2011 – 2013 Triennial Review

Presentation & Selection of Basin Planning Priority Projects

California Regional Water Quality Control Board

Los Angeles Region

Draft Staff Report

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1. INTRODUCTION

The Water Quality Control Plan for the Los Angeles Region (Basin Plan) contains water quality standards for surface and groundwaters the Los Angeles Region. The Los Angeles Region includes the coastal watersheds of Los Angeles and Ventura Counties. In California, water quality standards include existing and designated beneficial uses for surface and groundwaters, narrative or numeric water quality objectives to protect those beneficial uses, and the state's Antidegradation Policy (*Statement of Policy with Respect to Maintaining High Quality Water in California*, SWRCB Resolution No. 68-16). The Basin Plan also includes implementation programs for water quality objectives, including various regulatory programs such as total maximum daily loads (TMDLs), waste discharge requirements (WDRs), NPDES permits, conditional waivers, discharge prohibitions, and remediation programs among others. The Basin Plan fulfills statutory requirements for water quality planning in California Water Code (CWC) section 13240 and the federal Clean Water Act (CWA) section 303(c).

This staff report provides a status update on the Basin Planning issues prioritized by the Regional Board as part of the 2008 - 2010 triennial review and summarizes basin planning issues identified by Regional Board staff and those presented by stakeholders for consideration during this triennial review. This report is organized as follows. Section 2 provides background and information on the triennial review process, including public participation components. Section 3 provides an update on projects prioritized and conducted during the 2008 - 2010 period. Section 4 presents the basin planning potential projects initially recommended by staff for consideration during this triennial review and summarizes stakeholder comments regarding those projects. Section 5 summarizes stakeholder comments on other basin planning issues/projects they would like the Regional Board to consider. Section 6 presents staff's recommendations for prioritization of projects during the 2011 - 2013 triennial review period.

2. TRIENNIAL REVIEW PROCESS

The Regional Board first adopted an interim water quality control plan in 1971. After several revisions, the first comprehensive Basin Plans for the region (one for the Santa Clara River Basin and one for the Los Angeles River Basin) were adopted by the

Regional Board and approved by the State Water Resources Control Board (SWRCB) in March 1975. Subsequently, several amendments were adopted between 1976 and 1991. A comprehensive update to the Basin Plans was adopted in 1994, at which time the two Basin Plans were combined into one concise Basin Plan for the entire region.

Both State and federal laws mandate the periodic review of basin plans and the water quality standards contained therein. Specifically, California Water Code section 13240 states that basin plans "shall be periodically reviewed and may be revised." In addition, section 303(c)(1) of the federal Clean Water Act requires that a State review its water quality standards and, as appropriate, modify and adopt standards, at least once every three years. This process is known as a triennial review. The primary purpose of a triennial review is to review water quality standards and solicit public comment on issues the Regional Board should address in the future through the Basin Plan amendment process. The triennial review process may or may not result in amendments to the Basin Plan over the course of the 3-year review cycle.[1] At the start of the triennial review process, the Regional Board develops and adopts a prioritized list of Basin Planning issues that it determines should be investigated over the next three years. Following Regional Board adoption, this list of priorities is transmitted to the SWRCB and the United States Environmental Protection Agency (US EPA).

This staff report and the Regional Board resolution, when adopted, as well as any subsequent Basin Plan amendments, fulfill State and federal requirements for triennial review of water quality standards. The triennial review process is cyclical, meaning that at the end of one three-year review period, the review process begins again with the next three-year period. In this sense, the review process is on-going, reflecting the continuing planning process followed by the Water Boards. It does not conclude with the Regional Board's adoption of Basin Planning list of priorities or with any individual Basin

[1] As stated, the identification of an issue during a triennial review does not necessarily mean that any amendment will be made to the Basin Plan. The decision on whether or not to proceed with a proposed Basin Plan amendment is only made after the Regional Board reviews the technical and legal considerations associated with an issue and determines that development of a Basin Plan amendment is supported by evidence and appropriate. Amending the Basin Plan generally involves preparing a staff report outlining alternatives and environmental impacts and, in the case of water quality objectives, economic considerations; a CEQA environmental checklist; and the actual amendment (i.e., changes to the Basin Plan). Amendments are mailed out for public review 45 days in advance of the public hearing, typically held at a regularly scheduled Regional Board meeting. The Regional Board must adopt amendments, and then transmit them for review and approval by the State Water Resources Control Board and Office of Administrative Law, as well as by US EPA if the amendment involves surface water quality standards or implementation provisions for these standards.

Plan amendment that may be prioritized in the triennial review process. Moreover, a triennial review is not the only occasion where Basin Plan modifications are contemplated. Indeed, since 1994, numerous Basin Plan amendments have been adopted including revisions to water quality objectives and beneficial uses, new and revised implementation plans and policies, and TMDLs, some in the context of a triennial review, and others outside that process.

Section 303(c)(1) of the federal Clean Water Act contains a requirement for States to review water quality standards and, as appropriate, modify and adopt standards, at least once every three years, in a process known as a triennial review. This requirement is based upon recognition that the science of water quality is constantly advancing; its purpose is to ensure that standards are based on current science, methodologies, and US EPA mandates, recommendations and guidance. The triennial review does not necessarily involve the revision of all or any particular components of the standards every three years. While the Regional Board is required to conduct a review of its Basin Plan, neither federal nor state law imposes a duty to revise or modify it. (*City of Arcadia v. State Water Resources Control Bd*. (2010) 191 Cal.App.4th 156). Federal law only requires modifications "*as appropriate*". Modifications to the Basin Plan are usually made to incorporate new scientific and technical information; in response to US EPA's mandates, recommendations, and guidelines; to address SWRCB policy requirements; to address stakeholder concerns, where it is appropriate to do so; and to address issues identified by the Regional Board itself or its staff during the regular course of business. Additionally, staff often develop Basin Plan Amendments to address stakeholder developed site-specific objectives and/or the results of TMDL special studies.

The availability of new scientific information or methodological developments may not directly translate into a change to standards during a triennial review cycle. The state of the science also has to be taken into consideration, as is currently the case with the region's bacteria objectives for example. In this case, it would be premature to modify standards while scientific understanding is actively evolving and new methodologies are being developed and tested (i.e. on-going research on new criteria, including local epidemiological studies and methodological developments in the fields of rapid indicators and microbial source tracking), particularly given that the Basin Plan already contains the most recent EPA criteria as water quality objectives. Moreover,

notwithstanding the evolution of applicable scientific knowledge or policy considerations, federal or state law or regulations may preclude changes that might otherwise be deemed desirable by stakeholders. Therefore, it is common for standards to remain unchanged as a result of a triennial review process. Even where changes are appropriate and lawful, the State's Continuing Planning Process, and other federally approved documents, recognize that the process of modifying water quality standards is resource intensive, and typically limited by staffing and budgetary constraints. As such, the triennial review process assists in identifying the most important or compelling projects and allows the States to prioritize those as resources allow. This federal requirement for a triennial review of the Basin Plan is complemented by the provision in Section 13240 of the California Water Code that requires a periodic review of the Basin Plan and allows for revisions.

The triennial review occurs in three phases. During the first phase, the Regional Board reviews water quality standards and associated implementation programs and identifies issues for possible Basin Plan amendments. In the second phase, the Board prioritizes the issues that will be further researched and addressed through subsequent Basin Plan amendments. Finally, during the third phase, the Board develops projects addressing these issues and adopts any resulting changes to the Basin Plan as individual Basin Plan amendments over the course of the three-year review period or longer on large projects. Public input is a key component of each phase. Stakeholder input is solicited on issues of concern, on prioritization, and during the development of each individual Basin Plan amendment. The triennial review process may ultimately result in some amendments to the Basin Plan to adopt or modify water quality standards and implementation provisions.

The last triennial review was conducted from 2008 - 2010. The current triennial review began in the fall of 2011. As a first step in the triennial review process, staff reviewed information and comments submitted by stakeholders during previous reviews, as well as needs and suggestions from various Regional Board programs, and identified eight basin planning issues for initial consideration in the 2011 – 2013 review (see Section 4). On August 3, 2011, Regional Board staff sent a public notice inviting stakeholders to a public meeting on September 14, 2011 to discuss the 2011 – 2013 Triennial Review and to solicit comments on any basin planning issue or project they would like the Regional

Board to consider. The deadline for submission of written comments was October 14, 2011. The purpose of soliciting written comment was to ensure all stakeholders could provide information to the Regional Board even if they were not able to attend the September 14, 2011 public meeting and to allow stakeholders an opportunity to expand and clarify verbal comments. In all, Regional Board staff received 12 comment letters representing various cities, counties, and coalitions; industry and agricultural interests; environmental organizations; water and sanitation districts; and private citizens. Stakeholder issues of concern contained in these comment letters were reviewed and considered when developing this staff report and Board resolution. Additionally, a summary of stakeholder comments are included with the discussion of various basin planning issues or potential projects. The public meeting and comment solicitation and the identification of potential projects constitutes phase I of this triennial review period.

Phase II of the triennial review will conclude after another public comment period and public hearing on February 2, 2012, at which time the Regional Board will consider adoption of a resolution identifying the basin planning priorities to be investigated and further considered over the next three years.

In adopting a resolution identifying basin planning priorities for this triennial review period, the Regional Board is not required to consider the factors of California Water Code section 13241. Consideration of the factors, by section 13241's express terms, only applies in "establishing water quality objectives." Here, the Regional Board is not establishing water quality objectives, but as required by section 303(c)(1) of the federal Clean Water Act is reviewing its water quality standards. (See *City of Arcadia v. State Water Resources Control Bd*. (2010) 191 Cal.App.4th 156).

3. 2008 - 2010 TRIENNIAL REVIEW, PROJECTS ADDRESSED AND IN PROGRESS

During the previous triennial review period (2008 - 2010), the Regional Board acted on Basin Plan amendments, some of which have increased protection of water quality and beneficial uses, and others which have provided greater flexibility for the regulated community. In addition, some significant projects are still underway. The section below summarizes completed projects and provides an update on projects still in progress.

ADOPTED BASIN PLAN AMENDMENTS

UPDATE BACTERIA OBJECTIVES FOR FRESHWATERS DESIGNATED FOR WATER CONTACT RECREATION

Staff proposed an amendment to the Basin Plan to update the water quality objectives for bacteria that are applied to freshwaters designated for water contact recreation (REC-1 and LREC-1) by removing the fecal coliform objectives. The purpose in updating the region's freshwater bacteria objectives was to maintain consistency with US EPA's recommendation pursuant to federal Clean Water Act § 304(a) that *Escherichia coli* (*E. coli*) replace fecal coliform as an indicator of the presence of pathogens in freshwater, and to remove unnecessary regulatory and monitoring requirements that arise from having water quality objectives for both indicators. This amendment did not increase nor reduce the risk of illnesses associated with exposure to water containing fecal bacteria. It simply removed redundant objectives in keeping with US EPA's recommendations, which were based on national epidemiological studies and research on the most appropriate bacterial indicators for protecting the health of individuals engaged in water contact recreation.

Specifically, the amendment proposed *E. coli* as the sole bacterial indicator to assess the quality of freshwaters used for water contact recreation (REC-1) and limited contact recreation (LREC-1). The removal of the fecal coliform objectives is limited to freshwaters used for water contact recreation, since the use of the fecal coliform indicator for marine waters designated for water contact recreation is required by section 7958, "Bacteriological Standards", of Title 17 of the California Code of Regulations (Assembly Bill 411, Statutes of 1997). On July 8, 2010, the Regional Board adopted a resolution, amending the Basin Plan by removing the fecal coliform objectives for water contact recreation designated freshwaters.

NON-REGULATORY ADMINISTRATIVE UPDATE OF BASIN PLAN CHAPTER 2

The Basin Plan administrative update is being conducted in phases, the first of which updated Chapter 2 of the Basin Plan. Chapter 2 *Beneficial Uses* lists and provides standard definitions for the beneficial uses assigned to waterbodies in the Los Angeles Region. This chapter also contains beneficial use tables in which major surface waters, groundwater basins, coastal features, and wetlands are listed each with their assigned

hydrologic unit, and designated beneficial uses. Detailed maps of these features are also included in this chapter.

On November 10, 2011, the Regional Board adopted a resolution amending the Basin Plan to administratively update Chapter 2. The non-regulatory amendment to Chapter 2 updates the surface water, groundwater, and coastal features maps contained in Figures 2-1 to 2-22. These updated maps were created from more current, higher resolution data sets that possess greater accuracy and complexity, and offer better ways to process and display data. In addition, the updated maps reflect changes in reach boundaries as a result of TMDLs and other Basin Plan amendments. The amendments also update the Beneficial Use Tables (Tables 2-1 to 2-4) to align them with the updated maps and to reflect reach name changes that have occurred as a result of TMDLs and other Basin Plan amendments. Information from the higher resolution geographical data sets has also allowed the identification of previously unnamed waterbodies. These waterbodies have been included in the tributary table contained in Appendix 1 of the Basin Plan. Finally, as part of the update, the language from three previously adopted amendments to beneficial uses (Regional Board Resolution No. R98-018, Regional Board Resolution No. R03-010 and State Board Resolution No. 2005-0015) was integrated into Chapter 2 of the Basin Plan.

NON-REGULATORY ADMINISTRATIVE UPDATE OF BASIN PLAN CHAPTER 7

The second phase of the Basin Plan administrative update is the addition of Chapter 7, *Total Maximum Daily Loads* to the Basin Plan. Chapter 7 explains the legal basis and authority for establishing TMDLs, and describes the components of a TMDL. In addition, this chapter includes the 30 TMDLs that have been adopted and fully approved since the last update of the Basin Plan. The TMDLs are contained in Sections 7-1 to 7-37 (Sections 7-15, 7-20, and 7-32 through 7-36 were intentionally omitted) of Chapter 7.

The addition of Chapter 7 to the Basin Plan is non-regulatory in nature and does not involve changes to any of the previously adopted TMDLs. It neither modifies nor deletes any component of the 30 existing TMDLs in the Los Angeles Region. Any regulatory updates to Chapter 7 of the Basin Plan are required to be addressed in the future as separate individual Regional Board actions. The Chapter 7 *Total Maximum Daily Loads*

update will be presented for Regional Board consideration at the December 8, 2011 regularly scheduled Board Meeting.

ADDITIONAL BASIN PLAN AMENDMENTS ADOPTED

MALIBU CIVIC CENTER SEPTIC SYSTEMS PROHIBITION

Without community sewers and centralized wastewater treatment infrastructure, residents, businesses, and public facilities in the City of Malibu use thousands of on-site disposal systems to discharge their sewage to the subsurface and underlying groundwater. In several areas of the City, large volumes of wastewater coupled with unfavorable hydrogeologic conditions raised concerns about reliance on this on-site wastewater disposal strategy. The Malibu Civic Center is an area of particular concern as relatively intensive land use activities by more than 400 dischargers result in the release of wastewaters to the subsurface at a rate that Regional Board staff estimated to be as high as 270,000 gallons per day (gpd). While supporting a residential population estimated at almost 2,000, the Malibu Civic Center also serves as the core of the City of Malibu's business, cultural, commercial and recreational activities.

Regional Board Groundwater Permitting staff proposed an amendment to the Basin Plan to prohibit subsurface disposal systems (on-site wastewater disposal systems, or OWDSs), used in the Malibu Civic Center area. For the purpose of the amendment "Malibu Civic Center area" is defined as the area within the lower Winter Canyon watershed, Malibu Valley watershed and adjacent coastal strips between and including Amarillo Beach and Surfrider Beach. This entire area is within the City of Malibu and the unincorporated area of the County of Los Angeles.

On November 5, 2009, the Regional Board adopted a resolution, amending the Basin Plan to prohibit on-site wastewater disposal systems (septic systems) in the Malibu Civic Center area. The prohibition applies to all dischargers in the Civic Center area, including commercial and industrial facilities, public facilities, and residences. Except for certain specific projects which have already progressed through the entitlement process, new septic discharges are no longer allowed and existing commercial and industrial dischargers and public facilities must cease discharge by November 2015, while residential discharges must cease by November 2019.

TOTAL MAXIMUM DAILY LOADS (TMDLS)

During the 2008 - 2010 triennial review period, the Regional Board adopted seven TMDLs as Basin Plan amendments. These TMDLs address several pollutant-waterbody combinations. Of these, one was a revision to a previously adopted TMDL. Table 1 lists the adopted TMDLs.

Table 1. TMDLs adopted during the 2008-2010 Triennial Review period

Resolution Number	TMDL	Regional Board Adoption Date
R10-010	Santa Monica Bay Nearshore Debris	November 4, 2010
R10-008	Machado Lake Pesticides and PCBs TMDL	September 2, 2010
R10-007	Los Angeles River Bacteria	July 8, 2010
R10-006	Santa Clara River Bacteria	July 7, 2010
R10-003	Reconsideration of Los Angeles River Metals TMDL to Incorporate a Water Effects Ratio (WER) for Copper	May 6, 2010
R09-006	McGrath Lake PCBs, Pesticides, and Sediment Toxicity	October 1, 2009
R09-005	Colorado Lagoon Pesticides, PAHs, PCBs, and Metals	October 1, 2009

BASIN PLANNING PROJECTS IN PROGRESS

Other issues identified during the previous triennial review cycle are also being addressed, but have not yet been formally acted upon by the Board. They require further work before they can be developed into Basin Plan amendments.

RE-EVALUATE HOW BACTERIA WATER QUALITY OBJECTIVES SHOULD BE APPLIED IN COMPLIANCE DETERMINATION

As part of reconsiderations included in five bacterial TMDLs (listed below), Regional Board staff is re-evaluating the most appropriate method to calculate geometric means and assess compliance with geometric mean bacteria limits under the TMDLs.

- Los Angeles Harbor Bacteria TMDL
- Santa Monica Bay Beaches Wet Weather and Dry Weather Bacteria TMDLs
- Marina del Rey Harbor Mothers' Beach and Back Basins Bacteria TMDL

- Ballona Creek, Ballona Estuary, and Sepulveda Channel Bacteria TMDL
- Malibu Creek Bacteria TMDL

Bacterial objectives established in the Basin Plan include geometric mean limits for total coliform, fecal coliform, and enterococcus densities in marine waters and *e. coli* density in freshwaters for waters designated for water contact recreation (REC-1). Alternative methods of calculation under consideration may include fewer or greater required numbers of samples used in the calculation, different periods of time in a single geomean calculation, and rolling calculations versus static calculations. The TMDL reconsiderations and a new, or reconfirmed, method for calculation of geomeans will be brought before the Regional Board in spring of 2012.

RECONSIDER THE APPLICATION OF REC 1 AND REC 2 BENEFICIAL USES IN SPECIFIC INSTANCES

Hydrologic modifications may limit, to varying degrees, the nature and extent of recreational opportunities supported by engineered channels in the Los Angeles Region. At the same time, the Regional Board is aware of various efforts by local jurisdictions, non-profit organizations, and other interested parties to enhance the recreational opportunities in and around such modified streams.

In light of this, the Regional Board directed staff, as part of the 2008 – 2010 Triennial Review, to conduct a re-evaluation of recreational uses in waterbodies of this nature throughout the region. The Los Angeles River watershed is the first area to be addressed as part of the re-evaluation. The goal of the project is to document actual and potential recreational uses of engineered streams in the Los Angeles River watershed for the purpose of confirming or refuting their recreational use designations, for possible refinement or removal, following the assessment. The REC -1 designation of the main stem of the Los Angeles River is not in question given the evidence of people recreating in and on the water and results of the analysis by US EPA in 2010, which formed the basis for their determination that the river was a Traditional Navigable Waterway. The REC-1 designations of other engineered waterbodies in the watershed are under consideration.

Components of the re-evaluation include field work, electronic survey, water level and flow data gathering, and review of watershed plans and other relevant data and information. Thus far, staff has completed field reconnaissance of all the engineered channels in the Los Angeles River watershed; finalized a list of engineered water body segments to be re-evaluated; and documented the physical condition of each water body segment. Additionally, in cooperation with stakeholders, coordinated watershed-wide recreational use monitoring was conducted in the summer and fall of 2011.

Regional Board staff presented an information item to the Board on the results of the field reconnaissance and the overall project status in October, 2011. The next steps include continued recreational use monitoring to include the winter 2011/12, spring 2012 and summer 2012, compilation of monitoring results, compilation and analysis of flow data and relevant water quality information, review of master plans, and consideration of revitalization efforts in and along the Los Angeles River and its tributaries. Upon completion of the study, staff will develop proposals consistent with 40 CFR 131.10 for modifications to recreational uses for the Board's consideration.

COMPLETE ADMINISTRATIVE UPDATE OF THE BASIN PLAN

The Basin Plan is the Regional Board's master water quality control planning document for the coastal watersheds of Los Angeles and Ventura Counties. In addition to the region's water quality standards, the Basin Plan includes non-regulatory descriptions of the region covered by the plan and the Regional Board's regulatory assessment and monitoring programs. Since the 1994 update of the Basin Plan, several Basin Plan amendments have been adopted and more current background and geographical information has become available. Not all of these changes are yet reflected in the Basin Plan. Recognizing the importance of a current planning and regulatory document, an administrative update of the Basin Plan was identified as a priority project to be addressed during the 2008 – 2010 triennial review. The administrative update, as previously described, is being conducted in phases until all chapters of the Basin Plan are updated. Additionally, it is the intention of staff to update the Basin Plan by integrating previously adopted amendments and non-regulatory programmatic information into the appropriate chapters on a more routine basis.

As described above, the update of Chapter 2 *Beneficial Uses* is completed and was adopted by a Regional Board resolution on November 10, 2011. The Chapter 7 *Total Maximum Daily Loads* update will be presented for Regional Board consideration at the December 8, 2011 regularly scheduled Board Meeting. Staff is currently working on the updates for Chapter 3 *Water Quality Objectives*, Chapter 4 *Strategic Planning and Implementation*, Chapter 5 *Plans and Policies*, and Chapter 6 *Monitoring and Assessment*. Staff expects to complete the updates of these chapters within the 2012 calendar year.

CONTINUE DEVELOPMENT OF HYDROMODIFICATION POLICY

In 2005, the Regional Board directed staff to develop a hydromodification policy to strongly encourage the preservation of water courses in their natural state and to reduce negative water quality impacts associated with their alteration in the manner described above. In 2010, staff applied for and received grant funding (ARRA 604(b), i.e. federal stimulus funding) to begin the technical work required prior to policy development. The goal of the project was to investigate effects of direct hydromodification on beneficial uses.

The focus of the study was to investigate how in-stream structures, such as bank armoring and/or grade control structures constructed in otherwise natural channels affected in-stream biological resources. The study explored potential biological metrics that could be used to assess the effect of direct hydromodification on beneficial uses. Biological impacts to fully channelized streams were not considered. This work was conducted by the Southern California Coastal Water Research Project. The study results concluded that biologically based assessments held promise for monitoring and evaluating the effects of hydromodification, and that additional work was necessary to refine relationships between hydromodification and biological response.

For further policy development, information on the extent of stream channelization will be developed, and the impact of these hydromodifications on beneficial uses will be researched. In addition, an assessment of existing regulatory tools and the effectiveness of their application will be conducted, along with a consideration of new tools to strengthen what already exists.

DEVELOPMENT OF SALT AND NUTRIENT MANAGEMENT PLANS PER THE SWRCB RECYCLED WATER POLICY

The State Water Resources Control Board adopted a Recycled Water Policy in February 2009 (effective date May 14, 2009). This policy requires that every groundwater basin or sub-basin in California have a Salt and Nutrient Management Plan (SNMP) developed by stakeholders, with Regional Board staff participation. During the project selection phase of the 2008-2010 Triennial Review, the Board directed staff to assist in the development of Salt and Nutrient Management Plans per the Recycled Water Policy.

Staff convened the first stakeholder workshop in November 2010 to introduce the SNMP requirement to stakeholders and initiate the development process. Since then stakeholder groups have been formed for the major groundwater basins and staff from different Board programs have been assigned as project leads for each group. These project leads provide basin-specific technical guidance and oversight of individual plans. This cross program staff effort is coordinated by Basin Planning staff assigned to provide policy guidance and facilitate consistency in technical work products.

A second stakeholder workshop was held in November 2011 to provide further clarification on certain regulatory aspects of the SNMP development process that were identified as issues of concern by stakeholders. Most of the major groundwater basin stakeholder groups have made significant progress towards SNMP development - initiating plans and developing related technical reports.

4. 2011 – 2013 TRIENNIAL REVIEW POTENTIAL PROJECTS IDENTIFIED BY STAFF

Staff initially identified eight potential projects as important to consider addressing over the next three years. These potential projects were selected based on information and comments submitted by stakeholders during previous triennial reviews as well as needs and suggestions from various Regional Board programs and management. The Basin Planning issues and potential projects identified by staff were presented to stakeholders and discussed during a public meeting on September 14, 2011. Additionally, stakeholders were invited to provide written comments on the potential projects identified by staff and any other Basin Planning issue and/or project they would like the Regional

Board to consider. The eight potential projects are described below, after each potential project description there is a summary of stakeholder comments and staff response[2].

IDENTIFY AND ASSIGN BENEFICIAL USES TO COASTAL STREAMS THAT ARE CURRENTLY UNIDENTIFIED IN THE BASIN PLAN

When the 1994 Basin Plan was developed, the available Geographic Information System (GIS) data was limited and did not depict all of the coastal streams in the Region, thus not all coastal streams were listed in the Basin Plan and assigned beneficial uses. In the seventeen years since the adoption of the 1994 Basin Plan, there have been significant advancements in GIS mapping and the availability of other resources such as aerial photography. This information along with field surveys, review of existing information and data, and dialogue with other resource agencies would be used to identify and designate beneficial uses for those coastal streams previously unidentified in the Basin Plan. Additionally, because these coastal streams are tributary to the ocean an independent designation of beneficial would be valuable to ensure that all of the beneficial uses of these freshwater systems are designated and fully protected.

SUMMARY OF STAKEHOLDER COMMENT AND STAFF RESPONSE

There were no stakeholder comments on this potential project.

LOS ANGELES REGION GROUNDWATER QUALITY PROTECTION STRATEGY

Groundwater accounts for most of the Region's local water supply and is a critical resource that is subject to increasing quality and quantity demands. In recent years events such as drought and reduced snowpack have alerted scientists and managers to the changing conditions and challenges facing California's water resources. As a result, there has been a reduction of imported water supplies to the region and there is an urgency to develop and promote sustainable local water supplies. The Regional Board has a pivotal role to play in the statewide effort to secure sustainable local groundwater resources by fulfilling our mission to preserve, enhance, and restore groundwater quality.

[2] The majority of comments made by stakeholders did not focus on staffs identified potential projects; thus, the comment summary only represents remarks from one to three stakeholders. Most of the stakeholders commented on projects currently underway or other basin planning issues; these comments are presented in Section 5 of this report.

Regional Board staff are considering the development of a Groundwater Quality Protection Strategy to guide comprehensive, consistent, and coordinated groundwater protection within the Los Angeles Region. This strategy will provide an overarching framework for the implementation and coordination of Regional Board groundwater programs and ensure that valuable local groundwater resources are available as a clean and abundant source of water. Elements of the groundwater strategy may include:

- Region-wide assessment of existing groundwater quality
- Review of existing Regional Board groundwater regulatory programs, identification of potential gaps in protection and areas in need of updates/strengthening
- Identification of opportunities and/or resource requirements to improve program efficiency or coordination
- Identification and development of additional plans and/or policies promoting recycled water use and stormwater reuse
- Identification and development of appropriate Regional Board resolutions and/or Basin Plan Amendments to protect and restore groundwater quality
- Identification of existing and new partnerships with other agencies or organization that may be leveraged to protect and restore groundwater quality
- Identification of potential future actions to improve and protect groundwater quality

The Groundwater Quality Protection Strategy would be developed through an active stakeholder process. The stakeholder process would be used to explore additional strategy elements or alternative approaches to groundwater quality protection.

SUMMARY OF STAKEHOLDER COMMENT AND STAFF RESPONSE

Staff received one comment on this potential project.

COMMENT

This project should be renamed and developed as a strategic plan to enhance existing knowledge about regional groundwater issues. Currently, as required by the State Board's Recycled Water Policy, work is being conducted on Salt and Nutrient Management Plans (SNMPs) and it is premature for the Regional Board to develop a comprehensive groundwater protection strategy prior to completion of the SNMPs.

Since this is likely to be a multiphase project, the initial phase should only focus on strategic planning and let future phases be defined as part of future triennial reviews.

RESPONSE

The objectives of this potential project are three fold: 1) enhance and organize existing knowledge of regional groundwater issues, 2) improve the efficiency and coordination of Regional Board groundwater programs, and 3) identify the approach and actions that the Regional Board may take to better protect and manage groundwater quality. Staff recognizes the significant work currently underway by stakeholders on the development of SNMPs. This project would not conflict with that work, but coordinate with the SNMPs and promote a comprehensive approach to regional groundwater assessment and management. In fact, largely because of the work and momentum initiated with the SNMPs, staff finds that it is timely to build on this effort and develop an overarching strategy for groundwater quality protection. Furthermore, the focus of the SNMPs is to address salts and nutrients, but many groundwater basins are impaired by other constituents such as, hydrocarbons and industrial chemicals. This project would ensure that other constituents are considered (as necessary) and that there is a comprehensive approach to the assessment and management of the region's groundwater basins.

DEVELOP A GENERAL POLICY FOR INTERPRETING NARRATIVE OBJECTIVES

Many of the objectives in the Basin Plan are stated in narrative form (e.g. bioaccumulation, biostimulatory substances, color, exotic vegetation, floating material). That is, there is no specific numeric limit for the pollutant or stressor, instead the objective is generally worded as follows: "Waters shall not contain [pollutant or stressor] in concentrations that cause nuisance or adversely affect beneficial uses". However, staff must frequently interpret these narrative objectives when developing numeric targets in TMDLs and translating these narrative objectives into numeric effluent limits in permits. To facilitate a transparent process and the consistent translation of these narrative objectives, a policy or new language in Chapter 3 of the Basin Plan, may be developed to outline what considerations should be taken into account when the need for such translations arises.

These considerations may include: correlation between beneficial use impacts and levels of the pollutant/stressor; all relevant information submitted by the discharger and

interested parties; and relevant numerical criteria and guidelines developed and/or published by other state agencies (such as the Department of Fish and Game or the Office of Environmental Health Hazard Assessment), federal agencies (such as the US EPA or US Fish and Wildlife Service), foreign government agencies, international agencies, or from the scientific literature. A policy or implementation provisions in Chapter 3 could outline a decision process for interpreting narratives using appropriate numeric thresholds.

SUMMARY OF STAKEHOLDER COMMENT AND STAFF RESPONSE
Staff received three comments on this potential project.

COMMENT
Environmental stakeholders and the regulated community both support the development of a general policy for interpreting narrative water quality objectives. The interpretation and translation of narrative objectives into numeric thresholds suitable for permits and/or TMDL numeric targets should be a consistent and transparent process. The public and regulated community should clearly understand how a narrative objective was translated into a numeric threshold and how it will be applied as regulatory requirement such as a permit limit.

Although there is general support for the development of this policy, stakeholders also presented some concerns and recommendations including the following.

- The approach in developing this policy should be inclusive and evaluate several mechanisms for interpreting narrative objectives. The policy should not just evaluate "appropriate numeric thresholds".
- The Regional Board should ensure that this policy does not overreach and become a mechanism to establish numeric water quality objectives outside of the legally required water quality objective adoption process.
- It is the preferred approach to adopt numeric thresholds used to translate narrative objectives as individual independent numeric water quality objectives for either general application or as site specific objectives, as appropriate.

RESPONSE
Staff agrees that the translation of narrative water quality objectives into numeric thresholds should be both consistent and transparent. This is one of the reasons for identifying development of this policy as a potential project for the 2011 - 2013 Triennial Review. If this project is selected as a priority project for the 2011 - 2013 Triennial

Review, the policy would be developed in cooperation with stakeholders. At that time, staff will solicit additional stakeholder comment and participation (specific to this project) and evaluate various approaches for interpreting narrative objectives and identify those constituents that may be more appropriately considered for adoption as an individual numeric water quality objective. Moreover, it is the intention of staff to develop this policy as a decision framework, not to prescribe numeric thresholds. The policy would be developed in accordance with all legal and regulatory requirements.

PYRETHROID PESTICIDES WATER QUALITY OBJECTIVES

Pyrethroid pesticides are used extensively for both urban and agriculture applications. Pyrethroids are used as an agricultural pesticide in a variety of crops; in particular they are heavily used in nursery crop production, which is a principal crop in both Los Angeles and Ventura Counties. Urban applications of pyrethroids include structural pest control and landscape maintenance. Pyrethroids also dominate retail pesticide sales. Recent sediment and water quality monitoring throughout California and specifically within the Los Angeles Region has documented the widespread presence of pyrethroid pesticides in both rural and urban waterbodies at levels toxic to aquatic organisms.

Currently, the Basin Plan addresses all pesticides with the following narrative water quality objective:

> *No individual pesticide or combination of pesticides shall be present in concentrations that adversely affect beneficial uses. There shall be no increase in pesticide concentration found in bottom sediments or aquatic life.*

A numeric water quality objective for pyrethroid pesticides would provide a specific value to ensure that waterbodies are protected from pyrethroid pesticide contamination. Over the last several years, the Central Valley Regional Water Quality Control Board (Region 5) has been working on the development of numeric water quality objectives for five specific pyrethroid pesticides (bifenthrin, cyfluthrin, lambda-cyhalothrin, cypermethrin, and permethrin). Los Angeles Regional Board staff is evaluating the progress of this work and may consider the development of numeric pyrethroid water quality objectives based on the technical analysis conducted by the Central Valley Regional Board.

SUMMARY OF STAKEHOLDER COMMENT AND STAFF RESPONSE

Staff received three comments on this potential project.

COMMENT

The Regional Board should not pursue the potential project of adopting pyrethroid water quality objectives based on work being conducted by the Central Valley Regional Board. There are a number of technical limitations in the development of the Central Valley Regional Board's pyrethroid objectives such as, the selection of an appropriate method to derive the objective and standardized analytical techniques. The Los Angeles Regional Board should not consider the development and adoption of pyrethroid objectives until these technical limitations are resolved. Moreover, pyrethroid water quality objectives must be adopted in a manner consistent with the California Water Code.

Instead of developing pyrethroid water quality objectives, Regional Board staff should work with agencies responsible for directly regulating pesticides, including the California Department of Pesticide Regulation (DPR) and US EPA. The Regional Board could support efforts to ensure that federal and state pesticide regulatory programs are better aligned with water quality regulatory programs.

The comments summarized above reflect those of the regulated community and industry groups; environmental stakeholders however, strongly support the potential project to develop pyrethroid water quality objectives.

RESPONSE

The development and adoption of a new a water quality objective is a rigorous technical and regulatory process. This project, if selected, would involve a robust technical analysis to ensure that the objectives are scientifically defensible and consistent with US EPA guidelines and requirements for developing water quality criteria. At the same time, the Regional Board would be required to meet all regulatory requirements, including consideration of factors set forth in Water Code section 13241. It is not the intention of staff to simply rely upon the work conducted by the Central Valley Regional Board. Staff would consider the work conducted by the Central Valley Regional Board and determine if it is suitable to utilize a portion or any of that work in the Los Angeles Region.

Regional Board staff regularly communicates and cooperates with DPR and US EPA through interagency committees regarding pesticide regulation. Staff provides information and assistance on the development of new pesticide regulations and stays

informed about projects with multiagency importance. While the interagency committees are an important forum for agency collaboration this work alone is not sufficient to address water quality impairments due to pyrethroid pesticides. A numeric pyrethroid water quality objective would provide a specific value to ensure that waterbodies are protected from pyrethroid pesticide contamination and beneficial uses impacted by pyrethroid pesticide contamination are restored.

DIRECTORY OF ENVIRONMENTAL SCREENING LEVELS FOR CHEMICALS OF CONCERN AT SITES WITH CONTAMINATED SOIL AND GROUNDWATER

In most cases numerous chemicals are present in soil and groundwater at sites contaminated by hazardous chemicals and the site cleanup process requires a site investigation and detailed risk assessment. The preparation of detailed environmental documents can be a time consuming and costly effort that requires expertise in multiple scientific disciplines. For some responsible parties, such as small business owners with limited financial resources, the preparation of extensive environmental documents can be cost prohibitive. As a result, progress on cleaning up contaminated sites may be delayed, which can lead to further soil and/or groundwater contamination.

In an effort to address this problem and provide a consistent approach for initial risk assessment, staff is considering developing a directory of Environmental Screening Levels (ESLs) for soil and groundwater based on currently available local, state, and federal guidelines. The directory of ESLs would be designed to accommodate various regional and site specific characteristics (e.g. soil type and land-use) and environmental concerns (e.g. drinking water contamination). Site data would be compared to the ESLs and used to guide decisions regarding the need for additional site investigation, remedial actions, or a more detailed risk assessment.

SUMMARY OF STAKEHOLDER COMMENT AND STAFF RESPONSE

Staff received one comment on this potential project.

COMMENT

Environmental stakeholders support the potential project of developing a directory of Environmental Screening Levels for chemicals of concern at sites with contaminated soil and groundwater.

RESPONSE
Comment noted.

CONSTITUENTS OF EMERGING CONCERN

Traditionally, water quality standards and the assessment of surface water conditions have focused on conventional pollutants and the US EPA designated toxic pollutants pursuant to Clean Water Act section 307(a) (currently 126 priority pollutants). However, advancements in analytical chemistry have dramatically increased the number of chemicals that can be detected in the environment and significantly lowered chemical detection levels to allow detection of low levels of chemicals in the environment. This analytical advancement has expanded the universe of compounds known to be present in water and wastewater, which may cause deleterious effects on human health and aquatic life. Collectively, these compounds are referred to as Constituents of Emerging Concern (CECs). CECs include several types of chemicals and are often grouped into different classes including:

- Persistent organic pollutants such as polybrominated diphenyl ethers (PBDEs), which are used in flame retardants, furniture foam, and plastics;
- Pharmaceuticals and personal care products, including numerous human prescribed drugs (e.g., antidepressants, blood pressure medication), over-the-counter medications (e.g., ibuprofen), and sunscreens;
- Veterinary medicines such as antimicrobials, antibiotics, anti-fungals, growth promoters and hormones;
- Endocrine-disrupting chemicals, including synthetic estrogens and androgens, naturally occurring estrogens, as well as other chemicals such as organochlorine pesticides and alkylphenols.

CECs present significant water quality concerns due to 1) the wide variety and number of chemicals classified as CECs, 2) widespread presence in the environment, and 3) effects on human health and aquatic life. For example, researchers at the Southern California Coastal Water Research Project detected CECs in flatfish and marine sediments in southern California and reconnaissance studies conducted by the United States Geological Survey (USGS) documented the prevalence of CECs in streams throughout the U.S. Also, endocrine-disrupting chemicals are known to modify normal hormonal functions in aquatic organisms; field studies have documented wild populations of intersex fish associated with very low concentrations of endocrine-disrupting chemicals.

Recording the occurrence and concentration of CECs in waterbodies is an important building block necessary to advance CEC research. Currently, upon permit renewal, the Regional Board generally requires certain categories of discharge (POTWs) to monitor for certain CECs. Additionally, the Regional Board is beginning to direct resources toward establishing some baseline information on CEC occurrence in inland surface waters throughout the region. A coordinated monitoring program, in addition to directed research on CEC fate and transport and ecological and human health effects, is needed to understand and address potential water quality impacts from CECs. Regional Board staff is considering the development of a strategy for addressing CECs in the Los Angeles Region. The strategy may include identifying CEC monitoring and research priorities, establishing minimum levels of discharger monitoring of CECs based on discharge characteristics, and outlining a region-wide CEC monitoring program. The CEC strategy would be developed in cooperation with stakeholders and coordinate with other organizations and projects.

SUMMARY OF STAKEHOLDER COMMENT AND STAFF RESPONSE
Staff received three comments on this potential project.

COMMENT
Regional Board staff should pursue the development of a strategy to address CECs in the Los Angeles Region. Such a strategy could be used to 1) identify CEC monitoring and research priorities, 2) establish discharger CEC monitoring requirements, and 3) outline a region-wide CEC monitoring program. This potential project is timely because results from the SWRCB CEC Advisory Panel are expected to be released in the first half of 2012. The Los Angeles Regional Board can build on the results of this Advisory Panel and develop a cohesive means to address CECs. Although, when developing the CEC strategy staff should ensure that they do in fact build upon and are consistent with the results from the CEC Advisory Panel and not create duplicative or conflicting work.

RESPONSE
Comment noted. Regional Board staff is closely following the CEC projects currently being conducted by the Southern California Coastal Water Research Project (SCCWRP) and will be reviewing and considering the CEC Advisory Panel final report. If this project is selected as a 2011 - 2013 priority project, staff will utilize this prior work to inform the development of a Los Angeles Region CEC Strategy.

REVALUATE TEMPERATURE WATER QUALITY OBJECTIVE

Water temperature has far reaching effects on both aquatic chemistry and aquatic life. For example, temperature influences the concentration of oxygen in the water and chemical reaction rates as well as the growth, feeding, fecundity, and incubation rates of organisms. Elevated water temperatures can contribute to beneficial use impairment both directly by influencing and/or interrupting the life cycles of aquatic organisms and indirectly by affecting the attainment of another water quality objective such as dissolved oxygen or ammonia.

Currently, the Basin Plan water quality objective for temperature states:

For waters designated WARM, water temperature shall not be altered by more than 5 °F above the natural temperature. At no time shall these WARM designated waters be raised above 80 °F as a result of waste discharge.

For waters designated COLD, water temperature shall not be altered by more than 5 °F above the natural temperature.

The application of this objective requires staff to determine the "*natural temperature*" of waterbodies. This determination requires information such as historical data records, which may or may not be available. In many cases the waterbodies have been so dramatically altered that it may be impossible to reliably determine the "*natural temperature*". A numeric water quality objective for temperature would provide a specific value to ensure that aquatic life is protected from unnaturally elevated temperature conditions. Staff is considering the development of numeric temperature objectives for various waterbody classes and aquatic life beneficial uses.

SUMMARY OF STAKEHOLDER COMMENT AND STAFF RESPONSE

Staff received two comments on this potential project.

COMMENT

Stakeholders do not recommend that Regional Board staff include the re-evaluation of temperature water quality objectives as a priority project for the 2011 - 2013 Triennial Review. Due to the extent and magnitude of highly modified waterbodies in the Los Angeles Region, this project presents significant technical challenges, would be extremely resource intensive, and in the end may have limited benefits to beneficial uses.

RESPONSE
Staff agrees that this potential project would require considerable technical analysis including considerations for highly modified waterbodies. However, protecting aquatic life from elevated temperature conditions is a notable water quality concern and a revision to the temperature water quality objective may be warranted in order to ensure beneficial use protection.

REVIEW MUN P* BENEFICIAL USE DESIGNATIONS

The Statewide Sources of Drinking Water Policy (State Board Resolution No. 88-63) broadly defines "sources of drinking water" as those water bodies with beneficial uses designated as suitable, or potentially suitable, for municipal and domestic supply (MUN). Through the policy, the State Board required that the Regional Boards designate all surface and groundwaters as suitable, or potentially suitable, for municipal and domestic supply with certain exceptions, including the presence of elevated levels of total dissolved solids (TDS). Regional Boards were given the prerogative to apply the exceptions to water bodies in the region or to designate all water bodies as potentially suitable as municipal and domestic supply if they were not already so designated. Upon adopting the statewide policy into the Los Angeles Region's Basin Plan in 1989, the Regional Board did not invoke any of the exceptions to designation for surface waters or groundwater basins in the region and therefore categorically assigned the beneficial use MUN P* to those waterbodies not previously designated MUN. The asterisk indicates that these designations may be considered for exemption under the Sources of Drinking Water Policy in the future.

The objective of this potential project would be to review those waterbodies designated as MUN P* and determine if any of the policy exemptions apply to that waterbody as well as whether other federal factors for removing a beneficial use apply. If the exemptions do apply and one or more federal factors is met the MUN P* designation would be removed; if the exemptions do not apply then the waterbody would be designated MUN E (existing) or P (potential), as appropriate.

SUMMARY OF STAKEHOLDER COMMENT AND STAFF RESPONSE
Staff received two comments on this potential project.

COMMENT
Stakeholders consider this project to be of low priority especially considering limited Basin Planning staff resources. This project would be extremely resource intensive based on the number of MUN P* designations and the important interagency policy considerations that would need to be addressed. However, if this project is selected as priority project for the 2011 - 2013 Triennial Review staff should consult with stakeholders very early in the project because stakeholders can provide expertise on the issues associated with MUN designations. Additionally, this project is expected to be complex and highly contentious therefore, early stakeholder involvement would be necessary.

RESPONSE
Staff agrees that this potential project would require a significant assessment to adequately determine if any of the Sources of Drinking Water Policy exceptions and federal factors for use removal apply to the conditionally designated waterbodies and, if not, to correctly designate those waterbodies. If this project is selected as 2011 – 2013 priority project staff will conduct the project in consultation with stakeholders.

5. 2011 – 2013 TRIENNIAL REVIEW POTENTIAL PROJECTS IDENTIFIED BY STAKEHOLDERS

Stakeholder input on this triennial review cycle was solicited through a public comment period from August 3 – October 14, 2011. Staff requested that stakeholders provide comments on both the potential projects identified by staff and any other concerns and/or projects they would like the Regional Board to consider over the next three years. In total, 12 letters were received in response to this solicitation. The letters represented a number of stakeholder groups, including cities, counties, sanitation districts, industry and agriculture groups, environmental organizations, and private citizens.

Staff compiled an inventory of the basin planning issues raised by stakeholders, which is presented in the table below. These issues were not prioritized. Rather, staff grouped them into fourteen topical categories and indicated how many stakeholders commented on each. A summary of the general issues raised within each category is provided below in italicized text. The Regional Board staff response is after the summary of each general issue. Where any of the issues are being addressed or may be addressed in

the future by the Basin Planning program or other Regional Board programs, staff has indicated such following the issue summary.

Table 2. Summary of Stakeholder identified Basin Planning issues	Basin Planning Category													
	Beneficial Uses				Water Quality Objectives			Implementation				Other		
Commenter	Specific	Potential Uses	REC 1 & REC 2	High Flow Suspension	Specific WQO	Bacteria Objectives	Natural Sources Exclusion	TMDL Related	Administrative Update	Design Storm	NPDES Permits	Support Other Regional Board Programs	Complete Existing Projects	Other
City of Malibu						X	X		X	X		X	X	
City of Santa Clarita			X											
Calleguas Creek Watershed Committee			X	X		X	X						X	
Los Angeles County & Los Angeles County Flood Control District	X		X		X	X	X	X	X	X				
Los Angeles County Sanitation Districts			X		X					X			X	
Rutan and Tucker, LLP for the City of Signal Hill			X											X
Flow Science for the City of Signal Hill		X	X											
Environmental Solutions Group, LLC					X									
City of Los Angeles, Bureau of Sanitation			X					X					X	
GEI Consultants, Inc. for International Copper Association & Copper Development Association					X									
Heal the Bay					X						X		X	X
Private Citizen, Joyce Dillard														X
Comment Count	1	1	7	1	5	3	2	2	2	3	1	1	5	2

BENEFICIAL USES

Issues related to REC-1 and REC-2 (water contact and non contact recreation) were those most frequently raised. Stakeholders who raised this issue requested a re-evaluation of REC-1 and REC-2 uses, particularly for waterbodies where such uses are limited by physical characteristics (for example, flood control channels with restricted access) and in natural waterbodies. They requested that these uses be removed or revised where it was determined that they could not be supported. It was also suggested that the Basin Plan's recreational use definitions be revised.

As described in Section 3 above, a project addressing this comment is currently underway. Thus, staff does not recommend adding the project again to the list of projects for this triennial review period. The Board directed staff as part of the 2008 – 2010 Triennial Review to re-evaluate the REC beneficial uses in engineered streams. The Los Angeles River watershed is the first system to be addressed as part of the re-evaluation. The goal of the project is to document actual and potential recreational uses of engineered streams in the Los Angeles River watershed for the purpose of confirming or refuting their recreational use designations, for possible refinement or removal, following the assessment. Staff is following US EPA guidance on conducting Use Attainability Analysis (UAAs), which staff has used previously to sub-categorize the REC 1 use in a reach of Ballona Creek, and de-designate the REC 1 beneficial use in another reach.

The regulated community would like this project expanded to all watersheds in the Region. Given the intense resources this project requires, staff will evaluate where it may be most appropriate to expand this effort. Additionally, there are numerous efforts by various agencies and organizations to restore urban engineered waterbodies and enhance recreational activities. These efforts and potential implementation of long term restoration plans must also be considered during the recreational use re-evaluation.

Also regarding revisions to the Basin Plan's recreational use definitions, the Basin Plan clearly distinguishes between REC-1 and REC-2 beneficial uses. REC-1 (contact recreation) uses involve body contact with water, while REC-2 (non-contact recreation) uses involve proximity to water, not normally involving body contact with water. The Regional Board will not consider revisions to these definitions at the present time.

Requests were also made to address other beneficial use and related issues as listed below.

- *Develop tiered beneficial use designations*
- *Expand the High Flow Suspension to additional engineered channels and natural channel waterbodies*
- *Potential use designations should not be enforced as existing uses*

Tiered Beneficial Use Designations

In urban environments, the physical modifications to water bodies can place limitations on the type, quality and diversity of the resident biological community. As a result, regardless of the water quality, the aquatic community may be limited by the physical configuration of the water body. The concept of Tiered Aquatic Life Uses (TALUs) provides more appropriate goals for protecting aquatic life that account for these inherent physical limitations. Such adjustments to aquatic life uses must be based on biological assessments and biological indices.

The concept of tiered aquatic life uses has been under discussion by U.S. EPA for some time and several states have implemented these tiered uses in their state water quality assessments and water quality standards. However, there are few examples of the application of TALU in Western semi-arid streams and, in particular, no examples of how a state might identify and implement TALU in semi-arid coastal streams, where it is vital to protect downstream sensitive and ecologically rich coastal water bodies.

Regional Board staff worked with stakeholders to initiate the development more tailored water quality standards (through beneficial use designations and associated biocriteria) that would be protective of the biological communities within the region's urban coastal streams. This effort identified some large technical and potential policy barriers for implementation and produced a list of 13 projects that should be undertaken to help resolve these barriers and develop scientifically defensible tiered aquatic life uses, and integrate these tiered uses into the existing water quality standards program.

Recently the SWRCB has assumed the leadership role for the development of statewide biological objectives. This work is considering an approach that would provide a method to scale the biological expectations for waterbodies with varying levels of physical

stressors influence (i.e. tiered biological expectations). This work is being done in collaboration with Regional Board staff; staff will continue to actively participate in this work and support the adoption of statewide biological objectives.

High Flow Suspension

The inherent danger of recreating in engineered channels during and immediately following storm events is widely recognized and is already addressed by county policies. On this basis, the Regional Board adopted an amendment that temporarily suspends the recreational beneficial uses in a number of engineered channels during and immediately following significant storm events in Los Angeles County (Regional Board Resolution R03-010).

At the time of adoption, data on engineered channels in Ventura County were not readily available. Therefore, though similar "swift-water" conditions exist in engineered channels in Ventura County, the high-flow suspension is not currently applied there. A similar amendment for engineered channels in Ventura County may be developed to ensure consistency in regional policies.

Potential Uses

Potential beneficial uses are designated uses and the Clean Water Act directs the full protection of all beneficial uses. States are not directed to provide different levels of protection for existing versus designated uses. The Los Angeles Regional Board, the SWRCB, and US EPA all provide equal protection to both potential and existing beneficial uses.

WATER QUALITY OBJECTIVES

Various stakeholders requested staff to address a specific water quality objective. The objectives requested for re-evaluation are listed below.

- *Maximum contaminant level (MCL) based objectives*
- *Averaging periods for mineral objectives*
- *pH objectives*
- *Replace California Toxics Rule copper criteria with Biotic Ligand Model (BLM)*
- *Nitrogen objective*

MCL Based Objectives

The Basin Plan incorporates by reference, some of the provisions of Title 22, which include the maximum contaminant levels (MCLs) for inorganic chemicals, fluoride, organic chemicals, and radioactivity. These MCLs serve as water quality objectives for waters designated as MUN. The California Department of Public Health establishes the MCLs through its own rule-making process. It is unsuitable for the Regional Board to re-evaluate these because any changes to the MCLs are under the jurisdiction of the California Department of Public Health.

With respect to not applying MCLs to waters that may be treated prior to use as drinking water, it is US EPA's policy for drinking water that contaminants from natural sources are appropriately addressed through drinking water treatment, but that those contaminants from anthropogenic sources should be prevented from entering the water supply through a multiple-barrier approach to source water protection, including development of TMDLs, NPDES permitting, and nonpoint source management. The Safe Drinking Water Act (SDWA), amended in 1996, promotes a multiple-barrier approach to safeguarding the nation's water supply. This multiple-barrier approach goes beyond the traditional emphasis on treatment to address new challenges and reflects a better understanding of the need for a coordinated source water protection effort. Preventing contamination of drinking water sources is one of the key elements of the approach. Per US EPA, "[r]eliance solely on drinking water treatment, beyond that which is needed to address naturally occurring pollutant concentrations, imposes an unfair burden on communities to address preventable problems caused by man-made sources of pollution".[3]

Averaging Periods for Mineral Water Quality Objectives

There has been debate over the interpretation of the averaging period in the Basin Plan for mineral water quality objectives. As the regulations are currently worded, the objectives have been applied as instantaneous maxima. However, in the 1975 Basin Plan for the Santa Clara River Basin there was a footnote indicating that the mineral objectives were to be applied as flow weighted averages over a period of time. The footnote was not included in the 1994 Basin Plan, and this has implications on the way the mineral objectives are implemented, particularly for the Publicly Owned Treatment

[3] EPA Memorandum to Regional Water Management Division Directors titled "Effective use of Water Quality Standards to protect Sources of Drinking Water". October 1, 2003.

Works that discharge to the Santa Clara River and Calleguas Creek. With the footnote, mineral concentrations were averaged over a year and then compared to the objectives, allowing individual peaks to be moderated and compliance to be more easily achieved. Conversely, without the footnote the objectives must be met at all times, making the objective an instantaneous maximum and compliance more stringent. Resolving this debate is important to facilitate the calculation of effluent limits, determination of impairment, TMDL development, and is also important to stakeholders in the region. This issue has been addressed in the Santa Clara River Watershed through the adoption of conditional site-specific chloride objectives in the upper Santa Clara River (Regional Board Resolution R08-012). The Regional Board may eventually re-consider averaging periods for mineral water quality objectives in other watersheds.

pH Objectives

In the Basin Plan, the pH objective is tied in part to deviations from "natural conditions." Because many of our watercourses have been altered, determining natural conditions can pose challenges. The Basin Plan states that ambient pH levels shall not be changed by more than 0.5 unit or 0.2 unit from natural conditions as a result of waste discharge for inland waters and enclosed bays or estuaries, respectively. Given this objective, it is important to understand and define what constitutes "natural conditions." The Regional Board may eventually re-consider the pH objective to either determine natural conditions and/or evaluate restrictions on an allowable pH change.

Replace California Toxics Rule Copper Criteria with Biotic Ligand Model (BLM)

The biotic ligand model (BLM) may be used as a tool in the development of site specific objectives, where appropriate and as desired by stakeholders. However, before the BLM can be applied or adopted for widespread use in the Los Angeles Region it must be under go additional technical scrutiny and be validated for use in semi-arid western streams. Additionally, BLM results should be compared against those derived from the US EPA approved water effects ratio (WER) method for criteria adjustment.

Nitrogen Water Quality Objective

The Basin Plan numeric nitrogen water quality objective of 10 mg/L is based on the California Department of Public Health drinking water standards and is appropriate to

project MUN beneficial uses. This objective is not appropriate to protect waterbodies from elevated nutrient conditions and eutrophication. In order to protect waterbodies from eutrophic conditions staff must rely upon the narrative *Biostimulatory Substances* water quality objective. This narrative objective has been applied in several TMDLs and translated into numeric targets that are protective of water quality and will restore beneficial uses.

Currently, through the combined work of US EPA, the SWRCB, and regional boards, the SWRCB is preparing to adopt a statewide Nutrient Policy which would include water quality objectives and implementation tools to interpret and apply nutrient objectives statewide. The approach to address nutrients under the Nutrient Policy is the California Nutrient Numeric Endpoints (NNE). This approach links the waterbodies nutrient concentrations and biological response indicators because it is often the waterbody's biological response to nutrient loading that actually impairs beneficial uses.

The NNE framework and tools for lakes and streams have been evaluated in case studies and TMDLs throughout California. For example, an assessment of Malibu Creek was completed as one of four statewide NNE case studies, and Regional Board staff applied the NNE approach as part of the Machado Lake Nutrient TMDL. Additionally, the California NNE is currently undergoing a rigorous peer review process.

The State Board, with cooperation from regional boards, has assumed responsibility for the development of both the NNE and nutrient objectives for the State of California. Staff will continue to actively participate in this work and support adopting statewide nutrient objectives. In addition, an NNE framework is being developed for California estuaries; however, this work is still in the early stages and additional technical analysis is required before objectives can be developed. Regional Board staff is also participating in this work.

Bacteria Objective

(i) Stakeholders requested that staff amend the Basin Plan and Bacteria TMDLs to reflect US EPA's new or revised Recreational Water Quality Criteria expected to be published in 2012

As described in Section 3 above, staff is currently working on the reconsideration of five Bacteria TMDLs. Thus, staff does not recommend adding the project again to the list of projects for this triennial review period. As part of this reconsideration effort, staff is considering alternative approaches to the geometric mean calculation. These alternative approaches will provide additional flexibility for compliance determinations. Additionally, staff is closely following the development of US EPA's new or revised Recreational Water Quality Criteria. Staff is working with US EPA to ensure that any criteria changes or implementation provisions adopted by the Regional Board and/or US EPA will not be in conflict with one another.

(ii) *Stakeholders requested that implementation provisions or guidance be developed for indicator bacteria to allow for prioritization of human sources in determining compliance with objectives. Requests were also made to address natural loads and background conditions, as well as to develop allowable number of exceedance days for inland waters based on inland and local conditions.*

Stakeholders also requested that the Regional Board consider implementation provisions for indicator bacteria to allow for prioritization of human sources in determining compliance with objectives. However, the US EPA national ambient water quality criterion for bacteria does not differentiate between human and non-human sources. This is because, to date, there are no definitive epidemiological studies demonstrating that the level of risk associated with only non-human sources is substantially less than that of human sources. However, the Regional Board addresses the issue of controlling natural sources of bacteria through its reference system/antidegradation and natural sources exclusion approaches that are a part of the implementation provisions for the region's bacteria objectives. Using the reference system approach, exceedances of the objectives are allowed under certain circumstances where the exceedances are no more frequent than those that are observed in a "reference" system (i.e., a largely pristine, undeveloped area). A beach reference system was identified for use in several bacteria TMDLs in the region.

In addition, the Southern California Coastal Water Research Project (SCCWRP) completed a study of reference inland streams in 2008, the results of which have been used in bacteria TMDLs for inland surface waters. The natural sources exclusion approach is applicable for situations in which an appropriate reference system cannot be identified for the target waterbody or in instances where natural sources are the sole source of bacteria contamination (i.e. where anthropogenic sources are not present or

have been fully controlled). This approach may be further developed for specific watersheds, where supported by adequate data.

Natural Sources Exclusion

Stakeholders requested that the Regional Board account for natural conditions in re-evaluating Water Quality Objectives. Some suggested that the Board broaden application of the "natural sources exclusion" used in bacterial TMDLs to other naturally occurring constituents.

A number of chemical constituents are naturally occurring in the environment. These include, but are not limited to, nutrients (nitrogen and phosphorus), minerals and metals. In some cases, these constituents may be naturally elevated above the water quality objective and may exceed the objective more frequently than currently allowed by the objective. In these cases, it may be appropriate to allow exceedances of the objective comparable to those observed in a reference system. Furthermore, it is important in the development of TMDLs to be able to quantify the background levels of the pollutant of concern when setting waste load allocations and load allocations to achieve the numeric targets in the TMDL.

The Regional Board has obtained funding and will execute a contract to develop technical guidance to provide direction on making the determination that water quality violations of a given pollutant are solely or predominantly a result of natural sources of that pollutant. Once developed, this guidance may be used, where appropriate, to develop implementation provisions for water quality objectives where natural sources of a pollutant cause it to be elevated above the current objective, or to exceed the objective more frequently than currently allowed.

IMPLEMENTATION

TMDL Related

Stakeholders requested the Regional Board adopt implementation plans for the US EPA developed TMDLs and staff address the existing commitments for TMDL reconsiderations.

Staff is aware of the overdue TMDL reconsiderations; we are scheduling the TMDL reconsiderations into our annual workplan as our resources allow. In the current fiscal

year (2011-12) staff is on schedule to complete six TMDL reconsiderations, while another was completed last fiscal year.

An implementation plan is not required for TMDLs developed by US EPA. However, staff will consider as resources allow cooperating with stakeholders to develop implementation plans for specific TMDLs in cases where the implementation plan will add particular value to the TMDL.

Basin Plan Administrative Update

Stakeholders requested that staff continue with the Basin Plan Administrative Update.

As described in Section 3 above, this project is well under way and staff expects to complete the update of all Basin Plan chapters in 2012. Thus, staff does not recommend adding the project again to the list of projects for this triennial review period.

Design Storm

Stakeholders requested that work on the Design Storm be completed.

The initial phase of the Design Storm project was completed in 2007, resulting in a conceptual framework and pilot modeling applications. This initial work was funded and led by the Regional Board through the Wet Weather Task Force. Since this time, work on the Design Storm project has been stalled by the emergence of legal and policy issues and a lack of additional outside funding to complete the necessary technical work. Should funding be made available from outside sources staff will continue the technical work necessary for developing this project. Moreover, staff plans to evaluate legal and policy concerns in an effort to move this project forward.

NPDES Permits

Stakeholders requested that guidance on applying best professional judgment as part of a reasonable potential analysis be incorporated into the Basin Plan.

Regional Board staff follows US EPA guidance and the *SWRCB Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (SIP)* when conducting a reasonable potential analysis as part of developing NPDES permit limits. These guidance documents allow for the use of best professional judgment. Staff routinely reviews and considers all available data and

information as part of the reasonable potential analysis and applies their professional judgment to ensure that beneficial uses are protected. Furthermore, staff is coordinating with the SWRCB on this issue.

OTHER

Complete Existing Projects and Support Other Regional Board Programs

Basin Planning is a continuous planning process and staff has either completed or made significant progress on all of the priority projects from the 2008 – 2010 Triennial Review. Staff is committed to the completion of these projects even as a new list of priority projects is established as part of the 2011 – 2013 Triennial Review. Moreover, because Basin Planning issues are integral to all Regional Board programs staff will continue to provide assistance and/or advice to colleagues regarding Basin Planning matters.

Other

Staff received one comment letter alleging deficiencies with the Regional Board's triennial review process. The commenter alleged that the Regional Board's adoption of a list of priority projects is contrary to law and that the Regional Board is not only required to review its Basin Plan and water quality standards, but it is required to modify water quality standards, if appropriate, at least once every three years. As noted in Section 2 above, while the Regional Board is required to conduct a review of its Basin Plan, neither federal nor state law imposes a duty to revise or modify it. (See *City of Arcadia v. State Water Resources Control Bd*. (2010) 191 Cal.App.4th 156).

Staff also received comments from an individual citizen. Many of these comments were beyond the scope of the 2011-2013 Triennial Review or not enough information was provided for staff to realize the intent of the comments. However, when comments overlapped with identified potential projects or other basin planning issues they were taken into consideration.

6. 2011 – 2013 TRIENNIAL REVIEW PRIORITY PROJECTS, STAFF RECOMMENDATIONS

The Basin Planning Program currently consists of 1.5 PYs; some of these resources are used towards supporting other programs and for on-going projects. Therefore, the number of projects that can be addressed this triennial review period is limited. Based on available resources, stakeholder input, Regional Board program needs, and Board Member interest (based on statements and interest presented at various Board meetings), staff recommends the following list of priority projects for consideration during this period:

- Develop Region-wide CECs strategy;
- Develop Los Angeles Region Groundwater Quality Protection Strategy;
- Develop Policy to Interpret Narrative Water Quality Objectives;
- Develop Technical Guidance for making Natural Source Determinations;
- Provide support to other Regional Board Programs including TMDLs, Municipal Permitting, and Stormwater Permitting; and
- Address legal and regulatory mandates (where required).