Response No.	Comment Date	Commenter	Comments	Responses
1.1	11-21-23	Orange County Permittees	The TSO Amendment's Requirements section characterizes actions proposed to be ordered under the TSO. The Requirements section does not, however, align with the description of actions in Attachment C, thereby causing ambiguity as the TSO Amendment's requirements. The Permittees request that the TSO Amendment be modified so that the Requirements section and Attachment C clearly track each other. For example, Attachment C does not include the timeline and process for Regional Water Board approval of the Task 5a quantification methodology.	Attachment C summarizes and indicates the status of tasks in Order 2019-0050 as amended by Order 2023-0063. It is not a substitute for reading the requirements of the Order. As a result, the language between the requirements and Attachment C will not match. A footnote has been added to Attachment C to make explicit that the Order controls in the event of any conflict.
1.2	11-21-23	Orange County Permittees	Throughout the TSO Amendment, the term "fecal coliform densities" is used. The Permittees request this be revised to concentration-based units of colony-forming units (CFU) or most probable number (MPN) per 100 milliliters, as used in the State's Bacteria Provisions, and for loading determinations to be in number of organisms.	The term density is appropriate and is used by USEPA in 2012 criteria recommendations. https://www.epa.gov/sites/default/files/2015-10/documents/rwqc2012.pdf
1.3	11-21-23	Orange County Permittees	For Task 5a, the Permittees request that the description of the task be modified in the Findings and Requirements section of the TSO Amendment to match Attachment C to be clear that the requirement is to quantify reductions, not develop a study design (Findings) or complete a technical/scientific study (Requirements). The second sentence of both the Findings and Requirements state that the purpose of the task is to quantify reductions, but the inclusion of different requirements in the first sentence of each section could create confusion as to the required deliverable for the task.	Finding 5.a. and Provision 19.a. have been modified to clarify the purpose of the deliverables and the requirements for the deliverables.
1.4	11-21-23	Orange In the Findings, the Permittees also request that the second sentence remove the requirement to quantify reductions achieved by "those structural controls that are in operation in the Newport Ray watershed, including its freshwater tributaries" and		Finding 5.a. has been modified to limit the scope of structural treatment controls whose reductions in fecal coliform bacteria will be quantified.
1.5	Orange Additionally, the names of the five locations to be evaluated vary slightly between		the three sections. The Permittees request consistency in naming and that "Backbay Drive Drain Diversion" be changed to "Back Bay Drive Drain Diversion" to avoid	Provision 19.a. has been modified so that the names of locations are consistent with Finding 5.a. and Task 5.a. in Attachment C.

1.6	11-21-23	Orange County Permittees	Permittees request that the Requirement to include operations and maintenance plans in the methodology be changed to submittal of the operating permits from Orange County Sanitation District for the structural controls. The operating permits describe how the structural controls are to be operated and will provide the information needed to support evaluation of the proposed methodology for quantifying reductions.	Provision 19.a.i. has been modified to allow acceptance of "approved equivalent documents".
1.7	11-21-23	Orange County Permittees	On page 2, please modify Finding 5a as follows: a. Task 5a requires submittal of a methodology to quantify reductions in fecal coliform bacteria loadings from the following five study design for evaluation of structural source control projects at five specified locations. The study must quantify reductions in fecal coliform bacteria densities achieved by those structural controls that are in operation in the Newport Bay watershed, including its freshwater tributaries, during the term of this Amendment. These structural controls include, but are not limited to: 1. Santa Ana-Delhi Channel Diversion & Trash Capture System 2. Peters Canyon Channel Water Capture and Reuse Pipeline 3. IRWD San Joaquin Marsh and Wildlife Sanctuary 4. Back Bay Drive Drain Diversion 5. Newport Dunes Catch Basin Plugs	See Response 1.3.
1.8	Orange County Permittees The evaluation complete the technical/scientific study quantification in accordance with a methodology that has been approved by the Executive Officer. The evaluation study must quantify reductions in fecal indicator bacteria concentrations or loadings-densities, measured in colony-forming units per 100 milliliters deciliter (CFU/100 mL) and CFU (or number of fecal indicator bacteria), respectively, that may be achieved by the following structural controls: Santa Ana-Delhi Channel Diversion & Trash Capture System Project, Peters Canyon Channel Water Capture and Reuse Pipeline Diversion, IRWD's San Joaquin Marsh and Wildlife Sanctuary, Back Bay Drive Drain diversion, and the Newport Dunes catch basins drain plugs.		On page 4, please modify the Task 5a Requirements as follows: a. Task 5a: Structural Control Evaluation: The Permittees must complete the technical/scientific study quantification in accordance with a methodology that has been approved by the Executive Officer. The evaluation study must quantify reductions in fecal indicator bacteria concentrations or loadings-densities, measured in colony-forming units per 100 milliliters deciliter (CFU/100 mL) and CFU (or number of fecal indicator bacteria), respectively, that may be achieved by the following structural controls: Santa Ana-Delhi Channel Diversion & Trash Capture System Project, Peters Canyon Channel Water Capture and Reuse Pipeline Diversion, IRWD's San Joaquin Marsh and Wildlife Sanctuary, Back Bay Drive Drain diversion, and the Newport Dunes catch	See Response 1.3 and Response 1.6.

			i. The Permittees must submit a proposed quantification methodology no later than 60 days after the approval of Order No. R8-2023-0063. The methodology must include operations and maintenance plans the operational permits from Orange County Sanitation District (if available) for the structural controls with diversions to the sanitary sewer system.	
1.9	11-21-23	Orange County Permittees	Permittees request that the language in the Requirements be modified to match the language in the Findings and Attachment C by removing the requirement to "carry out a program to identify and control sources of fecal indicator bacteria in the Newport Bay Watershed pursuant to the Orange County MS4 Permit." The Permittees request that the language be modified to "conduct targeted source identification in the Back Bay Drive Drain and lower Santa Ana-Delhi Channel (south of Warner Avenue) subwatersheds." Previous work done for the TMDL and the TSO identified the likely sources of fecal indicator bacteria. Building on this work, Task 5b is a targeted source identification for specific areas that can be completed during the term of the TSO Amendment.	The introductory Language in Provision 19.b. is explanatory language that indicates how the responsibility for identifying and controlling sources of bacteria relates to the broader requirements under the federal regulations and the Orange County MS4 Permit, as re-issued or amended. These broader requirements will be enforced under the Orange County MS4 Permit, not the TSO. This language reminds the reader that there are requirements in the Orange County MS4 Permit, that relate to the TSO, that must also be met.
1.10	Dermittees 5b.i. be modified from "improve their information on the storm drains and sanitary		term "local jurisdictions" in the Requirements and Attachment C be changed to "sanitary sewer agencies" to provide more specificity as to the coordination requirements. Additionally, the Permittees request that the Requirements for Task 5b.i. be modified from "improve their information on the storm drains and sanitary sewer systems and identify likely sources of pathogens in discharges from MS4s" to match the Attachment C language "to confirm information on the storm drain and	The term "local jurisdictions", in the context of storm drains and sanitary sewers, is appropriately specific. It acknowledges that the operators of both systems will be contributing to improving information. The requested substitution of the term "improve" with "confirm" would allow the Permittees to confirm information they already possess, even if it is incomplete, and still comply. The broader term, "improve", better reflects the desired outcome of Task 5.b. Attachment C has been modified for consistency.
1.11	11-21-23	Orange County Permittees	The Permittees also request that both the Requirements and Attachment C be modified to clarify that "up to" three stages of progressive source investigation monitoring will be conducted rather than a "minimum of". It is possible that the source will be identified in fewer than three stages of monitoring, and the Permittees can potentially proceed to abatement of the source without additional monitoring. Given the time frame for the TSO Amendment, it will not be possible to conduct more than three stages of monitoring.	Provision 19.b.iv. has been replaced with a more general requirement that focuses on the purpose. Instead of prescribing specific methods, it requires that Permittees use methods of tracking and controlling work that allow them to objectively demonstrate that their investigation and control of

				sources of fecal indicator bacteria to their MS4s and Newport Bay are effective
1.12	11-21-23	Orange County Permittees	Permittees appreciate that further discussion on the Task 3 study design might be needed per the process outlined under Task 5b in the Requirements. However, given the short time frame for completing the targeted source investigations in Task 5b, the Permittees will need to begin the investigations shortly after approval of the TSO Amendment. As a result, it would not be possible to amend the study design and complete the source investigations during the term of the TSO Amendment. The Permittees request that the process for modifying the study design be moved to Task 7. With this change, any needed modifications to the study design can be implemented for the source identification studies to be completed during implementation of the Pollution Prevention Plan (PPP) while not delaying completion of the targeted source investigations during the TSO Amendment.	Task 5.b. effectively modifies Task 3 by emphasizing that Task 3 must be effective and be subject to adaptive management (e.g., the iterative process) accordingly. Simply completing Task 5.b., without regard to its effectiveness, is not a best management practice. The requirements of Task 5.b. give the Executive Officer more oversight authority to evaluate the effectiveness of the work and direct changes.
1.13	Orange County Permittees Orange County Permittees Orange County Permittees With the Orange County MS4 Permit, controllable MS4 sources that are unauthorized non- stormwater discharges under 40 CFR section 122.26(b)(2) (e.g., illicit discharges) and under the Orange County MS4 Permit as re-issued or amended, will be effectively prohibited. Controllable MS4 sources that are comprise of stormwater and authorized non-stormwater discharges will be controlled according to the conditions of the Orange County MS4 Permit, as revised or reissued, and as specified in this TSO. i. The Permittees must coordinate with local jurisdictions-sanitary sewer agencies to improve their confirm the information on the storm drains and sanitary sewer systems and identify likely sources of pathogens in discharges from MS4s.		b. Task 5b: Targeted Source Identification The Permittees must conduct targeted source identifications in two locations earry out a program to identify and control sources of fecal indicator bacteria in the Newport Bay watershed pursuant to the Orange County MS4 Permit. In accordance with the Orange County MS4 Permit, controllable MS4 sources that are unauthorized non- stormwater discharges under 40 CFR section 122.26(b)(2) (e.g., illicit discharges) and under the Orange County MS4 Permit as re-issued or amended, will be effectively prohibited. Controllable MS4 sources that are comprised of stormwater and authorized non-stormwater discharges will be controlled according to the conditions of the Orange County MS4 Permit, as revised or reissued, and as specified in this TSO. i. The Permittees must coordinate with local jurisdictions-sanitary sewer agencies to improve their confirm the information on the storm drains and sanitary	See Responses 1.9, 1.10, and 1.11.

			ii. The Permittees must complete an investigation of sources of fecal indicator bacteria in the Back Bay Drive Drain and lower Santa Ana-Delhi Channel (south of Warner Avenue) sub-watersheds. iii. The investigation must be carried out according to the methods in the approved Source Investigation Study under Task 3a of the TSO. The Study is subject to modifications under the direction of the Executive Officer, according to the process described below. iv. The Permittees must conduct a minimum of up to three stages of progressive source investigation monitoring. Within each stage, the Permittees must conduct at least three rounds of repeat sampling events at a minimum of three locations.	
1.14	11-21-23	Orange County Permittees	Move 19.b.vii on page 6 to Task 7.	See Response 1.12.
1.15	11-21-23	Orange County Permittees	1. Coordination with local jurisdictions sanitary sewer agencies to confirm information on the storm drain and sanitary sewer systems. 2. Evaluate the Back Bay Drive Drain and lower Santa Ana-Delhi Channel (south of Warner Avenue) sub- watersheds, from downstream to upstream, to identify potential sources of fecal indicator bacteria. 3. Conduct a minimum of up to three stages of progressive source investigation monitoring. Within each stage, conduct at least three rounds of repeat sampling events at a minimum of 3 locations.	See Response 1.10 and Response 1.11.
1.16	11-21-23	Orange County Permittees	The Requirements discussion of Task 7 requires a source investigation study of the San Diego Creek sub-watershed "using an improved source identification study design." This requirement is inconsistent with the discussion in Task 5b that outlines a process for the Regional Water Board to require a modification to the study design. Because this process has not yet been initiated, Task 7 should not require an improved study design, but rather include the language from Task 5b to outline the process for determining if an improved study design is needed for the source investigation in the San Diego Creek sub-watershed.	The process for developing an improved study design is incorporated into the process for reviewing and approving the PPP. Afterwards, changes to the approved PPP are expected to occur through an adaptive management process in the PPP. The process for modifications under the direction of the Executive Officer under Task 5.b. is not needed.
1.17	11-21-23	Orange County Permittees	Permittees also request that Attachment C be revised to be consistent with the Requirements section by requiring the revised PPP to include a study that "quantifies reductions in fecal indicator bacteria" rather than "an evaluation of the efficacy of structural controls."	Task 7 in Attachment C has been modified as requested.

1.18	11-21-23	Orange County Permittees	The Requirements section requires the revised PPP to incorporate the results of Task 5a and Task 5b. However, Tasks 5a and 5b will not be completed by the time the revised PPP is required to be submitted. The Permittees request that this requirement be removed.	Provision 21.f. does not require the incorporation of the results of Tasks 5.a. and 5.b. It requires their incorporation in general. This includes their processes and, if available, useful information gained from their implementation.
1.19	11-21-23	Orange County Permittees	Finding 4a indicates that the Task 3 study did not include the source identification and tracking for San Diego Creek and its tributaries and suggests that this information can be gathered during the duration of the TSO amendment. However, the investigation of San Diego Creek and its tributaries will be conducted as part of implementation of the PPP and may be initiated during the TSO Amendment but will not be completed. Therefore, this finding should be clarified to align with the description of the work to be done in San Diego Creek as outlined in Task 7. This finding also notes that the work will be done in accordance with an improved study design. As noted above, the process outlined in the TSO Amendment would need to be completed prior to determining that a revised study design is needed.	Finding 4.a. has been modified to clarify that additional source information for the Newport Bay watershed in general will be obtained during the term of the TSO Amendment. This information-collection effort is not specific to San Diego Creek.
1.20	11-21-23	Orange County Permittees	On page 2, please modify Finding 4a as follows: a. Permittees submitted a Source Identification Report in compliance with Task 3b of the TSO. However, additional information is necessary to further characterize sources of fecal coliform in Newport Bay and associated watersheds,. For example, the study did not include complete such as completing additional source identification and tracking for the San Diego Creek and its tributaries. This information can be gathered during the duration of an extension and amendment of the TSO as part of the implementation of a revised Pollution Prevention Plan, subject to improvements in the study design. Additional information can be obtained as part of the implementation of an amended Pollution Prevention Plan.	Finding 4 explains the specific benefits of approving an extension and amendment of Order R8-2019-0050. The specific mechanisms for realizing these benefits are in the Requirements. These mechanisms are not limited to the Pollution Prevention Plan as implied by the requested changes. Finding 4 is accurate as written.
On page 7, please modify Requirement as follows: Orange 1.21 11-21-23 Orange a. The revised PPP must initiate indicator bacteria in the San Diego Coledentification study design. b. The revised PPP must include indicator bacteria loading densities the		County	On page 7, please modify Requirement 21-Task 7: Pollution Prevention Plan (PPP) as follows: a. The revised PPP must initiate investigations that identify sources of fecal indicator bacteria in the San Diego Creek sub-watershed using an improved source identification study design.	We disagree that these changes are necessary. See Response 1.16

			c. If requested by the Executive Officer, Permittees must provide additional information for the revised PPP by the deadline specified in the request. d. The Executive Officer may approve the revised PPP subject to conditions. e. Permittees must fully implement their programs and projects to attain the fecal coliform WLAs for REC1 according to the approved PPP and the Executive Officer's conditions. f. The PPP must incorporate the Structural Control Evaluation (Task 5a) and Targeted Source Investigation (Task 5b).	
1.22	11-21-23	Orange County Permittees	Add the following from Task 5b to the Task 7 Requirements on page 7: i. If the Executive Officer determines that the methods for the investigation are ineffective, the Executive Officer may direct the Permittees to revise the Source Investigation Study by a written notice. Subsequently, the Permittees must submit a revised Source Investigation Study plan that conforms with the directive and the deadline specified in the Executive Officer's notice. a. The Executive Officer may approve the revised Source Investigation Study plan subject to any new or revised terms and conditions. b. If requested by the Executive Officer in writing, Permittees must provide additional information for the revised Source Investigation Study plan by the deadline specified in the request. c. The Permittees must implement the revised Source Investigation Study plan upon approval by the Executive Officer.	We disagree that these changes are necessary. See Response 1.16.
1.23	11-21-23	Orange County Permittees	Modify Task 7 in Attachment C on page 14 as follows: Submit for Santa Ana Water Board approval a revision of the PPP that was submitted on August 7, 2023, to address all comments in the Santa Ana Water Board letter dated September 13, 2023. The revised PPP must also include initiation of a source investigation study of the San Diego Creek sub-watershed and an evaluation of thea quantification of reductions in fecal indicator bacteria from efficacy of structural source controls in the Big Canyon Habitat Restoration and Water Quality Improvement Project.	Task 7 in Attachment C has been modified as requested.
1.24	11-21-23	Orange County Permittees	The descriptions of Task 8 differ between the Requirements and Attachment C as to the scope of the task (communications plan vs. schedule and participant list for technical staff meetings), the responsible parties for completing the tasks	Attachment C is a summary and is not a substitute for reading the Requirements. See Response 1.1.

			(Permittees vs. Permittees in conjunction with Santa Ana Water Board staff), and the scope of the discussions (developing a revised TMDL and progress on the TSO tasks vs. facilitating and implementing the TSO tasks). The Permittees request that Regional Water Board staff clarify the TSO Amendment to provide consistency between the two sections. Recommendations: Revise the language describing Task 8 on page 7 of the Requirements section and page 14 of Attachment C to be consistent.	
1.25	11-21-23	Orange County Permittees	Requirement 23, Compliance Determination, appears to expand compliance points for the TMDL to include freshwater bodies outside of the Bay itself. The Fecal Coliform TMDL was developed for Newport Bay due to the beneficial use impairments for the Upper and Lower Newport Bay. While monitoring has historically been conducted at several freshwater drainage stations to characterize freshwater discharges to Newport Bay, compliance determinations have always been reported based on the Bay monitoring locations. Shifting the requirements to determine compliance at freshwater monitoring locations would represent a significant disparity in the approach to assessing compliance that has not been required or discussed previously with the Permittees. Furthermore, the indicators and methods of determining compliance with the TMDL was discussed in detail during the Stakeholder Process, which did not include the use of freshwater monitoring locations to assess compliance. The expansion of the TMDL to freshwater that is suggested in Requirement 23 is inconsistent with the scope of the TMDL, which was developed to address impairments and meet water quality objectives in Newport Bay itself. If the Bay is attaining the WLAs which have been set equal to the water quality objectives, then the goal of the TMDL has been attained and the Permittees should be in compliance. A freshwater monitoring approach is also inconsistent with the Orange County MS4 permit. The permit clearly states that the WLAs are for Newport Bay itself, not the freshwater discharges to the Bay. This is distinct from other TMDLs in the permit that	Provision 23 has been modified to indicate that the results of monitoring in Newport Bay will be used to determine compliance with the WLAs for REC1. Freshwaters will continue to be monitored for the purpose of Targeted Source Identification in Task 5b.

	waterbodies to be assessed for compliance. The Orange County MS4 permit state that the compliance determination be "based on monitoring conducted at representative sampling locations within San Diego Creek and Newport Bay." However, the permit does not include reference to the other freshwater monitoring locations (Santa Ana- Delhi Channel and Big Canyon Wash). Moreover, while this provision indicates that monitoring data from San Diego Creek be considered, it fal far short of imposing TMDL WLAs on freshwater bodies draining into the Bay or requiring Permittees to comply with WLAs within these water bodies. Based on the above, the Permittees request that the Compliance Determination Requirement be modified to preserve consistency with the TMDL and MS4 permit and retain the exclusive use of monitoring locations located within Newport Bay. The Permittees also request that Finding 5f that discusses exceedances at the San		diazinon and chlorpyrifos TMDL. Compliance was not intended to be assessed outside the Bay, otherwise the permit would have included allocations specific to the waterbodies to be assessed for compliance. The Orange County MS4 permit states that the compliance determination be "based on monitoring conducted at representative sampling locations within San Diego Creek and Newport Bay." However, the permit does not include reference to the other freshwater monitoring locations (Santa Ana- Delhi Channel and Big Canyon Wash). Moreover, while this provision indicates that monitoring data from San Diego Creek be considered, it falls far short of imposing TMDL WLAs on freshwater bodies draining into the Bay or requiring Permittees to comply with WLAs within these water bodies. Based on the above, the Permittees request that the Compliance Determination Requirement be modified to preserve consistency with the TMDL and MS4 permit and retain the exclusive use of monitoring locations located within Newport Bay. The	
1.26	Orange On page 3, please delete Finding 5f		Finding 5.f. is factually correct and is necessary. Finding 5.f. justifies the need for the TSO.	
1.27	Orange County Permittees On page 7, please modify Requirement 23, Compliance Determination as follows: Compliance with the fecal coliform WLAs for REC1 must be demonstrated based on the Newport Bay locations prescribed in Table 6-1h of the Basin Plan and calculated for each monitored location in the Bay unless an alternative method is approved by the Executive Officer. Any sample results from additional monitoring performed by the Permittees beyond the requirements of this TSO at the monitoring locations in		Compliance with the fecal coliform WLAs for REC1 must be demonstrated based on the Newport Bay locations prescribed in Table 6-1h of the Basin Plan and calculated for each monitored location in the Bay unless an alternative method is approved by the Executive Officer. Any sample results from additional monitoring performed by	See Response 1.25
1.28	11-21-23	Orange County Permittees	The Permittees recommend that a new Finding be added to the TSO Amendment to recognize the progress towards achieving the WLAs and water quality objectives in Newport Bay. Recommendations: On page 4, please add the following finding:	The proposed finding makes a comparison that is not a comparison of equals. It compares one arbitrary year versus a ten-year average. This is not a statistically valid method of comparison and is not based on the standards in the Basin Plan. It is not appropriate that this TSO validate alternative methods of evaluating water quality that are not in

				Water quality conditions in Newport Bay have improved as demonstrated by indicators such as the reduction in AB411 period Beach Mile Days from 32.0 in 2000 to a ten-year average of 14.6, which is reported in the Orange County Health Care Agency's annual Ocean, Harbor and Bay Water Quality Report.	the Basin Plan, other water quality control plans, in waste discharge requirements, or otherwise have not been formally reviewed and approved.
2.	1	11-22-23	OCCK	In closing, we urge you to take control of this process by denying the one year extension and imposing financial penalties for noncompliance and to recover costs for extra staff time. This will send a clear message that the SARWQCB is going to enforce the Clean Water Act and stand up for the public.	A Time Schedule Order is an enforcement action that falls under the Santa Ana Water Board's discretion. The extension of the Order imposes processes and requirements that control the Permittees' efforts to attain the WLAs for REC1. It is not an abdication of control or of responsibility to enforce the Clean Water Act. The imposition of administrative civil liability would still require actions necessary to attain the WLAs; it would not increase the likelihood of the Permittees' success or of improving their levels of effort on its own. The extension of the TSO compels work towards attainment of the WLAs and is an exercise of enforcement discretion that is consistent with the statewide Enforcement Policy for progressive enforcement.
3.				We acknowledge and recognize that the City of Costa Mesa is a signatory to the County of Orange comment letter on the TSO.	

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD SANTA ANA REGION

DRAFTORDER R8-2023-0063

AMENDMENT TO TIME SCHEDULE ORDER R8-2019-0050

TO COMPLY WITH THE REQUIREMENTS PRESCRIBED IN ORDER R8-2009-0030 AS AMENDED BY ORDER R8-2010-0062 (NPDES PERMIT NUMBER CAS618030)

FINDINGS

The Santa Ana Regional Water Quality Control Board (Santa Ana Water Board) hereby finds as follows:

- 1. On May 22, 2009, the Santa Ana Water Board adopted Waste Discharge Requirements and National Pollutant Discharge Elimination System (NPDES) Permit (Order R8-2009-0030) for owners or operators of municipal separate storm sewer systems (MS4s) within the County of Orange and incorporated cities therein (Orange County MS4 Permit). On October 29, 2010, the Orange County MS4 Permit was amended by Order R8-2010-0062. The Orange County MS4 Permit expired on May 22, 2014, but the permit was administratively extended and continues in effect until such time that a new permit is adopted by the Santa Ana Water Board. The total maximum daily loads (TMDLs) for Fecal Coliform in Newport Bay (Fecal Coliform TMDL) requirements were incorporated into the Orange County MS4 Permit.
- 2. On October 28, 2019, Permittees in the Newport Bay watershed submitted a written request for a Time Schedule Order to comply with the fecal coliform waste load allocations (WLAs) for Newport Bay.
- 3. On December 6, 2019, the Santa Ana Water Board adopted Time Schedule Order R8-2019-0050 (TSO) to comply with the fecal coliform WLAs in the Orange County MS4 Permit.
- 4. The TSO included a schedule of tasks with submission timeline for the Permittees to bring the waste discharge into compliance with the WLAs for fecal coliform in the Orange County MS4 Permit by December 6, 2023. The Permittees have completed Tasks 1-4 as summarized in Attachment C to the TSO.
 - a. Permittees submitted a Source Identification Report in compliance with Task 3b of the TSO. However, additional information is necessary to further characterize

sources of fecal coliform in Newport Bay and associated watersheds. For example, the study did not include complete source identification and tracking for the San Diego Creek and its tributaries. Additional This information on sources in Newport Bay and its watersheds can be gathered during the duration of an extension and amendment of the TSO, subject to improvements in the study design. Additional information can be obtained as part of the implementation of an improved Pollution Prevention Plan.

- b. The Permittees have installed several primarily dry weather structural controls that are summarized in Attachment C. These structural controls must be operated and maintained according to 40 CFR 122.41(e).
- 5. This TSO Amendment adds tasks 5 through 8 to the list of required tasks in Attachment C of the TSO. The status of the earlier TSO tasks in Attachment C and the additional tasks are outlined in a revised Attachment C to this Amendment.
 - a. Task 5a requires the Permittees to quantify submittal of a study for evaluation of structural source control projects at five specified locations. The study must quantify reductions in fecal coliform bacteria densities achieved by those certain structural controls that are in operation in the Newport Bay watershed, including its freshwater tributaries, during the term of this Amendment. The Permittees must submit a study design for evaluation of structural source control projects at five specified locations. These location of these structural control projects are as follows include, but not limited to:
 - 1) Santa Ana-Delhi Channel Diversion & Trash Capture System
 - 2) Peters Canyon Channel Water Capture and Reuse Pipeline
 - Irvine Ranch Water District (IRWD) San Joaquin Marsh and Wildlife Sanctuary
 - 4) Back Bbay Drive Drain Diversion
 - 5) Newport Dunes Catch Basin Plugs
 - b. Task 5b requires targeted source identification at specific locations during the term of the TSO.
 - c. Task 6 requires coordination with wastewater agencies to update spill emergency response plans and share maps and resources to reduce the volume of Sanitary Sewer Overflows (SSOs) reaching the receiving waters.
 - d. Task 7 requires revision of the Pollution Prevention Plan (PPP) to address Water Board staff's comments provided in its September 13, 2023 letter. Task 4 of Attachment C to the TSO required preparation of a PPP containing the elements listed in Water Code section 13263.3(d)(2) subject to the approval of the

Executive Officer.

- e. On August 7, 2023, the Permittees submitted a PPP for the Executive Officer's review and approval. On September 13, 2023, Water Board staff provided comments on the PPP. The comment letter stated "revisions to the PPP are necessary so that the PPP satisfies the requirements of Water Code section 13263.3(d)(2)(B), (C), (D), (E), (H), and (I)." The PPP must also include initiation of a source identification study in the San Diego Creek sub-watershed and the initiation of an evaluation of the Big Canyon Habitat Restoration and Water Quality Improvement Project. The evaluation will assess the efficacy of structural source controls in the Big Canyon Wash for reducing fecal coliform and other fecal indicator bacteria. Implementation of these additional tasks is required upon approval by the Executive Officer of the Santa Ana Water Board. Task 8 requires coordination with Water Board staff to develop a schedule of technical staff meetings, and a list of participants ("Communication Plan"). These meetings will determine progress and facilitate the development and implementation of the tasks identified in Attachment C to this Amendment.
- f. Finding 8 of the TSO states, "Compliance with the WLAs specified in the Permit can be demonstrated by meeting the Water Contact Recreation (REC1) fecal coliform objectives at sampling locations within the San Diego Creek and Newport Bay." Data submitted as part of the Newport Bay Fecal Coliform TMDL Annual Data and Progress Reports (TMDL Annual Report) for years 2020-2023 indicate exceedances of the fecal coliform objectives at the San Diego Creek monitoring station.
- g. This Amendment modifies Attachment B to the TSO to correct an error in the coordinates for BNB26 and to be consistent with Table 6-1h and Figure 6-1 of the Santa Ana River Basin Water Quality Control Plan ("Basin Plan"), which includes four additional freshwater monitoring locations:
 - 1) San Diego Creek at Campus Drive
 - 2) Santa Ana-Delhi Channel
 - 3) Big Canyon Wash, and
 - 4) Back Bbay Drive Drain
- 6. This Amendment to the TSO is being issued to enforce the Orange County MS4 Permit (a permit for existing MS4s). Therefore, issuance of this Amendment is exempt from the provisions of the California Environmental Quality Act (Public Resources Code section 21100 et seq.) pursuant to Water Code section 13389, and sections 15301 and 15321(a)(2) of Title 14 of the California Code of Regulations.
- 7. If the Permittees comply with the requirements of the TSO, as amended, it is not the

Santa Ana Water Board's intention to take any enforcement action for violations of the fecal coliform WLAs applicable to the Newport Bay as set forth in the Orange County MS4 Permit.

- 8. The Santa Ana Water Board may revise reopen the TSO at its discretion or at the request of any of the identified Permittees, if warranted. Lack of progress towards compliance with the applicable WLAs addressed by the TSO shall be a reasonable cause for the Santa Ana Water Board to modify the terms and conditions of this TSO.
- The Executive Officer has notified interested agencies and persons of their intent to approve this TSO Amendment and has provided them with an opportunity to submit their written comments.

REQUIREMENTS

IT IS HEREBY ORDERED, pursuant to Water Code sections 13300, 13383, and 13385, subdivision (j)(3), that Order R8-2019-0050 is amended as follows:

1. Provision 1 is replaced with the following:

The Permittees must demonstrate compliance with the Orange County MS4 Permit fecal coliform WLAs for REC1 as soon as possible but no later than December 6, 2024. The compliance determination shall be based on the method described in Provision 223-below.

- 2. Attachment B of the TSO is amended in its entirety as shown in Attachment B to this Amendment. The amendments add fecal indicator monitoring locations at the San Diego Creek at Campus Drive, Santa Ana-Delhi Channel, Big Canyon Wash, and Back Bbay Drive Drain, as shown in Table 6-1h and in Figure 6-1 of the Basin Plan. The amendments also correct the coordinates for monitoring location BNB26. The changes are shown in the amended Attachment B to this Amendment.
- 3. Attachment C of the TSO is amended in its entirety as shown in Attachment C to this Amendment.
- 4. The following provisions are added to the TSO:
 - 17. The Permittees must carry out tasks in accordance with a PPP that has been approved by the Executive Officer of the Santa Ana Water Board.
 - 18. Changes to any submittal that has been approved by the Executive Officer for this TSO is are not allowed except for non-substantive grammatical or technical corrections. Any other changes must be approved by the Executive Officer.
 - 19. The Permittees must carry out the subtasks in Task 5 according to the following:

a. Task 5a: Structural Control Evaluation:

The Permittees must reliably complete the technical/scientific study in accordance with a methodology that has been approved by the Executive Officer. The study must quantify reductions in fecal indicator bacteria densities, measured in colony-forming units per deciliter (CFU/100 mL) that may be achieved by the following structural controls: Santa Ana-Delhi Channel Diversion & Trash Capture Project, Peters Canyon Water Capture and Reuse Pipeline Diversion, IRWD's San Joaquin Marsh and Wildlife Sanctuary, Back Bbay Drive Drain Diversion, and the Newport Dunes catch basins drain plugs. The work must be completed in accordance with a quantification methodology that has been approved by the Executive Officer.

- i. The Permittees must submit a proposed quantification methodology no later than 60 days after the approval of Order No. R8-2023-0063. The methodology must include operations and maintenance plans or approved equivalent documents for the structural controls¹.
- Santa Ana Water Board staff will review the proposed quantification methodology and notify the Permittees if it is complete within 30 days of receipt.
- iii. If requested by the Executive Officer in writing, Permittees must provide additional information for the proposed methodology by the deadline specified in the request.
- iv. The Executive Officer may approve the methodology subject to conditions.
- v. The methodology must be implemented as approved by the Executive Officer.
- vi. The study must be completed, and a final report shall be submitted to the Executive Officer no later than 8 months after the approval of this Amendment.

b. Task 5b: Targeted Source Identification

The Permittees must carry out a program to identify and control sources of fecal indicator bacteria to the MS4 in the Newport Bay watershed pursuant to the Orange County MS4 Permit. Sources that are unauthorized non-stormwater discharges under 40 CFR section 122.26(b)(2) (e.g., illicit

¹ These plans will be used to control variability in operations and maintenance that may affect the facilities' performance and affect the reliability of the conclusions from the study.

discharges) and under the Orange County MS4 Permit as re-issued or amended, will be effectively prohibited. Sources that are comprised of stormwater and authorized non-stormwater discharges will be controlled according to the conditions of the Orange County MS4 Permit, as revised or reissued, and as specified in this TSO.

- i. The Permittees must coordinate with local jurisdictions to improve their information on the storm drains and sanitary sewer systems and identify likely sources of pathogens in discharges from MS4s. The Permittees must submit a report on the results of their coordination effort within 90 days of the issuance of Order No. R8-2023-0063.
- ii. The Permittees must complete an investigation of sources of fecal indicator bacteria in the Back Bbay Drive Drain and lower Santa Ana-Delhi Channel (south of Warner Avenue) sub-watersheds.
- iii. The investigation must be carried out according to the methods in the approved Source Investigation Study under Task 3a of the TSO. The Study is subject to modifications under the direction of the Executive Officer, according to the process described below.
- iv. The Permittees must use methods of tracking and controlling work that allow them to objectively demonstrate that their investigation and control of sources of fecal indicator bacteria to their MS4s and Newport Bay are effective. Conduct a minimum of three stages of progressive source investigation monitoring. Within each stage, the Permittees must conduct at least three rounds of repeat sampling events at a minimum of three locations.
- v. Other investigative tools may be used to evaluate potential source(s).

 Alternative tools may be used following approval by the Executive Officer.
- vi. The investigation must be completed, and a final report shall be submitted to the Executive Officer within 8 months of the issuance of Order R8-2023-0063.
- vii. If the Executive Officer determines that the methods for the investigation are ineffective, the Executive Officer may direct the Permittees to revise the Source Investigation Study by a written notice. Subsequently, the Permittees must submit a revised Source Investigation Study plan that conforms with the directive and the deadline specified in the Executive Officer's notice.
 - a) The Executive Officer may approve the revised Source Investigation Study plan subject to any new or revised terms and conditions.

- b) If requested by the Executive Officer in writing, Permittees must provide additional information for the revised Source Investigation Study plan by the deadline specified in the request.
- c) The Permittees must implement the revised Source Investigation Study plan upon approval by the Executive Officer.

20. Task 6: Coordination with Wastewater Agencies

The Permittees must coordinate with wastewater agencies to update spill emergency response plans and share maps and resources with wastewater agencies to reduce the volume of sewage from SSOs reaching the receiving waters. The Permittees must submit a report on the accomplishments and effectiveness of the coordination efforts within 120 days of approval of this Amendment to the TSO.

21. Task 7: Pollution Prevention Plan (PPP)

The Permittees must submit a revised PPP that is responsive to Santa Ana Water Board staff's comments in the letter dated September 13, 2023, no later than 150 days after the approval of this Amendment to the TSO.

- a. The revised PPP must initiate investigations that identify sources of fecal indicator bacteria in the San Diego Creek sub-watershed using an improved source identification study design.
- b. The revised PPP must include a study that quantifies reductions in fecal indicator bacteria densities that may be achieved by structural treatment controls in the Big Canyon Habitat Restoration and Water Quality Improvement Project.
- c. If requested in writing by the Executive Officer, Permittees must provide additional information for the revised PPP by the deadline specified in the request.
- d. The Executive Officer may approve the revised PPP subject to conditions.
- Permittees must fully implement their programs and projects to attain the fecal coliform WLAs for REC1 according to the approved PPP and the Executive Officer's conditions.
- f. The PPP must incorporate the Structural Control Evaluation (Task 5a) and Targeted Source Investigation (Task 5b).

22. Task 8: Communication Plan

The Permittees must develop a communication plan to coordinate work with Santa Ana Water Board staff on developing a revised TMDL for fecal indicator bacteria and associated pathogens in the Newport Bay, and to report progress on the Tasks required by this TSO. The communication plan must include a proposed schedule and participant list for technical meetings and must designate points of contact. The communication plan must be submitted to the Executive Officer no later than 30 days after approval of this Amendment to the TSO.

23. Compliance Determination

Compliance with the fecal coliform WLAs for REC1 must be demonstrated based on the locations in Newport Bay in Table 6-1h of the Basin Plan² and calculated for each monitored location unless an alternative method is approved by the Executive Officer. Any sample results from additional monitoring in Newport Bay, performed by the Permittees beyond the requirements of this TSO, must be included in the calculations. An alternative method must be developed according to the following process.

- Any request for approval of an alternative method to demonstrate compliance must be submitted to the Executive Officer within 60 days of approval of this Amendment to the TSO.
- b. A request must include a justification for the alternative method, an assessment of the factors that may affect the reliability of the alternative method, and the measures that will be taken to mitigate the influence of those factors. Justification for the alternative method must be based on Substantial Evidence³ that it provides the same, or better, level of protection for the REC1 beneficial use as the WLA's methods.
- c. If requested by the Executive Officer, Permittees must provide additional information for the proposed alternative method by the deadline specified in the request.
- d. The Executive Officer will subject the request to 30 days of public review prior to approving the alternative method.

² Pursuant to Monitoring and Reporting Plan R8-2009-0030, the Executive Officer may allow modifications to sampling locations.

³ "Substantial Evidence" means facts, reasonable assumptions predicated upon facts, and expert opinion supported by facts. Substantial evidence does not include argument, speculation, unsubstantiated opinion or narrative, evidence which is clearly inaccurate or erroneous, or evidence of social or economic impacts which do not contribute to, or are not caused by, physical impacts on the environment.

ADMINISTRATIVE REVIEW

Any person aggrieved by this action of the Santa Ana Water Board may petition the State Water Board for review in accordance with Water Code section 13320 and California Code of Regulations, title 23, section 2050 et seq. To be timely, the petition must be received by the State Water Board by 5:00 pm on the 30th day after the date of this Order; if the 30th day falls on a Saturday, Sunday or state holiday, the petition must be received by the State Water Board by 5:00 pm on the next business day. The law and regulations applicable to filing petitions are available on the State Water Board website (http://www.waterboards.ca.gov/public_notices/petitions/water_quality). Copies will also be provided upon request.

This Order is issued under the authority delegated to the Executive Officer by the Santa Ana Water Board in Resolution No. R8-2019-0056 and is effective upon signature.

	Date:
Jayne E. Joy, P.E.	
Executive Officer	

ATTACHMENT B

Monitoring stations in Upper and Lower Newport Bay (GPS coordinates were obtained from the OCHCA QAPP submitted to State Water Board for the AB411 beach monitoring program in 2018.)

Lower Newport Bay

Station ID	Latitude	Longitude	Name
BNB01	33.60578	-117.886	Park Avenue
BNB02	33.60871	-117.89053	Onyx Avenue
BNB03	33.60833	-117.89493	Ruby Avenue
BNB0S	33.61259	-117.90758	Bayshore Beach
BNB07	33.61495	-117.91957	Via Genoa Beach
BNB09	33.62082	-117.93664	43rd Street Beach
BNB10	33.61834	-117.93426	38th Street Beach
BNB11	33.61614	-117.93092	33rd Street Channel
BNB12	33.6152	-117.92689	Rhine Channel
BNB14	33.60898	-117.92571	19th Street Beach
BNB15	33.60838	-117.92035	15th Street Beach
BNB17	33.60637	-117.91278	10th Street Beach
BNB18	33.60556	-117.9037	Alvarado/Bay Isle Beach
BNB20	33.60419	-117.89332	Sapphire Avenue Beach

BNB21	33.60415	-117.88799	Abalone Avenue Beach
BNB22	33.59875	-117.88257	N Street Beach
BNB23	33.59489	-117.87813	Rocky Point
BNB29	33.61327	-117.89902	Promontory Point Channel
			Ondinion
BNB31	33.60639	-117.89939	Garnet Avenue Beach
BNB32	33.60976	-117.91425	Lido Yacht Club Beach
BNB33	33.60226	-117.8828	Bayside Drive Beach
BNB34	33.60576	-117.88877	Grand Canal
BNB35	33.6203	-117.92867	Newport Blvd. Bridge

Upper Newport Bay

Station ID	Latitude	Longitude	Name
BNB24E	33.61595	-117.89215	Newport Dunes East
BNB24M	33.61515	-117.89376	Newport Dunes Middle
BNB24N	33.61786	-117.89194	Newport Dunes North

BNB24W	33.6153	-117.89459	Newport Dunes West
BNB25	33.63078	-117.88566	Vaughn's Launch
BNB26	33.96982 33.63982	-117.88685 -117.88685	Ski Zone
BNB28	33.62455	-117.8933	North Star Beach
BNB30	33.61711	-117.90402	De Anza Launch

Newport Bay Tributary Stations

Station ID	<u>Latitude</u>	<u>Longitude</u>	<u>Name</u>
CNBCD	<u>33.6553</u>	<u>-117.84535</u>	San Diego Creek at Campus Drive
CNBSA	33.65292	<u>-117.88366</u>	Santa Ana- Delhi Channel
<u>CNBBC</u>	33.63164	<u>-117.88487</u>	Big Canyon Wash
CNBND	<u>33.61725</u>	<u>-117.89054</u>	Back Bay Drive Drain

Attachment C4

Summary of Tasks Required by TSO R8-2019-0050, as amended by Order R8-2023-0063, and status of all Tasks from the date of adoption of Order R8-2023-0063

Task	Description	Due Date(s)	<u>Status</u>
1	Complete ongoing and approved structural BMP projects		
1a	Hoag Drain and Arches diversion	15 months after TSO effective date	Construction completed in March 2021. Operation is pending permit from the Orange County Sanitation District.
1b	Newport Bay bilge pump installation	18 months after TSO effective date	Completed in April 2021 and is operational.
1c	Newport Dunes diversion revision	24 months after TSO effective date	Completed in August 2021 and operating under a temporary permit from OCSD.
2	Develop new structural BMP projects		
2a	East Costa Mesa Channel diversion	6 months after TSO effective date	<u>Completed on</u> <u>6/5/2020</u>
2b	Santa Isabel Channel diversion	6 months after TSO effective date	Completed on 6/5/2020 and submitted as part of draft

⁴ Attachment C is a summary of the tasks described in the body of the TSO. In the event of any conflict between the TSO and Attachment C, the TSO controls.

Task	Description	Due Date(s)	<u>Status</u>
			PPP.
2c	Additional BMP projects for Newport Dunes	6 months after TSO effective date	Completed on 6/5/2020 and submitted as part of draft PPP
3	Evaluate human sources of fecal contamination		<u>Submitted</u>
			<u>Completed on</u> <u>4/6/2020</u>
3а	Source investigation study design	4 months after TSO effective date	<u>Last revised</u> on <u>7/28/2021</u>
			<u>Approved on</u> <u>3/3/2022</u>
3b	Source investigation final report	12 months after Santa Ana Water Board approval of	Completed on 2/7/2023 Revised on 8/7/2023
		study design	<u>61172020</u>
4	Pollution Prevention Plan (PPP)		
	 A PPP shall include, at a minimum, all of the following: a. An analysis of fecal coliform that the MS4 Permittees discharge into Upper and Lower Newport Bay, a description of sources of fecal coliform, and a comprehensive review of the activities known to the discharger that result in the generation and discharge of fecal coliform. b. An analysis of the potential for pollution prevention to reduce the discharge of fecal coliform, including the application of innovative and alternative technologies, and any adverse environmental impacts resulting from the use of 	18 months after Santa Ana Water Board's approval of Study Design	PPP submitted for approval on 8/7/2023

Task	Description	Due Date(s)	<u>Status</u>
	those methods. c. A detailed description of the tasks and time schedules required to investigate and implement various elements of pollution prevention techniques.		
	 d. A statement of the discharger's pollution prevention goals and strategies, including priorities for short-term and long-term action. 		
	 e. A description of the discharger's existing pollution prevention methods. 		
	f. An analysis, to the extent feasible, of the relative costs and benefits of the possible pollution prevention activities, including but not limited to Tasks 1 and 2 above. This includes estimates of numerical pollutant load reduction in receiving waters and defensible estimates of project costs.		
	g. A specification of, and rationale for, the technically feasible and economically practicable pollution prevention measures selected by the discharger for implementation, including but not limited to Tasks 1 and 2 above.		
<u>5</u>	Short Term Study Modifications: Source Control Evaluations and Targeted Source Identifications		

Task	Description	Due Date(s)	<u>Status</u>
	Evaluate Source Controls: Quantify reductions in fecal coliform bacteria densities achieved by the following structural controls: Santa Ana-Delhi Channel Diversion and Trash Capture System, Peters Canyon Channel Water Capture and Reuse Pipeline, IRWD San Joaquin Marsh and Wildlife Sanctuary, Back Bay Drive Drain Diversion, and Newport Dunes Catch Basin Plugs.	Submit the quantification methodology within 60 days of approval of this Amendment to the TSO	
<u>5a</u>		Complete the technical/scientific study and submit a final report no later than 8 months of approval of this Amendment to the TSO	
<u>5b</u>	Targeted Source Identifications: Conduct targeted source identification in the Back Bay Drive Drain and lower Santa Ana – Delhi Channel (south of Warner Avenue) subwatersheds. Targeted source identifications must be conducted in accordance with the Task 3a study design and shall consist of the following activities as a minimum: 1. Coordination with local jurisdictions to improve information on the storm drain and sanitary sewer systems. 2. Evaluate the Back Bay Drive Drain and lower Santa Ana-Delhi Channel subwatersheds, from downstream to upstream, to identify potential sources of fecal indicator bacteria.	Report on improvement effort within 90 days of approval of this Amendment to the TSO Complete evaluations and submit a report within 8 months of approval of this Amendment to the TSO.	
<u>6</u>	Coordinate with wastewater agencies to update spill emergency response plans and share maps and resources with wastewater agencies to reduce the volume of sewage from SSOs reaching the	Submit a report within 120 days after approval of this Amendment	

Task	Description	Due Date(s)	<u>Status</u>
	receiving waters.	to the TSO	
<u>7</u>	Submit for Santa Ana Water Board approval a revision of the PPP that was submitted on August 7, 2023, to address all comments in the Santa Ana Water Board letter dated September 13, 2023. The revised PPP must also include initiation of a source investigation study of the San Diego Creek sub-watershed and quantify reductions in fecal indicator bacteria densities achieved by structural source controls in the Big Canyon Habitat Restoration and Water Quality Improvement Project.	Silinmii revised	
8	Communication Plan: In conjunction with Santa Ana Water Board staff, the Permittees will develop a schedule and participant list for technical staff meetings to help facilitate development and implementation of Tasks 1-7.	Within 30 days of approval of this Amendment to the TSO	