

**California Regional Water Quality Control Board
Santa Ana Region**

Staff Report

May 31, 2019

Item: *8

Subject: Fiscal Years 2019-2022 Triennial Review and Work Plan of the Water Quality Control Plan for the Santa Ana River Basin



**REGIONAL WATER QUALITY CONTROL BOARD,
SANTA ANA REGION**

**Fiscal Years 2019-2022 Triennial Review and Work
Plan of the Water Quality Control Plan for the Santa
Ana River Basin**

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1. Introduction

The Santa Ana Region includes the upper and lower Santa Ana River watersheds, the San Jacinto River watershed, and several other small drainage areas. The Santa Ana Region covers parts of southwestern San Bernardino County, western Riverside County, and northwestern Orange County. The Water Quality Control Plan for the Santa Ana River Basin (Basin Plan) contains the basis for the Region's regulatory programs. Additionally, the Basin Plan includes water quality standards for surface and ground waters in the Santa Ana Region. The term "water quality standards," as used in the federal Clean Water Act (CWA), includes both the beneficial uses of specific waterbodies and the levels of quality that must be met and maintained to protect those uses. The Basin Plan includes an implementation plan describing the actions by the Santa Ana Regional Water Quality Control Board (Santa Ana Water Board), and others that are necessary to achieve and maintain the water quality standards.

The Porter-Cologne Water Quality Control Act (California Water Code section 13240) and the CWA both mandate the periodic review of basin plans and the water quality standards contained therein. Section 303(c)(1) of the CWA requires that a state review its water quality standards and, as appropriate, modify and adopt standards at least once every three years, hence the term "triennial review." The purpose of the triennial review is to identify and prioritize possible issues and/or revisions to water quality standards and other aspects of the Basin Plan to be addressed over the triennial review cycle. Examples of such issues or revisions include, but are not limited to, additions of and revisions to designated uses, water quality criteria, antidegradation policies, and adopted implementation procedures or other general policies. Public and intergovernmental coordination in identifying possible revisions to water quality standards and the Basin Plan is a key requirement of the triennial review.

The Santa Ana Water Board conducted the last triennial review of the Basin Plan in 2015. The 2019 triennial review process initiated in the last quarter of 2018.

This staff report summarizes basin planning priorities identified by Santa Ana Water Board staff and recommendations by stakeholders for consideration during the current 2019 triennial review period.

2. Triennial Review Process and Public Participation

The primary purpose of a triennial review process is to review water quality standards and solicit public comment on issues the Santa Ana Water Board should address through a Basin Plan amendment (BPA) process. The triennial review process assists the Santa Ana Water Board in identifying the most important issues and allows staff to prioritize those issues as resources allow. The triennial review process is on-going, meaning that at the end of one three-year review cycle, the review process starts again.

Due to resource limitations and the complexity of the BPA process, the triennial review is generally limited to identifying high-priority basin planning issues to be addressed. The triennial review process produces a prioritized list of Basin Plan issues but does not necessarily identify the method or the strategy staff will take in addressing them.

Each triennial review begins with the Santa Ana Water Board reviewing water quality standards (and other aspects) of the Basin Plan to identify potential Basin Plan issues that can be addressed through a BPA. After potential issues have been identified, they are placed on a

priority list of Basin Plan issues to be investigated further and addressed during the triennial review process. The issues are listed in the priority order in which they should be investigated or and addressed over the next three State fiscal years (FY), 2019-20, 2020-21, and 2021-22. The proposed priorities and schedules also reflect work that is already underway in response to previous triennial reviews and implementation commitments (for the review/adoption of water quality objectives) in established Total Maximum Daily Loads (TMDLs).

Furthermore, the priority list of issues estimates the staff time required to investigate and amend the Basin Plan. As a result, the priority list is also a work plan for the triennial review period of July 2019 through June 2022.

Public participation and stakeholder involvement are an integral part of this process. On February 14, 2019, the Santa Ana Water Board sent out an electronic notification for a Public Workshop to hundreds of interested parties informing them of the start of the 2019 Triennial Review process and upcoming public workshop. The notification also solicited comments for proposed water quality topics that stakeholders wanted addressed and comments on the draft Basin Plan issues themselves and their proposed priority. Additionally, on February 21, 2019, the Santa Ana Water Board sent out a comment solicitation notice to interested California Native American tribes and tribal members to participate in the triennial review process. On March 13, 2019, the Santa Ana Water Board held a public workshop in Riverside to present the draft priority list of issues and receive oral comments. Santa Ana Water Board staff received several written comments prior to the workshop and several oral comments at the workshop.

Additionally, on April 29, 2019, the Santa Ana Water Board sent out a Notice of Public Hearing for Adoption of the Triennial Review of the Basin Plan. The purposes of this public hearing are to review the Santa Ana Water Board staff's final proposed Triennial Review Priority List and Work Plan (Priority List); to get public comments and suggestions on issues the staff should consider for future BPAs and the priority order for them; and for the Santa Ana Water Board to consider adoption of the Priority List. During the hearing, the Board will decide whether or not to adopt the Priority List. The proposed final Priority List of issues reflects consideration of comments made at the public workshop and written comments submitted to Santa Ana Water Board staff.

The final phase of the triennial review process is to develop projects addressing these issues (if appropriate) and adopt any resulting changes to the Basin Plan during the remaining three-year review cycle. It is important to point out that placing an issue on the Priority List only requires staff to consider the need for a BPA; it does not necessarily mean a revision of the Basin Plan will be made.

The specific tasks associated with the Santa Ana Water Board's triennial review process are summarized below:

- Conduct an internal review of the Basin Plan and past Triennial Review issues;
- Prepare a draft list of potential high priority Basin Plan issues;
- Conduct a public workshop on a draft list of issues;
- Revise the priority list of issues and work plan based on input from stakeholder and staff;
- Prepare a staff report that includes responses to comments, a revised priority list and work plan, discussion of issues;

- Conduct a public hearing to adopt a resolution to approve the Priority List and Work Plan; and
- Submit the Triennial Review Administrative Record to the United States Environmental Protection Agency.

3. Basin Planning Resources

The Santa Ana Water Board's current and assumed future budget for the Basin Planning program (Non-TMDL) activities supports two staff positions (2.0 Personnel Years – PY) per fiscal year. Carrying out the activities identified during the triennial review process is only one of the responsibilities of those staff whose time comprises the 2.0 PYs. This level of funding is the same as it has been for the last several years. At the current funding level, the number of issues that can be addressed during the triennial review cycle is limited as a result; not all issues could possibly be addressed by staff during the three years.

In addition, the proposed Priority List identifies TMDL program resources and continued work on newly adopted or revised TMDLs. The TMDL program funding budget is separate from the Basin Planning activities. The current and assumed future budget for TMDL program activities is 6 PYs per fiscal year. However, Santa Ana Water Board staff has other responsibilities and ongoing projects not explicitly related to Basin Plan topics; for this reason, the total assumed TMDL PYs may not exclusively be allocated to TMDL-related Basin Plan issues.

The proposed Priority List and Work Plan reflects the staff's best estimate of the resources and PYs needed to investigate an issue or complete a project. Schedules for addressing the projects identified will depend upon the complexity of the issue and available resources. Previous experience suggests that unexpected complexity and/or controversy can significantly affect both the schedule and resources required. This may necessitate completion of work on some of these issues in the next triennial review cycle. Historically, stakeholder support of work on triennial review issues of particular concern to the stakeholders has enabled the Santa Ana Water Board to enhance the priority of that work and to facilitate its completion.

4. Project Prioritization and Work Plan

The FYs 2019-2022 Priority List and Work Plan provides prioritization informed by multiple factors, including Santa Ana Water Board direction and/or key priority; State Water Resources Control Board (State Water Board) guidance; stakeholder input; region-wide applicability; and current staff engagement and anticipated project completion.

To effectively use available resources, staff has prioritized thirty-one (31) Basin Plan issues as part of the triennial review process. The prioritization of issues ensures that resources are spent on issues and projects most important to the Santa Ana Water Board and stakeholders. As noted earlier, proposed priorities and schedules also reflect work that is already underway or identified as a priority in previous triennial reviews.

The proposed Basin Plan issues are separated into two lists – TMDL-related issues and Non-TMDL-related issues. The reason for this separation is to make a distinction between program activity types and funding sources.

Consistent with past practice, the proposed Priority List and Work Plan shown in Attachment 1 to the tentative resolution also includes work to revise the descriptive text, graphics, and

organization of the Basin Plan and to incorporate all approved amendments. This work is essential to assure that the Basin Plan remains current and as accessible as possible.

The triennial review priority list serves as the three-year work plan for Basin Plan issues.

5. Basin Plan Amendment Process

As mentioned previously, not all issues identified in the Priority List will lead to a BPA. The decision to proceed with a proposed BPA is only made after the Santa Ana Water Board reviews the technical and legal considerations associated with an issue and determines that development of a BPA is appropriate. Research for BPA can include scientific literature review; and/or water quality monitoring; or individual studies conducted by staff, contractor, and stakeholders.

The basin planning process can require six months to more than a year to account for public input, environmental documentation, peer review, and Santa Ana Water Board adoption. Subsequent State and possibly federal approvals are required following the Santa Ana Water Board action. Typically, amendments must be approved by the Regional Water Boards, State Water Board, the California Office of Administrative Law (OAL), and in most cases, the U.S. Environmental Protection Agency (USEPA).

6. National 304 (a) Recommended Criteria Consideration

A revision to the 40 Code of Federal Regulations section 131.20(a) Rule, published on August 21, 2015, requires that states and Tribes consider adopting new National 304 (a) recommended criteria (criteria established since May 30, 2000). If states do not adopt new or revised criteria for parameters for which USEPA has published new or revised criteria, then the state shall provide an explanation when it submits the results of its triennial review to the USEPA Regional Administrator.

Listed below are recent 304 (a) criteria and the status of Santa Ana Water Board's potential adoption of those criteria.

Aquatic Life

Acrolein (2009): This substance is used to control plant and algal growth in irrigation canals. The substance is not commonly used in this Region. A Statewide water quality objective would be more efficient than a region-specific objective.

Ammonia (2013): Staff is continually researching and considering adoption in the future. The Santa Ana Water Board currently has ammonia objectives for waters in the Region. Tables are presented in the Basin Plan, which identifies the un-ionized ammonia and total ammonia objective for various temperatures and pH. Also, there are site-specific ammonia objectives for the Santa Ana River and certain tributaries. These objectives may need to be updated.

Carbaryl (2012): This chemical is chiefly used as an insecticide under the brand name Sevin. A Statewide water quality objective would be more efficient than a region-specific objective.

Copper (2007): Huntington Harbour and Newport Bay are Region waters listed on the 2017 303 (d) list as impaired for copper. USEPA established copper TMDLs in 2002 for Newport Bay and San Diego Creek. Those copper TMDLs are currently being revised for Newport Bay based on new data and additional assessments. To develop a regionwide water quality objective would

take resources that the Region needs for other actions. A Statewide water quality objective would be more efficient.

Diazinon (2005): The concentrations of diazinon have become greatly reduced in the Region. In the 2017 303 (d) list, diazinon was delisted as a pollutant in Newport Bay. Considering the reduced concentrations of diazinon in the Region's waters, it would be more efficient for State Water Board staff to develop a Statewide objective.

Nonylphenol (2005): This substance is used in detergents, paints, pesticides, personal care products, and plastics and is moderately bioaccumulative, not readily biodegradable, and an endocrine disruptor in humans and wildlife. The Santa Ana Water Board does not have the resources to adopt these criteria. Therefore, a Statewide water quality standard would be more efficient.

Tributyltin (2004): This substance is a biocide used in boat bottom paints to inhibit the growth of microorganisms. When introduced into an aquatic environment, tributyltin poisons barnacles, algae, and other organisms and biomagnifies in predators higher up in the food web. A Statewide water quality objective would be more efficient than region-specific objectives.

Cadmium: State Water Board staff is working on a Statewide cadmium water quality objective, which will be adopted for this Region.

Human Health

Human Health Criteria Updates for 94 pollutants (2015): In this update, USEPA revised 94 of the existing human health criteria to reflect the latest scientific information, including updated exposure factors, bioaccumulation factors, and toxicity factors. The criteria included updates on benzene, ethylbenzene, toluene, chlordane, and dieldrin. Considering the resources required to adopt these criteria, a State Water Board effort would be more efficient.

Pathogen and Pathogen Indicators (2012): This criteria have been adopted Statewide on March 22, 2019, by the State Water Board for all the regions.

7. Conclusion and Staff Recommendation

The proposed Priority List and Work Plan shows the identified issues, their proposed priority and schedule, and the resources expected to be necessary to address them. A detailed discussion of each of these issues is provided in Attachment B of this report. A summary of the comments received for the March 22, 2019 Public Workshop and Santa Ana Water Board staff's responses are shown in Attachment C. The original written comments are also included in Attachment C or can be found at the Regional Board's website at http://www.waterboards.ca.gov/santaana/water_issues/programs/basin_plan/index.shtml.

Comments received after the March 22, 2019 Public Workshop and in response to the request for comments in the Notice of Public Hearing of April 29, 2019 will be available on the Santa Ana Water Board's website by June 6, 2019.

In adopting the 2019-2022 Priority List and Work Plan, Santa Ana Water Board staff will use its and possibly stakeholders' resources on investigating the priority list of issues leading to possible Basin Plan Amendments.

Santa Ana Water Board staff recommends adopting Resolution R8-2019-0055 and approving the 2019-2022 Triennial Review Priority List and Work Plan.

The following attachments are part of this report:

Attachment A – Tentative Order No. R8-2019-0055

Attachment 1 to Tentative Order No. R8-2019-0055: FYs 2019-2022 Proposed
Triennial Review Priority List and Work Plan

Attachment B – Discussion of Issues

Attachment C –Response to Comments

These documents have also been posted at

http://www.waterboards.ca.gov/santaana/water_issues/programs/basin_plan/index.shtml

**State of California
California Regional Water Quality Control Board
Santa Ana Region**

Order No. R8-2019-0055

for

Fiscal Years (FYs) 2019-2022 Triennial Review Priority List and Work Plan

WHEREAS:

1. Section 303(c) of the Clean Water Act requires that states hold public hearing for review of water quality standards (beneficial uses, water quality objectives, and antidegradation policy) at least once every three years.
2. California Water Code (CWC) section 13240 requires that water quality control plans be periodically reviewed. Water quality control plans specify the State's water quality standards.
3. The California Regional Water Quality Control Board, Santa Ana Region (Santa Ana Water Board) adopted the Water Quality Control Plan for the Santa Ana River Basin (Basin Plan) on March 11, 1994 (effective January 24, 1995). The Santa Ana Water board has amended the Basin Plan several times to incorporate Total Maximum Daily Loads, revise management strategies for nitrogen and total dissolved solids add language authorizing the inclusion of compliance schedules in National Pollutants Discharge Elimination System permits, revise recreation standards for inland surface waters, and make other changes.
4. In accordance with the federal and State requirements for review of water quality standards and basin plans, Santa Ana Water Board staff prepared a preliminary list and work plan of issues to be addressed in the following three years (FYs 2019-2022). The issues on this list were prioritized, by fiscal year, to reflect water quality concerns, ongoing work and commitments, and the availability of needed resources.
5. Copies of the proposed priority list were distributed to all interested parties for their review and comment.
6. On March 13, 2019 Santa Ana Water Board staff conducted a public workshop with interested stakeholders to consider the preliminary proposed priority list of Basin Plan issues to be addressed in FYs 2019-2022. Notice of this meeting was given to all interested parties. Staff revised the preliminary list based on the comments received and prepared written responses to the comments.
7. The Santa Ana Water Board conducted a public hearing on June 14, 2019 to consider the adoption of the proposed FYs 2019-2022 Triennial Review Priority List and Work Plan. Notice of the public hearing was given to all interested parties and published in accordance with federal and state requirements.
8. The Santa Ana Water Board considered all testimony at the public hearing regarding the proposed FYs 2019-2022 Triennial Review Priority List and Work Plan.

THEREFORE, BE IT RESOLVED THAT:

1. The Santa Ana Water Board hereby approves and adopts the FYs 2019-2022 Triennial Review Priority List and Work Plan shown in Attachment 1 to this Resolution.
2. Areas of the Basin Plan not identified as needing investigation and possible revision are reaffirmed as adequate at the present time. However, adoption of the FYs 2019-2022 Triennial Review Priority List and Work Plan does not preclude the Santa Ana Water Board from considering other Basin Plan amendments related to matters that are not on the list.
3. The current Basin Plan remains in effect until the Santa Ana Water Board adopts subsequent amendments and the appropriate state and federal agencies review and approve those amendments.

I, Hope A. Smythe, Executive Officer, do hereby certify that the foregoing is a full, true and correct copy of a resolution adopted by the California Regional Water Quality Control, Santa Ana Region, on June 14, 2019.

Hope A. Smythe
Executive Officer

Draft FYs 2019-2022 Basin Plan Triennial Review Priority List and Work Plan

Issue No.	Issue Description Total Maximum Daily Load (TMDL) Related Issue	Estimated TMDL Staff Personnel Years (PYs) ¹			
		FY ² 19/20	FY 20/21	FY 21/22	Total PYs
1.	Adopt and review the Basin Plan Amendment (BPA) for the Lake Elsinore and Canyon Lake Nutrient TMDLs.	0.8	0.4	0.4	1.6
2.	Adopt the revised Copper TMDLs and non-TMDL Metals Action Plans for zinc, mercury, arsenic, and chromium for Newport Bay.	1.0	0.75	0.75	2.5
3.	Consider/develop selenium site-specific objectives (SSOs) for freshwater within the Newport Bay watershed.	0.2	0.2	0.2	0.6
4.	Revise the Fecal Coliform TMDLs for Newport Bay: <ul style="list-style-type: none"> • Separate the recreational (REC) and shell harvesting (SHEL) sections of the TMDL into two TMDLs; • Work with stakeholders to revise the REC TMDL and adopt enterococcus as the fecal indicator bacteria. 	0.35	0.25	0.25	0.85
5.	Review and revise the nutrient objective for San Diego Creek (part of a nutrient TMDL).	0.25	0.25	0.25	0.75
6.	Review and revise or remove the TMDL for sediment in the Newport Bay/San Diego Creek watershed or replace the TMDL with an alternative regulatory approach.	0.1	0.25	0.25	0.6
7.	Review and revise the Bacterial Indicator TMDLs for the Middle Santa Ana River Watershed.	0.2	0.4	0.4	1.0

¹ 1 PY = 2,080 hours

² FY = State Fiscal Year. Estimated PYs required for each fiscal year of the triennial review

Draft FYs 2019-2022 Basin Plan Triennial Review Priority List and Work Plan

Issue No.	Issue Description TMDL Related Issue	Estimated TMDL Staff Personnel Years (PYs)			
		FYs 19/20	FYs 20/21	FYs 21/22	Total PYs
8.	Review and revise the Big Bear Lake water quality standards. May include: <ul style="list-style-type: none"> • Revision of the total inorganic nitrogen (TIN) and total phosphorus numeric water quality objectives for Big Bear Lake; • Development of objectives for other indicators of impairment; • Development of biocriteria for Big Bear Lake; • Investigation of Sawmill Creek drainage, and possibly add to the TMDL. 	0.2	0.7	0.5	1.2
9.	Revise the SHEL Newport Bay TMDL. Develop a SHEL objective and incorporate into the TMDL.	--	0.2	0.3	0.5
10.	Revise the Newport Bay/San Diego Creek Organochlorine compounds TMDL. Consider this TMDL using different numeric objectives for rivers/streams and bays and estuaries by separating the Newport Bay marine system from the San Diego Creek/Peters Canyon Channel (watershed) freshwater system.	0.35	0.35	0.4	1.1
11.	Review and possibly develop TMDLs for 303 (d) waters with 2005, 2012 and 2019 TMDL due dates.	0.2	0.2	0.2	0.6
TMDL Triennial Review Total PYs		3.65	4.15	4.10	11.90

Draft FYs 2019-2022 Basin Plan Triennial Review Priority List and Work Plan

Issue No.	Issue Description Non-TMDL Related Issue	Estimated Staff Personnel Years (PYs). Bracketed resources from other sources			
		FYs 19/20	FYs 20/21	FYs 21/22	Total PYs
1.	Add REC1 (water contact recreation) bacteria objectives to be consistent with the State Water Resources Control Board's (State Water Board) adopted bacteria provision into the Basin Plan.	0.1	--	--	0.1
2.	Update the Nitrogen/Total Dissolved Solids (TDS) Salt Management Plan: <ul style="list-style-type: none"> a. Revision of the TDS and TIN wasteload allocations, including considering revisions to the Waste Load Allocation Model (WLAM); b. Adoption of the Salt and Nutrient Management Plan for the Upper Temescal Basin; c. Adoption of a maximum benefit program for the Elsinore Groundwater Management Zone; d. Consideration of the need for/nature of policy regarding TDS compliance during drought conditions; e. Amendment of the Basin Plan to revise the implementation program for Inland Empire Utilities Authority (IEUA)/Chino Basin Watermaster. 	1.0	0.6	0.6	2.2
3.	Complete a review of waters for which REC1 or REC1 and REC2 (non-contact water recreation) beneficial uses were de-designated via approved use attainability analyses (UAAs) to determine if the de-designations remain justified.	0.1	--	--	0.1
4.	Review septic system minimum lot size requirements. Investigate whether eliminating Region-wide minimum lot size requirements will result in a violation of nitrate objectives in groundwater. Consider update to description of current septic system regulations.	--	0.1	--	0.1

Draft FYs 2019-2022 Basin Plan Triennial Review Priority List and Work Plan

Issue No.	Issue Description Non-TMDL Related Issue	Estimated Staff Personnel Years (PYs). Bracketed resources from other sources			
		FYs 19/20	FYs 20/21	FYs 21/22	Total PYs
5.	Revise the Quail Valley On-Site Septic Tank-subsurface Disposal System Prohibition.	[0.5] ³	--	--	[0.5] ³
6.	For REC1 bacteria objectives consider the development of region-specific reference/natural sources exclusion policy, development of a limited REC1 use, and/or development of UAAs to remove REC1 for certain waters.	0.2	0.2	0.2	0.6
7.	Consider adopting new (2000) Clean Water Act section 304 (a) recommended criteria, which include: <ul style="list-style-type: none"> • Aquatic Life: acrolein, ammonia, cadmium, carbaryl, copper, diazinon, nonylphenol, selenium freshwater, tributyltin, and; • Human Health: Human Health Criteria Updates for 94 pollutants. 	0.1	0.1	0.1	0.3
8.	Consider revision of Prado Basin Management Zone boundary to include U.S. Geological Survey Gauge and Below Prado Dam Monitoring Station or change the Santa Ana River (SAR) Reach 2/Reach 3 boundaries to include the monitoring station in Reach 3.	--	0.1	--	0.1
9.	Consider/revise TDS objectives for Rattlesnake, Syphon, and Sand Canyon reservoirs based on use for storage of recycled water.	--	--	0.1	0.1
10.	Revise the Basin Plan to clarify the proper application of certain water quality objectives.	0.1	0.1	0.1	0.3

³ TMDL Resources

Draft FYs 2019-2022 Basin Plan Triennial Review Priority List and Work Plan

Issue No.	Issue Description Non-TMDL Related Issue	Estimated Staff Personnel Years (PYs). Bracketed resources from other sources			
		FYs 19/20	FYs 20/21	FYs 21/22	Total PYs
11.	<p>Consider development of Biostimulatory Substances Objective and Program to Implement Biological Integrity:</p> <ul style="list-style-type: none"> a. Participate with State Water Board staff to develop statewide objectives for biostimulatory substances and an implementation program for biological integrity; b. Incorporate the new objectives and program into the Basin Plan. Review/revise the language in the Basin Plan that relates to biostimulatory substances and biological degradation; c. Consider the development of numeric biological objectives for the Santa Ana Region. 	0.2	0.2	0.2	0.6
12.	<p>Add to the Basin Plan and designate appropriate beneficial uses and water quality objectives (if applicable):</p> <ul style="list-style-type: none"> a. List Rhine Channel separately from Lower Newport Bay; b. Consider changing the San Diego Creek reach designations; c. Add reach designations to Peters Canyon Wash; d. Consider waters tributary to Anaheim Bay and Huntington Beach Wetlands: Bolsa, Westminster, East Garden Grove Wintersburg, Huntington Beach, Talbert, and Anaheim Barber Channels. 	0.1	0.1	0.1	0.3

Draft FYs 2019-2022 Basin Plan Triennial Review Priority List and Work Plan

Issue No.	Issue Description Non-TMDL Related Issue	Estimated Staff Personnel Years (PYs). Bracketed resources from other sources			
		FYs 19/20	FYs 20/21	FYs 21/22	Total PYs
13.	Update the Basin Plan's Chapter 2 by adding currently approved Statewide plans and policies.	--	0.2	--	0.2
14.	<p>Update and revise the narrative Programs/Policies in the Basin Plan.</p> <ul style="list-style-type: none"> a. Update "Disposal of Hazardous and Nonhazardous Waste" in Chapter 5 to reflect loss of Solid Wastewater Quality Test (SWAT) program; b. Update Spills, Leaks, Investigations, and Cleanups (SLIC) Program Discussion; c. Update Animal Confinement Facilities (Dairies and Related Facilities) discussion in Chapter 5; d. Update Nonpoint Source (NPS) Program discussion in Chapter 5; e. Update narrative on efforts to remediate groundwater contamination from perchlorate, Underground Storage Tanks (USTs), and other sources in the region in Chapter 5; f. Update the Wetlands Section in Chapter 3 and discussion of the Santa Ana Water Board's 401 Certification process in Chapter 5. Include USEPA, State Board, CDFW, and USACE wetland and waters of the State regulatory measures. Update the discussion of the Region's treatment and mitigation wetlands. 	--	0.2	0.1	0.2
15.	Update and revise the Monitoring and Assessment Chapter 7 to include current regional activities, such as, an update of the Prado Basin monitoring.	--	0.1	0.1	0.1

Draft FYs 2019-2022 Basin Plan Triennial Review Priority List and Work Plan

Issue No.	Issue Description Non-TMDL Related Issue	Estimated Staff Personnel Years (PYs). Bracketed resources from other sources			
		FYs 19/20	FYs 20/21	FYs 21/22	Total PYs
16.	Consider updating Basin Plan maps. Add State Water Board and Santa Ana Water Board digital or other maps to the Basin Plan to show surface and groundwaters and the water quality standards that apply to them. Include related hydrology boundary and spatial data layers that reflect current data.	--	--	0.1	0.1
17.	Review chemical oxygen demand (COD) objectives for inland surface waters.	--	0.1	0.1	0.2
18.	Consider deletion or revision of established SSOs for copper, cadmium, and lead for the SAR and tributaries. Consider SSOs for aluminum, chlorine, and cyanide for the SAR and tributaries.	--	--	0.2	0.2
19.	Identify freshwaters that support early life stages of salmonids and adoption of pentachlorophenol (PCP) water quality objectives.	0.1	--	0.1	0.1
20.	Add adopted BPAs to the electronic Basin Plan.	0.1	--	0.1	0.3
Total Non-TMDL Triennial Review Total PYs		2.1	2.3	2.2	6.6⁴

⁴ Some percent of PYs from TMDL or other programs

**2019 TRIENNIAL REVIEW
DESCRIPTION OF PROPOSED ISSUES**

June 14, 2019

TMDL-Related Issues

Issue No. 1

**ADOPT AND REVIEW THE BASIN PLAN AMENDMENT (BPA) FOR THE LAKE
EL SINORE AND CANYON LAKE NUTRIENT TOTAL MAXIMUM DAILY LOADS.**

Lake Elsinore and Canyon Lake are identified in the Basin Plan as water quality limited, and both lakes are listed as impaired in accordance with Section 303(d) of the Clean Water Act (CWA). Impairment for these waterbodies is a result of excess nutrients, low dissolved oxygen and algae growth. In 2004, the Santa Ana Regional Water Quality (Santa Ana Water Board) adopted the Lake Elsinore and Canyon Lake Nutrient Total Maximum Daily Loads (TMDLs) to control the amount of nitrogen and phosphorus flowing into Lake Elsinore and Canyon Lake from the surrounding watershed.

The Santa Ana Water Board is required to review and revise the 2004 TMDLs for Lake Elsinore and Canyon Lake every three years; however, it has now been 15 years since the TMDLs were adopted, and staff has been working closely with the TMDL stakeholders to prepare a Technical Report for revising these TMDLs. There have been significant improvements in the water quality in both lakes due to the implementation of nutrient load reduction and sediment nutrient reduction projects by watershed stakeholders. However, additional nutrient load reductions are needed to ensure the beneficial uses are protected and excessive nutrient concentrations are further reduced.

On December 1, 2018, a Technical Report proposing revisions to the TMDLs was completed. The TMDL Technical Report analyzed new data collected over the last 15 years. Also, state-of-the-art computer simulation tools were used to develop more accurate and reliable water quality models for both lakes.

To date, staff has held a formal tribal consultation and a California Environmental Quality Act (CEQA) scoping meeting to discuss the revisions of the TMDLs. Prior to an adoption hearing of the revised TMDLs, Santa Ana Water Board staff held a public workshop to present the proposed revisions, tentative draft resolution, and BPA. Consideration for Santa Ana Water Board adoption is expected following the Peer Review. The Basin Planning activities for this triennial review cycle included the adoption/approval of the TMDLs and incorporation into the Basin Plan. This work will rely on TMDL resources.

Issue No. 2

**ADOPT THE REVISED COPPER TMDLS AND NON-TMDL METALS ACTION PLANS
FOR ZINC, MERCURY, ARSENIC, AND CHROMIUM FOR NEWPORT BAY.**

In 1998 and 2002, both the Upper and Lower Newport Bay were 303(d) listed for metals. In 2006, copper (Cu) was listed for both the Upper and Lower Newport Bay, and

the general metals categories were delisted for the Lower Bay. In 2010, both Upper and Lower Newport Bay remain listed for Cu; the Upper Newport Bay remained listed for the general category of metals.

In Newport Bay Cu exceeds the water quality standards, and the largest source is copper antifouling paints (AFPs) on boat hulls. Santa Ana Water Board staff has developed a draft revision to the Cu TMDL to reduce the amount of Cu released from boat hulls. In addition, other metals exceed sediment and fish tissue guidelines in Newport Bay. These metals include zinc (Zn) and mercury (Hg) in Lower Newport Bay; arsenic (As) and chromium (Cr) in the Upper and Lower Bay. Santa Ana Water Board staff is developing recommended Non-TMDL Action Plans (Action Plans) for these other metals.

To meet the water quality standards as stated in the draft Cu TMDLs, Cu discharges from paints (AFPs) on boat hulls must be reduced. Santa Ana Water Board staff and partners have been working with paint manufacturers and boatyards to provide an alternative non-toxic paint that is both viable and cost-effective. Staff has also been working to investigate potential funding options to assist with the conversion from Cu to non-toxic or less toxic paints.

Additionally, staff has been meeting and working with the major responsible parties, including the City of Newport Beach, the County of Orange, and Irvine Ranch Company. Currently, Santa Ana Water Board staff is working on revising the BPA and CEQA documents. Prior to an adoption hearing for the Cu TMDL, Santa Ana Water Board staff conducted two additional public workshops for 2019. The Basin Planning activities for this triennial review cycle will possibly be required to adopt the Cu TMDL and add to the Basin Plan. This work will rely on TMDL resources.

Issue No. 3

CONSIDER/DEVELOP SELENIUM SITE-SPECIFIC OBJECTIVES FOR FRESHWATER WITHIN THE NEWPORT BAY WATERSHED.

Selenium (Se) is a naturally occurring trace mineral found in geological formations of marine origin. Se readily bioaccumulates through the food chain, and at high levels, can cause adverse effects to aquatic life and wildlife. Although selenium is a mineral essential for reproductive health and immune system function in humans, fish, and wildlife, the margin between nutritionally optimal and detrimental amounts is very narrow. In aquatic ecosystems, selenium can bioaccumulate at concentrations that can impair reproduction in sensitive fish and bird species.

As part of the Selenium TMDL for the Newport Bay Watershed (Resolution No. R8-2017-0014), the determination was made that site-specific objectives (SSOs) for Se in freshwater should be adopted because Se is significantly affected by site-specific factors, and preliminary recommendations for those objectives have been made. Those recommendations are reflected as numeric targets in the revised Selenium TMDL. The TMDL has recently been approved by the State Office of Administrative Law (OAL) and

only needs United States Environmental Protection Agency's (USEPA) approval to be an approved BPA.

However, additional work is necessary to complete and refine the BPA to adopt the recommended Se SSOs. Santa Ana Water Board staff will continue to work with stakeholders and partners to develop the SSOs. This work will rely on TMDL resources.

Issue No. 4

REVISE THE FECAL COLIFORM TMDLS FOR NEWPORT BAY. REVISE THE RECREATIONAL (REC) AND SHELL HARVESTING (SHEL) BENEFICIAL USES SECTIONS OF THE TMDL INTO SEPARATE SECTIONS IN THE BASIN PLAN. ADOPT ENTEROCOCCUS AS THE FECAL INDICATOR BACTERIA.

The Basin Plan includes bacteria quality objectives for the water contact recreational use (REC1) of enclosed bays and estuaries based on fecal coliform. These fecal coliform objectives have been made obsolete by the USEPA (1986 and 2012 Water Quality Criteria for Recreational Waters) and by USEPA's promulgation of enterococci criteria for these waters in 2004. The USEPA found that fecal coliform is not a reliable indicator of health risk associated with REC1. However, a BPA is required to delete the obsolete fecal coliform objectives.

As noted, USEPA now recommends the adoption of enterococci criteria to protect the REC1 beneficial use in enclosed bays and estuaries. The State Water Board adopted the Statewide Bacteria Provisions and Water Quality Standards Variance Policy (Statewide Bacteria Provisions) for the California Inland Surface Waters Enclosed Bays and Estuaries (ISWEBE) Plan on August 7, 2018. The Statewide Bacteria Provisions established enterococci as the sole indicator for saline inland surface waters, enclosed bays, and estuaries, and enterococci as one of the indicators in ocean waters. The Statewide Bacteria Provisions received OAL approval on February 4, 2019 and awaits USEPA approval later this year before becoming effective under State law.

The Santa Ana Water Board has established a fecal coliform TMDL for Newport Bay that is intended to assure that the fecal coliform objective currently in place for Newport Bay's REC1 and shell harvesting beneficial (SHEL) beneficial uses are achieved. Given that the fecal coliform objectives established to protect recreation have been found obsolete, continued reliance on those objectives and implementation of the applicable portions of the fecal coliform TMDLs are no longer scientifically justified. The deletion of the recreation use fecal coliform objectives is necessary.

Staff will coordinate the deletion of the fecal coliform objectives and adoption of new enterococci objectives for all enclosed bays and estuaries with the adoption of the Statewide Bacteria Provisions. Santa Ana Water Board staff have been working with stakeholders to revise the REC1 part of the TMDL in a parallel fashion in preparation of the final approval by the USEPA.

To address this issue a first step will be addressed in a Time Schedule Order (TSO) projected for adoption at the June 14, 2019 Board meeting. During the five-year course of the TSO, there will be a development of a BPA to revise the REC beneficial uses

objectives from fecal coliform to enterococcus, consistent with the California ISWEBE Plan.

Once new objectives to protect recreation are in place, it will be appropriate to conduct a new impairment assessment based on those objectives to determine whether a new TMDL is needed. It should be noted that those parts of the established Fecal Coliform TMDL that address shellfish harvesting and compliance with applicable fecal coliform objectives will remain in place. This work will rely on TMDL resources.

Issue No. 5

REVIEW THE NUTRIENT OBJECTIVES FOR SAN DIEGO CREEK (PART OF NUTRIENT TMDL IMPLEMENTATION PLAN).

Numeric water quality objectives for nitrogen (as Total Inorganic Nitrogen [TIN]) in San Diego Creek were established in 1975 for Reach 2 (5 mg/L) and in 1983 for Reach 1 (13 mg/L). These objectives were frequently exceeded in the 1980s, and Newport Bay was placed on the CWA Section 303(d) list of impaired waterbodies in 1990 due to persistent macroalgal blooms. San Diego Creek was listed as impaired by nutrients in 1992.

The Santa Ana Water Board adopted the Nutrient TMDL for the Newport Bay/San Diego Creek Watershed in 1998 to address these impairments. The TMDL included a task for re-evaluating the San Diego Creek nitrogen objectives. Staff and stakeholders subsequently conducted studies to investigate nutrient sources and macroalgal blooms and effects in Newport Bay. Information developed by these studies was used to build a macroalgae model for Newport Bay to predict in-bay macroalgae biomass in response to different alternative nutrient loading scenarios from San Diego Creek. Santa Ana Water Board staff also used two other approaches (a reference approach and a simplified modeling approach within San Diego Creek) to identify suitable total nitrogen objectives. These approaches suggested appropriate dry-weather total nitrogen objectives in the range of 0.5 mg/L to 3 mg/L.

In 2008, Santa Ana Water Board staff held a CEQA scoping meeting to present these preliminary results and solicit CEQA comments for a proposed BPA to revise the San Diego Creek nitrogen objectives. Ultimately, staff decided to delay the BPA in order to prioritize work on the related selenium TMDL for San Diego Creek. In the interim, implementation of Best Management Practices (BMPs) to reduce nitrogen discharges to San Diego Creek have resulted in steep declines in nitrogen concentrations. Dry weather concentrations in San Diego Creek at Campus Drive over the past three years have generally been below 2 mg/L. These reduced concentrations, combined with reduced flow rates, have resulted in greatly reduced nutrient loading and virtually eliminated excessive macroalgal blooms in Newport Bay.

During the triennial review cycle, Santa Ana Water Board staff will use the most recent data from San Diego Creek and Newport Bay along with new science and policy guidance developed by the State Board's Biostimulatory Substances Project to propose new nitrogen objectives for San Diego Creek. This work will rely on TMDL resources.

Issue No. 6

REVIEW AND REVISE OR REMOVE THE TMDL FOR SEDIMENT IN THE NEWPORT BAY/SAN DIEGO CREEK WATERSHED OR REPLACE WITH AN ALTERNATIVE REGULATORY APPROACH.

Upper Newport Bay was included on the CWA Section 303(d) list as impaired by sediment in 1986 and both reaches of San Diego Creek were listed for sediment in 1996. The Santa Ana Water Board adopted a sediment TMDL for the Newport Bay Watershed in 1998, and it was approved by USEPA in 1999.

The sediment TMDL included three numeric targets: (1) limiting sediment loads to the bay to 62,500 tons/year on a 10-year annual average basis, (2) requiring that two existing in-bay sediment trapping basins be maintained at an elevation of -7 feet mean sea level (MSL) or deeper, and (3) limiting sediment-driven habitat change in Upper Newport Bay to less than one percent.

The TMDL numeric target for loading is currently being achieved: the 10-year average annual load is currently 26,500 tons and is likely to remain below the TMDL target due to urbanization of former agricultural areas, stabilization of eroding channels, and periodic removal of sediment trapped in San Diego Creek and its tributaries.

The TMDL numeric target for in-bay basin depths is also being achieved. A large U.S. Army Corps of Engineers dredging project from 2006 to 2010 removed nearly two million cubic yards of sediment from the upper bay and lowered the in-bay basin depths to an average of nearly -22 feet MSL. The preliminary results from a modeling project being conducted by researchers from the University of California at Irvine, indicate that sediment accumulation in the basins is not likely to reach -7 feet MSL until mid-century.

The third TMDL target (regarding habitat change) was slightly exceeded based on expansion of saltmarsh onto mudflats as documented in the most recent habitat survey in the upper bay in 2015. Saltmarsh habitat has subsequently receded significantly and collection of a new set of habitat data is scheduled for 2020.

The overall goal of the sediment TMDL was to lengthen the interval between needed dredging events in the upper bay to “once every twenty to thirty years.” This overall goal has been achieved. A thorough review of the TMDL and consideration of alternative regulatory options is now needed. Outcomes of this process may include new regulatory actions to ensure efficient management of sediment discharges to San Diego Creek and Newport Bay consistent with water quality standards.

Issue No. 7

REVIEW AND REVISE THE BACTERIAL INDICATOR TMDLS FOR THE MIDDLE SANTA ANA WATERSHED.

Pursuant to CWA Section 303(d), the Santa Ana Water Board identified several

waterbodies in the Middle Santa Ana River (MSAR) watershed as water quality limited segments. Waterbodies included on the 303(d) list of impaired waters include the Santa Ana River-Reach 3, Chino Creek-Reaches 1 and 2, Mill Creek (Prado Area), Cucamonga Creek-Reach 1, and Prado Park Lake. Impairment of these waterbodies is due to elevated levels of bacterial indicators.

To address the impairment, the Santa Ana Water Board developed a TMDL for bacterial indicators that ensure attainment of water quality standards. The Santa Ana Water Board adopted the MSAR Bacteria TMDL in 2005. The TMDL established compliance targets for both fecal coliform and E-coli. However, those compliance targets became ineffective upon USEPA approval of the BPA to Revise Recreation Standards for Inland Freshwaters in the Santa Ana Region in 2012. Furthermore, some key elements of that amendment have since been superseded by the State Board's adoption the Statewide Bacteria Provisions for the ISWEBE Plan on August 7, 2018 using USEPA's bacteria water quality recommendations.

During the Triennial Review cycle, Santa Ana Water Board staff will work to review and revise the MSAR Bacteria TMDL. Staff will work with stakeholders to prepare a Technical Report for revising the TMDL.

Issue No. 8

REVIEW AND REVISE BIG BEAR LAKE WATER QUALITY STANDARDS. MAY INCLUDE:

- Revision of the TIN and total phosphorus numeric water quality objectives for Big Bear Lake;
- Development of objectives for other indicators of impairment (e.g., chlorophyll a, macrophyte coverage, and species composition);
- Development of biocriteria for Big Bear Lake; and,
- Investigation of Sawmill Creek drainage, and possible addition to the Nutrient Total TMDL for Big Bear Lake.

The discharge of nutrients into Big Bear Lake promoted the growth of nuisance aquatic plants that serve as both a sink and a source of nutrients and reduce the available dissolved oxygen. As a result, Big Bear Lake's beneficial uses were adversely affected. The Santa Ana Water Board listed Big Bear Lake as water quality limited in accordance with Section 303(d) of the CWA and required the establishment of a TMDL (Resolution No. R8-2006-0023).

The implementation plan included as part of the established Nutrient TMDL for Big Bear Lake identifies tasks for the consideration of revised nutrient objectives and development of biocriteria. The target compliance date for the TMLD is the year 2020. The Santa Ana Water Board will investigate/review the Big Bear Lake water quality

standards starting in 2020. This work is expected to be accomplished using TMDL resources.

Issue No. 9

REVISE THE SHELLFISH HARVESTING (SHEL) NEWPORT BAY TMDL AND WORK TO DEVELOP A SHEL OBJECTIVE AND INCORPORATE INTO THE TMDL.

As defined in the Basin Plan, waters designated SHEL “support habitats necessary for filter feeding shellfish (e.g., clams, oysters, and mussels) collected for human consumption, commercial, or sports purposes.” The fecal coliform objectives (fecal coliform median concentration of not more than 14 most probable number (MPN) /100 ml and not more than 10% of samples exceed 43 MPN/100 ml) are included in the Basin Plan to protect human consumers of shellfish. Compliance with this objective has become increasingly difficult to achieve.

There are no commercial shellfish growing/harvesting operations in the Santa Ana Region at this time. However, according to the California Department of Fish and Wildlife (CDFW) biologists and local CDFW game wardens stationed in Orange County, a variety of shellfish are, or potentially are, harvested for sport/recreational purposes in all of Santa Ana Region’s ocean waters, enclosed bays, and estuaries. The extent of human consumption of the shellfish is unknown; some of the shellfish collected is used as bait.

A Regional Board/State Water Board task force has been considering recommendations for revisions to the statewide water quality standards for the commercial and sport/recreation collection of shellfish. The matters under review include:

- Develop a consistent objective for all Regions (some coastal Regional Boards and the Ocean Plan currently list 70 MPN/100ml as the SHEL objective) for the SHEL beneficial use;
- Consider the use of a Reference/Natural Source Option for implementation of SHEL bacteria objective; and
- Apply the Aquaculture beneficial use for waters where commercial shellfish operations are occurring, using the 14 MPN/100ml fecal coliform objective.

TMDL resources will be used to investigate this issue.

Issue No. 10

REVISE NEWPORT BAY/SAN DIEGO CREEK ORGANOCHLORINE COMPOUNDS TMDL. CONSIDER THIS TMDL USING DIFFERENT NUMERIC OBJECTIVES FOR RIVERS/STREAMS, BAYS, AND ESTUARIES BY SEPARATING THE NEWPORT BAY MARINE SYSTEM FROM THE SAN DIEGO CREEK/PETER CANYON CHANNEL FRESHWATER SYSTEM.

On June 14, 2002, USEPA established TMDLs for 14 toxic pollutants, including five organochlorine compounds, for San Diego Creek, Upper, and Lower Newport Bay, and

Rhine Channel. The organochlorine compounds included four legacy pesticides (1,1,1-trichloro-2,2-bis(p-chlorophenyl)ethane [DDT], chlordane, dieldrin and toxaphene) and polychlorinated biphenyl (PCBs).

San Diego Creek and Newport Bay are identified on the State's CWA 303(d) list of impaired waters. Impairment in these water bodies has previously been attributed to fecal coliform, pesticides, metals, and priority organics. The potential sources of these pollutants include urban runoff, contaminated sediments, boatyards, agriculture, and unknown nonpoint sources.

To address the impairments, the Santa Ana Water Board developed, for the organochlorine compounds, TMDLs that will ensure attainment of water quality standard for San Diego Creek, Upper, and Lower Newport Bay. On September 7, 2007, the Santa Ana Water Board adopted Resolution No. R8-2007-0024, which adopted an amendment to the Basin Plan that incorporated the Organochlorine Compounds TMDL.

Currently, the TMDL includes both marine and freshwater systems, which is problematic when assessing water quality attainment. The proposed BPA, when developed, will separate the Newport Bay marine system from the San Diego Creek/ Peters Canyon Channel (watershed) freshwater system. These two separate BPAs will then be addressed in tandem, with the initiation of the document development for the freshwater system to begin sometime mid-2020.

The marine section of the BPA will proceed during the schedule of a TSO that is projected for adoption at a 2020 Board meeting. In addition to separating the marine waters portion from the current (2013) TMDL, the objectives will be revised to be consistent with the California ISWEBE Plan and the 2015 amended 303(d) Listing Policy. TMDL resources will be used to address this issue.

Issue No. 11

REVIEW AND POSSIBLY DEVELOP TMDLS FOR 303 (d) WATERS WITH 2005, 2012, AND 2019 TMDL DUE DATES.

Santa Ana Water Board staff will work to review and possibly develop TMDLs for waterbodies that have been 303 (d) listed pursuant the CWA and identified as requiring a TMDL. Several waterbodies have been identified as needing TMDLs for bacteria. Additionally, staff will work to review waterbody-pollutant combinations that may need a TMDL to be developed during the upcoming three-year period.

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Non-TMDL Related Issues

Issue No 1

ADD WATER CONTACT RECREATION (REC1) BACTERIA OBJECTIVES TO BE CONSISTENT WITH THE STATE WATER BOARD'S ADOPTED BACTERIA PROVISION INTO THE BASIN PLAN.

The Statewide Bacteria Provisions policy will conflict with certain provisions of the Regional Water Board's 2012 Recreational Standards Amendment. USEPA's 2012 Bacteria criteria are the basis for the Statewide Bacteria Provisions. The Statewide Bacteria Provisions will allow the use of a reference system and/or natural source exclusion policy and a Limited REC1 use.

Issue No. 2

UPDATE NITROGEN (N) /TOTAL DISSOLVED SOLIDS (TDS) SALT MANAGEMENT PLAN, INCLUDING:

- a. Revision of TDS and TIN wasteload allocations, including considering adopting the revised Waste Load Allocation Model (WLAM);
- b. Adoption of the Salt and Nutrient Management Plan for the Upper Temescal Basin;
- c. Adoption of a maximum benefit program for the Elsinore Groundwater Management Zone (GMZ);
- d. Consideration of need for/nature of policy regarding TDS compliance during drought conditions;
- e. Amendment of the Basin Plan to revise the implementation program for Inland Empire Utilities Agency (IEUA)/Chino Basin Watermaster.

A significant element of the Santa Ana Region Basin Plan is the N/TDS Salt Management Plan, which is contained in Chapter 5, Implementation. Salt management has long been and remains a high priority for the Santa Ana Water Board, water supply, and wastewater agencies in the Santa Ana Region since it has profound effects on the protection of surface and groundwater for domestic supply, groundwater recharge, and other beneficial uses. Staff would review these options with stakeholder assistance. This Salt Management Plan coupled with N and TDS objectives is the basis for waste discharge requirements. The Salt Management Plan includes nitrogen and TDS wasteload allocations for discharges to the Santa Ana River (SAR), "maximum benefit" programs to be implemented by specific agencies in certain groundwater management zones, nitrogen loss coefficients that are applied in determining nitrogen discharge limitations, and other elements.

The N/TDS Salt Management Plan must be reviewed and updated periodically as conditions in the region change. As the quality and quantity of available water supplies

change over time, and the need to recycle wastewater to conserve potable sources increases, monitoring and sophisticated modeling are necessary to determine the efficacy of water resource management strategies and the need for and nature of modifications.

Santa Ana Water Board staff is presently engaged in work to update the nitrogen and TDS wasteload allocations. We anticipate that an amendment to the N/TDS Salt Management Plan will also be necessary to address revisions to the boundaries of the Upper Temescal GMZ, establishment of the TDS and nitrate-nitrogen objectives, and the monitoring and reporting program to ensure protection of the beneficial uses for the Upper Temescal GMZ. Another Basin Plan amendment project is the adoption of a maximum benefit program for the Elsinore GMZ to accommodate increased recycled water use. In addition, IEUA and the Chino Basin Watermaster have requested to update the maximum benefit commitments, such as changing the average period for the TDS trigger for IEUA wastewater quality improvement and schedule submittals from a 12-month running average to 120-month running average.

In response to previous triennial review comments from Eastern Municipal Water District, Santa Ana Water Board staff has also considered the allocation of staff resources by taking into account the need for and nature of a policy to address TDS compliance during drought conditions. Issues of TDS compliance can significantly affect opportunities to use recycled water in place of potable water. This portion of the issue requires stakeholder support for the development of such a policy. This issue is expected to be completed during this triennial review cycle.

Issue No. 3

COMPLETE A REVIEW OF WATERS FOR WHICH REC1 OR REC1 AND REC2 (NON-CONTACT WATER RECREATION) BENEFICIAL USES WERE DE-DESIGNATED VIA APPROVED USE ATTAINABILITY ANALYSES (UAAS) TO DETERMINE IF THE DE-DESIGNATIONS REMAIN JUSTIFIED.

The 2012 Recreational Standards Amendment de-designated REC1 from reaches of Santa Ana Delhi Channel, Temescal Creek, Cucamonga Creek, and REC1 and REC2 from Greenville-Banning Channel. Following USEPA regulations (40 CFR 131.10) UAAs were completed on each waterbody. USEPA regulations also require that the de-designated uses be reviewed each triennial review to determine if the use is still not attained. Santa Ana Water Board staff plan on reviewing site conditions in the summer of 2019 at these waters to determine whether the de-designation is still valid.

Issue No. 4

REVIEW SEPTIC SYSTEM MINIMUM LOT SIZE REQUIREMENTS. INVESTIGATE WHETHER ELIMINATING REGION-WIDE MINIMUM LOT SIZE REQUIREMENTS WILL RESULT IN VIOLATION OF NITRATE OBJECTIVES IN GROUNDWATER.

CONSIDER UPDATING DESCRIPTION OF CURRENT SEPTIC SYSTEM REGULATIONS.

Local regulations for Onsite Wastewater Treatment Systems (septic systems) largely address design elements to ensure that waste does not rise to the ground surface and become a public health risk and that groundwater is protected. Septic system design elements differ from minimum lot size requirements because the latter addresses nitrogen levels in groundwater. Resolution No. 89-157 established a 0.5-acre minimum lot size requirement for discharges of waste from new septic systems.

The Onsite Wastewater Treatment System Policy (OWTS Policy) does not specify a minimum lot size requirement for existing lots. There are minimum lot size requirements for newly subdivided lots based on rainfall – more arid areas require larger lot sizes. The statewide 2012 OWTS Policy was adopted into the Basin Plan under Resolution No. R8-2014-0005. The Santa Ana Water Board resolution also established a sunset date of May 13, 2018, for Region-wide minimum lot size requirements for all lots, including existing lots. The OWTS Policy allowed for local permitting agencies to develop their own requirements for new septic systems. These do not establish an equivalent minimum lot of size requirements.

Staff is considering investigating to determine whether eliminating Region-wide minimum lot size requirements compromises the concentration of nitrate-nitrogen in groundwater. If it were to be found that Region-wide minimum lot size requirements are required, staff would recommend that the protective density of septic systems be re-evaluated.

Issue No. 5

REVISE QUAIL VALLEY ON-SITE SEPTIC TANK-SUBSURFACE DISPOSAL SYSTEM PROHIBITION.

Heavy rains during the 2004-2005 winter resulted in widespread septic system failures in Quail Valley. This led to Resolution No. R8-2006-0024, which prohibited the discharge of waste from new septic systems. New systems would have been permitted should Eastern Municipal Water District had completed a sewer system design for a designated portion of the community. The design has not been completed, which effectively prohibits new development. Santa Ana Water Board staff initially proposed minimum lot size restrictions (MLSR), for which approximately 85% of the parcels do not meet the threshold. 85% of the lots are smaller than a MLSR of 0.5-acre. Santa Ana Water Board staff since evaluated advanced treatment systems as an alternative to minimum lot size requirements. The Basin Planning activities for this triennial review cycle will possibly be required to adopt the revised prohibitions and add to the Basin Plan. This work will rely on TMDL resources.

Issue No. 6

FOR REC1 BACTERIA OBJECTIVES CONSIDER THE DEVELOPMENT OF REGION-SPECIFIC REFERENCE/NATURAL SOURCES EXCLUSION POLICY, DEVELOPMENT OF A LIMITED REC1 USE, AND/OR DEVELOPMENT OF UAAS TO REMOVE REC1 FOR CERTAIN WATERS.

A reference system and/or natural source exclusion policy will allow Regional Boards to assure that regulatory actions, including TMDLs, are appropriately focused on controllable bacteria indicator sources that have public health significance. Some Regional Boards already employed such a policy. The Santa Ana Water Board is considering the development of a Santa Ana Region specific reference system for certain waters.

Stakeholders and Santa Ana Water Board staff may be interested in developing a Limited REC1 objective (the Statewide Bacteria Provisions has not given specific guidance on what the objective should be). In addition, stakeholders may be interested in de-designating REC1 from certain waters following the use attainability analysis format used in the 2012 Recreational Standards Amendment. Designating a Limited REC1 objective or de-designating REC1 will require the completion of site-specific UAAs.

Issue No. 7

CONSIDER ADOPTING NEW (SINCE 2000) CWA 304 (A) RECOMMENDED CRITERIA, WHICH INCLUDES:

USEPA has informed the Regional Boards that states should consider adopting new (since 5/30/2000) National 304 (a) recommended criteria. The 40 CFR Section 131.20 (a) Rule states: if a state does not adopt new or revised criteria for parameters for which USEPA has published new or updated CWA section 304(a) criteria recommendations, then the state shall provide an explanation when it submits the results of its triennial review to the Regional Administrator.

Santa Ana Water Board staff and stakeholders will consider adopting the following new criteria:

- Aquatic Life: Acrolein, Ammonia, Cadmium, Carbaryl, Copper, Diazinon, Nonylphenol, Selenium Freshwater, and Tributyltin
- Human Health: Human Health Criteria Updates for 94 pollutants and Recreational Waters Pathogen Indicators

Some of the criteria will be adopted by State Water Board into statewide water quality objectives such as for cadmium and recreational water pathogen indicators. As a result, these criteria will be adopted for the Regional Boards, including the Santa Ana Region. The USEPA will accept brief responses as to why the Santa Ana Water Board has not adopted some of the criteria, such as, not having sufficient resources.

Issue No. 8

CONSIDER REVISION OF PRADO BASIN MANAGEMENT ZONE BOUNDARY TO INCLUDE U.S. GEOLOGICAL SURVEY GAUGE AND BELOW PRADO DAM MONITORING STATION OR CHANGE THE SANTA ANA RIVER (SAR) REACH 2/REACH 3 BOUNDARY TO INCLUDE THE MONITORING STATION IN REACH 3.

The location of the Prado Dam monitoring and U.S. Geological Survey (USGS) gauging station is physically on Reach 2, not Reach 3 of the SAR. Stakeholders have expressed concerns that data collected below Prado Dam is used to evaluate compliance with Reach 2 water quality objectives and not Reach 3, the intended reach, because of the location of the monitoring station. However, simply moving the boundary between Reach 2 and Reach 3 may not address concerns from stakeholders. Further discussion and coordination with stakeholders and Santa Ana Water Board staff are needed.

Issue No.9

CONSIDER REVISION OF TOTAL DISSOLVED SOLIDS OBJECTIVES FOR RATTLESNAKE, SYPHON, AND SAND CANYON RESERVOIRS BASED ON USE FOR STORAGE OF RECYCLED WATER.

Irvine Ranch Water District (IRWD) staff has asked the Santa Ana Water Board to consider revising the TDS water quality objective for Rattlesnake, Sand Canyon, and Syphon Reservoirs. IRWD owns and operates these reservoirs. Sand Canyon and Rattlesnake Reservoirs are currently utilized for seasonal storage of recycled water produced at the Michelson Water Recycling Plant. Syphon Reservoir is being expanded to be integrated into the IRWD's recycled water system. The current Basin Plan TDS water quality objective for these reservoirs is 720 mg/L. IRWD staff states that in recent years it has been increasingly challenging to meet the water quality objective because of higher TDS levels in the recycled water produced at the Michelson Water Recycling Plant. IRWD staff believes that a higher TDS water quality objective could be established while fully protecting the beneficial uses of the reservoirs. The beneficial uses currently designed in the Basin Plan for these reservoirs are Agricultural Supply (AGR), Water Contact Recreation (REC-1), Non-Contact Water Recreation (REC-2), Warm Freshwater Habitat (WARM), and Wildlife Habitat (WILD).

Issue No. 10

REVISE THE BASIN PLAN TO CLARIFY THE PROPER APPLICATION OF CERTAIN WATER QUALITY OBJECTIVES. THIS MAY INCLUDE:

- Adding a footnote, where appropriate, to identify water quality objectives that were established as antidegradation targets rather than use protection thresholds;
- Adding a footnote, where appropriate, to identify surface water objectives that were established to protect underlying groundwater uses not surface water uses;

- Adding a footnote to Table 4-1 of the Basin Plan to clarify that compliance with the baseflow TDS objective for Reach 3 of the Santa Ana River is intended to prevent degradation in the Orange County groundwater management zone and compliance is determined using samples collected immediately below Prado Dam;
- Adding text to Chapter 5 describing the Santa Ana Water Board's longstanding policy to implement the state Antidegradation Policy using TDS in lieu of evaluating each of the individual ions (e.g., chloride, sulfate, sodium, etc.) that contribute to salinity;
- Adding text to Chapter 5 (Implementation) describing the appropriate spatial and temporal averaging procedures to determine compliance with water quality objectives specified in Table 4-1 of the Basin Plan; and
- Clarifying text in Table 4-1 of the Basin Plan regarding when and where filtered samples and Total N concentrations should be used to assess compliance with the current TIN objectives when evaluating ambient instream samples.

Issue No. 11

CONSIDER DEVELOPMENT OF BIOSTIMULATORY SUBSTANCES OBJECTIVES AND PROGRAM TO IMPLEMENT BIOLOGICAL INTEGRITY. ADDITIONALLY, CONSIDER THE DEVELOPMENT OF BIOLOGICAL OBJECTIVES. THIS INCLUDES:

- a. Participating with State Water Board staff to develop statewide objectives for biostimulatory substances and an implementation program for biological integrity;
- b. Incorporate the new objectives and program into the Basin Plan. Review/revise the language in our Basin Plan that relates to biostimulatory substances and biological degradation;
- c. Consider development of numeric biological objectives for the Santa Ana Region.

A vital goal of this effort is to establish consistent, statewide methods for conducting biological assessments and interpreting biological data as indicators of biological integrity in California's surface waters. It is envisioned that biological assessments may be used to assess the biological community condition of streams and the effectiveness of management plan implementation and evaluate whether additional management actions are necessary to improve biological community condition. State Water Board staff and staff of the Regional Boards are participating in the development of this plan, which, if and when adopted by the State Water Board, will be incorporated in the Basin Plan.

As part of the ongoing issue, Santa Ana Water Board staff will attend statewide

taskforce and regional meetings. Potentially, Santa Ana Water Board staff will outline a possible strategy/workplan for development of numeric biological objectives for the Santa Ana Region.

Once adopted in the Basin Plan, the plan is expected to necessitate substantial additional work over time by each of the Regional Boards to incorporate bioassessment requirements in waste discharge requirements, evaluate bioassessment data, and to identify stream or stream reaches where biological conditions warrant improvement. Actions to achieve this improvement will need to be identified and implemented.

Issue No. 12

ADD/REVISE THE FOLLOWING WATERS TO TABLE 3-1 AND 4-1 AND DESIGNATE APPROPRIATE BENEFICIAL USES AND WATER QUALITY OBJECTIVES:

a. List Rhine Channel separately from Lower Newport Bay

The revision of the boundary definition of the Rhine Channel portion of Lower Newport Bay is considered a high priority issue for this triennial review cycle. Discussions are underway about the specifics of the boundary definition, and if existing boundaries defined by USEPA and U.S. Army Corps of Engineers can be used directly in the Basin Plan. Revision of the boundary is necessary for both legal and remedial planning reasons.

b. Consider changing the San Diego Creek Reach designations

The existing reach designations divide San Diego Creek into two reaches: an approximately eight-mile reach (Reach 1) extending from Newport Bay to Jeffrey Road, and a six-mile reach (Reach 2) continuing from Jeffrey Road to Laguna Woods. Due to extensive land use and other changes in the watershed, these reach designations are no longer representative of hydrogeological conditions along the creek. Redefining the reaches to better match the local hydrogeology will allow more effective application of water quality standards to the creek.

c. Add reach designations to Peters Canyon Wash

Peters Canyon Wash is not divided into reaches although the character of the wash changes significantly where it intersects the area of shallow groundwater in the lower portion of the Tustin Plain. Dividing the wash into two reaches based on the location where groundwater begins to exert a significant impact on the hydrology and water chemistry will facilitate implementation of targeted water quality standards.

d. Consider waters tributary to Anaheim Bay and Huntington Beach Wetlands: Bolsa, Westminster, East Garden Grove Wintersburg, Huntington Beach, and Talbert and Anaheim Barber Channels

Santa Ana Water Board staff's preliminary recommendation are to designate these waters the following beneficial uses existing or potential ("X") Water Contact Recreation (REC1), Non-contact Water Recreation (REC2), Wildlife Habitat (WILD), Warm Freshwater Habitat (WARM), Estuarine Habitat (EST), and Rare, Threatened, or Endangered Species (RARE), if appropriate.

The East Garden Grove Wintersburg and Bolsa Chica Channels are soft-bottomed, engineered flood control channels that discharge into Huntington Harbour and Anaheim Bay. The East Garden Grove Channel flows into Outer Bolsa Bay of the Bolsa Chica wetlands prior to discharging into Anaheim Bay. The most downstream reaches are dominated by tidal waters. Huntington Beach and Talbert Channels discharge into the Huntington Beach wetlands. The flows from these waters impact the beneficial uses in the National Wildlife Refuge at Seal Beach, Huntington Beach Wetlands, and Huntington Harbour.

Issue No. 13

UPDATE CHAPTER 2 IN THE BASIN PLAN BY REVISING/ADDING CURRENTLY APPROVED STATEWIDE PLANS AND POLICIES (e.g., NONPOINT SOURCE ENFORCEMENT POLICY, 303(d) LISTING POLICY, ETC.).

The list of approved plans and policies shown in the Basin Plan (Chapter 2) has not been updated since 1995. Explicit references to new policies adopted by the State Water Board since that time may need to be included in the Basin Plan, and the descriptions of other plans and policies already included in this Chapter may need to be updated. Plans and policies such as the Ocean Plan and the Nonpoint Source Management Plan have been revised several times since 1995 and the latest versions could be added to Chapter 2 of the Basin Plan. Other policies such as the Water Quality Control Policy for Developing California's Clean Water Act Section 303 (d) List (referred to as the 303 (d) Listing Policy), and the expanded California ISWEBE Plan also could be added.

Issue No. 14

UPDATE AND REVISE NARRATIVE PROGRAMS/POLICIES DESCRIPTIONS IN THE BASIN PLAN.

- a. Update the "Disposal of Hazardous and Nonhazardous Waste" description in Chapter 5 to reflect loss of Solid Wastewater Quality Test (SWAT) program;
- b. Update the Spills, Leaks, Investigations, and Cleanups (SLIC) Program description;
- c. Update the Animal Confinement Facilities (Dairies and Related Facilities) description in Chapter 5;
- d. Update the Nonpoint Source (NPS) Program description in Chapter 5;

- e. Update the narrative on efforts to remediate groundwater contamination from perchlorate, Underground Storage Tanks (USTs), and other sources in the region in Chapter 5;
- f. Update the Wetlands Section in Chapter 3 and discussion of the Santa Ana Water Board's 401 Certification process in Chapter 5. Include USEPA, State Board, CDFW, and USACE wetland and waters of the State regulatory measures. Update the discussion of the Region's treatment and mitigation wetlands.

Issue No. 15

UPDATE AND REVISE THE MONITORING AND ASSESSMENT CHAPTER 7 TO INCLUDE CURRENT REGIONAL ACTIVITIES, SUCH AS, AN UPDATE OF THE PRADO BASIN MONITORING.

The current Chapter 7 needs to be updated to reflect ongoing regional monitoring. Much of the monitoring described in Chapter 7 is no longer conducted. The Prado Basin monitoring description should be updated to reflect current conditions and sampling methodologies as the data that is generated is relied upon by many stakeholders and is ultimately used to report on water quality conditions. The monitoring program was last assessed as part of the 2004 N/TDS BPA and has since that time changed.

Descriptions of the Prado Dam monitoring are spread throughout three (3) separate chapters in the Basin Plan –Chapters 4, 5 and 7. Santa Ana Water Board staff are considering coordinating an update of Chapter 7 not only with internal staff, but also with the affected stakeholders. Specific objectives needed to address the issues are:

- Complete the monitoring and assessment workplan;
- Coordinate with the Salt and Nutrient coordinator, Basin Planning section, and others as needed;
- Provide the Santa Ana Watershed Project Authority (SAWPA)-led Basin Monitoring Program Task Force with the proposed new language, sampling and analysis plan and Quality Assurance Project Plan for the Prado Dam monitoring for review;
- Submit proposed revisions to the Basin Planning section for inclusion in a revised Chapter 7 of the Basin Plan; and
- Requires updates to below Prado Dam monitoring program which requires revised Prado Basin Management Zone boundary or revised SAR Reaches 2 and 3 boundary.

Issue No. 16

CONSIDER UPDATING BASIN PLAN MAPS. ADD STATE WATER BOARD AND SANTA ANA WATER BOARD DIGITAL OR OTHER MAPS TO THE BASIN PLAN

SHOWING SURFACE AND GROUNDWATERS AND THE WATER QUALITY STANDARDS THAT APPLY TO THEM. INCLUDE RELATED HYDROLOGY BOUNDARY AND OTHER SPATIAL DATA LAYERS THAT REFLECT CURRENT DATA.

Funds obtained through the State Water Board have been used to support the creation of digital maps for every Region. The maps show Basin Plan surface waters and their major tributaries, groundwater basins, associated water quality standards and beneficial uses, and hydrologic units. California State University at Northridge and State Water Board GIS staff have produced the maps with assistance from Santa Ana Water Board staff. Santa Ana Board staff have assisted the contractors in reviewing the draft maps to insure accuracy. At the time the digital maps were created, the contractors were using the most up to date data (such as the Cal Waters GIS layers) to reflect the Santa Ana Region's waters as accurately as possible. This activity should clarify the Santa Ana Region boundary in the few locations where it is not clearly defined between Regions.

Issue No. 17

REVIEW THE CHEMICAL OXYGEN DEMAND OBJECTIVE FOR INLAND SURFACE WATERS.

Chemical oxygen demand (COD) is an indirect measure of the amount of oxygen used by inorganic and organic matter in water. High COD levels decrease the amount of dissolved oxygen available for aquatic organisms. Low (generally under 3 mg/L) dissolved oxygen, or "hypoxia," causes adverse effects on aquatic organisms, including the death of individual organisms as well as large "dead zones." Hypoxic water can also release pollutants stored in sediment.

USEPA has not published recommended COD water quality criteria. Early Basin Plans for the Santa Ana Region established numeric COD objective for certain inland surface waters. The technical basis for these numeric objectives specified is unclear. These objectives have not been reviewed or revised. Given the implications of potential non-compliance with these objectives as the result of stormwater discharges, the review of these objectives to confirm their propriety and scientific defensibility is appropriate.

The current COD objective is a technology-based objective meant for publicly owned treatments works (POTWs). All POTWs effluents meet the objectives in the Basin Plan. The objective was not developed to control stormwater quality. The Santa Ana Water Board likely will require stakeholder assistance to provide scientific justification for any revision of the COD objective.

Issue No. 18

CONSIDER DELETION OR REVISION OF ESTABLISHED SITE-SPECIFIC OBJECTIVES FOR COPPER, CADMIUM AND LEAD FOR THE SANTA ANA RIVER AND TRIBUTARIES. CONSIDER SITE-SPECIFIC OBJECTIVES FOR ALUMINUM, CHLORINE AND CYANIDE FOR THE SANTA ANA RIVER AND TRIBUTARIES.

Site-specific objectives (SSOs) for Copper (Cu), cadmium (Cd), and lead (Pb) for the SAR and certain tributaries were incorporated in the 1995 Basin Plan and submitted for review and approval by the USEPA. USEPA was also engaged in the development of these SSOs. USEPA reserved action on these SSOs considering its promulgation of the California Toxics Rule (CTR), which incorporated new scientific information concerning the appropriate objectives for these metals that were not available at the time the SSOs were adopted. USEPA allowed the Santa Ana Water Board to consider whether it would be appropriate to delete the SSOs and to rely instead upon the CTR. Given the new scientific information, it appears appropriate to withdraw the SSOs in favor of the numeric water quality criteria in the CTR. The Santa Ana River Dischargers Association (SARDA) has identified at least three pollutants for which SSOs may be warranted, including aluminum (Al), chlorine (Cl) and cyanide. The concern is that strict application of the national criteria/guidance for these constituents recommended by the USEPA may be overly stringent to protect aquatic life beneficial uses. The SSOs development efforts might employ the recalculation procedure, one of the methods recommended by the USEPA to tailor USEPA's recommended national criteria to site-specific conditions.

Issue No. 19

INVESTIGATE/IDENTIFY FRESHWATERS THAT SUPPORT EARLY LIFE STAGES OF SALMONIDS AND ADOPTION OF PENTACHLOROPHENOL WATER QUALITY OBJECTIVES.

As a result of an Endangered Species Act consultation between the USEPA, U.S. Fish and Wildlife Service (USFWS), and the National Marine Fisheries Service on the CTR, the USFWS Biological Opinion concluded that the CTR criteria for pentachlorophenol were not protective of early life stages of salmonids. Protective criteria are outlined in USEPA's November 14, 2007 letter to the State Board. If the Santa Ana Water Board does not have any waters for which these conditions exist, the USEPA will accept brief responses as to why no action is necessary.

Issue No. 20

ADD ADOPTED BPAs TO THE ELECTRONIC BASIN PLAN.

Adopted amendments must be added to the electronic Basin Plan, available on the Santa Ana Water Board's website, to keep it up to date. Printed versions of the Basin Plan are no longer available. Timely action to incorporate the amendments contributes to accuracy and reduces the chance of error.

**Response to Comments¹ on the draft FY2019-2022 Basin Plan Triennial Review
Priority List and Work Plan**

Received for the March 13, 2019 Triennial Review Workshop

- 1. Diane Fleck
Water Quality Assessment Section
USEPA
Received March 6, 2019**

Comment:

The USEPA supports the projects listed in the Draft Priority List of Issues. For TMDL related issues, we strongly support adopting the Copper TMDL and non-TMLD Metals action plans for Zinc, Mercury, Arsenic, and Chromium for Newport Bay.

Response: Comment noted.

Comment:

To comply with 40 C.F.R [Code of Federal Regulations] Part 131.20, the Triennial Review must include an explanation if the State (or Regional Board) does not adopt new or revised criteria for parameters for which EPA has published new or updated CWA section 304 (a).

Response:

Santa Ana Water Board staff will provide an explanation for not adopting or working to adopt the 304 (a) Criteria when the Triennial Review Administrative is submitted to USEPA.

Comment:

EPA supports identification of freshwaters that support early life stages of salmonids, and adoption or revision of pentachlorophenol (PCP) water quality objectives, as part of the Triennial Review process.

Response:

Santa Ana Water Board staff have included this issue on our Triennial Priority List and Work Plan. We anticipate reviewing this issue during this triennial review period.

¹ Comments have been shortened and or paraphrased. Original written comments are posted on the Santa Ana Water Board's web site at:
http://www.waterboards.ca.gov/santaana/water_issues/programs/basin_plan/index.shtml

**2. Anna McCarthy
Assets Manger
Lido Peninsula Company, LLC
Received March 7, 2019**

Comments:

We [Lido Peninsula Company, LLC] previously provided written comments regarding concerns about the proposal to require marina owners to restrict or ban the use of legally available copper-based antifouling paints through a new TMDL. We are concerned that the implementation plan will be both unenforceable, and the practical impacts of the proposed implementation plan to the harbor and individual stakeholders is unknown. We believe this plan could have significant detrimental economic impacts on the harbor and its stakeholders.

The current written description of this issue [Copper TMDL] indicates that the Water Board will hold two public workshops during the summer of 2019. We strongly encourage the Board to hold these workshops with the goal of having a meaningful discussion regarding the feasibility and impacts of the proposed Copper TMDL.

Response:

The purpose of the triennial review is to identify necessary updates and revisions to water quality standards and other elements of the Basin Plan. The triennial review is not a regulatory action but a planning activity. The result of the triennial review is a prioritized list of issues that will be investigated further and, where appropriate, addressed through the adoption of Basin Plan amendments. The proposed priorities and schedules also reflect work that is already underway and require further staff resources to be finalized.

Additionally (similar to previous responses), the proposed Copper TMDL does not ban the use of copper antifouling paints (AFPs). The proposed Copper TMDL requires that the City of Newport Beach and other responsible parties take actions to reduce the discharge of copper into Newport Bay from boats. Santa Ana Water Board staff's proposed Implementation Plan that identifies several recommended tasks whereby such reductions could be achieved, including providing incentives to boat owners to convert from copper AFPs to nontoxic AFPs or lower leach rate copper AFPs. The proposed Implementation Plan does not dictate the method or manner of compliance but does require the City of Newport Beach, the County of Orange, and other responsible parties to develop their own proposed implementation plan(s) with strategies to achieve the Copper TMDL.

The proposed Implementation Plan provides for the responsible parties to take a lead role in developing strategies and schedules in their own Implementation Plan(s), to achieve the TMDL and Action Plans. Also, staff proposed an extended compliance schedule that allows the responsible parties time to implement their strategies and to assess their efficacy. The schedule also allows the City of Newport Beach and other responsible parties to conduct further investigation(s) to confirm findings of impairment,

and to consider whether a Water Effects Ratio should be determined to adjust the California Toxics Rule (CTR) criterion.

Santa Ana Water Board staff have engaged in numerous discussions with the City of Newport Beach. Recently, staff held two public workshops in May (9th and 10th) to present on the Copper TMDL. Currently, staff is working on revising the Basin Plan Amendment, CEQA documents and preparing responses to the latest round of comments.

Santa Ana Water Board staff have engaged in numerous discussions with the City of Newport Beach. Recently, staff held two public workshops in May (9th and 10th) to present on the Copper TMDL. Currently, staff is working on revising the Basin Plan Amendment, CEQA documents and preparing responses to the latest round of comments.

If you have further comments on the Copper TMDL, we recommend that you attend upcoming public workshops and hearings to provide comments to the Santa Ana Water Board's Coastal TMDL staff.

**3. Chris Crompton
Manager, North OC Watershed Management Area
Orange County Public Works
Received March 8, 2019**

Comment:

The County [County of Orange] supports several of the priorities identified in the Draft Priority List, particularly those affecting Newport Bay watershed TMDLs. The County is concerned; however, that revision of the TMDL for sediment in the Newport Bay/San Diego Creek watershed is not included on the List [Priority List]. The TMDL was adopted in 1998 and has not been amended since that time and needs significant updating, or replacement with non-TMDL approach, or rescission. A portion of a PY should be allocated in both 19/20 and 20/21 [fiscal years] for this work.

Response:

The proposed Triennial Review Priority List and Work Plan has been modified since Mr. Crompton's comment. Review and revision, or removal (if appropriate), of the TMDL for sediment in the Newport Bay/San Diego Creek watershed, has been incorporated in the Priority List of TMDL related issues. The Santa Ana Water Board acknowledges that the TMDL numeric target for loading and in-bay basin depths are currently being achieved. The third TMDL target (regarding habitat change) was slightly exceed based on the expansion of saltmarsh onto mudflats. Based on anecdotal evidence, saltmarsh habitat has subsequently receded significantly, and collection of a new set of habitat data is scheduled for 2020. The overall goal of the TMDL – increasing the interval between needed dredging events to once every 20 to 30 years - has been achieved. A thorough review of the TMDL and consideration of alternative regulatory options is now needed. Outcomes of this process may include new regulatory actions to ensure efficient

management of sediment discharges to San Diego Creek and Newport Bay consistent with water quality standards. A total 0.6 of a PY has been allocated to investigate this issue.

Comment:

The Draft Priority List recognizes that a selenium site specific objective (SSO) will require approval but offers no Regional Board resources for this work. While most on the SSO development work will be completed by the County and its funding partners, Regional Board [Santa Ana Water Board] resources will be needed to successfully process a Basin Plan amendment through the regulatory process and compile the administrative record. A portion of a P.Y. should be allocated in both 19/20 [fiscal years] and 20/21 for this work.

Response:

Santa Ana Water Board staff has worked with stakeholders, regulators, and the scientific community to develop preliminary recommendations for SSOs for selenium in freshwater within the Newport Bay Watershed. These recommendations will be refined, and associated documentation will be prepared to support a proposed future Basin Plan amendment establishing selenium SSOs.

At the time the preliminary Priority List and Work Plan were posted on the Santa Ana Water Board website, staff recognized that it was necessary to complete and refine a basin plan amendment to adopt the recommended selenium SSOs; however, staff was unsure if the selenium SSOs would be addressed during the 2019-2022 triennial review period. For this reason, no resources were allocated to this issue. Since receiving this comment, 0.6 of a PY has been assigned to address this issue for the three-year review; however, it is important to point out that this is only staff best estimate of required resources.

Comment:

The statewide effort to develop biostimulatory objectives to implement biological integrity has been going on for many years. Based on the progress report presented at the February 13, 2019 Science Advisory Panel meeting, there is still a significant amount of work to do before either new nutrient water quality objectives or numeric biological objectives could be considered in the Santa Ana Region. Therefore, assigning greater than 1 PY to these collective efforts [Issues 1.b. and 4] starting in 2019-20 appears to be too much and premature.

Response:

Santa Ana Water Board staff agrees that much work is still necessary to develop biostimulatory substance objectives. As part of the ongoing issue, Santa Ana Water Board staff will attend statewide taskforce and regional meetings and participate with State Water Board to develop statewide objectives for biostimulatory substances and an implementation program for biological integrity. Potentially, Santa Ana Water Board staff will outline a possible strategy/work plan for the development of numeric biological objectives for the Santa Ana Region. Although there is still a significant amount of work

before developing new nutrient water quality objectives or numeric biological objectives, staff resources are needed to investigate/research these issues.

Comment:

The Draft Priority List allocates 0.9 PY over a 3-year period primarily for adopting a copper TMDL. There is considerable disagreement as to whether a TMDL is needed and who the dischargers would be since the primary driver of copper levels in Newport Bay is boat paint. The formulation of boat paints is regulated by the California Department of Pesticide Regulation, and the recent antifouling paint regulation (DPR 16-005) has the potential, with other ongoing actions, to attain California Toxics Rule copper criteria in the water column over a period of time without the need of a TMDL.

Response:

Santa Ana Water Board staff agree that the Department of Pesticide Regulation is the sole state agency with authority to regulate the sale and use of copper AFPs; however, the Santa Ana Water Board has the authority and obligation to regulate the discharge of copper from pesticides and other sources so that a water body meets applicable water quality objectives. While it is legal to buy and use copper AFPs, dissolved copper concentrations in Newport Bay continue to exceed the CTR criterion; therefore, copper TMDLs are recommended by the USEPA for both Upper and Lower Newport Bay. We are working to adopt a TMDL that will improve water quality and be reasonable for all parties to implement.

Comment:

The County was part of a 10-year effort to revise freshwater contact recreation objectives/implementation strategies, including initial prototype UAAs [use attainability analyses], that was completed by the Santa Ana Regional Board in 2013. The relationship of this new proposed priority [Issue No. 2] to the prior work needs is not explained. Continuing to pursue additional UAAs based on the 2013 prototypes remains a priority for the County and should be added to the Issue 2 description.

Response:

The issue to consider the use of UAAs, development of a limited REC1, and or development of region-specific reference/natural sources exclusion policy is listed as Issue No. 6 on the revised proposed Priority List and Work Plan. Santa Ana Water Board staff are very open to meeting with County staff to consider these issues.

Comment:

For a number of Triennial Review periods, the County has commented on the inappropriateness of designating beneficial uses to channels in north Orange County that were built for flood control purposes [Issue 7.b.], are maintained regularly, and likely not Waters of the U.S. given that they were man-made. Given the current efforts to define Waters of the U.S. by USEPA, which may provide a clearer distinction between the MS4s and Waters of the U.S., resources should not be assigned to these efforts during this Triennial Review period.

Response:

Comment noted. Santa Ana Water Board staff will likely only consider adding waters or further defining existing waters that will assist in providing clarity in our regulating of certain waters.

Comment: It is unclear how much benefit will be gained from defining tidal prisms.

Response:

Since receiving this comment, defining tidal prism extents for specific water bodies has been removed as a priority issue for the region.

Comment:

The SHEL [shellfish harvesting] beneficial use, impairments to that use in Newport Bay and a subsequent TMDL has prompted a watershed and statewide reassessment of the SHEL use and the initiation of a number of key studies. Until such work is completed, and appropriate objectives are either affirmed or replaced it would be premature to consider further SHEL designations at the scale proposed. SCCWRP [Southern California Coastal Water Research Project] recently reported (Steve Weisberg to SCCWRP Commission, March 8, 2019) that almost half of the currently designated SHEL areas do not meet the current objectives pointing to the need for the science to catch up.

Response:

Comment noted. At this time, Santa Ana Water Board staff are not considering designating any waters with the SHEL beneficial use in Table 3-1 of the Basin Plan in this Triennial Review period. This issue is not listed in the current Priority List.

Comment:

The Description of Proposed Issues states "the extent of human consumption of the shellfish is unknown" but fails to reference two County studies completed in response to the Fecal Coliform TMDL for Newport Bay² to survey the types of human use. The County's studies found no evidence for human consumption of shellfish, and virtually all shellfish harvested being used for bait. The Description of Proposed Issues should be updated to reflect the study results³.

Response:

Comments noted. The purpose of Attachment B – Description of Proposed Issues, is to provide a short description of the Basin Plan issues; however, staff plan on continuing to investigate this issue including all studies completed on shellfish harvesting.

Comments:

The subtitle for 1.e. should be 'Newport Bay-San Diego Creek' and not 'Newport-San

² Newport Bay Shellfish Harvesting Assessment (2004) and Technical Memorandum Newport Bay Shellfish Beneficial Use Assessment Revalidation (2009)

³ Studies are posted on the Santa Ana Water Board's website at:

https://www.waterboards.ca.gov/santaana/water_issues/programs/tmdl/FC_TMDL_Special_Studies.html

Diego'. (Se) should follow 'selenium' and not 'freshwater'.

Response:

Comments have been noted.

**4. Timothy Moore
Risk Science
on behalf of the Basin Monitoring Program Task Force
Received March 8, 2019**

Comment:

Basin Monitoring Program Task Force recommends that the Santa Ana Water Board designate the following projects are "High Priority" during the triennial review period:

- 1) Amend the Basin Plan to adopt the revised Waste Load Allocation Model (WLAM);
- 2) Revise the Basin Plan to clarify the proper application of certain water quality objectives;
- 3) Adopt a regional policy governing effluent limits for TDS during drought conditions; and
- 4) Review and approve the revised estimates of assimilative capacity in groundwater.

Response:

We appreciate your general and specific comments on these issues. We have placed these issues as priority Issue Nos. 2 and 10 on the Non-TMDL related issues. We plan on reviewing these issues substantially over the next three fiscal years (FYs), especially during FY 2019/20. We estimate that 2.5 PYs will be required to review and potentially develop BPAs.

**5. Timothy Moore
Risk Science
on behalf of the Lake Elsinore/Canyon Lake TMDL Task Force
Received March 8, 2019**

Comments:

During the 2015 Triennial Review, the Santa Ana Water Board determined that revising the Lake Elsinore and Canyon Lake Nutrient TMDL was a "High Priority." Consequently, over the last three years, the Lake Elsinore/Canyon Lake TMDL Task Force (Task Force) has worked closely with staff to update the TMDL and its related implementation plan. Many hundreds of hours and nearly a million dollars were invested in developing a new watershed runoff model and new water quality models for both lakes. Now the process is nearing completion. The final TMDL Technical Report was submitted to the Santa Ana Water Board in December of 2018, and the public review

process is scheduled to begin soon. Although most of the detailed scientific work is done, the Task Force knows that considerable work is also required to finalize the Basin Plan amendment.

The Task Force requests that the Santa Ana Water Board allocate staff time and resources to finish the adoption of the Basin Plan amendment for the Lake Elsinore and Canyon Lake Nutrient TMDL. There is still a lot of work that needs to be done to finalize the amendment, including submitting the TMDL Technical Report for scientific peer review, solicit and respond to public comments, and make appropriate changes based on any comments received. After that, there will be a formal public hearing and, if the Basin Plan amendment is adopted, another round of public review and comments before a hearing to the State Board. OAL and USEPA approval is also required before it can become effective. The full regulatory review and approval process could require approximately another year to 18 months to complete.

Additionally, the Task Force requests that this TMDL amendment be designated as a "High Priority" in the 2019 Triennial Review process. The Task Force will continue to work with the Santa Ana Water Board to finalize the Basin Plan amendment.

Response:

Santa Ana Water Board staff acknowledges that there is much work needed to finalize the Lake Elsinore and Canyon Lake TMDL amendment before the public adoption hearings, and subsequent approvals. The proposed Priority List and Work Plan has this issue as Number 1. We estimate a total of 1.6 Personnel Years (PYs) of TMDL resources will be needed to adopt, implement, and review this issue over the three years.

The Santa Ana Water Board looks forward to working with the Task Force through the Basin Plan amendment process.

**6. Timothy Moore
Risk Science
on behalf of the Middle Santa Ana River TMDL Task Force
Received on March 8, 2019**

Comments:

The Middle Santa Ana River Task Force (MSAR Task Force) recommends that the Santa Ana Water Board designate the following initiatives as "High Priorities" for the coming triennial review period:

- 1) Revise the water quality objectives for pathogen indicator bacteria in the Basin Plan to be consistent with those recently approved by the State Board as amendments to the Water Quality Control Plan for Inland Surface Waters.
- 2) Update the Table 5-REC2 Only Antidegradation targets for freshwater waterbodies; and

- 3) Update the Middle Santa Ana River Watershed TMDL for Bacterial Indicators in Chapter 5 of the Basin Plan.

Response:

Thank you for your detailed comments and suggestions. We have made these issues a high priority. Regarding your three main points:

- 1) Revising water quality objectives for pathogen indicator bacteria in the Basin Plan has been achieved when the State Board approved the bacteria provisions on March 22, 2019. We intend to integrate the bacteria provisions into our TMDLs and permits. We anticipate adding the bacteria provisions to the online Basin Plan in the upcoming FY and as a result, made that task the number one priority in the Non-TMDL priority list.
- 2) Updating the Table 5-REC2 Only Antidegradation Targets for Freshwater is anticipated to be reviewed while working on the Middle Santa Ana River TMDL. We anticipate the assistance of the TMDL Task Force in completing this task. We have placed the review and possible revision of these targets as Priority Issue No. 7 and have allocation staff resources for each of the next three fiscal years.
- 3) As mentioned, updating the Middle Santa Ana River TMDL is a priority that will be reviewed by staff over the next three years.

**7. Timothy Moore
Risk Science
on behalf of the MSAR Task Force
Received on March 12, 2013**

Comment:

Since this upcoming Triennial Review is the first to occur since the UAAs were approved in 2015, it is now time to re-check the status of those waterbodies that were re-designated or de-designated. The MSAR Task Force will be willing to assist in this process.

Response:

We agree with the comment and have placed this issue on the Priority List. We anticipate checking this summer to determine if the de-designations of REC1 and or REC1 and REC2 for certain waters are still warranted. We anticipate using the assistance of the MSAR Task Force in completing this task.