8 Consideration of Other Regulatory Programs

Stakeholders in the watershed are subject to numerous other regulatory requirements. Several of these programs have the potential to influence the schedule or actions related to the project. Although these programs will need to proceed on their own required schedules in conjunction with this project, the Process Plan recognizes the need to consider the other regulatory influences when conducting the work. As a result, a flow chart was developed to show the relationship between the Process Plan, other regulatory programs, and the estimated schedule for the work.

As shown in the flow chart, several regulatory programs will need to consider implementation actions for nutrients ahead of the completion of the TMDL and associated implementation actions. As a result, it may be necessary to consider the potential impact of the implementation actions for other regulatory programs, such as the Salt and Nutrient Management Plans (SNMPs), earlier in the project than needed. Given that the SNMP is designed to manage nutrients, it is unlikely that the actions that would be taken under the SNMP will cause additional nutrient loads to be discharged to the receiving waters. However, it is possible that the TMDL will result in additional requirements beyond the SNMP. One possible approach to address the scheduling concerns includes:

1. Consideration during SNMP development to ensure additional loading is not discharged to surface waters as a result of the proposed management measures.
2. Utilization of similar assumptions and analysis during TMDL development where appropriate as was used during SNMP development. This will avoid differences in requirements simply due to model or analysis assumptions.
3. Inclusion of implementation requirements from other programs (SNMP, MS4 permit) in TMDL implementation plan. Use a phased approach to TMDL implementation that allows for full implementation of existing program requirements to see if targets are met prior to requiring any additional actions.

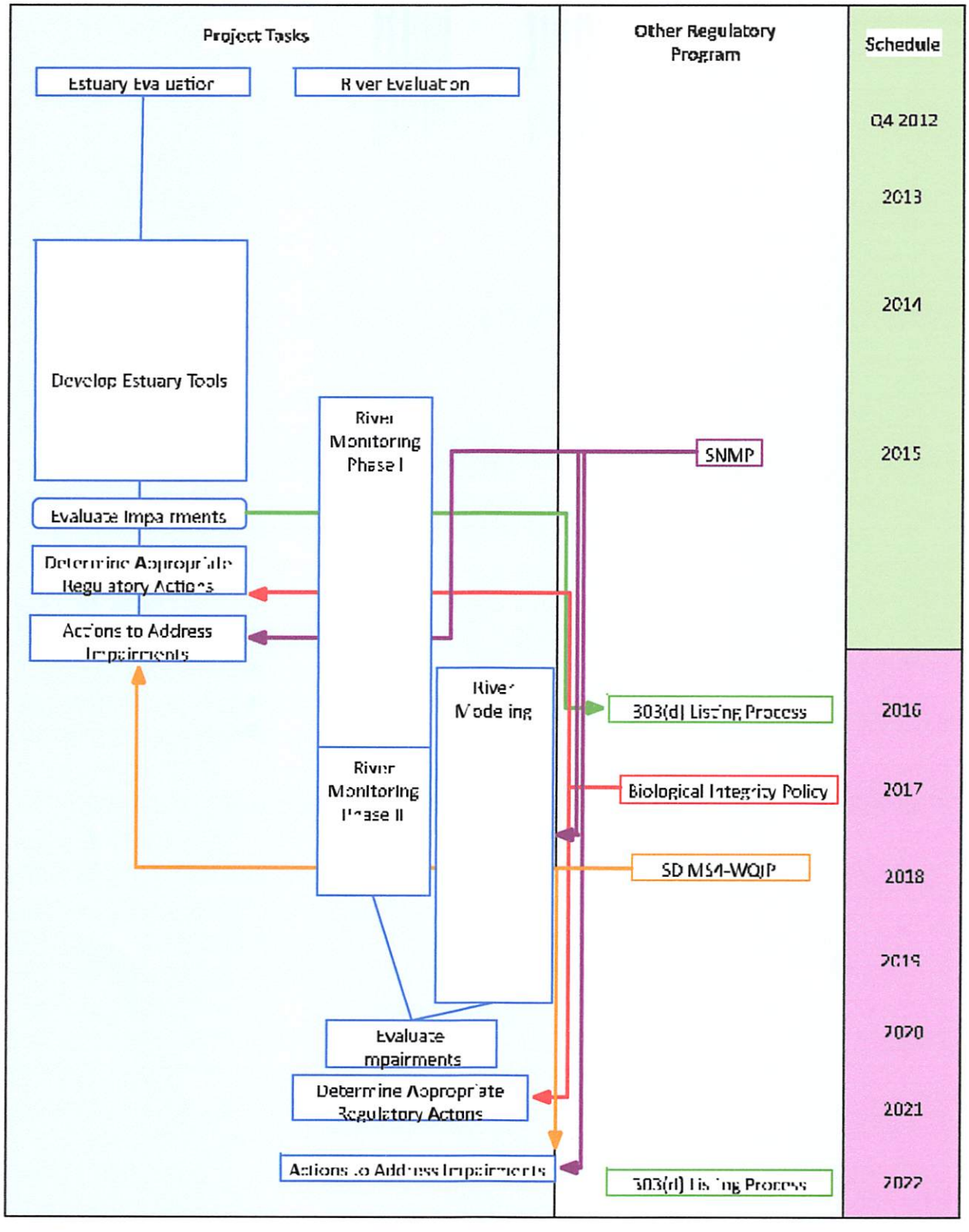

Figure 9. Relationship to Other Regulatory Programs

9 Schedule and Cost Estimate

The project is being conducted with partial funding from Proposition 84 grant funds. As a result, the scheduling of the work elements has been phased to coordinate with the available funding. In general, work conducted under Phase 1 of the funding is designed to develop the site-specific objectives and TMDL for the Santa Margarita River Estuary and gather initial monitoring data to support technical work in the Santa Margarita River. Further work for the study will be conducted at a future date pending funding from the next round of Proposition 84 grants. Future work will include the development of site-specific objectives and TMDLs or TMDL alternatives for the River, if necessary. Project scheduling and scope may be impacted by the IRWM funding cycle and approach.

A detailed schedule for completing the tasks outlined in Section 7 is included in Appendix 1. The Phase 1 estimated schedule provides targeted dates for completion of the tasks to evaluate the Estuary water quality objectives and estimates for completion of work after the evaluation is completed. The schedule also includes a summary of decisions that will need to be discussed with RWQCB staff. The decisions and discussions could influence the timing and scope of the work to be conducted. Additionally, as the work progresses, changes to the tasks and schedule may be warranted as a result of the work conducted. Finally, the schedule includes a linkage to the ways in which the information developed by the SMRNIG (as outlined in the SMRNIG deliverables column) can be utilized by the RWQCB for SSO and TMDL development, if appropriate, in the RWQCB decisions/use of SMRNIG deliverables column.

The second table provides a list of tasks for future phases of work that could be conducted if funding is available. The estimated schedule reflects targeted dates for completion of the work; however, the schedule and scope of the tasks is subject to change and the work may not be completed if funding is not obtained.

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December 21, 2015

DRAFT

Framework for Assessing Seasonality in the Santa Margarita River Watershed

prepared by:
SANTA MARGARITA WATERSHED TECHNICAL ADVISORY COMMITTEE

on behalf of the:
SANTA MARGARITA RIVER WATERSHED NUTRIENT INITIATIVE
STAKEHOLDER GROUP

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Glossary

Allocation: The amount of a pollutant that can be discharged to a waterbody to meet the numeric target in the TMDL or TMDL alternative.

Beneficial Use Impacts: Beneficial use impacts is a demonstration of impacts to beneficial uses as a result of biostimulatory substances. The most common way to make this determination is through a comparison of monitoring results to numeric water quality objectives or numeric interpretations of narrative water quality objectives in accordance with the State of California's Listing Policy. In the Santa Margarita Watershed, the evaluation should include whether sufficient flow is available during the growing season to sustain algal growth (30 days).

Direct effects: Direct effects due to nutrient concentrations. Ammonia toxicity to aquatic life and nitrate toxicity in municipal drinking water are the key direct effects from nutrients.

Indirect effects: Indirect effects of nutrients causing biostimulatory impacts. Indirect effects are more closely linked to beneficial uses through the use of response variables (algal biomass, dissolved oxygen) rather than nutrient concentrations.

Retentive Waterbody: Depositional waterbodies where sediment deposition containing nutrients could occur during one season and release the nutrients to the water column during other seasons or receive groundwater inputs from groundwater recharged by surface waters during a different season.

Summer Dry Weather: Dry weather occurring between May 1 and September 30.

Target: Numeric interpretation of water quality objectives into a TMDL or TMDL alternative to determine the goal for implementation of actions to achieve the objectives. Targets for biostimulatory substances could be response variables and/or nutrient concentrations.

Water Quality Objectives: Numeric or narrative objectives included in the Basin Plan.

Wet Season: Dry or wet weather occurring in the designated wet weather months (typically October to April).

Wet Weather: Storm events and the three days following a storm event.

Winter Dry Weather: Dry weather occurring between October 1 and April 30.

1 Introduction

1.1 BACKGROUND

Several stream reaches and the estuary in the Santa Margarita River (SMR) watershed are on the 2010 Clean Water Act section 303(d) list of water quality limited segments (303(d) list) for nitrogen (N), phosphorus (P), or eutrophication. The listings are based on exceedances of a specific numeric interpretation of the biostimulatory narrative objective in the Water Quality Control Plan for the San Diego Basin (Basin Plan). The availability of more recent scientific advances provide a better framework to evaluate the impacts to water quality and beneficial uses from biostimulatory substances and the relationship between nutrient concentrations and those impacts. In light of the recent science, stakeholders in the SMR, in cooperation with the California Regional Water Quality Control Board, San Diego Region (SDRWQCB), have identified the need to develop a watershed process for evaluating and addressing the 303(d) listings utilizing the best available science and information.

The purpose of this document is to provide a structure for evaluating options for addressing direct and indirect effects due to biostimulatory substances during wet weather and winter dry weather in the SMR. Beneficial use impacts due to direct effects are addressed by established water quality objectives that currently apply year round under both dry and wet weather. Indirect effects may vary depending on the condition and the time of year. As a result, the evaluation of indirect effects involves more considerations and the majority of the discussion in the document is designed to address indirect effects. The document provides the following information to support this discussion:

1. Background on beneficial uses and water quality objectives
2. Literature review of ways in which wet weather and winter dry weather have been handled in TMDLs and other regulatory documents
3. Discussion of potential options for handling wet weather and winter dry weather based on the literature review.
4. Evaluation of options and recommendations for the Santa Margarita River Watershed.

1.2 BENEFICIAL USES AND BASIN PLAN STANDARDS

While all beneficial uses must be considered and protected, some are more likely to be impacted by biostimulatory substances, such as: Cold Freshwater Habitat (COLD), Fish Migration (MIGR), Municipal and Domestic Supply (MUN), Water Contact Recreation (REC-1), Noncontact Water Recreation (REC-2), Fish Spawning (SPWN), and Warm Freshwater Habitat (WARM). All water bodies in the SMR watershed are designated with recreational and aquatic life beneficial uses that could be impacted by biostimulatory substances.

The Basin Plan Water Quality Objectives (WQOs) for biostimulatory substances can be described as narrative water quality objectives with numeric guidance or interpretations. These numeric interpretations have been utilized historically for 303(d) listing decisions, TMDLs, and permit conditions. However, the objectives were established in the 1970's and regulatory and scientific approaches to evaluating biostimulatory objectives have since evolved. It is now

recognized that due to site-specific factors (such as hydrology, shading, temperature) total nitrogen (TN) and total phosphorus (TP) concentrations/loads that can contribute to primary producer overproduction at levels that impact beneficial uses vary greatly among streams and estuaries.

Nitrogen and phosphorus compounds can have direct impacts on beneficial uses. For example, ammonia can cause toxicity to aquatic life and nitrate can impact the municipal drinking water beneficial use. However, these direct impacts are addressed through Basin Plan objectives specifically targeted to address those impacts. For impacts due to biostimulatory substances, nitrogen and phosphorus cause indirect impacts on beneficial uses. These indirect impacts to beneficial uses vary from potential visual effects and odors, to recreational impacts, to low dissolved oxygen levels. In general, all of these result from the overabundance of primary producers and resulting effects on water quality, biodiversity and food web support, not as a result of nutrient concentrations per se.

Additionally, the science, information, and tools to evaluate biostimulatory WQOs have evolved. It is now clear that a single nitrogen or phosphorus concentration objective is not adequate to protect beneficial uses (Paerl 2015). The concentrations of nitrogen and phosphorus that contribute to a given level of algae in a water body may vary based on a number of variables. As a result, the protection of beneficial uses needs to consider different nutrient concentrations to reflect site-specific conditions and the effects upon the response indicators being managed. An abundance of published studies has demonstrated shortcomings of using nutrient concentrations within a water body alone to predict eutrophication (e.g. Cloern and Dugdale 2010). Concentration data may not be effective in assessing eutrophication and the subsequent impact on water use because algal productivity depends on several additional factors, such as morphology, light availability, flooding frequency, biological community structure, etc.

As a result, the new regulatory approaches for protecting beneficial uses from biostimulatory substances are aimed at addressing the cause of potential impairments rather than focusing on controlling nutrient concentrations per se. The parameter of concern for protection of beneficial uses is the ecological response indicator; such as benthic algal biomass and community structure and dissolved oxygen. These response indicators provide a more direct linkage to beneficial uses than the nutrient concentrations alone. The numeric guidance for biostimulatory objectives in the current Basin Plan does not include numeric target(s) for response indicator(s). To adequately protect beneficial uses from biostimulatory substances, it is important to consider both causal and response indicators.

The State Water Resources Control Board (Water Board) staff has proposed a regulatory approach to nutrient objectives based on the use of ecological response to assess waterbody condition and status of beneficial use support (SWRCB 2014). One of the central tenets of the Water Board staff's Nutrient Control Program framework is that, in order to assess more directly impairments to beneficial uses, the development of nutrient WQOs should be based on response to nutrients (e.g., increased algal biomass, lowered dissolved oxygen) rather than nutrient concentrations. Mathematical models would then be employed to link numeric response endpoints back to site-specific nutrient concentrations.

Fundamentally, the Water Board staff's Nutrient Control Program Framework is based on a dry weather regulatory paradigm. In Southern California, eutrophication symptoms are associated with dry weather conditions and typically manifest themselves in the late spring and summer months. As will be discussed in the literature review, many TMDLs consider this time period as the critical condition and require load reductions and/or attainment of targets only during these times. Even though nutrient concentrations can be higher during wet weather, the probability of exceeding response indicator endpoints is low, because the physical energy associated with storms will scour benthic algae, transport and dilute phytoplankton blooms downstream, and cause mixing and re-oxygenation of the water column. While wet weather nutrient loading may influence dry weather nutrient concentrations, wet weather nutrients are not linked to adverse effects to beneficial uses during the storm, outside of direct toxicity from ammonia or nitrate (if water is used for municipal supply). Therefore, a coherent framework that addresses biostimulatory objectives during wet weather based on the most current scientific research is needed to determine if, where and when wet weather targets and/or loads are needed. In addition, consideration of the application of dry weather objectives during the winter dry weather as compared to the summer dry weather (growing season) needs to be evaluated.

In conjunction, geomorphology of the waterbody segment and downstream waters plays an important role in eutrophication. Waterbodies that are continuously flowing with no impoundments would typically exhibit fewer signs of beneficial use impacts than impounded, slower flowing, or standing water bodies under the same loading conditions. Consideration of the geomorphology of the waterbody and downstream waters and the impact of those factors on the approach taken to address wet weather/wet season loads was included in the evaluation of options.

2 Literature Review

A literature review was performed to examine various approaches that have been used to address wet weather and winter dry weather biostimulatory impairments in California TMDLs and other states if applicable. For each document reviewed, the approach to addressing seasonality is identified, the basis of the targets is presented, and the method for calculating allocations to meet the targets is summarized in this section. Additional information on the basis for picking seasonal targets is included for some key TMDLs.

2.1 CALIFORNIA

2.1.1 Loma Alta Slough

Loma Alta Slough was listed on the 303(d) list as being impaired due to nutrients. An alternative to a TMDL was adopted to address the 303(d) listings for the Slough. The technical work to support the alternative was similar to the work that would have been developed for a TMDL. Based on the developed technical work, seasonal goals for macroalgal biomass and percent cover were developed for the dry weather season (May through October). Loads of TP that would be needed to meet those goals were calculated as monthly loads for each month of the dry season. The goals and loads were only developed for the dry season because that was when the impairment was determined to occur. During the dry months, "watershed flows are insufficient

to maintain an opening to the ocean, and atmospheric conditions in conjunction with nutrient loading in the Slough result in excessive algal growth." Additionally, dry weather loadings to the Slough were determined to be the primary sources of loadings contributing to the excessive algal growth. No winter dry or wet weather goals or load allocations were developed.

(CA San Diego RWQCB, R9-2014-0020. 2014)

2.1.2 Malibu Creek and Lagoon

In 2003, USEPA developed a nutrient TMDL for the Malibu Creek watershed to protect aquatic health and recreational beneficial uses in the Malibu Creek watershed including the lagoon. The 2003 nutrient TMDL included targets for dissolved oxygen, ammonia, algal percent cover, algal biomass (chlorophyll a), TN and TP. The dissolved oxygen and ammonia targets are based on Basin Plan objectives for direct effects and apply year round. The algal percent cover, algal biomass, TN and TP targets are to address indirect effects. The TP targets and lower TN targets to address indirect effects only apply during the summer (April 15 to November 15). The summer TN and TP targets were based on literature review values and a reference watershed approach. The reference watershed approach in which a less impacted portion of the watershed is analyzed to determine water quality conditions and its characteristics are set as standards for the more impacted parts of the waterbody. During the winter (November 16 to April 14), no TP targets apply and higher TN targets based on meeting the Basin Plan objectives (10 mg/L) for direct effects with a margin of safety were included. Higher targets were found to be appropriate for the winter because there is some evidence of algae problems in the winter months, but it would be unwarranted to apply the summer season numeric target values because of the significant uncertainty about the extent of the problem and the relationship between nutrients and algal growth in the winter months. The allocations were daily loads for the summer and concentrations set equal to the winter targets during the winter.

In 2013, USEPA conducted an evaluation of targets and allocations necessary to address benthic macroinvertebrate impairments in the watershed. The analysis determined that nutrients were contributing to the benthic macroinvertebrate impairments and concluded that more stringent targets and allocations were needed than those included in the 2003 nutrient TMDL. The Benthic TMDL establishes targets for benthic algal coverage, chlorophyll a, dissolved oxygen, TN and TP. The dissolved oxygen targets are set equal to the Basin Plan objectives to address direct effects. The remaining targets were developed to address indirect effects of biostimulatory substances and algae on the benthic community. The TN and TP targets are based on reference stream conditions with a seasonal average concentration target for summer (April 15 – November 15) and winter (November 16 – April 14). The targets were determined based on a reference watershed approach. The seasonal approach from the 2003 Nutrient TMDL was maintained, but the TN and TP targets during both seasons were lowered and are both now based on reference conditions.

Allocations are concentrations with lower concentrations applied during the summer season as compared to the winter season. Summer season WLAs are set for Caltrans and LA County's MS4 at a seasonal average load of TN of 1 mg/L. Winter WLAs are set at 4 mg/L for TN and 0.2 mg/L for TP. For Ventura County MS4s, WLAs were not assigned because the discharges

from Ventura County were determined to be not contributing to the downstream waterbodies addressed by the TMDL.

(USEPA, July 2013)

2.1.3 Ventura River

TMDLs were established in the watershed for algae, eutrophic conditions and nutrients to protect impacts to municipal water supply, recreational beneficial uses and several aquatic habitat uses. The TMDL includes targets for total algal biomass, macroalgal cover, phytoplankton biomass, dissolved oxygen and pH. The biomass and percent cover indicator targets only apply during the summer dry season when algae growth primarily occurs (May 1 to September 30). Dissolved oxygen and pH targets apply during all conditions (wet weather, winter dry weather and summer dry weather). The dry season algal biomass and percent cover targets were developed based on addressing indirect effects due to biostimulatory substances and the dissolved oxygen and pH targets were set equal to Basin Plan objectives.

Seasonal targets were determined to be appropriate because the critical condition for the TMDL was determined to be dry, summer weather conditions during which flows are lower, temperatures higher and the estuary mouth closed. The closed mouth prevents flushing and allows accumulation of nutrients. A conceptual model noted that when flows are above 50 cfs the mouth will breach and flows of at least 10 cfs are needed to keep the mouth open. Thus it was concluded that in much of the winter the mouth is open and nutrients flush straight out to sea and do not accumulate in the river or estuary. So the critical conditions for this TMDL are summer, dry weather. Dry weather is defined as a day with no rain; wet weather is a day with rain. Nutrients are loaded from the watershed to the Ventura River and Estuary in both dry and wet weather, but the nutrients loaded in the dry season are predominately responsible for the algae, eutrophic conditions, and nutrient impairments in the Ventura River and Estuary. The staff report states:

> "Nutrients are loaded from the watershed to the Ventura River and its tributaries, and the Estuary in both dry and wet weather, but the nutrients loaded in the dry season are predominately responsible for the algae, eutrophic conditions, and nutrient impairments. Nutrient concentrations present in the river during the winter months are sufficient to support algal growth; however, cofactors in the winter, such as greater flow and lower temperatures, mitigate algal growth in the winter. Also, the typical seasonal succession of primary producers generally shifts in the winter to be dominated by aquatic plants. The watershed nutrient wet-weather loads are generally delivered directly to the ocean and thus do not contribute to exceedance of the biostimulatory substances objective in the river or Estuary, which occurs during the dry season when algae growth primarily occurs. Nonetheless, to protect water quality year-round, wet-weather WLAs and LAs are assigned to meet water quality objectives and/or maintain existing discharge quality."

Waste load allocations (WLAs) and load allocations (LAs) addressing point and nonpoint sources of nutrients are assigned to discharges to the Ventura River watershed. Because the critical condition for this TMDL is dry weather, and it is the dry-weather loading that results in water quality impairments, the allocations are primarily focused on dry-weather nutrient loading

reductions. However, wet weather WLAs and LAs are assigned as well. The dry weather allocations are loads calculated using a model and apply during both summer dry and winter dry weather. Wet weather allocations for stormwater, agriculture, and horse/livestock sources were set equal to the Basin Plan objectives for nitrate to protect for direct effects. Where no Basin Plan objectives were available and for the wastewater treatment plant, wet weather allocations were set equal to existing concentrations in discharges (anti-degradation based allocations).

(CA Los Angeles RWQCB, R12-011. 2012)

2.1.4 Central Coast TMDLs

A number of nutrient TMDLs have been developed for rivers and creeks in the Central Coast Region. While there are some variations, most of the TMDLs were developed using similar approaches. Below is a summary of the general approach taken in the Lower Salinas River, Lower Santa Maria River and Pajaro River TMDLs.

The Central Coast TMDLs generally contain targets for nitrate, un-ionized ammonia and orthophosphate. The numeric targets for nitrate and un-ionized ammonia related to direct effects apply year round under all conditions (wet weather, winter dry weather and summer dry weather). Nitrate and orthophosphate targets for biostimulatory effects are seasonal. Separate targets are presented for the dry season (May through October) and the wet season (November through April). The wet season targets are higher than the dry season targets and apply during both wet weather and winter dry weather.

The dry season targets are based on an evaluation of the amount of nutrients necessary to meet the biostimulatory objectives using available models and validated by considering USEPA's reference reach approach and looking at a percentile of existing data.

The wet season numeric targets, associated TMDLs and allocations, are less stringent than the dry season targets and allocations because available data and research studies do not clearly demonstrate that wet season nutrient levels are likely to cause excessive algae growth. The appendices to the TMDLs provide a detailed discussion of the findings and basis for determining the need for wet season targets and justifying the higher values. In summary, higher wet season targets were included in the TMDL for the following reasons:

- Some evidence of periodic and episodic elevated chlorophyll a measurements during the wet season, but it is not consistently observed.
- High flows during wet weather are likely to scour algae and flush nutrient loads from the watershed.
- Uncertainty as to whether wet weather and winter dry loads contribute to biostimulatory impacts during the summer dry season.

The wet season targets for nitrate were set equal to 8 mg/L. The value was based on the direct effects nitrate objective of 10 mg/L to protect municipal drinking water supplies with a 20% reduction applied to "ensure implementation of the Basin Plan numeric objective for nitrate while acknowledging uncertainty concerning winter algae problems and associated attainment of

the narrative objective for biostimulatory effects." The orthophosphate targets are based on the State of Nevada's criteria and an evaluation of the reference conditions in the watershed.

> "The wet season numeric targets, associated TMDLs and allocation are less stringent than the dry season targets because available data and research studies do not clearly demonstrate that nutrient levels are likely to cause excessive algae growth. The wet season targets and allocations are designed to ensure implementation of the Basin Plan numeric objective for nitrate while acknowledging uncertainty concerning winter algae problems and associated attainment of the narrative objective for biostimulatory effects. The TMDLs account for this winter period uncertainty by incorporating a 20% margin of safety (setting the nitrogen numeric target at 8 mg/l instead of 10 mg/l, which is the applicable numeric objective).

Waste load allocations (WLAs) and load allocations (LAs) were established for dry and wet season concentrations and set equal to the numeric targets for the applicable season. The wet season allocations apply during both wet weather and winter dry weather.

In the Lower Santa Maria TMDL, the staff report included an assessment of a series of biostimulatory criteria for the stream reaches of the waterbodies to decide if impairment was occurring. This assessment included a determination of whether or not the nutrient related conditions in that reach are contributing to impacts downstream. If so that reach was included in the impaired due to biostimulation list and the biostimulatory numeric targets for nitrate and orthophosphate were applied.

(CA Central Coast RWQCB, R3-2013-0013, R3-2014-0008, R3-2015-0004. 2013, 2014, 2015)

2.1.5 Chorro Creek

The TMDL for Chorro Creek includes numeric targets for dissolved oxygen that apply year round and are intended to protect the waterbody from direct effects. The target for indirect effects due to biostimulatory substances is a percent cover of benthic algae that is applicable between May and September. The benthic algae percent cover target is based on USEPA's recommendation for percent cover. The benthic algae percent cover target was determined to be necessary during the growing season when algal growth contributes to low dissolved oxygen levels. Allocations for the treatment plant were set equal to the nitrate-N concentration necessary to address direct effects (10 mg/L) and were set to apply year round. Orthophosphate allocations apply from May through September and were set equal to existing concentrations. Land owners along the creek were assigned load allocations to maintain a median stream shading along the creek.

(CA Central Coast RWQCB, R3-2006-044. 2006)

2.1.6 San Simeon Creek

In the San Simeon Creek TMDL, numeric targets for TN, TP, dissolved oxygen and chlorophyll a were selected to address indirect effects due to biostimulatory substances. These targets apply during a modified dry season of July through December. Waste load allocations were set equal

to the TN and TP targets and only apply during a modified dry season of June through December.

An analysis was undertaken during the TMDL development to assess local conditions within the watershed and stream responses to nutrient loading and seasonality. The analysis determined that concentrations of nutrients in the study area showed significant differences that were strongly correlated to the season, with a "wet" season of January through June, and a "dry" season of July through December. This seasonal bifurcation was used in the targets and WLAs of the TMDL. The following explanation for developing the seasonal targets and allocations was included in the TMDL:

> "Using the same analysis for the adjusted alternative wet and dry season, the dry season (July through December) median (12.2 mg/L total nitrogen) is significantly larger than the wet season (January through June) median (2.2 mg/L total nitrogen) at San Simeon Creek (310SSC) for total nitrogen....
>
> The cluster analysis confirms that the data separates into two select groups, the two groups sort consistent with the adjusted alternative wet and dry season, and that for the adjusted alternative wet and dry season those groups show a greater degree of separation than when the data is grouped using the conventional wet and dry season. Understanding seasonal variation in San Simeon Creek supports the development of seasonal numeric targets that are protective of beneficial uses."

(USEPA and CA Central Coast RWQCB. 2015)

2.1.7 Lakes TMDLs

A number of TMDLs have been developed for lakes in the Santa Ana and Los Angeles region. Below are short summaries of each of these TMDLs. The lake TMDLs include considerations that are not directly applicable to the Santa Margarita River watershed, but have been included to show the impact of different geomorphological conditions on the approach.

2.1.7.1 Big Bear Lake

The Big Bear Lake TMDL includes targets for TP, macrophyte coverage, and chlorophyll a. The targets apply year round during dry hydrologic conditions for TP and macrophyte coverage and during the dry season for chlorophyll a. Wet condition targets are included to address loadings during wet weather that could impact dry weather impairments, but do not apply until a later date after further investigation is done. Impairments are not considered to occur during wet weather. Allocations are annual average loads that apply during dry hydrological conditions only. Wet weather allocations may be developed in the future to address external loading that could contribute to the nutrient reservoir in the lake and impact eutrophic conditions during the critical condition of the summer and dry years.

(CA Santa Ana RWQCB, R8-2006-0023. 2006)

2.1.7.2 Lake Elsinore and Canyon Lake

The Lake Elsinore and Canyon Lake TMDL includes annual TN, TP targets for both lakes and a growing season chlorophyll a target for Lake Elsinore. An annual chlorophyll a target for Canyon Lake was included because of the greater spatial and temporal variability of algal biomass in the lake and the annual target was considered more representative of eutrophic conditions. The TP and TN targets were determined by evaluating reference conditions and existing conditions. The chlorophyll a targets were derived from literature values designed to protect the lakes from indirect effects. Allocations are assigned as annual loads that are evaluated as a 10 year running average.

(CA Santa Ana RWQCB, R8-2004-0037. 2004)

2.1.7.3 Los Angeles Lakes (Developed by EPA)

The Los Angeles Lakes TMDLs include a number of lakes throughout the Los Angeles Region that are impaired for biostimulatory substances and other pollutants. The TMDLs include dry season and annual average targets for indirect effects. Compliance with the targets is determined as a three-year average. The allocations are annual loads calculated to meet the indirect effects targets where the targets are not yet being achieved and set equal to existing loads for waterbodies where the targets are currently being met.

(USEPA, March 2013)

2.2 NATIONWIDE

2.2.1 Florida

The State of Florida has developed nutrient related TMDLs for many waterbodies across the State, addressing waterbody types including rivers, bays, harbors, and offshore waters. In cases where no beneficial uses were affected, it appears that an anti-degradation approach was used. Where indications of impacts to beneficial uses existed, it appears that a reference watershed approach was used to develop site specific targets based on observed conditions.

The State has established narrative criteria for nutrients: "In no case shall nutrient concentrations of a body of water be altered so as to cause an imbalance in natural populations of aquatic flora or fauna." The approach to the TMDLs is to interpret the narrative objective to develop site specific targets that represents unimpaired or "healthy" conditions. This is typically accomplished through analysis of existing data or through the use of water quality/quantity models. Several targets were selected as representative of key beneficial uses: submerged aquatic vegetation and clarity were used to assess sea grass communities, chlorophyll-a was used to assess phytoplankton biomass, and dissolved oxygen was used to assess effects on faunal communities. These targets were used to develop site specific criteria for chlorophyll-a, total nitrogen, and total phosphorus that used volume weighted, segment averaged concentrations to calculate annual geometric mean concentrations. There was no indication that wet and dry weather conditions were differentiated within the TMDLs.

(FDEP, 2013a; FDEP, 2013b)

2.2.2 Chesapeake Bay

The USEPA has developed 92 nutrient TMDLs to address water quality issues related to eutrophication in the Chesapeake Bay Watershed(s), addressing many types of waterbodies across six states and the District of Columbia. The TMDL approach established thresholds or targets for indicators of impacts which are based on state standards, and then calculated load and wasteload allocation necessary to meet the targets. The TMDLs generally call for reductions of nitrogen (25%), phosphorus (24%), and sediment (20%) to meet state water quality standards for dissolved oxygen, water clarity, underwater Bay grasses, and chlorophyll-a that have been deemed protective of beneficial uses. Allocations are expressed in pounds per year and do not differentiate between wet and dry weather conditions. However, there is seasonal variation accounted for within the targets (DO, clarity, and chlorophyll-a). For example, the target for chlorophyll-a is lower in the spring, higher in the summer, and there is no applicable target from October – February.

(USEPA, 2010.)

2.2.3 Wisconsin

The Wisconsin Department of Natural Resources, in conjunction with USEPA and the Oneida Tribe of Indians of Wisconsin developed a suite of 45 individual TMDLs for nutrients and TSS for the Lower Fox River Basin and Lower Green Bay watershed. Five restoration goals were set for the Lower Fox River Basin: reduce excess algal growth, increase water clarity, increase growth of beneficial submerged aquatic vegetation, increase DO levels, and restore degraded habitat. A narrative water quality criterion is applicable:

> "NR 102.04(1). General. To preserve and enhance the quality of waters, standards are established to govern water management decisions. Practices attributable to municipal, industrial, commercial, domestic, agricultural, land development or other activities shall be controlled so that all waters including the mixing zone and the effluent channel meet the following conditions at all times and under all flow conditions: (a) Substances that will cause objectionable deposits on the shore or in the bed of a body of water, shall not be present in such amounts as to interfere with public rights in waters of the state, (b) Floating or submerged debris, oil, scum or other material shall not be present in such amounts as to interfere with public rights in waters of the states, (c) Materials producing color, odor, taste or unsightliness shall not be present in such amounts as to interfere with public rights in waters of the state."

In addition, the State has also established numeric criteria for TP to protect fish, aquatic life uses, and recreational uses. The TMDL targets established for TP are based on the statewide phosphorus criteria applied as a summer median concentration. For the main stem, the criteria are 0.10 mg/l and tributaries are subject to 0.075 mg/l. From these criteria, annual average WLAs were developed for wastewater treatment plants, agriculture, MS4s, and others. Although there is no explicit distinction between wet and dry conditions, water quality improvements and attainment of TMDL targets will be evaluated based on a comparison of annual summer median

TP concentrations in the water column to criteria and is limited to the critical condition (i.e., May through October). It appears that targets/criteria would not apply during other months.

(Cadmus Group for Wisconsin Department of Natural Resources, Oneida Tribe of Indians of Wisconsin, USEPA, Total Maximum Daily Load and Watershed Management Plan for Total Phosphorus and Total Suspended Solids in the Lower Fox River Basin and Lower Green Bay, Wisconsin, March 2012; www.dnr.wi.gov/water/projectDetail.aspx?key=16084305; glc.org/announce/2013-04-glc-usda-nrcs-ptrade)

2.2.4 New York

In December of 2000, the New York State Department of Environmental Conservation and the Connecticut Department of Environmental Protection adopted a TMDL to address eutrophication and hypoxia in Long Island Sound. Because of eutrophic conditions and depressed DO, the waterbody is not supportive of aquatic life habitats or recreation. The TMDL focused on attainment of DO water quality standards, developed by EPA, through reduced nitrogen loads from wastewater treatment plants, combined sewer overflows, agriculture, urban runoff, and atmospheric deposition. The TMDL target is a 58.5% reduction in nitrogen loads over 15 years based on modeled scenarios predicting the benefit of various management scenarios on dissolved oxygen levels. Although the critical period for hypoxia occurs from June – September each year, the model used (LIS 3.0) did not show a strong correlation between nitrogen loads during the critical period and the reduced DO levels. For this reason, seasonal management of nitrogen loading was not included, as it appears that algal growth in this case is more dependent on the total pool of nitrogen available. This resulted in the development of WLAs and LAs based on total annual loads for nitrogen measured in tons per year, irrespective of seasonality or weather conditions.

(New York State Department of Environmental Conservation, Connecticut Department of Environmental Protection, 2000)

2.2.5 New Mexico

Three examples of nutrient TMDLs in New Mexico were reviewed: Rio Ruidoso (2005), Mora River (2007), and Cieneguilla Creek (Angel Fire) (2010). Each TMDL was developed to address eutrophication in streams and focused on TN and TP loading, primarily from wastewater treatment plants. The State of New Mexico uses a narrative nutrient standard: "Plant nutrients from other than natural causes shall not be present in concentrations which will produce undesirable aquatic life or result in a dominance of nuisance species in surface waters of the state." The TMDLs were developed based on the USEPA Ecoregion recommendations. Water body specific targets were set for TN and TP and considered "non-impaired" conditions in some cases. The TMDL did not factor in seasonality or weather conditions.

For these TMDLs, a phased implementation process was developed that allows flexibility in setting final targets. For Phase I, achievability of the WLA was considered first. Where the WLA is achievable, effluent limits are developed based on Ecoregion targets. Where the WLA is not achievable, effluent limits are assigned based on Limits of Technology. After a defined period of implementation and monitoring, the designated uses are evaluated – are they being

met? If not, more stringent effluent limits are assigned. If the designated uses are being met, the effluent limits that are proven effective are retained and the TMDL is revised to set the final targets equal to the interim targets. This process is repeated, keeping the effluent limits as interim targets until the uses are met, at which time the targets become final. The TMDL did not factor in seasonality or weather conditions.

(Lemon, 2011)

2.2.6 North Carolina

Multiple waterbodies in North Carolina have exhibited eutrophication problems and have been addressed through various management processes over the past 30+ years. Over this time period, nutrient management has become more focused on all sources (as opposed to only point sources), has moved to inland waters looking at characteristics of individual sub-basins (rather than focusing only on the larger watershed), and has become more water quality based, moving away from purely technology based approaches. The State of North Carolina set water quality standard for chlorophyll-a set at 40 ug/l for all waters, except for trout waters, where it is lower (15 ug/l).

In the Roberson Creek TMDL for TP, the TMDL is expressed as a percent load reduction for TP (71%), which represents the maximum load of TP that can be assimilated and maintain the water quality standard for chlorophyll-a. The allowable load is based on the critical condition, identified as a dry hydrologic period during the algal growing season. High loading during the wet season is typically flushed through the system quickly, reducing the nutrients available for uptake by algae. For this reason, the TMDL is focused on nutrient loading and algal response only during an extended growing season defined as April through October. Load and WLAs are expressed as kg TP/day/summer and the required reduction is only applicable during the summer time period. It is expected that basing the TMDL during the warm months will protect the creek during the colder period from November through March.

(Behm, 2011; NCDENR, 2003)

2.2.7 Illinois

For the Wabash River, serving parts of Illinois and Indiana, the nutrient TMDL was developed around the critical conditions, which includes both high and low flow periods. The WLAs were developed such that water quality standards would be met during high and low flow conditions, thus the targets and WLAs are the same throughout the year.

(Tetra Tech, 2008)

2.3 SUMMARY OF LITERATURE REVIEW

Based on the literature review, many TMDLs include seasonal considerations. Some of the TMDLs distinguish between wet weather and winter dry weather, but the majority of the TMDLs consider the wet season as a whole and do not provide a separate discussion of the two conditions. As a result, the literature review resulted in identification of options that did not distinguish between the two conditions. In developing the evaluation framework discussed in the

next section, the two conditions are considered separately and the applicability of the options identified from the literature review to each condition are considered. Based on the literature review, the following approaches to addressing seasonality in nutrient TMDLs and regulations were identified.

For wet season targets:

- No targets because beneficial use impacts were not identified during the winter dry weather and/or wet weather
- Targets based on direct effects only
- Targets based on other considerations that included uncertainty, future potential for currently undefined indirect effects, and other factors. Reference conditions, existing concentrations (anti-degradation), other state criteria, and margin of safety on direct effect objectives were all used as approaches to address this situation.

For wet season allocations:

- Allocations calculated to meet the targets with the same seasonality applied. The allocations could be set equal to the targets or be developed using models or other analysis to determine the appropriate allocations necessary to meet the targets, but the seasonality matches the targets.
- Annual loads that account for the impact of wet weather loading on downstream waterbodies.

There were only two identified instances in the literature review where wet season or annual allocations were determined to be necessary to meet dry season targets when wet season targets were not identified. In both cases, the downstream waterbodies were retentive waterbodies where sediment nutrient loads were significantly contributing to the biostimulatory impacts in the downstream waterbody. For the majority of the TMDLs reviewed, the allocations were designed to meet the applicable target and seasonal allocations were applied if seasonal targets were included.

Several of the TMDLs discussed the fact that high flows during wet weather are likely to scour algae and beneficial use impacts due to biostimulatory effects are unlikely to occur during wet weather. As a result, when wet weather and winter dry weather were separated, indirect effects targets were not applied during wet weather. In most cases, a dry period critical condition was defined as the summer dry season and many TMDLs did not include any targets or allocations for the wet season (wet weather and winter dry weather). A summary of the approaches used in the reviewed literature is included in Table 1.

Table 1. Summary of Nutrient Approaches in Reviewed Literature

State(s)	Wet Season Targets				Indirect Effects	Allocations	
	No Target	Direct Effects Only	Reference Conditions	Anti-Degradation		Based on Targets with same seasonal applicability	Wet Loads to protect dry season impacts
California							
Loma Alta Slough	X					X	
Malibu Creek			X		X	X	X
Ventura River [1]		X		X		X	
Central Coast TMDLs		X			X	X	
Chorro Creek	X					X	
San Simeon Creek	X				X		X
Big Bear Lake [1]					X	X	
Lake Elsinore					X	X	
Canyon Lake					X	X	
Los Angeles Lakes					X	X	
National							
Florida			X	X			
Chesapeake Bay	X						X
Wisconsin	X						X (annual)
New York							X
New Mexico					X	X	
North Carolina	X					X	
Illinois					X	X	

1. Included consideration of wet weather vs. winter dry weather in developing targets and allocations.

3 Summary of Potential Options

As found in the literature review, the majority of the documents reviewed reviewed pertaining to waterbodies in California, and some documents pertaining to waterbodies in other parts of the United States, considered seasonality and the different impacts that occur during the summer dry season as compared to the winter dry season and wet weather in the technical analysis. In many cases, the application of targets and allocations was limited to the summer dry season. When seasonal targets/allocations were considered, multiple factors were use to determine the appropriate use of seasonal analysis including:

1. Whether or not an impairment was occurring during wet weather or winter dry weather.
2. Whether or not loadings during wet weather or winter dry season had an impact on summer dry season impairments in the waterbody or downstream.
3. Whether there was uncertainty, concerns about future conditions, or other factors that influenced target and allocation development.

Based on these considerations and the approaches identified in the literature review, the following options were identified as potential ways wet weather and winter dry season targets could be considered in the SMR.

Options for Wet Weather Targets

- No targets applied during wet weather because no direct or indirect effect is presumed to occur.
- No targets applied during wet weather, but allocations or management scenarios are developed to address impacts of wet weather loading on dry season beneficial uses (within the waterbody or in downstream waterbodies).
- Wet weather targets assigned to address direct effects
- Wet weather targets to address concerns other than beneficial use impacts (e.g. antidegradation or uncertainty).

Options for Winter Dry Weather Targets

- No targets applied during winter dry weather because no direct or indirect effect is presumed to occur.
- No targets applied during winter dry weather, but allocations or management scenarios are developed to address impacts of winter dry weather on summer dry beneficial uses (within the waterbody or in downstream waterbodies).
- Winter dry weather targets developed to address indirect effects that are different from summer dry targets.
- Winter dry targets developed to address indirect effects that are equal to summer dry targets.
- Winter dry weather targets assigned to address direct effects

- Winter dry weather targets to address concerns other than beneficial use impacts (e.g. antidegradation or uncertainty).

These options are described in more detail in the following section. The framework for evaluating whether or not targets, allocations or management actions are needed for winter dry and wet weather is shown in Figure 1. The applicable target, allocations and/or management options applicable to each evaluation pathway in the Figure 1 flow chart are shown in Table 1.

3.1 TARGET OPTIONS

3.1.1 No Beneficial Use Impacts

3.1.1.1 No Targets

As discussed in the introduction to this section, beneficial uses due to indirect effects often do not occur during wet weather events due to the scouring effects of high flows. Similarly, beneficial uses due to indirect effects may not occur during winter dry weather. If no beneficial use impacts are identified, it is not necessary to define targets for wet weather and/or winter dry weather.

It is possible that loads generated during wet weather and/or the winter dry weather could contribute to beneficial use impacts with a time lag—either during winter dry weather or later during summer dry weather. The potential impacts due to the loads can be addressed through allocations or management measures and do not necessarily require the identification of targets.

3.1.1.2 Antidegradation Targets

In cases where beneficial uses are not impacted by biostimulatory substances under wet weather and/or winter dry conditions, an antidegradation approach could be used to set targets to ensure that beneficial uses continue to be protected. The antidegradation approach uses data to define existing conditions in the waterbody. By using existing data to define the targets, concentrations of algae, TN and/or TP will not be allowed to increase and beneficial use impacts will not occur as a result of increased concentrations in the future.

3.1.1.3 Reference Condition Targets

In cases where the target at which beneficial uses are not impacted by biostimulatory substances under wet weather and/or winter dry conditions is not well understood, a reference approach can be used to set targets. Reference condition based targets can also be appropriate to ensure that actions are not required to make waterbodies cleaner than would occur under natural conditions.

Under a reference watershed approach, data would be collected from waterbodies within a similar sized undeveloped watershed to establish a baseline or reference condition. The waterbodies within the reference watershed should be similar in size, geomorphology, and hydrology to those in the non-reference watershed. The reference watershed should be unimpacted by anthropogenic activities, typically represented by the amount of urbanized land use within the reference watershed.

Once a reference watershed is identified, water quality conditions and beneficial uses would be assessed under various conditions. In this case, data collection would be focused on wet weather and winter dry weather conditions. Concentrations and loading could be measured for causal indicators (TN, TP). Ecological response indicators could also be measured to confirm the lack of impairment and to demonstrate the relationship between cause and effect under the reference condition. These data could be used to establish targets within the flowing stream (i.e., causal indicators) or within the downstream waterbody (i.e., ecological response indicators) that are representative of the reference

3.1.2 Direct Effects Targets

Direct effects targets are nutrient concentrations that address direct toxicity from nutrients. Water quality objectives are established in the Basin Plan to address direct effects on aquatic life from ammonia and in municipal drinking water supplies from nitrate. The applicable water quality objectives currently apply during all conditions (wet weather, winter dry, and summer dry). Direct effect targets may be appropriate if it is determined that the threat beneficial use impacts due to direct effects may be occurring or could occur under future conditions.

3.1.3 Targets Based on Indirect Effects

As mentioned previously, while wet weather nutrient loading may influence dry weather nutrient concentrations, wet weather nutrients are generally not linked to adverse effects to beneficial uses during the storm, outside of direct toxicity from ammonia or nitrate (if water is used for municipal supply). As a result, the indirect effects targets are only applicable to dry weather conditions. Should the analysis of beneficial use impacts determine that indirect impacts from wet weather are occurring during winter or summer dry weather, targets should be developed to address the effects. The identified targets for winter dry weather should be based on the applicable conditions and may be the same or vary from those developed for the summer dry season.

3.1.4 Allocation/Management Considerations

In cases where beneficial use impacts are determined to be occurring during wet weather and/or winter dry weather, allocations and/or management strategies will likely need to be developed to address the impacts and meet the applicable targets. Allocations and/or management strategies would be needed to address both impacts in the waterbody to which a discharge occurs and downstream waterbodies if the discharge has an impact on those waterbodies. If no beneficial use impacts during wet weather and/or winter dry weather are occurring, wet weather and/or wet season allocations and/or management actions are not needed for the applicable condition.

However, it is possible that discharges during wet weather and/or winter dry weather may be contributing to an identified beneficial use impact under summer dry conditions. To address these potential impacts, an additional assessment of allocations or management scenarios can be considered to address wet weather and/or winter dry weather discharge impacts on summer dry beneficial use impacts. The summer dry beneficial use impacts could occur within the waterbody or downstream waterbodies.

Consideration of the need for management or allocation considerations varies depending on whether or not the watershed contains retentive waterbodies. For example, in estuaries that are consistently open to tidal flushing, direct and indirect effects during summer dry from wet weather and/or winter dry discharges may be minimal. In contrast, where downstream waters are impounded all or the majority of the time, the effect of wet weather and/or winter dry weather nutrient loads may be more evident as direct and/or indirect effects. Some downstream waterbodies are dependent on precipitation and littoral sand transport to open and close and are often shifting from one condition to another.

For each waterbody being evaluated, consideration should be given to the following factors:

1. Is the waterbody flowing or retentive?
2. Are there seasonal conditions that change the status of the waterbody from flowing to retentive (e.g. estuaries that have closed mouths only during summer months)?
3. Are sediment loads in the waterbody a significant source of nutrients contributing to beneficial use impacts?

In general, flowing waterbodies or estuaries subject to tidal flushing are less likely to have beneficial use impacts during dry weather that result from wet weather and/or winter dry season loads. The exception could be if the waterbody is highly depositional and nutrient-laden sediment deposits during wet weather or winter dry weather.

Waterbodies that are retentive (such as lakes) are more likely to require controls on wet weather and/or winter dry season loading as all the nutrients transported to the waterbody during wet weather/wet season are likely to remain in the downstream waterbody and contribute to dry season impacts.

Models and estimates of sediment loading and deposition can be utilized to evaluate potential impacts of wet weather and/or winter dry season loads on summer dry season impairments. Special studies may need to be conducted to fully evaluate potential impacts.

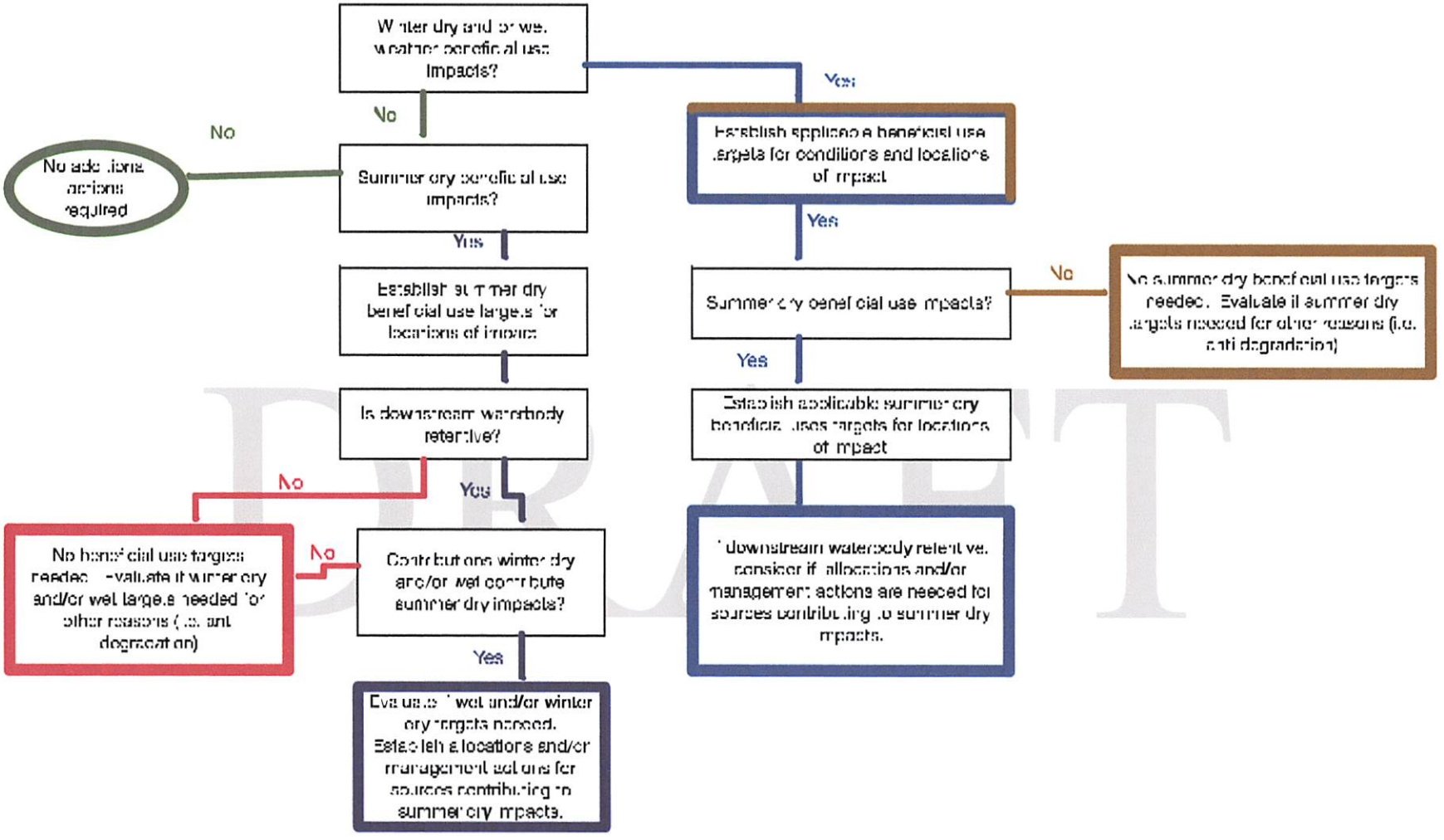

Figure 1. Evaluation Framework for addressing seasonal impacts

Table 1. Targets, Allocations and/or Management Strategies Applicable to Pathways

		Green	Red	Purple	Brown	Blue
Wet	No Targets	X	X	X		
	Antidegradation or reference		X	X		
	Direct				X	X
	Allocations/management actions to address winter and/or summer dry beneficial use impacts			X		X [1]
Winter Dry	No Targets	X	X	X		
	Antidegradation or reference		X	X		
	Direct				X	X
	Allocations/management actions to address summer dry beneficial use impacts			X		X [1]
	Indirect effects equal to summer dry					X
	Indirect effects different from summer dry				X	X
Summer Dry	No targets	X			X	
	Direct effects		X	X		X
	Indirect effects		X	X		X
	Antidegradation or reference				X	

1. Allocations and/or management strategies to address dry impacts would be considered if the downstream waterbody is retentive.

4 Conclusions

In summary, the literature review combined with the fact that the current nutrient regulatory framework is based on a dry weather paradigm indicates that considering seasonality is important in evaluating approaches to address biostimulatory impairments in waterbodies. However, given the differences in waterbody types and conditions, a single approach is not appropriate. Multiple options are available and the impacts on beneficial uses during various conditions along with the geomorphology of the waterbody and loading contributions during different seasons will all play a role in determining the appropriate approach for a given waterbody.

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CALIFORNIA
Water Boards

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SECRETARY FOR
ENVIRONMENTAL PROTECTION

San Diego Regional Water Quality Control Board

NOTICE OF CALIFORNIA ENVIRONMENTAL QUALITY ACT SCOPING MEETING

NUTRIENT TOTAL MAXIMUM DAILY LOAD FOR THE SANTA MARGARITA RIVER ESTUARY

NOTICE IS HEREBY GIVEN that the California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) will hold a California Environmental Quality Act (CEQA) public scoping meeting to provide information and receive public feedback on the proposed scope of the Nutrient Total Maximum Daily Load (TMDL) for the Santa Margarita River Estuary (Estuary). The meeting will be held at the following location and time:

Thursday, January 14, 2016
9:30 a.m. to 12:30 p.m.
City of Temecula Council Chambers
41000 Main Street, Temecula, CA 92590

The intent of the CEQA scoping meeting is to assist us in determining the scope and content of the CEQA environmental document. During this scoping meeting, staff will provide an overview of the CEQA process, development of the Nutrient TMDL for the Estuary, and the proposed schedule for the project. Staff will receive public verbal comments regarding potential environmental impacts from the implementation of the TMDL, feasible alternatives, and potential mitigation measures. A quorum of Board members may be present at the meeting but no action will be taken.

BACKGROUND INFORMATION

The Estuary was placed on the federal Clean Water Act 303(d) list in 1986 for eutrophic conditions caused by excessive inputs of nutrients (total nitrogen and total phosphorus). To correct the impairment a TMDL, total maximum daily load, is required. The TMDL represents two concepts. First, the TMDL represents a calculation of the direct sources and indirect sources of the pollutant, and any natural background sources; and second, the TMDL represents a strategy to restore an impaired waterbody so the water quality can once again meet applicable water quality standards.

Excessive loading of nutrients into the Estuary leads to blooms of nuisance algae, shading of beneficial aquatic algae and plants, and depletion of dissolved oxygen. These changes negatively affect existing beneficial uses in the Estuary. The beneficial

uses described in the Water Quality Control Plan for the San Diego Basin (Basin Plan) as most sensitive to eutrophic conditions are Estuarine Habitat and Contact and Non-Contact Water Recreation.

In recent years, two significant sources of nutrients to the Estuary have been identified and eliminated. These are 1) treated sewage discharges and 2) groundwater dewatering from a transit project. The current focus is to reduce eutrophication in the Santa Margarita watershed by implementing best management practices to reduce and treat municipal storm water and agricultural runoff water. TMDL actions will comply with the Regional Municipal Separate Storm Sewer System (MS4) Permit, and potentially, a General Agricultural Order.

The San Diego Water Board is working collaboratively with stakeholders in the watershed to assess the Estuary's current condition, develop numeric targets for algae that will lead to healthy levels of algae and to the attainment of beneficial uses in the estuary.

DOCUMENT AVAILABILITY

The Estuary's Nutrient TMDL is being developed and not yet available for public comment. A copy of the Estuary's TMDL Project Draft CEQA Checklist will be available electronically at least 10 days prior to the workshop on the San Diego Water Board Web site at:
http://www.waterboards.ca.gov/sandiego/water_issues/programs/tmdls/santa_margarita_river_estuary.shtml

PARKING AND ACCESSIBILITY

For directions to the City of Temecula Council Chambers, please refer to:
http://www.cityoftemecula.org/Temecula/Government/CityHall/CityHall.htm .

Persons requiring special accommodation should contact Hiram Sarabia at (619) 521-8037 or Hiram.Sarabia@waterboards.ca.gov at least five (5) days prior to the meeting.

From Downtown: Take I-163 north (for approximately 11 miles) to I-15 north. Continue on 1-15 north for approximately 45 miles to exit 58 for CA-79/Temecula Parkway toward Indio. Turn left onto Temecula Parkway (signs for Temecula/Old Town Front St.). Turn right onto Old Town Front St. Turn right onto 2nd St. Turn left onto Mercedes St. The meeting location will be on your right.

From the North: Take I-15 south to exit 59 for Rancho California Rd. Turn right onto Rancho California Rd. Turn left at the first cross street onto Old Town Front St. Turn left onto Moreno Rd. Turn right onto Mercedes St. The meeting location will be on your left. Free parking is available on a first-come first-serve basis in the City Hall parking structure.

CONTACT INFORMATION

Please direct any questions or concerns regarding the above subject to Mr. Hiram Sarabia by phone at 619-521-8037 or by email at Hiram.Sarabia@waterboards.ca.gov.

DRAFT Action Items
Santa Margarita River (SMR)
Watershed Nutrient Initiative Group Meeting
January 12, 2016

1. SPAWAR will identify for Martha Sutula (Southern California Coastal Water Research Project [SCCWRP]) the table in a previous report that provides phosphorus levels for the estuary by Friday, January 15.

2. Dave Ceppos (Center for Collaborative Policy [CCP]) will confirm that the Wet Weather/Winter Dry Nutrient Regulatory Approaches White Paper titled "Framework for Assessing Seasonality in the Santa Margarita River Watershed" has been distributed to the group for review by 5:00 pm, February 2.

3. Jon Butcher (Tetra Tech), Jo Ann Weber (San Diego County), and Martha will check the land use coverage file available on the ftp site and ensure Jon received the latest San Diego County land use analysis map that includes a land use analysis based on satellite or aerial photos.

4. Riverside Flood Control and Water Conservation District (RCFCWCD) will coordinate with Rancho California Water District (RCWD) regarding groundwater upstream of the gorge and use of their model.

5. Hiram Sarabia (Regional Board) will send a reminder of the CEQA Scoping Meeting taking place on January 14, by Wednesday, January 13.

6. Hiram will provide Aldo Licitra (City of Temecula) the criteria from the Regional Board's Agricultural Order that defines the regulatory threshold for orchards, nurseries, etc. and in particular whether it is based on size of operation or annual revenues.

7. RCFCWCD will work with their GIS support staff assess their data sets and to provide the latest land use data to Tetra Tech by Tuesday, January 19.

8. Tetra Tech will identify the estimated level of effort to re-configure the model using updated land use data from San Diego County and RCFCWCD, as well as to break the land use down into more categories. Tetra Tech will provide a revised scope, budget, and deliverables schedule to Martha as soon as possible.

9. Martha will send out to the group by Tuesday January 20, the PowerPoint presentation given today regarding project implications (after updating the slides to indicate if the model is under-predicting or over-predicting for macroalgae and dissolved oxygen).

10. Martha will provide Greg Seaman (Camp Pendleton) the details on the concentrations used at the estuary input.

11. All group members will provide feedback to Martha on Tetra Tech's draft work plan by January 19.

12. Hiram will provide to Dave for distribution to the group by January 15, a table that defines the beneficial uses for the SMR estuary.

13. Martha will send to the group by January 15, the report authored by her and Peggy Fong on macroalgae and its effect on benthic communities.

14. Martha will prepare new scenarios for the next technical meeting, including adjusting the macroalgae thresholds to 5-unit increments from 25 to 125 g/m^2, removing the three-segment scenarios, showing the results if only the summer concentration contributions are reduced, evaluating the relationship between macroalgae and dissolved oxygen, and using the daily data for Total Nitrogen (TN) and Total Phosphorus (TP) instead of a monthly running average.

15. Martha will review resources availability for possible additional work to identify the limiting nutrient and to potentially complete a nutrient mass balance study.

16. As scenarios are removed from the discussion, Martha will document defensible reasoning for their removal.

17. Dave and Amber will coordinate for a meeting date in late February or early March for presentation of the new scenarios and other technical information. The February 4 meeting may still be held, possibly as a webinar, to discuss the MOU and other process issues. Dave and Amber will notify the group of the meeting particulars and to assess group participant availability.

18. Over the next month, Dave will prepare a proposed process for group decision-making on target and load recommendations.

19. Hiram will send to Dave for distribution to the he group by January 15, the SCWRRP document referred to as the Baseline Report which combines various datasets.

20. Chuck will send estuary photos to Hiram for use at the CEQA meeting by January 13.

FINAL

June 28, 2012

CHARTER

The Santa Margarita Watershed Nutrient Initiative – Stakeholder Group

Process, Purpose and Organization for Potential Site-Specific Nutrient Objectives, Basin Planning and TMDL Development in the Santa Margarita River Watershed

1. Introduction

This Charter describes the purpose of the Santa Margarita River (SMR) Watershed Nutrient Initiative Stakeholders Group (Stakeholder Group). It describes the Stakeholder Group's organizational structure, participants, roles and responsibilities, general participation guidelines, and decision-making and communication methods. The Stakeholder Group will focus on the methods that are used to prepare and implement a workplan to use a nutrient numeric endpoint (NNE) methodology to potentially develop nutrient site-specific objectives (SSO) for the SMR Lagoon, and other basin plan amendments as potentially appropriate. This work is a follow-on effort to the San Diego Lagoons Investigative Order (R9-2006-0076) (Lagoon Order) and subsequent workplan developed jointly by the San Diego Regional Water Quality Control Board (RWQCB) and stakeholders in 2006. This work may eventually include the preparation of separate Total Maximum Daily Loads (TMDL) for the SMR watershed, and the SMR lagoon, using the outcomes of the NNE and SSO work.

Related to this, the U.S. Marine Corps – Camp Pendleton, in cooperation with the SMR Stakeholder Group Technical Advisory Committee (described in Section 4.3) and the RWQCB is developing an estuarine hydrodynamic and eutrophication model in a process separate from but related to Phase I of the effort covered by the Charter (described below) that will be used to support a potential estuarine SSO and/or potential TMDL. This work will use data collected as a part of the Lagoon Order, along with other available historical data to develop a model that can be used to identify management options that the Stakeholder Group may consider as a means to meet estuarine water quality objectives. The model will be designed to work interactively with a watershed model that is being developed independently by the RWQCB and U.S. Environmental Protection Agency (U.S. EPA).

2. Stakeholder Group Purpose – SMR Site Specific Objectives and Total Maximum Daily Load Development

The Stakeholder Group is developing the technical work that the RWQCB will potentially use to support adoption of the proposed nutrient SSO and potential TMDLs

The project consists of several phases. Phase 1 targets the development of the nutrient SSO for the lagoon. Phase 1 is supported through Proposition 84 grant funds from the San Diego Region Integrated Regional Water Management (IRWM) Program and Upper Santa Margarita Watershed IRWM Program. Key Phase 1 tasks include:

- Establish a process and agreements for stakeholder and RWQCB participation, decision-making, and funding;
- Identify key technical questions for development of an overall project scope;
- Implement supplemental river monitoring and special studies to address the technical questions and establish a workplan to guide project activities; and

- Develop a model for the lagoon to establish estuarine NNE targets, TMDLs, load and waste load allocations, and to evaluate possible SMR lagoon implementation scenarios.

Future phases of this effort are anticipated to be funded with future IRWM grants or other grants and will focus on collecting a comparable data set regarding nutrient loading, transport processes, and modeling within the river and its tributaries. Similar to what may be done for the SMR lagoon, this work will be used to establish NNE targets (and if applicable, TMDLs and implementation scenarios) for the SMR and its tributaries.

Although the Stakeholder Group will develop technical work for their use, ultimately, the RWQCB, State Water Resources Control Board (SWRCB), and U.S. EPA (collectively referred to as the "Regulatory Agencies") will have to adopt the SSO and potential TMDLs, or specify other management methods for the SMR through some other means. As a result, the work must be acceptable for these purposes and presented in an appropriate format to facilitate the use of the work.

3. SMR Watershed Group Participants

The SMR Stakeholder Group is made up of parties that have an interest in the water quality, management, and uses of the SMR. These entities may include but may not be limited to:

- Cahuilla Band of Indians
- Pechanga Band of Luisena Indians
- Sierra Club
- Trout Unlimited
- Rancho California Water District (RCWD)
- Eastern Municipal Water District
- Western Municipal Water District
- Fallbrook Public Utilities District
- Rainbow Municipal Water District
- Mission Resource Conservation District
- Elsinore-Murrieta-Anza Resource Conservation District
- Temecula Valley Wine Growers Association
- Upper Santa Margarita - Irrigated Lands Group
- San Diego County Farm Bureau – Irrigated Lands Group
- Riverside County Farm Bureau
- City of Temecula
- City of Murrieta
- City of Wildomar
- City of Menifee
- County of San Diego
- Riverside County Flood Control & Water Conservation District (RCFC&WCD)
- County of Riverside

- California State University San Diego (SDSU), Santa Margarita Ecological Research Station
- Caltrans
- San Diego RWQCB
- U.S. EPA
- U.S. Bureau of Reclamation
  U.S. Marine Corps (USMC) Camp Pendleton / Naval Weapons Station Fallbrook

In the context of the Stakeholder Group purpose, different Participants in this process have different "stakes" in the outcomes and implications of defining the SSO, and the potential development of TMDL(s). All stakeholders have an interest in the well-being of the SMR however some are specifically considered "Dischargers" by the Regulatory Agencies. The following describes the Stakeholder Group process that welcomes and encourages involvement by all Participants and the general public, and differentiates unique roles and responsibilities for Participants that are currently or likely to be designated Dischargers.

4. SMR Stakeholder Group Organization and Governance

To support reader clarity and shared understanding, the following definitions are provided for commonly used terms in this Charter.

Stakeholder	Any individual and/or organization directly affected by and having a direct interest in the management, use, and condition of the SMR.
Participant	An organization that is a directly affected Stakeholder, and has illustrated a historic intent to participate in the Stakeholder Group process.
Discharger	Any party that has been deemed or will potentially be deemed as responsible for point source and/or non-point source discharge of waters into the SMR Watershed and/or has been issued a National Pollutant Discharge Elimination System (NPDES) permit, Waste Discharge Requirements (WDR), or discharge waiver. Due to their unique role in the SMR Watershed as regulated entities, Dischargers, and holders of NPDES permits and WDRs that are regular Participants of the SMR Group may be members of the SMR Stakeholder Group Steering Committee (described in Section 4.2)
Grant Agreement	The Proposition 84 IRWM Implementation - Round 1 Grant administered by the California Department of Water Resources (DWR) and entered into separate agreements between respectively DWR and the San Diego County Water Authority, and DWR and RCWD, and administered respectively by the County of San Diego and RCFC&WCD, to organize an effort to assess the nutrient water quality objectives within the upper lower SMR watershed (downstream of Skinner Reservoir and Vail Lake).

Grant Sponsors — The lead and contractually responsible organizations that implement the Grant Agreement (currently County of San Diego and RCFC&WCD) and answer to the IRWM planning processes (San Diego County Water Authority and Rancho California Water District) and in turn the DWR.

Decision — The SMR Stakeholder Group and sub-elements thereof make two types of decisions: 1) Coordination Decisions, and 2) Resource Decisions. The differences between these types of decisions are illustrated in the methods used to make the decisions and the Participants that are vested through this Charter with various decision authorities.

- Coordination Decisions address the routine activities of the Stakeholder Group (including but not limited to: logistics, meeting dates and times, agenda revisions, schedules, etc.). All coordination decisions are made on a simple majority vote of all Participants present at any Stakeholder Group meeting or sub-element meeting. All coordination decisions should be noticed in advance to allow Participants time to consider a decision however, Coordination Decisions can be made by the Stakeholder Group without advance notice or Participant communication.

- Resource Decisions are specific, binding decisions about technical activities (including the delegation of labor / staff services, and the expenditure of Discharger resources), policy conditions, regulatory conditions, communications, and other similar topics. Resource decisions are made by the Steering Committee (described in Section 4.2). All pending resource decisions must be publicly noticed at least two week in advance of a meeting to ensure all Participants are informed and have an equal opportunity to participate in a decision discussion. Support materials to ensure that Steering Committee participants are prepared to make the decision will be provided before a meeting however these materials and the proposed agenda for said meeting may be distributed less than two weeks before a meeting if necessary.

The following describes the related but distinct organizational sub-elements of the Stakeholder Group. Each section describes the role(s), participation criteria, decision-authority and decision limitations of each sub-elements and the Stakeholder Group in total.

4.1 SMR Stakeholder Group Description

Stakeholder Group meetings are held for Stakeholder Group Participants (as defined above) to receive informational updates, discuss topics, and make coordination and resource decisions about the SMR SSO and potential TMDL processes. Meetings are publicly noticed and open to the public. Discrete periods of public comment are provided in Stakeholder Group meeting agendas however members of the public and other interested parties do not participate in ongoing, iterative discussions with Participants. Meeting time is principally reserved for general process updates, presentations by and discussions with the SMR Technical Advisory Committee

(TAC) (described in Section 4.3), presentations by and discussions with the SMR Regulatory Subgroup (described in Section 4.4), conversations between Stakeholder Group Participants, coordination decisions by the full Group, and resource decisions by a Steering Committee (described in Section 4.2).

The Stakeholder Group is convened by a Chairperson (described below). Meetings are facilitated by a neutral facilitator (described in Section 4.6). Administrative project support for the Stakeholder Group is currently provided by the County of San Diego in the form of in-kind services (described in Section 4.5).

The Chairperson works with the facilitator to review and modify Stakeholder Group meeting agendas, assess the status of assignments made to Stakeholder Group Participants, Group sub-elements, and the TAC. The Chairperson acts as the formal external speaker on behalf of the Stakeholder Group (when warranted and after having vetted comments / perspectives with the Stakeholder Group in advance). The Chairperson (or a designee) participates in all Regulatory Subgroup meetings (described in Section 4.4). The Chairperson has no unique or unilateral decision authorities. The Chairperson's role is principally that of strategic management, oversight, and communication. Selection methods and duration of term for Chairpersons are described below in Section 5. The Stakeholder Group makes coordination decisions. Within the Stakeholder Group is a Steering Committee (described in Section 4.2). The Steering Committee makes resource decisions (defined above) as informed by discussions of the full Stakeholder Group.

In addition to the above, Stakeholder Group Participants have the following responsibilities:

1. Provide honest perspectives representing a broad scope of interests about the SMR.
2. Review and provide recommendations on policy and technical issues relevant to the SSO and potential TMDLs.
3. Develop Resource and text or provide other assistance to staff and facilitators as appropriate.
4. Consistently participate in Stakeholder Group meetings (and subcommittee meetings, where appropriate).
5. Anticipate short- and long-term future events, trends and conditions that will impact and shape the SMR work.
6. Help identify, review, verify and critique data, assumptions, analysis and methods used by the TAC and others in support of the SMR process.
7. Communicate information about the process and products with respective constituencies.
8. Seek agreement on proposals and/or recommendations.

4.2 Steering Committee Description

The purpose of the Steering Committee is to be informed by full Stakeholder Group discussions and perspectives and to then make resource decisions. The Steering Committee is comprised of SMR Participants that are Dischargers (as fully described below). Members of the Steering Committee will be directly or potentially fiscally impacted by any revisions to the Basin Plan to incorporate SSOs and/or potential TMDLs.

Steering Committee Participants include Dischargers identified in the RWQCB Lagoon Order:

- USMC Camp Pendleton / Naval Weapons Station Fallbrook,
- City of Murrieta (either directly or as represented by RCFC&WCD),
- City of Temecula (either directly or as represented by RCFC&WCD),
- County of Riverside,
- RCFC&WCD,
- County of San Diego, and
- Caltrans

In addition to these organizations, two other organizations are Dischargers that were not incorporated local governments at the time of the Lagoon Order but have since been incorporated. These are:

- The City of Wildomar (either directly or as represented by RCFC&WCD),
- The City of Menifee (either directly or as represented by RCFC&WCD)

In addition to these Dischargers (and according to personal interviews between a Regional Board representative and the Stakeholder Group neutral facilitator, and discussions by the Stakeholder Group) other Steering Committee members might also include:

- The organizations that represent waiver holders such as agricultural lands managers / owners whose property discharges flows to the SMR and that participate in existing Irrigated Lands Regulatory Program groups in the SMR Watershed,

- NPDES permit holders in the SMR Watershed.

- Other organizations that have defined point and non-point source discharges (e.g. tribal entities, U.S. Forest Service, California Department of Fish and Game, SDSU, RCWD, Temecula Wine Growers Association, etc.).

- Other holders of WDRs that may be affected by decisions on the SMR and/or amendment of the San Diego Basin Plan.

The current and potential Dischargers, NPDES permits holders and WDR holders have unique responsibilities to achieve nutrient load and waste load allocations in the SMR, and several of them are making financial and in-kind contributions to support the technical work of the process. In this context, there is a reasonable hierarchy of decision-making authority in the Stakeholder Group related to which organization has the most pronounced implications associated with regulatory actions.

The Steering Committee meets as part of full Stakeholder Group meetings and individually in separate meetings as needed. Individual Steering Committee meetings will take place to address items unique to Dischargers such as to address funding and in-kind support topics, or to discuss policy conditions related to regulatory actions. However for the purpose of transparency, all

resource decisions are made by the Steering Committee within a facilitated Stakeholder Group meeting.

Steering Committee members are subject to the same responsibilities described for the Stakeholder Group in Section 4.1.

4.3 Technical Advisory Committee Description

The Stakeholder Group process is served by a TAC. The TAC is comprised of consultants, staff specialists from Participant organizations, and Participants with applicable technical proficiency and interest. Currently, the consultant and staff specialists includes representatives from the following organizations:

- Southern California Coastal Water Research Project (SCCWRP),
- U.S. Navy, Space and Naval Warfare Systems Center Pacific (SPAWAR)
- Larry Walker Associates
- Tetra Tech Inc.
- Stetson Engineers, Inc., and
- Michael Welch Associates.

While these respective TAC members serve the interests of various Participants, collectively, their role is to conduct technical activities on behalf of the full process and Stakeholder Group. More specifically, TAC consultants and staff have the following responsibilities:

1. Provide technical guidance to the Stakeholder Group including the development of informational materials, delivery of technical presentations, and availability to answer technical questions.
2. Conduct technical tasks on behalf of the project and at the direction of the Steering Committee (as informed by the full Stakeholder Group).
3. Develop technical work products for use by the full Stakeholder Group, the Steering Committee, and/or the Regulatory Subgroup (described in Section 4.4).
4. Provide and update a project timeline and schedule to help manage technical assignments and decision milestones.
5. Prepare and modify the process work plan to be mutually agreed on by the Steering Committee and the RWQCB.

At times, a consultant or staff member of the TAC may be asked by their "sponsor" in the Stakeholder Group to represent them on the TAC. This is acceptable but the TAC member is expected to disclose this situation to all Stakeholders.

The TAC is led by a Team Leader. The Team Leader is currently designated by the Grant Sponsors and defined within the work plan of the Phase 1 Grant Agreement (both described in Section 4.0). In future phases of the project, the TAC Team Leader may be selected by the Steering Committee as informed by discussion of the entire Stakeholder Group. The Team Leader is responsible to track the status of, and manage the TAC consultant and staff responsibilities listed above. In addition, the Team Leader is expected to act as the technical

spokesperson to the Stakeholder Group and the general public on behalf of the TAC (as authorized by the Steering Committee). Similarly, the Team Leader will act as the technical spokesperson and liaison on behalf of the Stakeholder Group with the Regulatory Subgroup. The Technical Team Leader has no unique, or unilateral decision authorities. The Team Leader's role is principally that of technical management and oversight. Any need for technical decisions identified by the Team Leader is communicated to the Stakeholder Group and the neutral facilitator to be agendized at a subsequent Stakeholder Group meeting.

Stakeholder Group participation on the TAC is based on Participant willingness and interest to provide additional support to the process. Participant members should have appropriate education and/or professional skill to best serve the technical discussions. The Participant representatives have the following responsibilities.

1. Attend TAC meetings as needed to review and discuss technical topics,
2. Provide guidance to the technical consultants and staff about project priorities and technical questions,
3. Attend all Stakeholder Group meetings and provide recommendations to fellow Participants about the status and direction of technical activities.

TAC meetings are held monthly (or as needed) and are attended by the TAC consultants and staff (as listed above), the neutral facilitator (in observation mode rather than as a facilitator), a representative from the County of San Diego (acting as the administrative project manager as described in Section 4.5), and are open to stakeholders to attend.

Additionally, the TAC works interactively with the Camp Pendleton/SPAWAR modeling staff to ensure that the potential estuary TMDL effort receives sufficient data, guidance, and SSO and/or TMDL regulatory requirements of the Stakeholder Group or pertinent regulatory agencies.

4.4 Regulatory Subgroup Description

The Regulatory Subgroup includes staff from the:

- San Diego RWQCB,
- SWRCB, and
- U.S. EPA

The Subgroup also includes the TAC Team Leader, the neutral facilitator, and the Stakeholder Group Chairperson (or designee). The purpose of the Subgroup is to provide opportunities for candid discussions about the SMR process with the Regulators. The TAC Team Leader attends Regulatory Subgroup meetings to discuss the process and interim/ final technical outcomes. The Chairperson represents the Stakeholder Group and ensures that various Participant interests are considered. The neutral facilitator participates as a representative of and on behalf of all Stakeholder Group members and relies on his/her neutral role to similarly ensure various Participant interests are considered and to ensure shared understanding about Regulatory Subgroup meeting outcomes. The Regulatory Subgroup meets as requested and/or directed by the Steering Committee.

Outcomes of the Regulatory Subgroup meetings are memorialized by the neutral facilitator and provided to the SMR Stakeholder Group.

4.5 Administrative Project Support Description.

The SMR SSO and potential TMDL processes requires administrative support to keep efforts efficient and effective. Staff from the County of San Diego currently handle all of the administrative functions necessary for ensuring the work for the SSO and potential TMDLs is completed on schedule, and with sufficient stakeholder input (as defined in the Grant Agreement workplan). The administrative project support staff from the County are responsible for the following duties:

1. Verify the achievement of key milestones and recording reasons for not meeting milestones.
2. Track expenditures to verify the project is on budget,
3. Work with the San Diego RWQCB to ensure a mechanism to maintain the administrative record and organizing the final record.
4. Maintain a current mailing/contact list of stakeholders and interested parties.
5. Distribute information to the contact list in coordination with the facilitator.
6. Prepare draft meeting summaries and provide to the neutral facilitator for draft final review.
7. Maintain an ongoing list of conflicts to be addressed.
8. Facilitate information gathering and sharing in coordination with the facilitator.
9. Track public contact and stakeholder participation.
10. Provide a point of contact for public inquiries about the process. *Note: This role is different from the communication role assigned to the Chairperson to be available to speak about and on behalf of content and policy issues addressed by the SMR Stakeholder Group.*
11. Receive and respond to telephone, FAX, email and written requests for information from stakeholders and other interested parties.
12. Copy and assemble mailing and e-mailing information in coordination with the facilitator.
13. Prepare progress reports, invoices and deliverables under the Proposition 84 IRWM Grant Agreement.

4.6 Facilitator Description

The Stakeholder Group is supported by a neutral facilitator. The responsibilities of the facilitator are:

1. Serve as a professional neutral and be responsible to manage dialogue in meetings and oversee the provisions of this charter.
2. Design, implement and refine (as needed) a consensus-seeking process.
3. Facilitate meetings and sub-element meetings as necessary.
4. Receive input on items of a personal or process nature from Participants. (Technical or policy issues will be discussed in open session of the Stakeholder Group).

5. Ensure that all points of view held by Participants are heard and that the interests of each Participant's constituencies are considered.
6. Provide assistance to Participants requesting help with communications.
7. Prepare and distribute meeting agendas, attendance sheets, and Draft Final meeting summaries.
8. Address and resolve ongoing conflicts.
9. Facilitate information gathering and sharing in coordination with the Administrative Project Support.
10. Distribute information to the contact list in coordination with the Administrative Project Support.

As of the approval date of this Charter, the facilitator works under a contractual agreement with the County of San Diego. In this context, the facilitator has a scope of services and contract that has been mutually agreed on by the facilitator and the County. In the future, the contract manager for facilitation services may change. Regardless, the following is applicable for all future facilitation support agreements.

Any Participant may submit a request to remove and replace a facilitator. The request will be considered by the Steering Committee and will be addressed as a decision-item at the next appropriate full Stakeholders Group meeting. Should a facilitator be removed, the SMR Stakeholder Group has the latitude to proceed without a facilitator or hire a new facilitator. In the event a new facilitator is sought, the solicitation, review, and selection process will be managed by the Chairperson and Steering Committee.

4.7 Other Committees

On an as-needed basis the Stakeholder Group convenes other advisory committees to address key topics or outstanding items. These will include but not be limited to:

- Outreach - An Outreach Committee will be convened as directed by the Steering Committee. The purpose of the Outreach Committee is to ensure that all parties that might be affected by the SSO and/or potential TMDL processes are aware of the planning and technical activities by the SMR Stakeholder Group. These activities may include but are not limited to:
    - Stakeholder meetings
    - Steering Committee meetings
    - TAC meetings
    - Public meetings
    - Updates on Regulatory Subgroup consideration including respective updates from and about San Diego RWQCB, SWRCB, and U.S. EPA consideration of the proposed SSO and/or potential TMDLs

  Activities may also include but not be limited to coordinating contact databases to maximize communication with the general public, creation and shared distribution of standardized speaking points and project facts to ensure consistent messaging, and similar tasks

Other advisory committees may be deemed necessary by the Steering Committee. When convened, these advisory committees function under the same decision and communication methods as the Stakeholder Group.

4.8 General Stakeholder Group Guidelines

To ensure Stakeholder Group and associated sub-element meetings are effective, all Participants commit to the following guidelines:

- All Participants will have scheduled opportunities to accurately represent the interests of his or her participating organization in the development and implementation of the SSO and/or potential TMDLs.
- The personal integrity, values and legitimacy of the interests of each Participant will be respected by other Participants. Everyone will participate; no one will dominate.
- All interests will be considered by all Participants in general deliberation and in decision-making procedures (described in Section 5)
- Participants participate regularly and in person (if possible) and will be well informed on the issues under discussion.
- Every Participant will communicate his or her interests and will disclose pertinent information on issues under consideration.
- Commitments will not be made lightly and will be kept. Delay will not be employed as a tactic to avoid an undesired result.
- All Participants will have the authority necessary to represent their respective organizations in deliberations.
- All Participants will inform their respective decision-making bodies in a timely manner of developments in the proposed program. All Participants will notify the Stakeholder Group when a decision-making body's approval is required to enter any formal commitment and will work to secure approval from their respective organization.

5. SMR Stakeholder Group Decision Making and Participation Guidelines

This section describes expectations for attendance and the use of Alternates by Participants, methods to replace Participants in the event of resignation and/or removal, decision-making methods for all groups within the SMR Stakeholder Group process, and specific terms of service and selection processes for the Stakeholder Group Chairperson, and the TAC Team Leader.

5.1 Participant Attendance and the use of Alternates

Given the volume of information to be considered and various demands on Participants' schedules, Alternates may be used by a participating organization. Alternates must be identified in advance, fully briefed, and able to represent the Participant and Participant's constituents during decision making. Alternates are expected to be kept up to date on all project activities by their Participant representatives and are expected to attend on behalf of a Participant, fully

prepared to discuss agenda items. No items addressed at previous meetings will be revisited to accommodate an Alternate.

5.2 Participant Resignation and Replacement

Participant Resignation: Participants and/or their organization may resign their service to the process. They are encouraged to do the following:

- Provide written resignation communication (e.g., letter, email) to the Chairperson and facilitator.
- Recommend a replacement either from the Participant's organization, or from a similar interest organization.

Participant Replacement: In the event a Participant resigns, that person's organization is expected to recommend a replacement. That individual will automatically be included as a Participant representative. If a prior organization chooses to not submit a new representative, they may recommend a representative from a different organization that has similar interests. The Stakeholder Group will consider replacement recommendations from the prior organization at the next available meeting and will determine if the recommended replacement is appropriate to be added.

In the event a new, interested organization requests to become an active Participant on the Stakeholder Group (beyond attending as a member of the public), the person / organization must do the following and the Stakeholder Group will conduct the following review steps:

1. The prospective new Participant will be instructed to submit a letter of application to the Chairperson describing why their interest is unique and is not currently and adequately represented on the Stakeholder Group by existing Participants.
2. The Chairperson will work with the facilitator and agendize consideration of the request at the next appropriate Stakeholder Group meeting.
3. The Stakeholder Group will review the application and will decide if the requested position is warranted to be added to the Group. Criteria for new Participants should include but not necessarily be limited to the following questions:

    - Will the new Participant add interests / perspectives not currently served on the Stakeholder Group?
    - Will the new Participant add geographic representation not currently served by the Stakeholder Group?
    - Will the new Participant provide some other form of diversity not currently served by Stakeholder Group?

5.3 Stakeholder Group Decision Making Procedures

As a voluntary partnership of diverse organizations, the Stakeholder Group cannot be "*consensus based*". Organizations within the process, nor individual participants on behalf of their organizations, do not necessarily have the authority to make or implement binding decisions. Therefore, all elements of the SMR SSO and potential TMDL processes are "*consensus-seeking*"

wherein, each part of the organizational structure takes reasonable and appropriate steps to reach consensus (as described below).

Consensus-Seeking Decision Method

The consensus decision method is based on principles of "consensus with accountability". Consensus with accountability requires all Participants to try to reach consensus while at all times supporting and expressing their self-interest. In the event a Participant must reject a proposal, that Participant is expected to provide a counter proposal that legitimately attempts to achieve their interest, and the interests of the other Participants. When seeking consensus, a group will not vote and will not seek to identify numeric "winners and losers" on key topics. Rather, a group will seek mutually acceptable and beneficial conclusions.

In seeking consensus on an interim or final recommendation, participants will voice their opinions with specific proposals along the way, rather than waiting until a final recommendation has been developed. At all times, participants will ensure that they are providing input commensurate to their prescribed role and constituency. The basic decision-making process is as follows:

Straw Polls: Participants will use straw polls to assess the degree of preliminary support for an idea before it is submitted as a formal proposal for final consideration by the group. Participants may indicate only tentative approval for a preliminary proposal without fully committing to its support.

Draft and Final Decisions: A group will use the following three levels to indicate Participants' degree of approval and support for any proposal being considered and to determine the degree of consensus.

Thumbs Down:	I do not agree with the proposal. I feel the need to block its adoption and propose an alternative.
Thumbs Sideways:	I am not enthusiastic about it, but I can accept the proposal.
Thumbs Up:	I think this proposal is the best choice of the options available to us.
Abstention	At times, a pending decision may be infeasible for a Participant to weigh in on. Examples could include but not be limited to: a topic that has statutory implications that an agency representative cannot be on record conflicting with; a Participant cannot get a consensus of his/her decision-makers and therefore cannot offer a proposal or opinion; and other similar conditions.

The goal is for all Participants to be in the 'Thumbs Up', or Thumbs Sideways' levels of agreement. Any group will be considered to have reached consensus when there is a quorum of

participants present, and all Participants present are at Thumbs Up or Thumbs Sideways levels. If any Participant is at a 'Thumbs Down' level, that Participant must provide a counter proposal that legitimately attempts to achieve their interest and the interests of the other Participants. The group will then evaluate how best to proceed. Participants that abstain from particular proposals are encouraged to explain why abstention is in their best interest.

Consensus decisions / recommendations will be made at each appropriate meeting and will be noticed at least one week in advance. A group will not revisit previously agreed on decisions or recommendations, unless new information is brought to light that would likely affect the outcome of the group's previous work.

Majority Rule Decision Method

Should consensus not be achievable, any group in the process uses a majority rule method to complete and memorialize a decision process (as described below). For all circumstances, decision-making will take place using the following criteria:

- Coordination Decisions. Coordination decisions will be made by the Stakeholder Group using a simple majority of all Participants present (51 percent or more) at any given meeting.
- Resource Decisions. Resource decisions are made by the Steering Committee after sufficient discussion and deliberation has been conducted by the full Stakeholder Group. In the event consensus cannot be achieved, a resource decision will be made by a super majority of all Steering Committee members present (67 percent or more with caveat that if the supermajority is made up of Riverside County entities, there must be one additional non-Riverside County vote in favor of a proposal).

All groups within the SMR organizational structure will have one voting member per represented organization. All voting Participants from any group within SMR organizational structure are required to recuse themselves from voting on issues with potential conflict of interest.

5.4 Service Terms and Selection Guidelines

The Stakeholder Group process has two designated leadership positions: 1) The Stakeholder Group Chairperson, and 2) the Technical Team Leader. The following describes the guidelines to select these positions and the duration they will serve.

Chairperson: A Chairperson will serve a one year term. On completion of that term, the Chairperson may be considered for an additional term or may step down from the position. There are no term limits for Chairperson.

A Chairperson nominee must be a Discharger member of the Steering Committee to be eligible to serve as the Chairperson

For the duration of Phase 1 of the SSO and potential TMDL efforts, the position of Chairperson will alternate between the RCFC&WCD and the County of San Diego (as the Grant Sponsors). Beyond Phase 1, the selection of Chairperson will be determined by the source of funding. If

grant funds are obtained, then Chairperson will be selected from the future grant sponsors. If no grant funds are obtained, then the Chairperson will be appointed by the Steering Committee through consensus or a majority process (as described above).

TAC Team Leader: The TAC Team Leader will serve for the duration of Phase 1 of the SSO and potential TMDL effort (as appointed by the Grant Sponsors and defined within the work plan of the Phase 1 Grant Agreement). Beyond Phase 1, the TAC Team Leader will serve a term as determined by the source of funding available with the default of a one year term. On completion of that term, the Leader may be considered for an additional term or may step down from the position. There are no term limits for TAC Team Leader. Alternatively and if no grant funding / funder exists, the TAC Team Leader will be selected by the Steering Committee through the consensus or majority rule processes.

5.5 Charter Ratification and Amendment

The Stakeholder Group may amend this Charter by following the same decision rule set forth above. Amendments may be proposed by the Participants during or between meetings to the Chairperson. The proposal will be agendized for discussion and possible action, using the consensus decision rule process, at the next meeting, or through email and/or conference call communication if feasible and appropriate. Amendments will be decided on by the Steering Committee as advised by the Stakeholder Group

6. SMR Stakeholder Group Communication Guidelines

The following describes specific caveats and guidelines to support decision making with the regulating agencies, and to establish shared expectations on the feasibility / infeasibility of decision steps in the process.

6.1 Communication and Decision-Making with RWQCB and U.S. EPA

One of the keys to the success of the process is an effective communication process with the regulatory agencies. The developed process recognizes the following constraints:

1. The RWQCB and U.S. EPA have limited resources and time to participate in the stakeholder process.
2. The Regional Board and U.S. EPA are ultimately responsible for approving the SSO and/or potential TMDLs.
3. The RWQCB and U.S. EPA may have limited ability to enter into agreements, such as memorandums of understanding, for the conduct of work by stakeholder groups.
4. The Regional Board and U.S. EPA cannot guarantee any outcome from the proposed process and will maintain their discretion to determine the nutrient SSO and/or potential TMDLs requirements.
5. The Stakeholder Group and Steering Committee need some type of assurance that the technical work products will be utilized by the RWQCB and U.S. EPA for developing the SSO and/or potential TMDLs.

6. The Stakeholder Group and Steering Committee may choose not to support the nutrient SSOs and/or potential TMDLs developed by the RWQCB even if the SMR Stakeholder Group's technical work is utilized to develop the documents.

Given these constraints, the following process has been identified to facilitate interactions and decision-making.

1. The Stakeholder Group will develop a work plan to submit to the RWQCB for approval. The work plan will consist of the technical work to be completed and this administrative process document as an appendix. The work plan will identify key decision points that will require RWQCB and/or U.S. EPA input.

2. The RWQCB will review and approve the work plan. As part of the approval, the RWQCB shall agree to participate in the process outlined in this administrative process document and consider any work products developed in accordance with the work plan in developing nutrient SSOs and/or potential TMDLs for the Santa Margarita watershed.

3. The RWQCB and U.S. EPA will each identify a staff person that will be responsible for participating in the stakeholder meetings as much as possible, but at a minimum for meetings at which key decisions need to be made. The identified staff person will be responsible for communicating technical information and needed decisions to their management as appropriate to provide meaningful input to the process. All parties, Stakeholder and Regulator alike, agree to to keep an open mind on the results of the scientific questions to be answered, and to abide by agreed upon processes in implementing the results of studies undertaken pursuant to this initiative

4. For each key decision, the Stakeholder Group will submit "briefing" information to the regulatory agencies at least one week ahead of the meeting at which the decision will be discussed.

5. The RWQCB and/or U.S. EPA will use the "briefing" information to discuss the decision internally prior to the Stakeholder Group meetings and they may opt to conduct a Regulatory Subgroup meeting in advance of a full Stakeholder Group meeting. At the Stakeholder Group meeting, the designated staff person will attend to discuss RWQCB, and/or U.S. EPA issues and concerns with the Group. If needed, the staff person will take information obtained from the meeting back to their management to obtain approval of the decision. If a situation arises where the RWQCB, and/or U.S. EPA cannot provide a final decision on an issue, they will assist the Stakeholder Group in identifying a method for moving forward and developing information that will allow a decision to be made in a timely manner.

6. The RWQCB and U.S. EPA will review and provide comments on the technical work products developed by the Stakeholder Group.

7. During the development of the nutrient SSO and/or potential TMDLs by the RWQCB, the designated staff person will continue to meet regularly with the Stakeholder Group to

provide updates on the RWQCB development process. To the extent possible, key policy decisions and the proposed approach will be discussed with the Stakeholder Group and sections of the documents will be shared to facilitate discussion. At a minimum, the draft nutrient SSO and/or potential TMDL documents (Basin Plan Amendments and Staff Report) will be shared with the Stakeholder group prior to being released for the official public comment period.

To facilitate the success of the process outlined above, the Stakeholder Group Participants, and the regulating agencies will adhere to the rules of participation outlined throughout this Charter.

In addition to the process outlined above, the Stakeholder Group will provide updates and education to other parties as necessary to support the development of the nutrient SSO or/or potential TMDLs. Possible actions include but are not limited to:

1. Initial meetings with the RWQCB Executive Officer, U.S. EPA and other key staff to provide an overview of the project and the proposed process to get agreement on RWQCB and U.S. EPA participation in the project.
2. Periodic updates to the Executive Officer on the project status.
3. Periodic information items or public comments to the RWQCB members to educate them on the work being conducted ahead of the adoption of the SSO and/or TMDL.
4. Periodic updates and discussions with State Board staff regarding the relationship of the project to the State's nutrient criteria development process.

7. Peer Review

Peer review and outside technical advisory committees may be employed during the completion of the work identified in the work plan. The Stakeholder Group and Steering Committee will potentially seek to have a role in the selection and use of a Peer Review Committee. This decision will be made by the Steering Committee. If the Stakeholder Group takes a role in this process, the Steering Committee and Chairperson will agendize this topic on future meeting agendas and will support the consideration of options that can provide informed, independent, and balanced review. This Charter may be amended to represent future decisions about this topic.

MEMORANDUM OF UNDERSTANDING

BETWEEN THE

CITIES OF MURRIETA, TEMECULA, WILDOMAR,

AND THE COUNTIES OF RIVERSIDE, SAN DIEGO AND THE RIVERSIDE COUNTY

FLOOD CONTROL AND WATER CONSERVATION DISTRICT,

THE CALIFORNIA DEPARTMENT OF TRANSPORTATION,

AND THE

MARINE CORPS BASE CAMP, CAMP PENDLETON

AND THE

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

SAN DIEGO REGION

REGARDING

SANTA MARGARITA RIVER WATERSHED NUTRIENT INITIATIVE

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This Memorandum of Understanding, hereinafter referred to as "MOU," is made and entered into this XXX day of XXXXXXXXX, 2014, by and between the Cities of Murrieta, Temecula, Wildomar; and the Counties of Riverside and San Diego; the Riverside County Flood Control and Water Conservation District, the California Department of Transportation; and Marine Corps Base Camp Pendleton, hereinafter referred to as "PARTIES" and individually as "PARTY", and the California Regional Water Quality Control Board, San Diego Region, hereinafter referred to as "SAN DIEGO WATER BOARD".

RECITALS

WHEREAS, the San Diego Water Quality Control Plan for the San Diego Region (hereinafter the "BASIN PLAN") ~~defines~~ designates the beneficial uses and water quality objectives for waters of the State of California in the San Diego Region; and

WHEREAS, the SAN DIEGO WATER BOARD uses the BASIN PLAN to, among other things, to evaluate determine compliance with the federal Water Pollution Control Act (Clean Water Act or CWA) Section 303(d) (33 U.S.C.§ 1313(d)) and with the California Porter-Cologne Water Quality Act (hereinafter "PORTER-COLOGNE), CAL. WATER CODE Division 7; and

WHEREAS, CWA Section 303(d) requires states to develop a list of waterbodies that do not or are not expected by the next listing cycle to meet Water Quality Objectives after implementing technology-based controls; and

WHEREAS, the Santa Margarita River Estuary (ESTUARY), the Santa Margarita River and some tributaries to the Santa Margarita River (RIVER), have been listed by the State Water Resources Control Board (STATE BOARD) as water quality limited segments for excessive nutrient enrichment pursuant to Section 303(d) of the Clean Water Act, and whereby the SAN DIEGO WATER BOARD must develop a Total Maximum Daily Load (TMDL) or take other appropriate regulatory actions, if impairment of beneficial uses is confirmed, to in require restoration of the quality of the waters so that ~~order to attain~~ water quality objectives are attained and to ensure protection of the waterbody's designated Beneficial Uses; and

WHEREAS, the United States Environmental Protection Agency (US EPA) defines a TMDL to mean a calculation of the maximum amount of a pollutant that a waterbody can receive and meet water quality standards and an allocation of that load among the various sources of that pollutant still safely meet water quality standards; and

WHEREAS, the SAN DIEGO WATER BOARD initiated efforts to develop a TMDL for the ESTUARY in 2006; and

WHEREAS, the SAN DIEGO WATER BOARD issued Investigative Order R9-2006-076 dated July 19, 2006, to the PARTIES, and other entities, to gather monitoring data and submit monitoring reports to assess the condition of the ESTUARY; and

WHEREAS, as a result of Investigative Order R9-2006-076 the PARTIES collaboratively collected and submitted to the SAN DIEGO WATER BOARD monitoring data to be used in the development of a possible ESTUARY TMDL; and

Comment [CGH 1]: Does this mean evaluate whether specific water bodies are in compliance in terms of being unimpaired? Would it be better to say then that the Basin Plan is used to determine whether waterbodies are impaired and if so for which constituents?

Comment [CGH 2]: Is the board still waiting for confirmation of impairment?

Comment [CGH 3]: We can reword but I assume this is what is meant.

Comment [CGH 4]: This sounds odd – not sure where this EPA definition of TMDL comes from – not from the definition in the federal regulations at 40 CFR part 130.

Comment [BPulver5]: I revised the sentence to be an exact quote of what is on the EPAs webpage http://water.epa.gov/lawsregs/lawsguidance/cwa/tmdl/overviewoftmdl.cfm

Comment [CGH 6]: This effort was just for the Estuary and not the River as defined here?

Comment [CGH 7]: Same comment.

Comment [CGH 8]: Same comment.

WHEREAS, the US EPA published a National Strategy for the Development of Regional Nutrient Criteria in 1998 to promote the development of waterbody-type technical guidance and region-specific nutrient criteria; and

WHEREAS, US EPA Region IX published a Technical Approach to Develop Nutrient Numeric Endpoints for California in July 2006 and a Technical Approach to Develop Nutrient Numeric Endpoints for Estuaries in March of 2007, that outlined a possible approach for setting nutrient criteria based on multiple lines of evidence, potentially including dissolved oxygen, algal biomass, water column concentrations of nitrogen and phosphorous, and the health of macro invertebrate communities; and

WHEREAS, the existing ~~SAN DIEGO WATER BOARD~~ BASIN PLAN Water Quality Objectives for nutrients predate the application of the multiple lines of evidence- based Numeric Nutrient Endpoint ("NNE") methodology; and

WHEREAS, SAN DIEGO WATER BOARD staff and the PARTIES have observed what appear to be recent improvements in water quality in the ESTUARY and the RIVER that may support consideration of alternative regulatory approaches to ~~eliminate the need for~~ a TMDL to address impairment, or otherwise limit the requirement for for the need for a potential TMDL to certain hydrologic conditions normally associated with summer dry conditions; and

WHEREAS, the SAN DIEGO WATER BOARD agrees that consideration of local biological and site specific conditions may be appropriate in setting regulatory targets for waterbodies in the San Diego Region; and

WHEREAS, Section 303(c)(1) of the federal Clean Water Act and provisions ~~requirements in of~~ the ~~SAN DIEGO WATER BOARD under~~ PORTER-COLOGNE ~~Porter Cologne~~ require that the SAN DIEGO WATER BOARD review its BASIN PLAN every three years to ~~make use of the most recent available information and technology to~~ review, and as appropriate, modify ~~update~~ water quality objectives and designated beneficial uses of receiving waters based on a number of factors; and

WHEREAS, the STATE BOARD in 2005 published Guidance for Addressing Impaired Waterbodies in California observing that Water Quality Objectives should be evaluated and validated prior to establishing TMDLs; and

WHEREAS, during the ~~2010~~ 2011 Triennial BASIN PLAN review, upon the recommendation of the SAN DIEGO WATER BOARD'S Triennial Review Advisory Committee ("TRAC"), which listed the development of nutrient objectives and seasonal water quality objectives as top priorities, Resolution No. R9-2011-0047 identified the development of Nutrient Water Quality Objectives as a priority for SAN DIEGO WATER BOARD staff focus; and

WHEREAS, the ~~SAN DIEGO WATER BOARD~~ BASIN PLAN includes narrative Water Quality Objectives for nutrients with recommended numeric values to implement and/or translate the narrative standard; and

Comment [CGH 9]: From staff's standpoint, what would you be comfortable saying here about "improvements."

Comment [CGH 10]: A different word from "targets" might be better or it should be clarified if you mean "numeric targets" as used in TMDLS or not.

Comment [CGH 11]: Should this clause be combined with clauses that talk about potential alternatives to TMDL?

Comment [CGH 12]: Is this accurate? Numeric values are recommended in the basin plan? I haven't checked yet.

WHEREAS, the SAN DIEGO WATER BOARD and the PARTIES agree that different regulatory approaches may be appropriate during different seasonal and hydrologic conditions—provided Beneficial Uses are protected; and

WHEREAS, the SAN DIEGO WATER BOARD and PARTIES are interested in evaluating ~~alternative~~ watershed-based approaches that have the potential to serve as alternatives to ~~eliminate or reduce the need for~~ TMDL development in the Santa Margarita River Watershed and ESTUARY; approaches that ensure protection of Beneficial Uses while identifying the most resource-effective solution or solutions to addressing the impairment and identifying other STATE BOARD priorities such as increased recycled water use, and development of additional local water supplies where feasible; and

WHEREAS, the PARTIES recognize that the SAN DIEGO WATER BOARD staff does not now have adequate resources at its disposal to accomplish a review of all of the factors and analysis of impairment and approaches to watershed and nutrient management as it applies to the Santa Margarita River Watershed and ESTUARY; and

WHEREAS, the San Diego Integrated Water Management Plan (IRWMP) group and the Upper Santa Margarita Watershed IRWMP group jointly obtained two separate Proposition 84 Implementation Grants on behalf of the County of San Diego and the Riverside County Flood Control and Water Conservation District (DISTRICT) to partially fund the evaluation of biostimulatory substance criteria for the Santa Margarita ESTUARY, RIVER and tributaries; and

WHEREAS, the PARTIES to this MOU, and other interested stakeholders in the Santa Margarita River Watershed (including, but not limited to, environmental organizations, other federal agencies, agricultural interests, and recycled water producers) approved a Charter on June 28, 2012 formally establishing the Santa Margarita River Nutrient Initiative - Stakeholder Group (SMR STAKEHOLDER GROUP) "CHARTER" utilizing resources from the Proposition 84 Implementation Grant and other resources of the individual Parties to Investigative Order R9-2006-076; and

WHEREAS, the PROCESS PLAN, as described herein, provides a framework for the technical and regulatory tasks to be conducted collaboratively by the SMR STAKEHOLDER GROUP; and

WHEREAS, in order to evaluate water quality conditions in support of the PROCESS PLAN, the PARTIES may need to conduct certain monitoring and field studies in the Santa Margarita River Watershed and in estuaries and beaches at Marine Corps Base Camp Pendleton. Accordingly, a Memorandum of Agreement, included for reference in Attachment E, has been executed by the County of San Diego and Marine Corps Base Camp Pendleton; and

WHEREAS, implementation of the PROCESS PLAN by the SMR STAKEHOLDER GROUP will result in the evaluation and development of biostimulatory substance criteria and watershed management strategies for the Santa Margarita ESTUARY, RIVER and tributaries with the goal of simultaneously ensuring designated Beneficial Uses are protected while also considering other important STATE BOARD and SAN DIEGO WATER BOARD priorities such as:

Comment [CGH 13]: Not RIVER too?

Comment [CGH 14]: This does not realy seem to fit but maybe there is an explanation for why t does?

Comment [CGH 15]: It seems these might be combined with other related clauses.

Comment [CGH 16]: Should this be a defined term?

Comment [CGH 17]: This is the first time this term is used. Is it defined somewhere? Is it a finished product that is intended to be incorporated fully in this MOU or just referenced?

Comment [CGH 18]: Where is this?

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Comment [CGH 19]: Here it says the SMR Stakeholder Group will implement the Process Plan but elsewhere the board and PARTIES are also expected to do so. It is confusing. Do you agree that implementation of the Process Plan will accomplish this?

increasing the opportunities for recycled water use in the Santa Margarita River Watershed Region and facilitating the development of additional local water supplies, where possible; and

WHEREAS, Camp Pendleton, the County of San Diego, the DISTRICT and other PARTIES have expended their own financial and staff resources to leverage available grant funds and promote the goals and objectives of the CHARTER and implementation of the PROCESS PLAN; and

WHEREAS, the SAN DIEGO WATER BOARD has reviewed the CHARTER and ~~AND~~ PROCESS PLAN and agrees to the framework for participating in the PROCESS PLAN; and

WHEREAS, the PARTIES wish on behalf of the SMR STAKEHOLDER GROUP? to establish this MOU with the SAN DIEGO WATER BOARD on behalf of the SMR STAKEHOLDER ~~GROUP~~ to assist the SAN DIEGO WATER BOARD in the evaluation and establishment of appropriate biostimulatory substance policies and/or targets for the ESTUARY, RIVER and tributaries consistent with the PROCESS PLAN; and

WHEREAS, the PARTIES have retained Mr. David Ceppos, Associate Director of the Center for Collaborative Policy at California State University, Sacramento to serve as the SMR STAKEHOLDER GROUP FACILITATOR—a role the SMR STAKEHOLDER GROUP envisions will continue for the duration of PROCESS PLAN implementation~~execution~~; and

WHEREAS, this MOU describes the roles and responsibilities of the PARTIES, the SMR STAKEHOLDER GROUP, and the SAN DIEGO WATER BOARD in implementing the PROCESS PLAN; and

WHEREAS, the SAN DIEGO WATER BOARD in its meeting held on November 13, 2013 adopted the "Practical Vision" as prepared by SAN DIEGO WATER BOARD staff; a Practical Vision that aligns with the goals of the SMR STAKEHOLDER GROUP as delineated in the PROCESS PLAN.

NOW, THEREFORE, The PARTIES and the SAN DIEGO WATER BOARD mutually agree as follows:
~~, in consideration of the foregoing and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the PARTIES and SAN DIEGO~~ WATER BOARD agree as follows:

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Comment [CGH 20]: Where is the Charter? It is unclear what the board is agreeing to relative to "participating in the PROCESS PLAN" and the referenced framework.

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Comment [CGH 21]: But the stakeholder group itself is not a PARTY?

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~~1. Incorporation of Recitals. The foregoing Recitals are fully incorporated into the MOU, as if they were fully repeated herein.~~

2.1. **TERM**

This MOU shall become effective upon the date of final signature of all of the PARTIES and the SAN DIEGO WATER BOARD and shall continue until a regulatory solution or solutions are identified through the implementation~~execution~~ of the PROCESS PLAN. However, in no event shall the term of this MOU be more than five years from the date of final signature unless otherwise extended, in writing by mutual consent of the PARTIES and the SAN DIEGO WATER BOARD.

Comment [CGH 22]: Do you agree that the scope of the MOU is intended only to cover identification of a regulatory solution?

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~~3.~~2. **PURPOSE**

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The Purpose of this MOU is to: (1) define the working relationship and commitments between the PARTIES and the SAN DIEGO WATER BOARD during ~~execution~~ implementation of the PROCESS PLAN in order to ensure protection of Beneficial Uses and achievement of other watershed priorities within the Santa Margarita River Watershed; and (2) provide assurance to the SAN DIEGO WATER BOARD, and other interested parties, that the PARTIES and SAN DIEGO WATER BOARD are committed to the goals and objectives identified in the PROCESS PLAN attached hereto as Attachment A; and (3) facilitate the development and completion of biostimulatory substance criteria using best available science for the ESTUARY, RIVER, and tributaries.

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Comment [CGH 23]: Above it says the board is committed to the "framework" in the Process Plan so it is confusing – is this a different concept or the same wth different wording?

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Comment [CGH 24]: Is this last element a part of the implementation of the Process Plan or some other action?

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~~4.~~ 3. **ROLES AND RESPONSIBILITIES**

a. Both PARTIES and the SAN DIEGO WATER BOARD shall have joint responsibility for implementing this MOU, and in that capacity, agree to do the following:

i. Participate in SMR STAKEHOLDER GROUP Meetings, sponsored Studies and other regulatory interface as may be needed to implement the PROCESS PLAN.

ii. Ensure effective communication between the SAN DIEGO WATER BOARD and the ~~Parties~~ PARTIES as the PROCESS PLAN facilitates the evaluation and development of biostimulatory substance criteria, and resolution of disputes in accordance with Section 4 herein.

iii. Ensure the most current science and best available data are utilized, vetted, and promoted during implementation~~execution~~ of the PROCESS PLAN.

Comment [CGH 25]: What does that mean? It's a pretty vague term. Vetted by whom?

iv. Provide/identify data to be used in execution of the PROCESS PLAN.

Comment [CGH 26]: What does "provide" commit the board to do here? Devebp or just provide already existing data?

v. Timely (but not later than sixty (60) days after submittal), review of all reports and documents and provide comments to the SMR STAKEHOLDER GROUP FACILITATOR or his designee where appropriate.

vi. Ensure that any regulatory approaches selected as a result of execution of the PROCESS PLAN are consistent with applicable State and Federal policies. This includes the consideration of policies related to the protection of terrestrial and aquatic Threatened or Endangered Species, facilitation of greater recycled water use in accordance with the State Recycled Water Policy, and protection/facilitation of local water supply development.

vii. Agree to consider revisions to the PROCESS PLAN as necessary to effectively and efficiently conduct the work of the SMR STAKEHOLDER GROUP [pursuant to ? PROCESS PLAN< CHARTER? , provided such revisions are consistent with the framework and policy considerations identified in this MOU.

b. The SAN DIEGO WATER BOARD agrees to: staff shall be responsible and agree to ~~the following~~:

i. ~~To f~~Fully consider, consistent with the SAN DIEGO WATER BOARD Practical Vision, regulatory approaches developed pursuant to the PROCESS PLAN.

ii. ~~To e~~Continue dedicating, to the extent adequate funding exists, a regular staff person(s) to support and participate in the development/evaluation of biostimulatory criteria in the Santa Margarita Watershed for the duration of the PROCESS PLAN execution.

iii. [Participat~~ion in and~~, communicat~~ion with, and commitment with~~ the SMR STAKEHOLDER GROUP in the refinement and execution implementation of the PROCESS PLAN and associated scientific study].

iv. Communicate with ~~to~~ and engage with PARTIES and other SMR STAKEHOLDER GROUP members about . . . .]

v. Seek~~Obtain~~ and use best efforts to obtain concurrence from USEPA and STATE BOARD, where appropriate, on scientific methods, data, assumptions, regulatory interpretations, and other relevant issues considered during development of biostimulatory substance criteria.

Comment [CGH 27]: What is the scope of what is meant by that?

Comment [CGH 28]: What is this study?

Comment [CGH 29]: Can these two things be combined?

vi. Arrange for scientific peer review through the STATE BOARD of any reports, studies, or proposed regulatory documents, if required, prior to action by SAN DIEGO WATER BOARD.

vii. Based on the outcome of the evaluation of the biostimulatory substance criteria for the ESTUARY, RIVER and/or tributaries pursuant to the PROCESS PLAN, collaboratively develop with representatives of the SMR STAKEHOLDER GROUP a technical/staff report, resolution and proposed implementation strategy plan for consideration and adoption by the SAN DIEGO WATER BOARD.

viii. Consolidate and maintain the output of the PROCESS PLAN implementation to support the administrative record.

c. The PARTIES agree to ~~shall be responsible and agree to do the following~~:

i. Utilize the consensus-approved CHARTER dated June 28, 2012 as the foundational document for identifying the SMR STAKEHOLDER GROUP participants, roles and responsibilities, general participation and meeting guidelines, organization, decision-making, and methods of communication.

ii. Implement ~~Execute~~ the SAN DIEGO WATER BOARD approved PROCESS PLAN included as Attachment A, or future amended versions approved pursuant to Section 10 below.

iii. Conduct outreach to various organizations/institutions/groups that are not part of the SMR STAKEHOLDER GROUP (e.g., non-governmental organizations (NGO)s, Universities, disadvantaged communities (DACs) to ensure maximum participation during implementation~~execution~~ of the PROCESS PLAN.

~~iii.~~

~~5.~~ 4. COMMUNICATION AND DISPUTE RESOLUTION

In line with the values identified in the SAN DIEGO WATER BOARD's Practical Vision, the PARTIES and SAN DIEGO WATER BOARD ~~staff~~ commit to ongoing, timely, and open communication to identify issues and problems during the implementation of the PROCESS PLAN. In the event that deficiencies, delays, or other circumstances occur during the course of work, the PARTIES and SAN DIEGO WATER BOARD through its staff staff will, in good faith, initiate discussion and actions as necessary to resolve said deficiencies, delays, or circumstances. In the event that a dispute arises regarding any aspect of this MOU, the PARTIES and SAN DIEGO

Comment [CGH30]: Let's discuss – it seems like there is some redundancy between what is speled out in the MOU as compared to the Process Plan.

Comment [CGH31]: How will the representatives be determined? Will they all be PARTIES?

Comment [CGH32]: What if it becomes impossible to do this in a collaborative fashion? Is there an off-ramp? Is this what staff envision?

Comment [CGH33]: What is involved with this? Also, I have been using "implementation" instead of "execution."

Comment [CGH34]: I thought the participants were already known. If so, we should change this or modify it to reflect that it just means some may be added/dropped.

Comment [CGH35]: When does the process plan get "approved by the SDWB"?

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Comment [CGH36]: What is meant by deficiencies?

Comment [CGH37]: Same comment.

WATER BOARD ~~staff~~ agree to assign appropriate individuals to resolve the dispute. In the event a dispute cannot be resolved amongst the PARTIES and SAN DIEGO WATER BOARD, the SMR STAKEHOLDER GROUP FACILITATOR will mediate the dispute amongst the PARTIES to facilitate an amicable resolution.

The SMR STAKEHOLDER GROUP FACILITATOR, utilizing available resources, shall keep, or cause to be kept, minutes of the STAKEHOLDER GROUP meetings including any handout materials used. Copies of the meetings and handouts will be delivered to the SMR STAKEHOLDER GROUP.

6. 5. FUNDING

Funding for implementation ~~execution~~ of the PROCESS PLAN activities agreed upon by the PARTIES will be determined separately from this MOU. Any potential financial obligations of the PARTIES will not be addressed under this MOU, but under a separate agreement that the PARTIES ~~and the SAN DIEGO WATER BOARD~~ envision negotiating among the PARTIES upon adoption of this MOU. The PARTIES may choose to provide funding to augment studies and SAN DIEGO WATER BOARD staff resources as feasible such that additional regulatory scenarios are investigated and scientific study conducted. However, the amount of funding is dependent upon the availability of funds from individual PARTIES and grant funding that may become available in the future. In the event that such funding is terminated or reduced, the PARTIES may terminate or modify this MOU, pursuant to Section 7 after good faith consultation with the SAN DIEGO WATER BOARD Executive Officer or his/her designee.

~~7.~~ 6. NOTICES

Notices or other communication provided under this MOU shall be delivered, in writing (to include by e-mail where mutually acceptable), to the Chairman of the SMR STAKEHOLDER GROUP (or his/her designee) and to the Executive Officer of the SAN DIEGO WATER BOARD (or his/her designee). Address or other contact information changes, or changes in the Chairman of the SMR STAKEHOLDER GROUP shall be promptly communicated to the SAN DIEGO WATER BOARD by the SMR STAKEHOLDER GROUP Chair upon a change in the SMR STAKEHOLDER GROUP Chair and/or the Chair's mailing address or contact information.

7.

~~8.~~ MODIFICATION OR RESCISSION

No ~~alteration or variation of the~~ modification to the terms of this MOU shall be valid unless made in writing and signed by the PARTIES and SAN DIEGO WATER BOARD. ~~staff.~~ Consent to such modification ~~alteration or variation~~, where requested in good faith, shall not be unreasonably withheld by the PARTIES or the SAN DIEGO WATER

Comment [CGH 38]: This dispute mediation by these terms only applies to the PARTIES but applies when a dispute can't be resolved with the SDWB and SMR Stakeholder Group. So it's not clear. What is the intention of this from the board's standpoint? Would you be comfortable with the SMR Stakeholder Group facilitator mediating a dispute? Usually it's a neutral person – but maybe that person is neutral?

Comment [CGH 39]: And if no amicable resolution can be reached? Then what? Can you envision a dispute that can't be resolved and from which the board would want to walk away? We should think about that.

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Comment [CGH 40]: Does the board anticipate providing any funding other than funding of staff for for peer review or other regulatory processes undertaken by the board?

Comment [CGH 41]: What other potential bases for termination might there be if any? Should there be a separate section for "TERMINATION"?

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Comment [CGH 42]: I assume they mean termination here.

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BOARD. Bases for termination of the MOU shall include elimination or reduction of anticipated funding by PARTIES necessary to implement the PROCESS PLAN and ?? Based upon an annual review of the MOU implementation by the PARTIES and the SAN DIEGO WATER BOARD, this MOU will be reviewed and modified as necessary.

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~~9.~~ 9. RESERVATION OF AUTHORITY

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Though the PARTIES and the SAN DIEGO WATER BOARD, by their signature to this MOU, have communicated their intent to participate in the implementation of the PROCESS PLAN, no element in this MOU is intended to, or shall have the effect of, delegating, constraining, ~~or~~ limiting or expanding any PARTY'S ~~the authority of the PARTIES~~ or the SAN DIEGO WATER BOARD's responsibilities, statutory and other authorities or discretion, ~~and SAN DIEGO WATER BOARD staff in carrying out their legal responsibilities or exercising their discretion in management, regulation, coordination, and control of water quality or land use affecting water quality.~~

~~10.~~ 10. [WITHDRAWAL] or ADDITION OF PARTIES

Comment [CGH43]: When does "withdrawal" by a party or the SDWB necessitate termination? Would the MOU go on without the Board? Maybe there's a way to combine this section with the modification/rescission secsion

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Comment [CGH44]: Check for how t applies to addition/removal.

A new party or parties may be added or removed from participation in this MOU in accordance with the procedures in the [CHARTER] and upon written consent of the SAN DIEGO WATER BOARD, though the remaining PARTIES will remain bound to the MOU to the same extent as before the addition or withdrawal. [Participation in this MOU may be withdrawn by the SAN DIEGO WATER BOARD or any PARTY for any good faith reason, to include the absence or loss of funding associated with PROCESS PLAN implementation, only after the SAN DIEGO WATER BOARD or PARTY complies with all of the following:

a. The SAN DIEGO WATER BOARD and/or the PARTY shall notify all other MOU participants in writing 30 days prior to its intended date of withdrawal and good faith reasons for such withdrawal.

b. Any expenses associated with withdrawal will be solely the responsibility of the withdrawing PARTY, and any additional staffing, funding, or other benefits received as a result of the signatory's participation in PROCESS PLAN execution, shall be immediately cancelled and subject to recoupment upon that signatory's unilateral withdrawal from this MOU.]

Comment [CGH45]: It seems this is better h TERMINATION section as to the Water Board because the board has specific responsiblities and if it withdraws, it does not seem that the MOU survives. It could be redrafted to just include the PARTIES or some of them.

~~11.~~3. 11. COUNTERPARTS

This MOU may be executed in original counterparts, which together constitute a single MOU.

12. GOVERNING LAW AND REMEDIES

This MOU, and all matters arising directly or indirectly from this MOU, shall be governed by and construed in accordance with applicable state and federal laws to the extent applicable to any actions of the individual PARTIES and the SAN DIEGO WATER BOARD arising out of the MOU. However, the PARTIES and SAN DIEGO WATER BOARD agree and intend that this MOU simply memorializes the intent of the PARTIES to work together collaboratively in implementing the PROCESS PLAN, and this MOU is not intended as a contract that can give rise to a claim for damages in the event of alleged or actual non-performance by any PARTY or the SAN DIEGO WATER BOARD. The exclusive remedy for alleged violations of this MOU shall be the dispute resolution procedures identified in Paragraph 5 herein.

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