a compliance schedule may be appropriate, in some cases, when a discharger must implement actions to comply with a more stringent permit limitation, such as designing and constructing facilities or implementing new or significantly expanded programs and securing financing, if necessary, to comply with permit limitations implementing new, revised, or newly interpreted water quality objectives or criteria in water quality standards."	

Action Comment Response No. Taken - Provide an update on the progress the Regional Board staff Burbank WRP Effluent Temperature (°F) have made on the 2020 triennial review temperature project. In the absence of revising the TO to contain the current temperature limit, the City requests that the Regional Board staff provide an update on the progress made on the 2020 triennial review temperature project and the following: - Extend the compliance schedule from 8 years to 10 years The Discharger submitted an application per the City's original request. At a minimum, the Fact Sheet requesting inclusion of a compliance schedule in should acknowledge that the City requested 10 years based the new Order since effluent data suggests the on the City's experience completing similar studies and, if discharge will not be able to meet the new needed, capital improvements to the BWRP. temperature effluent limitation. The Compliance - Revise section 3.5.9 of the Fact Sheet (Environmental Schedule Policy authorizes the Los Angeles Justice and Advancing Racial Equity) to evaluate the potential Water Board to develop a time schedule for the impacts of increased treatment controls for temperature in Discharger to comply with more stringent permit terms of: 1) increased costs to our community (including limitations that implement newly interpreted water historically disadvantaged communities); and 2) quality objectives. The proposed Compliance environmental impacts (e.g., higher energy usage and Schedule includes a temperature study to better associated increased levels of GHGs, air pollution, and understand temperature ranges that are climate change impacts). protective of beneficial uses and to identify necessary treatment controls. Although the Discharger requested a 10-year compliance schedule, the tentative Order contains an 8-year compliance schedule. consistent with the 8-year compliance schedule afforded to the Los Angeles Glendale and the D.C. Tillman WRPs, the two other inland water reclamation plants in the Los Angeles River watershed, in the NPDES permits adopted during the December 8, 2022 Board meeting. Eight years is reasonable because the Discharger has the advantage of observing comparable efforts

being undertaken by others in the San Gabriel River Watershed and the Santa Clara River

No.	Comment	Response	Action Taken
		Watershed. The City of Los Angeles has also already initiated development of a work plan that will include a temperature study for the Los Angeles River Watershed, so the Discharger also has the opportunity to collaborate with the City of Los Angeles since both agencies have an interest in how temperature impacts the Los Angeles River.	
		It is premature to anticipate the outcome of the Discharger's study before the work plan has been submitted and before the study has been conducted because there is not enough information available to determine if a site-specific objective is appropriate for reaches in the LA River impacted by this discharge and there is also not enough information available to determine whether additional treatment controls are needed or how much those controls would cost. This information will be collected by the Discharger through completing the milestones in the Compliance Schedule, so there is not yet enough information available to include a finding in the Fact Sheet regarding costs and environmental impacts of treatment controls.	
		The receiving water limitation for temperature in section 5.1.1 is also still relevant to protect the receiving water temperature from being altered above the natural temperature. Even at 80°F, the discharge could increase the temperature of the receiving water more than 5°F, depending on the receiving water temperature and flows of both the receiving water and the effluent.	

No.	Comment	Response	Action Taken
		However, the Los Angeles Water Board will consider modifying the receiving water limitation for temperature only if the Discharger demonstrates to the satisfaction of the Los Angeles Water Board that an alteration of the receiving water temperature will not adversely impact the beneficial uses.	
		Finally, the Basin Plan is an adopted regulation which includes water quality objectives such as this one for temperature. California Water Code Section 13241 requires the Los Angeles Water Board to consider factors such as beneficial use and economic considerations when establishing a water quality objective. These factors were in fact considered during the comprehensive update of the Basin Plan in 1994.	

Comment Letter dated August 30, 2023, from Los Angeles WaterKeeper and Heal the Bay

No.	Comment	Response	Action Taken
LH1	The Tentative Permit authorizes discharges of up to 12.5 million gallons per day ("MGD") of treated wastewater from the Burbank Water Reclamation Plant ("Burbank Plant") into the Los Angeles River ("LA River"). When combining the Tentative Permit with the authorized discharges of the three other POTWs comprising the North Outfall Sewer System, the permits collectively authorize discharges of up to 562.5 MGD, which in practice results in an average daily discharge of 216.7 MGD of treated wastewater directly into the LA River and the Pacific Ocean. This amount of authorized discharge alone represents 7.6% of California's total annual urban	Although the City of Burbank Department of Public Works is authorized to discharge the design flow of 12.5 MGD from its Burbank WRP, the facility currently receives considerably less influent and consequently discharges much less wastewater than the permitted rate. During a joint inspection conducted by Los Angeles Water Board and State Water Board, Division of Drinking Water (DDW) staff on August 17, 2023, the observed influent flow was 6.1 MGD, the amount discharged to Burbank Western Channel was 2.68 MGD, and the amount	None necessary.

No.	Comment	Response	Action Taken
	water demand. When considering the North Outfall Sewer System with the recent approval of a new permit for the Joint Water Pollution Control Plant ("JWPCP"), which authorizes up to 400 MGD of daily discharges and as high as 675 MGD during wet weather, collectively POTW permits in the region authorize discharges of treated wastewater representing over 13% of all urban water demand statewide.	recycled was 3.38 MGD. Burbank's Department of Water and Power distributes tertiary-treated effluent for beneficial reuse under WDRs/ Water Recycling Requirements (WRRs) Order No. R4-2016-0144. On May 16, 2017, the City of Burbank submitted a wastewater change petition to the State Water Board, Division of Water Rights (DWR), in accordance with California Water Code (CWC) Section 1211, to attain approval to reduce the amount of water discharged to Burbank Western Channel and increase the amount of water that it recycles. As stated in section 3.3.11 of the Fact Sheet, the State Water Board's Division of Water Rights approved the City of Burbank's wastewater change petition and authorized the quantity of discharge of treated wastewater from the Burbank WRP to the Burbank Western Channel to be reduced by a maximum monthly rate of up to 2.97 mgd, for a total annual reduction of 1,610 acre-feet per year (afy), from January 1 to December 31 of each year. This reduction is in addition to the 647 afy flow reduction authorized in a 1993 order approving an earlier wastewater change petition. To further the City's recycled water program, on January 10, 2022, the City of Burbank's Department of Water and Power submitted a supplemental Title 22 Engineering report to DDW and received comments from DDW on April 27, 2022. City staff indicated that they expect to submit a response to DDW in September 2023. The City is taking action to increase the amount of tertiary-treated effluent that it recycles while also complying with flow-related requirements by continuing to discharge effluent from the Facility to maintain the beneficial uses of	

No.	Comment	Response	Action Taken
		the receiving water The recycled water the City produces and plans to reuse in the future will help decrease the amount of imported drinking water used for irrigation purposes.	
LH2	As with the previous permits, Regional Board staff has failed to consider whether the discharges authorized under the Tentative Permit for the Burbank Plant constitute a waste or unreasonable use of water. By failing to analyze whether allowing 12.5 MGD of discharges into the LA River is wasteful, the Regional Board declines to exercise its authority (in close coordination with the State Board) to prevent waste and unreasonable use pursuant to the California Constitution and the Water Code.	The California Second District Court of Appeal recently affirmed that neither the California Constitution nor the Water Code impose a duty on a Regional Board issuing an NPDES permit to a POTW to take actions related to preventing waste or unreasonable use of water. The Court stated that "[w]astewater discharge permits center on water quality" and "the [relevant] statute does not mention waste or unreasonable use of water." The Los Angeles Water Board strongly encourages water recycling, water conservation, and use of stormwater and dry-weather urban runoff, consistent with the Water Quality Control Policy for Recycled Water (Recycled Water Policy) State Water Board Resolution No. 2017-0012 and LA Water Board R18-004 that have adopted. The current permit requires the Discharger to evaluate the feasibility of recycling, conservation, and/or alternative disposal methods for wastewater, and/or capture and treatment of dry weather urban runoff and stormwater. The Tentative Order carries over this requirement in section 4.3. Recycled water discharged from the Burbank WRP provides habitat along the Los Angeles River and maintains flow in the river to support other beneficial uses, such as warm freshwater habitat (WARM), water contact recreation (REC-1), non-contact water recreation (REC-2), and groundwater recharge (GWR), to name a few. Section 4.7 of the Fact Sheet of the Tentative Order also briefly discusses the	None necessary.

No.	Comment	Response	Action Taken
		Discharger's future plans for reusing final effluent from the Burbank WRP. Burbank hopes to deliver up to 440 acre feet of recycled water for landscape irrigation and industrial use, to 32 new customers listed in Table 9-3 of the Title 22 Engineering Report.	
LH3	Along with the Hyperion Water Reclamation Plant ("Hyperion"), the Donald C. Tillman Water Reclamation Plant ("Tillman"), and the Los Angeles-Glendale Water Reclamation Plant ("LA-Glendale"), the Burbank Plant operates as part of the North Outfall Sewer System (also referred to in the Tentative Permit as the "Hyperion Treatment System"), an interconnected system between several wastewater treatment plants that discharge treated water into the Pacific Ocean and LA River. At issue in the Tentative Permits is the authorized discharge of up to 562.5 MGD, which in practice results in an average daily discharge of 216.7 MGD of treated wastewater directly into the LA River and the Pacific Ocean, amounting to nearly 80 billion gallons per year.	Only the Burbank WRP Tentative Order is being considered for renewal during the October 19, 2023, Board meeting and the average daily flow discharged to the receiving water in 2022 was 2.49 MGD. The Hyperion permit was adopted on February 23, 2023 and the LAG WRP and DCT WRP permits were adopted on December 8, 2022. Only the authorized discharge of 12.5 MGD from the Burbank WRP is at issue in this tentative permit.	None necessary.
LH4	Importing large volumes of water has been necessary because local water resources in Los Angeles—such as groundwater, stormwater, and reclaimed wastewater—have failed to meet local demand. Historically, as surface water and water imports become less available during droughts, California's average urban reliance on groundwater increases from forty percent to sixty percent. But during the height of the most recent drought, the City of Los Angeles could only meet a small portion of its demand with local groundwater resources.	The effluent quality from the Burbank WRP meets the definition of disinfected tertiary recycled water in Title 22 of the California Code of Regulations. This quality of water may be used for various non-potable applications and the Discharger is currently using recycled water for many of those uses. The Burbank WRP does not currently have the processes in place to use its recycled water for indirect potable reuse to recharge the groundwater basins. It would take significant planning and resources to upgrade the Burbank WRP to produce water of a quality	None necessary.

No.	Comment	Response	Action Taken
	These dynamics place in stark context the volumes of water being discharged by the plants at issue here. Every year, hundreds of billions of gallons of treated water in the Los Angeles region are being discharged into receiving waters instead of being reused. The North Outfall Sewer System expends significant money and energy cleaning huge volumes of water to then discharge the treated water into the ocean.	appropriate for groundwater recharge. To ensure the Discharger continues to assess how to increase its local water supplies, as a requirement of the tentative Order, the Permittee will continue to investigate the feasibility of recycling, conservation, and/or alternative disposal methods for wastewater, and/or beneficial use of stormwater and dry-weather urban runoff. The Permittee is required to submit an update to this feasibility investigation as part of the submittal of the Report of Waste Discharge (ROWD) for the next permit renewal.	
LH5	Instead of discharging treated water into the ocean after just one use, the Los Angeles region could use it to recharge its groundwater basins. But for the most part, our region is not yet taking advantage of sustainable recharge strategies, despite laudable goals in this area.	Treated effluent from the Burbank WRP cannot be used to recharge local groundwater basins because it is tertiary-treated wastewater and does not meet the requirements for groundwater recharge. The Discharger would need to build additional infrastructure to further treat the wastewater and to inject or percolate the water into the groundwater basin. In addition, the wastewater discharge helps maintain beneficial uses of the receiving water and the Discharger would need to seek approval to divert any of this water through the 1211 petition process.	None necessary.
LH6	The refusal of the Water Boards to evaluate the cumulative discharge of water from the North Outfall Sewer System equivalent to 7.6% of the entire state's urban water demand (and over 13% of statewide urban water demand when considering the JWPCP), in Southern California's current context of water scarcity, is simply bad public policy. Additionally, the analysis of whether any discharges from the Burbank Plant is wasteful or unreasonable would be instrumental in identifying the necessary threshold for	NPDES permits regulate the discharge of pollutants to a water of the United States and do not govern instream flows. As the Second District Court of Appeals stated, "The Regional Board's purpose in granting wastewater discharge permits is to determine how much treated wastewater a POTW safely may discharge, not whether the POTW could put the treated wastewater to better use." (Los Angeles Waterkeeper v. State Water Resources	None necessary.

No.	Comment	Response	Action Taken
	minimum flows in the LA River to protect beneficial uses, particularly ecological health. Because POTW discharges from the Burbank Plant, Tillman, and LA-Glendale are the main sources of dry weather flows in the LA River, an analysis of waste and unreasonable use in the Tentative Permit inherently would include consideration of beneficial uses in the LA River and the necessary minimum flows to maintain such uses.	Control Bd. (2023) 92 Cal.App.5th 230, 272, review denied (Aug. 23, 2023)). The State Water Board and the Los Angeles Water Board, in cooperation with local municipalities, are wrapping up the Los Angeles River Flows Project to better evaluate the cumulative impacts of potential flow reductions. The Southern California Coastal Water Research Project is leading the project to evaluate flows and to establish a framework to develop flow criteria. That effort will inform future decisions regulating flows. This study was initiated, in part, in response to the State Water Board's order on Water Code 1211 petitions that considered a reduction in flow to the LA River due to proposed changes in wastewater treatment plant discharge or the use of treated wastewater. Additional studies and monitoring may also be required to determine the appropriate minimum flows.	