Summary of Discussion at the August 4, 2015 Workshop and Comment Letters Received subsequent to the Workshop

for the

2015 Triennial Review

of the

San Francisco Bay Basin

Water Quality Control Plan

(Basin Plan)

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Basin Plan Triennial Review Workshop Meeting Summary

August 4, 2015

Fred Krieger, SFPUC consultant (Berkeley): The NNE project for the SF Estuary. How does this project differ from the project in SF Bay?

Response: They are the same project. For clarification, there are 3 NNE projects in progress: freshwater wadeable streams; all estuaries except SF Bay; and SF Bay.

Lorien Fono from BACWA: Please explain screening and ranking process for the Triennial Review.

Response: We have various ranking criteria, e.g, available resources, have we already started work, WQ benefit, EPA/Stakeholder/State Board interest; technical complexity, etc. Not all criteria are worth the same number of points. We do our best to be as objective as possible in applying these criteria. The staff report supporting the recommended projects will explain this in more detail.

Karin North, City of Palo Alto: How many PYs do you have for this over the 3 years?

Response: we have 2 PYs (person years) per year working on basin plan amendments, other than TMDLs so that is about 6 PYs over the next three years. We also have other resources, internal to the Boards and some external support which can augment our available resources.

Patrick Sweetland, City of Daly City: He is supportive of the Lake Merced water quality objective review project that is on the candidate list.

Tim Potter CCCSD: Voiced interest in the issue of establishing a policy for managing Hg in restored wetlands that includes consideration of the use of treated wastewater.

Response: The proposed candidate project is about managing wetlands in areas where the sediment is already Hg-contaminated, and wetlands may create a condition that transforms Hg to MeHg. This project is about managing the restored wetland areas despite the presence of mercury. How can we best do this but still protect wildlife.

Tim Potter: Expressed concern that Hg will also be in POTW effluents, and that the re-use of POTW discharges in wetlands is a benefit that should be considered given that there is a lot of interest in reusing POTW effluent. He expressed concerns that there would be more stringent discharge requirements because of Hg, even though atmospheric deposition of Hg will continue and should be addressed.

Response: The issue of POTW effluents in restoring marshes is actually the topic for a separate project. We have one project that is about managing mercury in wetlands, and we have a second project looking into the issues of using wastewater to restore marshes. The permitting challenges you mention are associated more with the former.

Tim Potter: Comments that we should also be comparing wastewater to dredge materials for use in wetlands.

Response: We have some experience – for example at Hayward Marsh – where we successfully navigated the regulatory challenges, including issues associated with mercury, with using wastewater in a restored marsh. This project (wastewater used for marsh restoration) will look at a broader scope, including climate change adaptation.

Wil Bruhns: Would like to see a project that creates goals with a longer planning horizon in mind. His analogy was the California Water Plan from DWR, which has very long term planning horizons. He suggests that the Basin Plan have a section that looks out 35 years from now to the 100th anniversary of the Water Board. He thinks we should describe challenges that will happen over this time period– population increase (do we have infrastructure to cope?) and climate change (include and reference BCDC maps of sea level rise – will our infrastructure be flooded?). We should be setting goals to solve problems by that date. Focus on habitat, infrastructure, and water supply. Here are some possible examples to include for goals (a) double the no. of urban creeks that support steelhead; (b) how do we maintain tidal wetlands in the face of sea level rise? Advance planning.

Response: We have an ongoing tension between how much of our resources do we devote to pressing immediate problems vs. devoting resource for long-term thinking. We do have elements of long-term planning in many of the candidate projects though – but around a particular topic – like climate change or managing wetlands.

Amy Chastain, SFPUC: What will happen when the 2012 EPA REC bacteria standards are adopted in terms of the SF Bay Beaches pathogens TMDL?

Response: We're looking at this very issue as we work on the TMDL. If the TMDL is adopted before the State Board takes an action relative to the 2012 EPA criteria, then the TMDL wouldn't change. Looker: The new objectives include a different definition of gastro-intestinal illness. The definition is broader so the number of incidents of disease per 1000 exposure incidents is greater. State Board is considering a more stringent objective that would bring down the numeric objectives (from current values) slightly, but no decisions have been made yet. Another commenter: – stakeholders (discharger community) would prefer a higher number.

Amy Chastain, SFPUC: tell us more about un-ionized ammonia objective

Response: This project was on the last triennial review. ; USEPA has some new nos. for this objective; the current Basin Plan objective is expressed as an annual median so it does make sense to evaluate the shorter averaging periods of the USEPA criteria.

Amy Chastain, SFPUC: very interested in the specifics of how the new REC-1 bacteria objectives will be applied – we are willing to work collaboratively

Fred Krieger, SFPUC consultant (Berkeley): How will the RB2 REC bacteria project follow on State Board's work?

Response: Whatever action State Board takes, they would take some of the actions to amend our Basin Plans at the State level. We think that State Board action will only affects WQOs. It is unclear if implementation (e.g., effluent limits) in SF Bay Basin Plan would need later revision.

Discussion about the need for reopening TMDLs to update them. Reopening TMDLs is not a high priority at this time. If you think a TMDL needs to be revised, you are welcome to provide that input as part of the project to establish priorities for TMDL development. .

Anna Fedman SFPUC: About the 4 TMDLs closer to adoption – how do we find out more about these? She also inquired about the Statewide mercury program and its current status.

Response: explained that the Statewide Mercury program has a separate website, as do the regional TMDLs under development and the public can sign up for notification via e-mail.

Karin North, City of Palo Alto: She inquired into the project involving the naming of unnamed waterbodies. Are we able to name it ourselves?

Response: There are about 6 of these waterbodies that we know about at the moment. I think we have names for some of these but perhaps not for all. They just aren't in the Basin Plan.

North: Would like to nominate it as Bobel Slough.

Response: I believe naming conventions are not something the Regional Board can establish but we can look into it. John McHugh SCCVWD: It would be really nice if the TMDL names all of the tributaries subject to a TMDL rather than using non-specific "all tributaries."

Karin North, City of Palo Alto: She noted that several South Bay POTWs (especially Palo Alto) have already done extensive research on un-ionized ammonia in compliance with our NPDES permit requirements. She also encouraged us to look at water recycling and discharge into lower SF Bay as a beneficial re-use. She also thinks it will be good for the Water Board to explain in the Basin Plan how the Board will address reverse osmosis concentrate discharges into lower SF Bay? Karin asked about the timing and content for the NNE (Nutrient Objectives) project– Board staff responded by saying that we are looking at a 10-year timeframe counting from about a year ago. We plan to bring the technical framework to a stakeholder group in the fall.

Pablo Ramudo MMWD: How will the NNE project in freshwater affect surface waters? There are several dairies in the vicinity of drinking water reservoirs that have no numeric discharge limits. Will the NNE project affect dairies' ability to get permits w/o requirements? MMWD cares about this because of high nutrient loads into reservoirs.

Response: The waiver of waste discharge requirements for dairies ("dairy waiver") was just renewed; all dairies will need to re-enroll, and the waiver requires monitoring of nutrients in discharges. Feger agreed to send him link to the dairy waiver, and gave him Laurie Taul's contact info. Dairies are not supposed to be discharging.

Tim Potter CCCSD: Regarding the DO objectives in SF Bay, Looker mentioned in his presentation that: applicability to margins and other shallow areas was questionable. Is there a way to clarify applicability?

Responses: There are factors we need to consider involving natural conditions, like diurnal dissolved oxygen fluctuation in shallows, and the fact biota in shallow water habitats may be in

these locations because they have capacity to deal with fluctuations. We also need to consider the superimposed stress from anthropogenic factors – in other words, anthropogenic factors may be exacerbating the natural fluctuations.

For Suisun Marsh we are looking at developing numeric DO targets for the marsh, as we don't think the objectives in the Basin Plan of 7 mg/L above the Carquinez Strait should apply to the back slough channels. We are looking to apply an approach that was taken in the Chesapeake Bay, the Virginia Province approach. Those, objectives take into consideration the duration and frequency of excursions below thresholds, which the current objectives in the Basin Plan do not.

We have some contract resources to look into this for lower South SF Bay. We would look into how to build in consideration of frequency and duration in interpreting data relative to the standards. This could be done in several ways - either as an explicit part of standard or as implementation directions for a standard.

Anna Fedman SFPUC: Could you explain more about the project about clarifying the turbidity objective? Would this be about the number or something else?

Response: The wording of the turbidity objective can be difficult to interpret – particularly in the realm of permitting dredging and disposal operations. Also, it is not exactly consistent (in wording) compared to other similar objectives from other basin plans around the state. This candidate project would not be about changing the number but rather making the wording more intelligible and consistent with other similar objectives.

Fred Krieger, SFPUC consultant (Berkeley): The U.S. EPA in the new REC bacteria standards said that enterococcus is the only useful indicator for marine waters. Does this mean that when adopted by the State that the monitoring requirements for other bacteria indicators (like total coliform and fecal coliform) goes away?

Response: We're hoping that monitoring requirements for other bacteria indicators for rec uses will not be necessary but changes made by the Water Boards won't impact requirements adopted by legislation for beach monitoring and in the Department of Public Health's regulations.

Diane O'Donahue, SFPUC: I think that local agencies will still use the other bacteria indicators in monitoring beaches and posting notifications about whether it is safe to swim.

Fred Krieger, SFPUC consultant (Berkeley): I have a question regarding the definition of waters of US. Ornamental and artificial lakes created on dry land are not waters of the US so federal water quality criteria and NPDES permits do not apply.

Response: State Water Board is looking at this issue. There are many cases in which waters that we regulate may be a water of the state but not a water of the US. We regulate both categories.

Tim Potter CCCSD: We haven't talked about toxicity yet. Tim knows about where State Water Board is going. Is there a way to write into SF Bay Basin Plan that recycled water used to restore wetlands is a good thing? We might not be able to do this because there is little or no dilution so these discharges might not be acceptable for use in wetlands because of the toxicity policy.

Responses: This is another example of the challenges we would address if we do the candidate project on the use of wastewater in restoring wetlands. We would need to look at all of the possible permitting and regulatory challenges that might inhibit such use and develop a sensible approach to make sure that beneficial uses are protected but also that we did foreclose the use of good quality water to enhance and restore wetlands that need this water.

We expect that concern about wetlands receiving discharges is a minor consideration in the State Water Board's toxicity policy.

Potter: It would be great for Basin Plan to not create a disincentive for use of wastewater in restoring wetlands.

Suggestion from SF Bay Water Board staff for comment letters – attendees were encouraged to give feedback on which candidate projects they supported as well as offer additional suggestions for candidate projects.

Karin North, City of Palo Alto: For the candidate CECs project. What are you planning on for inclusion in the Basin Plan? Would this project be about incorporating the work conducted through RMP, or would it also include more recent work from James Parrish on the topic?

Response: We are open-minded about this. We do not have a detailed project scope for this project so we are seeking your comments and suggestions. We're currently bay-focused so we would definitely consider the risk tier-based framework developed through the RMP.

Tim Potter CCCSD: I would like to make a clarification on the statewide mercury TMDL. There are actually 2 projects underway. The first is a project for mecury-impaired reservoirs, and this includes NPDES discharges to waters upstream of these reservoirs. The second project is to develop statewide mercury objectives so this second project would impact virtually all NPDES discharges except those already regulated by Hg TMDLs.

Closing comments – Water Board staff look forward to receiving your written comments. We'll combine the notes from this workshop with your written comments and make them available on the website. Thank you for your attendance, discussion, and please stay involved.

August 18, 2015

Richard Looker
1515 Clay Street, Suite 1400
Oakland, CA 94612
(510) 622-2451

VIA EMAIL: rlooker@waterboards.ca.gov

Subject: Comments on the 2015 Triennial Review for the Water Quality Control Plan, San Francisco Bay Basin

Dear Mr. Looker:

The Bay Area Clean Water Agencies (BACWA) appreciates the opportunity to comment on the 2015 Triennial Review of the San Francisco Bay Basin Water Quality Control Plan (Basin Plan). BACWA is a joint powers agency whose members own and operate publicly-owned treatment works (POTWs) and sanitary sewer systems that collectively provide sanitary services to over 6.5 million people in the nine-county San Francisco Bay (SF Bay) Area. BACWA members are public agencies, governed by elected officials and managed by professionals who protect the environment and public health.

BACWA supports the triennial review process and applauds the improvements made to the Basin Plan through this process in recent years. The current list of issues proposed for review in the *Brief Issue Descriptions for the 2015 Triennial Review of the San Francisco Bay Basin Water Quality Control Plan* (Issue Descriptions) that was developed by the Regional Water Quality Control Board (Regional Water Board) addresses roughly two dozen topics that affect broad sections of the residents, businesses, and public agencies of the San Francisco Bay Area. Because the Regional Water Board has limited resources to address each of these issues, BACWA is limiting its comments to five of the issues, while proposing two new issues.

The comments below are made with reference to the number in the Issue Descriptions. The comments are ranked in order of BACWA's assignment of importance.

1. ***Issue 3.1 – Consider refinement and/or development of site-specific objectives for dissolved oxygen in San Francisco Bay***

   The Basin Plan includes a minimum water quality objective of 5.0 mg/L for dissolved oxygen in all tidal waters downstream of the Carquinez Bridge and 7.0 mg/L upstream of the Carquinez Bridge and also includes a requirement that the median dissolved oxygen concentration for any three consecutive months shall not be less than 80 percent of the dissolved oxygen content at saturation. These dissolved oxygen water quality objectives have been interpreted to be applicable at all times, at all depths, and in all locations. As described in the Issue Descriptions, this approach does not make sense for shallow habitats on the SF Bay's margins. The objectives also do not account for natural variability due to diurnal cycling and stratification. Setting a rigid

objective that applies throughout the Region fails to consider the beneficial uses attained in a diversity of habitats in the SF Bay's margins.

BACWA and its member agencies support research on appropriate dissolved oxygen levels in the SF Bay through the Nutrient Management Strategy and other initiatives. For example, Dr. Jim Hobbs of UC Davis has been conducting monthly trawls at Artesian Slough, Pond A19, and Upper Coyote Creek in the Lower South Bay with the cooperation of staff at the San Jose/Santa Clara Regional Wastewater Facility. The aim of these studies is to determine what levels of dissolved oxygen impact different fish species. Preliminary findings indicate that dissolved oxygen is not the primary driver of species diversity, and that a natural diverse ecosystem provides various open-water and marsh habitats with variable dissolved oxygen levels. BACWA would be happy to provide data from Dr. Hobbs' studies to inform the development of a strategy for dissolved oxygen in the SF Bay margins.

Recommendation: Amend the Basin Plan to develop a narrative dissolved oxygen objective that is linked to beneficial use attainment for shallow habitats in the SF Bay. Alternatively, develop implementation language to specify that the dissolved oxygen objective does not apply to shallow habitats in the SF Bay.

2. ***New Issue - Revise instantaneous chlorine limitation of 0.0 mg/L***

In Basin Plan Table 4-2, chlorine is given an instantaneous limit of 0.0 mg/L in effluent, which is an interpretation of the Basin Plan's narrative toxicity objective. Region 2 is the only Region in California where the Basin Plan assigns a limit of 0.0 mg/L. Other Basin Plans in California either include effluent limits up to 0.1 mg/L for chlorine, or include only the narrative toxicity objective. Because chlorine is monitored continuously, chlorine residuals are the most likely constituent to lead to an effluent quality violation in our Region. POTWs that use chlorine for disinfection dechlorinate using sodium bisulfite (SBS). To avoid violations, operators routinely overdose the effluent with SBS, costing agencies millions of dollars per year in aggregate, and exerting oxygen demand in the receiving water, with no water quality benefit.

Chlorine quickly decays during discharge through an outfall, and NPDES permits in other regions account for such decay. In Massachusetts, for example, in addition to using a non-zero water quality objective for receiving waters and giving dilution credit, they calculate the rate of chlorine decay in the outfall pipeline and set effluent limits accordingly[1].

BACWA is interested in contributing resources to address this issue either through the Basin Planning process, or through alternative implementation of the existing limit. BACWA has identified four options to explore alone or in combination to address chlorine residual limits and to reduce SBS overuse:

a) Adopt an alternative effluent limit for chlorine.
b) Change the effluent limit to a water quality-based effluent limit derived using the State Implementation Plan procedure and taking dilution into account.

[1] See Massachusetts Water Resource Authority's NPDES Permit No. MA0103284, Attachment H: http://www.epa.gov/region1/eco/mwra/pdf/h.pdf

c) Change the averaging period for the limitation. For example, make it a rolling median over the course of one day.
d) Change how the point of compliance is determined. For example, calculate the rate of decay and set the limit such that the concentration measured at the dechlorination facility would decay to zero by the time it is discharged at the outfall.

Recommendation: Work with BACWA to develop a strategy for implementing chlorine residual limitations that minimizes the risk of a momentary exceedance and does not compromise receiving water quality.

3. Issue 4.3 - Using Wastewater to Create, Restore, and Enhance Wetlands

BACWA sees merit in encouraging the use of wetlands to provide additional water quality enhancement of treated effluent while concurrently increasing the amount of wetlands habitat around the Bay. In order to encourage wetlands creation in this manner, BACWA recommends that Water Board staff update Regional Board Resolution 94-086. Resolution 94-086 is the "Policy on the Use of Wastewater to Create, Restore, and/or Enhance Wetlands." The current Resolution 94-086 policy is now over 20 years old. Many lessons have been learned about salt marsh restoration over the intervening years. In fact, the hydrology and topography of the San Francisco Bay has been changing as vast areas of former salt evaporating ponds are being restored to marsh under the San Francisco Bay Salt Pond Restoration Project.

This triennial review cycle is an appropriate time to begin this updated Policy development and the evaluation of the beneficial aspects of potential future discharges to wetlands. As described in the Issue Descriptions, the goal would be to develop near-shore permitting strategies for discharges to wetlands to resolve issues such as mixing zones. It would also develop a shallow water discharge prohibition exception for discharges to enhance wetlands.

Recommendation: BACWA recommends that Basin Plan revisions be developed and incorporated to recognize that treated wastewater can enhance beneficial uses in wetlands, and to provide implementation language for encouraging and permitting such discharge.

4. Issue 4.4 - Update Conditions for Exemption to Discharge Prohibitions

The Regional Water Board is looking to remove treatment reliability as a justification for the shallow water discharge prohibition exception, since treatment reliability is the "minimum expectation of all treatment facilities rather than…an achievement deserving of special privilege."

BACWA appreciates the Regional Water Board's confidence in our members' treatment facilities, and urges the Regional Water Board to re-envision the role of shallow water discharges to the SF Bay. As the ongoing drought has demonstrated, effluent may be the only freshwater input into a given section of the SF Bay allowing the existence of brackish margin habitats that would otherwise disappear. In many cases, it can be demonstrated that the effluent contributes to a net environmental benefit. In this manner, BACWA's comments on issue 4.4 are related to our comments on Issue 4.3.

Recommendation: Update the Basin Plan to acknowledge that highly treated wastewater effluent can enhance the ecosystem in shallow margin habitats.

5. ***New Issue - Develop policy for Recycled Water Reverse Osmosis Concentrate Discharge (New Issue)***

In response to the ongoing drought, as well as anticipated long-term water shortages in the Region, many of our member agencies have been expanding their recycled water programs. Ultimately, some agencies are considering implementing indirect potable reuse, as well as delivering to customers who require very highly treated recycled water. These projects would treat wastewater effluent with reverse osmosis, which results in a concentrate composed of approximately 15 percent of the reverse osmosis influent flow but almost all of its dissolved and suspended pollutants. When the concentrate is discharged, it has the same loads but higher concentrations of pollutants compared to the original effluent. Agencies that discharge this reverse osmosis concentrate may therefore be in jeopardy of triggering reasonable potential or exceeding permit limits. Due to the importance of recycled water as a Regional asset, BACWA encourages the Regional Water Board to examine alternative permitting strategies to allow these projects to move forward.

Recommendation: Allocate resources to scope out a future policy on encouraging recycled water while protecting receiving water quality.

6. ***Issue 3.2 - Update the Basin Plan's Toxicity Testing Requirements***

The description in the Issue Descriptions states that:
"Currently, there are inconsistencies between different State and Regional Water Boards' toxicity testing requirements that result in uneven protections for aquatic life and an unequal playing field for waste dischargers."
The State Water Board has been working on a Plan to address toxicity testing statewide (State Toxicity Plan). The proposed State Toxicity Plan will establish numeric chronic toxicity limits and require a new statistical approach, the Test of Significant Toxicity (TST), for evaluation of toxicity tests. This new statistical approach is calibrated with a built-in "false positive" rate and the null hypothesis is inverted: instead of testing to see if effluent is "toxic," under the new method, dischargers will be demonstrating that effluent is "not toxic." Both of these features are intended to make toxicity testing err on the side of determining that treated effluent is "toxic".

The most recent draft of the State Toxicity Plan from 2012 gives Regional Water Boards discretion in determining instream waste concentration for toxicity testing, and in determining reasonable potential for acute toxicity testing, assuming the chronic toxicity tests continue to be performed on a regular basis. These two areas are elements to explore via a future Basin Plan modification.

Recommendation: BACWA has no recommendations at this time since the content of the State Toxicity Plan is still uncertain. When there is clarity, BACWA will engage

with Regional Water board staff to develop an implementation plan for Region 2 and discuss a future Basin Plan Amendment.

7. **Issue 4.5 - Develop Regulatory Strategy for Contaminants of Emerging Concern**

   BACWA supports the Regional Monitoring Program (RMP). Many of our member agencies participate in the Contaminants of Emerging Concern (CEC) Workgroup. BACWA participation in this workgroup led to development of the CECs Management Strategy, as described in the 2013 Pulse of the Estuary publication. Key elements of this Strategy, such as tiered risk levels, were borrowed and replicated by the statewide project looking at CECs in the Aquatic Ecosystem.

   A benefit of an informal strategy is that it can adapt to new information. The very nature of the field of CECs research is that questions being asked are constantly shifting and analytical tools for CECs continue to develop and improve. BACWA does not see an advantage to constraining the CECs Management Strategy such that it would require a Basin Plan Amendment to change it in the future.

   Recommendation: The CEC Management Strategy should not be incorporated into the Basin Plan.

BACWA appreciates the opportunity to comment on the 2015 Triennial Review and thanks you for considering our input.

Respectfully Submitted,

David R. Williams

David R. Williams
Executive Director
Bay Area Clean Water Agencies

cc: BACWA Executive Board

Alameda Countywide Clean Water Program

Contra Costa Clean Water Program

Fairfield-Suisun Urban Runoff Management Program

Marin County Stormwater Pollution Prevention Program

Napa County Stormwater Pollution Prevention Program

San Mateo Countywide Water Pollution Prevention Program

Santa Clara Valley Urban Runoff Pollution Prevention Program

Sonoma County Water Agency

Vallejo Sanitation and Flood Control District

B A S M A A

August 18, 2015

Richard Looker
Regional Water Board – San Francisco Bay Region

Subject: 2015 Triennial Review of the Water Quality Control Plan for the San Francisco Bay Basin

Dear Mr. Looker:

Thank you for the opportunity to comment on the proposed priorities for updating the Water Quality Control Plan for the San Francisco Bay Basin in the next three years. These comments are submitted on behalf of the Bay Area Stormwater Management Agencies Association (BASMAA)[1]. Of particular interest to Bay Area stormwater programs are the following issues – listed with quoted excerpts from the Brief Issue Descriptions document – followed by *our comments*:

Update Water Quality Objectives

3.5 Develop Numeric Nutrient Endpoints (NNEs) in Estuaries and Freshwater – "The State Water Board is engaged in two separate efforts to develop statewide NNE policy: one NNE effort for California estuaries, and a second effort for wadeable streams throughout the state… This candidate Basin Planning project consists of Water Board staff's active participation in both efforts. As each nears completion, Staff will evaluate the applicability to the Region's water bodies and the need for changes to the Basin Plan's narrative nutrient objective and its implementation."

> *BASMAA supports this approach. It avoids duplication of effort, which often also results in inconsistent programs – the differences in which are not supported by scientific, technical, or management information. The proposed approach also allows for the expended resources to be leveraged by additional resources should the San Francisco Bay Regional Water Board decide changes to the Basin Plan's narrative nutrient objective and its implementation are necessary.*

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[1] BASMAA is a 501(c)(3) non-profit organization comprised of the municipal stormwater programs in the San Francisco Bay Area representing 98 agencies, including 84 cities and 7 counties. BASMAA focuses on regional challenges and opportunities to improve the quality of stormwater flowing to our local creeks, the Delta, San Francisco Bay, and the Pacific Ocean. The members of BASMAA are responsible for complying with the requirements of municipal separate storm sewer system (MS4) National Pollutant Discharge Elimination System (NPDES) permits issued by the San Francisco Bay Regional Water Quality Control Board (Regional Water Board).

3.6 Development and Implementation of Biological Objectives – "Since 2011, the State Water Board has been developing a statewide implementation plan to utilize bioassessment data in perennial streams and rivers. Regional staff actively participates in the scientific technical team and Regulatory Advisory Group. Depending on the ultimate result of the statewide policy, such as whether it applies [to] perennial and non-perennial streams, Region 2 may undertake a Basin Plan amendment to describe a regional approach to using benthic macroinvertebrate bioassessment data to minimize degradation of biological condition in streams and to improve biological conditions where feasible."

BASMAA generally supports this approach. It avoids duplication of effort, which often also results in inconsistent programs – the differences in which are not supported by scientific, technical, or management information. The proposed approach also allows for the expended resources to be leveraged by additional resources should the San Francisco Bay Regional Water Board decide to undertake a Basin Plan amendment.

Update Plans and Policies

5.1 Priority Ranking for TMDL Development – "… The current list of impaired waters for the San Francisco Bay Region is available on the State Water Board's website. We present here, for stakeholder review and comment, the list of TMDLs that are of higher priority for development and completion as Basin Plan amendments over the next three years:…"

- San Francisco Bay Beaches (pathogens) - Defer

  (Source: Bacteria Objectives web page – State Water Board website) "The State Water Board is proposing a statewide control program to protect recreational users from the effects of pathogens in California water bodies. The program would be adopted as amendments to both the Inland Surface Water, Enclosed Bays and Estuaries Plan and the California Ocean Plan. Significant proposed program elements may include: new water quality objectives for both fresh and marine waters based on newly released United States Environmental Protection Agency (U.S. EPA) criteria; a reference beach/natural source exclusion process and high flow exemptions; and revised beach notification requirements." We recommend deferring to the State Water Board process on bacteria objectives for the same reasons as for issues 3.5 and 3.6 above.

- San Francisco Bay (PCBs) - New

  Under Adaptive Implementation in Basin Plan section 7.2.3 San Francisco Bay Polychlorinated Biphenyls TMDL; subsection 7.2.3.7 Critical Data Needs it states "The Water Board will adapt the TMDL and implementation plan to incorporate new and relevant scientific information such that effective and efficient measures can be taken to achieve the allocations and numeric fish tissue target. The Water Board staff will present an annual progress report to the Water Board on implementation of the TMDL that includes evaluation of new and relevant information that becomes available through implementation actions, monitoring, special studies, and the scientific literature. Within ten years of the effective date of the TMDL, Water Board will consider a Basin Plan amendment that will reflect and incorporate the data and

information that is generated in the intervening years. The Water Board will consider amending the PCBs TMDL and implementation plan as necessary to ensure attainment of water quality standards in a timely manner while considering the financial and environmental consequences of new control measures."

Within ten years of the effective date of the PCBs TMDL will be early 2020 – beyond the 3-year horizon for this current triennial review. However, we believe there is a need to start updating the PCBs TMDL sooner given what we have already learned regarding sources, performance of available controls, need for significant time for attaining load reductions, and the significant costs. Given the new information, its potential effect on the design and implementation of the TMDL, and the time necessary to complete an update, we see no reason to wait until 2020 to "consider a Basin Plan amendment". Therefore, we recommend a PCBs TMDL Update project be added and implemented during the current triennial review. The project should be used to review all relevant information, including the results of the Clean Watersheds for a Clean Bay project and the PCBs "synthesis" report, and to update the PCBs TMDL and Implementation Plan accordingly. BASMAA and its member agencies are prepared to assist with this effort.

Thank you again for opportunity to provide input. Please contact me with any questions.

Sincerely,

Geoff Brosseau, Executive Director

cc: BASMAA Board of Directors

Looker, Richard@Waterboards

From: bruhns@lmi.net
Sent: Monday, August 10, 2015 4:07 PM
To: Looker, Richard@Waterboards
Subject: BP 3 year review

Oops, sent the BP comments in response to a TMDL e-mail. Just to avoid any legal confusion, I'm resending here. Greetings,

This is in response to the public notice for updating the Basin Plan. I offer the following thoughts for your consideration (note that these are my own opinions, I am not representing any other person, group, legal entity, etc.) These comments are essentially the same as my verbal comments during the recent staff workshop, with a few clarifications (at least I hope they are consistent with what I think I said).
I suggest the Board do long range planning with a defined time horizon.
This can be in the Basin Plan, or possibly in another planning process. I believe this type of process has certain advantages, including: 1.It allows measuring of progress against a stated time; 2. It makes it easier to define problems by putting them into a time frame; 3. It makes easier public understanding, again by putting problems and solutions into a time frame; and 4. It allows for more coordinated response among agencies (e.g.
the Board and BCDC), especially if the other agencies use the same planning approach and use same or close time horizon.
I suggest a planning horizon of 2050, 35 years from now. This is close enough to make reasonable predictions. It is also far enough in the future to allow time to develop and implement major responses to coming problems.
It would also be the 100th anniversary of Board, a good time to reflect, celebrate successes, and map out further actions.
I suggest this long range planning should look, at a minimum, at two major environmental stressors between now and 2050, population growth and climate change.
ABAG projects that the Bay Area population by 2040 will have over 2 million more folks living here. Presuming ABAG is correct, there will be increased pressure on the region's wastewater infrastructure (a lot more sewage to move and treat), an infrastructure that is already stressed (e.g. Board orders requiring sewer system upgrades to prevent overflows).
Increasing population will also need more housing, more business structures, more roads, etc. All these will further stress the landscape and have potential impacts on water quality (e.g. stormwater or stream system encroachment).
The second stressor is climate change. There is already a measured rise of over 20 cm. in the Bay level since 1900. BCDC has published maps of expected further rise. There is really no need for any further discussion of whether there will be an impact, perhaps some discussion of the magnitude and timing. Much of the overburdened infrastructure noted above will be impacted (trunk sewers and wastewater treatment plants tend to located at the low points of a city, areas most likely to affected by rising sea level). Will all these facilities be moved, surrounded by dikes, or what? If planning for this has not begun, perhaps it should. Sea level rise also needs to be considered in such efforts as tidal marsh restoration. Another expected impact of climate change is a more variable climate, i.e. more droughts and very wet years. This will have a potential impact on stream systems and will be a compounding factor along with population growth.

One final comment. If the proposed Stream Policy is adopted, it may (depending on the specifics of the Policy) help mitigate impacts on streams from population growth and climate change. I therefore support further development of the Policy. However, the Policy by itself would be insufficient to address all the concerns and suggestions for planning I propose above.
Thank you for your consideration of these thoughts.

Wil Bruhns

August 18, 2015

San Francisco Regional Water Quality Control Board
1515 Clay Street
Oakland, CA 94612
Attn: Richard Looker
Via Email: rlooker@waterboards.ca.gov

Re: 2015 Basin Plan Triennial Review—Program 5.2 Climate Change/Water Resources

Dear Mr. Looker:

The Building Industry Association of the Bay Area (BIA) and Bay Planning Coalition (BPC) appreciate the opportunity to submit comments regarding the San Francisco Regional Water Quality Control Board (Regional Board)'s 2015 San Francisco Bay Basin Plan Triennial Review. The Basin Plan is the master policy document that contains descriptions of the legal, technical, and programmatic bases of water quality regulation in the San Francisco Bay Region, including water quality standards. According to the Notice of Public Solicitation, the purpose of the Triennial Review is to examine and update the focus of Regional Board planning efforts. The Notice also indicates that Regional Board staff has prepared an initial list of candidate issues for inclusion in the Regional Board's Triennial Review work plan, and encourages interested parties to provide input regarding the priority of potential projects "as the Water Board is limited in terms of the staff resources that are available to complete the projects."

The Basin Plan is at the core of many regulatory programs that significantly impact our organizational and members' interests in the San Francisco Bay Area, and it profoundly impacts the region's economic and environmental health and quality of life. With that in mind, we respectfully submit the following comments regarding what is identified as Program 5.2 *Climate Change and Water Resources Policy* in the Brief Issue Descriptions document prepared by staff as part of the Triennial Review process.

While we understand the reasons for including Program 5.2 in the discussion of potential Basin Plan work programs, we have significant concerns regarding Program 5.2's description of, and expressed intention to draw heavily from, the *Baylands Ecosystem Habitat Goals 2015 Science Update* (Goals 2015). For the reasons discussed below, we respectfully request that Program 5.2 be revised to eliminate references to Goals 2015—or any other specific policy/source document.

First, it is inappropriate at this point to presume that any specific policy document will play an important role in establishing policy goals and objectives in the context of

the Triennial Review's assessment of whether a potential new program should be added to the Regional Board's plan of work. This puts the proverbial cart before the horse by making what amounts to a significant policy decision—*de facto* embrace of Goals 2015's goals, objectives, and response strategies, before the Triennial Review process is even completed and a decision made on whether to proceed with the program itself. Discussion of Goals 2015—or any other similar resource document—is properly considered as part of a public scoping process if and when the Regional Board initiates Program 5.2 or something like it.

Second, the description of Goals 2015 is incomplete and creates a misleading impression of its preparation, content and purposes. BPC actively participated in the original Goals development process in 1999. It also thoroughly reviewed the draft Goals 2015 Update and submitted extensive comments. We have included a copy of that letter with our comment letter regarding Program 5.2. Among the key comments and recommendations from that letter that we wish to highlight to the Regional Board are the following:

> The key components of the 2014 Update should first restate the following important caveats from the 1999 Report, as they remain important for readers to know and many readers of the 2014 Update won't go back and read the 1999 Report and see them:
>
> - "The maps in this report are meant to inform the reader about past and present habitat conditions in and adjacent to the baylands. These maps do not indicate the jurisdictional limits of wetlands, and they are not intended to be, and should not be, used for regulatory purposes." [1999 Preface p. ix]
> - "Representatives from many local, state, and federal agencies were involved in the 2014 Update. This does not imply that these agencies concur with each and every part of the 2014 Update or that they will take all of the actions necessary to implement the recommendations." [1999 Preface p. ix]
> - "The habitat and other recommendations in the 2014 Update are meant to be implemented voluntarily, incrementally, and cautiously in the coming decades." [1999 Preface p.x]
> - "**2014 Update participants sought to develop habitat and other recommendations based primarily on ecology and physical science. In this way, they attempted to provide for the needs of fish and wildlife, even though certain considerations—economic constraints, landowner desires, zoning, and societal interests—might make it difficult or impossible to implement some recommendations. Restoration projects will need to analyze these considerations."** [1999 Preface p. x] (emphasis added)

The final recommendation from BPC's comment letter excerpted above is especially important to bear in mind as part of any discussion or consideration of Goals 2015 by the Regional Board. The 1999 Preface made clear that the original Goals project developed the ecosystem goals based on the needs of fish and wildlife, and expressly **did not** assess them with respect to "economic constraints, landowner desires, zoning, and societal interests." **Likewise, the 2014-2015 Update followed this same approach.** Thus, the breadth of what was **not** considered in Goals 2015 is sweeping, and bears significantly on the nature of any reliance on Goals 2015 in a regulatory proceeding that may be undertaken by the Regional Board.

Regards

Paul Campos
BIA Bay Area

John Coleman
Bay Planning Coalition

Accompanying Letter: April 6, 2015 BPC Letter to State Coastal Conservancy

August 18, 2015

San Francisco Regional Water Quality Control Board
1515 Clay Street
Oakland, CA 94612
Attn: Richard Looker
Via Email: rlooker@waterboards.ca.gov

Re: 2015 Basin Plan Triennial Review

Dear Mr. Looker:

The signatory organizations appreciate the opportunity to submit comments regarding the San Francisco Regional Water Quality Control Board (Regional Board)'s 2015 San Francisco Bay Basin Plan Triennial Review. The Basin Plan is the master policy document that contains descriptions of the legal, technical, and programmatic bases of water quality regulation in the San Francisco Bay Region, including water quality standards. According to the Notice of Public Solicitation, the purpose of the Triennial Review is to examine and update the focus of Regional Board planning efforts. The Notice also indicates that Regional Board staff has prepared an initial list of candidate issues for inclusion in the Regional Board's Triennial Review work plan, and encourages interested parties to provide input regarding the priority of potential projects "as the Water Board is limited in terms of the staff resources that are available to complete the projects."

The Basin Plan is at the core of many regulatory programs that significantly impact our organizational and members' interests in the San Francisco Bay Area, and it profoundly impacts the region's economic and environmental health and quality of life. With that in mind, we respectfully submit the following comments:

I. Further work on the Regional Board's Stream and Wetland Policy should be deferred until the State Water Resources Control Board (State Board) completes its comprehensive Wetlands and Riparian Area Protection Policy.

Regional Board staff published a Brief Issue Descriptions document in connection with the 2015 Triennial Review.[1] Issue 2.4 is titled "Complete the Stream and Wetland System Protection Policy." According to the issue summary:

> This project is to complete the Stream and Wetland Policy currently under development. The resulting Basin Plan amendment would protect stream and wetland systems, which include stream channels, wetlands, floodplains, and riparian areas…. The proposed stream [and wetland] protection amendment would designate two new beneficial uses of streams and wetlands…. The proposed amendment would also include additions to the implementation plan chapter to explain how the Water Board will regulate controllable water quality factors in a variety of permitting contexts in order to protect the new beneficial uses.

The Regional Board began development of a stream and wetland policy—including initiation of the CEQA Scoping Process on March 30, 2006—before the State Board adopted Resolution 2008-0026 in 2008 that began the comprehensive statewide policy development covering the same subject matters.[2] At that time, the Regional Board indicated an intent that "the Policy will serve as a model for other Regional Water Boards and for the state in the protection of water quality."[3]

We believe that the 2015 Triennial Review should formally acknowledge the State Board's development of a stream and wetland regulatory policy that is intended to provide statewide policy consistency and regulatory certainty, and defer further action in this policy area at the Regional Board level until the State Board completes its work. While in 2006 the Regional Water Quality Control Board may have deemed it appropriate to consider a wetland and stream policy for one region, the State Board's subsequent policymaking makes such action inappropriate and very possibly inconsistent with one of the State Board's express goals, *i.e.*, statewide consistency. We also believe the Regional Board should revisit the need for, and scope of, its own stream and wetland protection policy in light of the State Board's policymaking. These recommendations are based on the fact that one of the primary purposes of the State Board's policy development is to establish a consistent regulatory approach between the State Board and the Regional Water Quality Control Boards with respect to wetland and stream definitions and regulation, as discussed below.

With the adoption of Resolution No. 2008-0026, the State Board committed "to take action to ensure the protection of the vital beneficial services provided by wetlands and riparian areas through the development of a statewide policy to protect wetlands and riparian areas that is watershed-based." The State Board directed its staff to develop the policy "using a collaborative process that involves the Regional Water Boards…." The State Board also expressed its intent that upon completion, the statewide policy "will inform and shape proposed Regional Basin Plan amendments."[4]

Throughout the policy development process, the State Board has stressed this crucial theme that its action will establish much-needed statewide consistency and certainty as follows:

> The State Water Resources Control Board is considering a new policy on wetlands. The new policy is designed to protect and enhance California's wetlands, bring consistency to

[1] http://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/planningtmdls/basinplan/web/docs/Triennial_Review/Brief%20Issue%20Description%202015%20Triennial%20Review%207-3-15.pdf
[2] http://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/stream_wetland/swspp_web_notice.pdf; http://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/stream_wetland/r2_swspp_factsheet.pdf.
[3] http://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/streamandwetlands.shtml.
[4] http://www.swrcb.ca.gov/board_decisions/adopted_orders/resolutions/2008/rs2008_0026.pdf

regulatory efforts by the State Water Board and nine Regional Water Regional Water Quality Control Boards (Water Boards collectively), and to provide a common framework for monitoring and reporting water quality….

Why is a new policy needed? [T]he Water Boards do not have a single accepted definition of wetlands that would capture the rich diversity of wetlands types throughout the state. That's led to a lack of consistency in wetland regulation and management….

What will the proposed new policy do? The policy is expected to add consistency and transparency to the determination of wetland areas, and help resolve potential conflicts in areas of overlapping regulatory jurisdiction…. It would add certainty for permit applicants on defining wetlands and requirements for obtaining permits. The policy would also allow consistent monitoring and tracking of trends in state waters, including wetlands, making it easier to protect and manage them.

How does it go about doing that? By the State Water Board establishing a statewide definition of a wetland, the policy would bring a uniform regulatory approach between the State Water Board and the nine Regional Water Quality Control Boards and quicken coordination with other agencies involved in protecting wetlands. It would also establish procedures and criteria for the application, review, and approval of permits to discharge dredged or fill material to state waters, and it would provide a common framework for wetland and riparian area monitoring and assessment. This will aid in making regulatory determinations and ensure consistency with statewide environmental reporting programs.[5]
****

The Need for a New Policy →To promote efficiency, effectiveness and consistency among Water Board programs.

Concerns raised by respondents about the proposed Statewide Policy:

→ Concern: Overlapping jurisdictions/duplication of effort with other agencies.

Water Board staff will seek permit streamlining;
Our focus is water quality.

→ Concern: Separate Regional and State efforts

Joint development team to ensure consistency.[6]

Recent information from the State Board further supports the Regional Board taking occasion of the 2015 Triennial Review to make a formal deferral and reconsideration of moving forward with a region-specific stream and wetland policy. The July 2015 Report of the State Board's Executive Director announced that "State Water Board staff is currently preparing the draft staff report for internal review.

[5] http://www.swrcb.ca.gov/water_issues/programs/cwa401/docs/wrapp/wetlands_faq2012.pdf
[6] http://www.waterboards.ca.gov/water_issues/programs/cwa401/docs/wrapp2008/wetlandpolicy_presentation.pdf. Significantly, in its 2012 Triennial Review, the Regional Board also recognized the importance of allowing the State Board to complete its policy "to ensure coordination and consistency." http://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/planningtmdls/basinplan/web/docs/Triennial_Review/2012%20Triennial%20Review%20and%20Priority%20Projects%20-%2011-12%20signed.pdf.

This includes the draft policy language and the accompanying draft Substitute Environmental Document (SED). Staff expects to release the proposed policy and SED for public comments by fourth quarter of 2015." The Report also gives a target date for State Board action on a proposed policy of May 2016.[7]

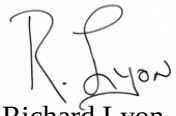
In light of the State Board's impending action, the importance of developing a uniform and consistent statewide approach to stream and wetland protection, and finite staff and financial resources at the Regional Board, we again urge the Regional Board to defer further work on its Stream and Wetland Policy and revisit the need for, and scope of, this particular work program after the State Board completes its work.

Regards,

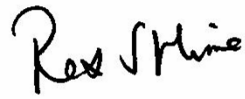
Rebecca Franklin
Association of California Water Agencies

John Coleman
Bay Planning Coalition

Paul Campos
BIA Bay Area

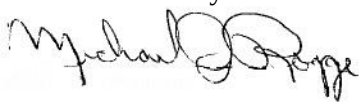


Richard Lyon
California Building Industry Association



Rex S. Hime
California Business Properties Association

Steven Brink
California Forestry Association

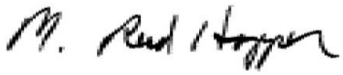


Mike Rogge
California Manufacturers and Technology Association

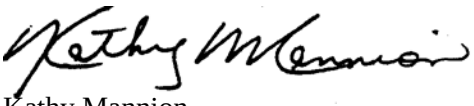
[7] http://www.swrcb.ca.gov/board_info/exec_dir_rpts/2015/edrpt072115.pdf

Karen Keene
California State Association of Counties

Mark Grey
Construction Industry Coalition on Water Quality

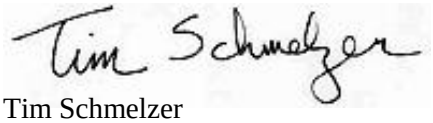


Reed Hopper
Pacific Legal Foundation



Kathy Mannion
Rural County Representatives of California

Kevin Buchan
Western States Petroleum Association



Tim Schmelzer
Wine Institute

cc: Felicia Marcus, Chair, State Water Resources Control Board
Tom Howard, Executive Director, State Water Resources Control Board

Central Contra Costa Sanitary District
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August 18, 2015

Mr. Richard Looker
San Francisco Bay
Regional Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, CA 94612

VIA EMAIL: rlooker@waterboards.ca.gov

RE: 2015 Triennial Review for the Water Quality Control Plan San Francisco Bay Basin

Dear Mr. Looker:

Central Contra Costa Sanitary District (CCCSD) appreciates the opportunity to comment on the 2015 Triennial Review of the San Francisco Bay Basin Water Quality Control Plan (Basin Plan). We concur with the comments made by the Bay Area Clean Water Agencies (BACWA) that have been submitted under separate letter. CCCSD's comments presented below are intended to compliment and in some cases expand on BACWA's comments. References are to the document titled *Brief Issue Descriptions for the 2015 Triennial Review of the San Francisco Bay Basin Water Quality Control Plan* (Issue Descriptions) that was developed by the Regional Water Quality Control Board (Regional Board).

Update to Basin Plan's Toxicity Testing Requirements

CCCSD continues to support Issue Descriptions Item No. 3.2, Update to Basin Plan's Toxicity Testing Requirements, in order that resources can be directed toward addressing toxicity testing implementation. CCCSD looks forward to working with the Regional Board on the Test of Significant Toxicity policy to help ensure that implementation supports the maintenance of beneficial uses and/or water quality objectives for the region.

Consider Refinement and/or Development of the Site-Specific Objectives for Dissolved Oxygen (DO) in San Francisco Bay

With respect to Issue Descriptions Item No. 3.1, CCCSD supports research on appropriate DO levels in the San Francisco Bay through the Nutrient Management Strategy and other initiatives. CCCSD supports the retention of the DO objective along

channel locations of the San Francisco Bay and supports the development of site-specific objectives for DO to closely model the process currently under development for the Suisun Marsh DO Total Maximum Daily Load.

Develop Regulatory Strategy for Contaminants of Emerging Concern

CCCSD does not support Issue Descriptions Item No. 4.5, the development of a regulatory strategy for Contaminants of Emerging Concern, at this time. The analytical methods for measurement of these constituents continue to evolve as does the understanding of their transformation and mode of action in the aquatic environment. Future improvements in measurement and understanding of these contaminants are anticipated, and therefore, CCCSD encourages the Regional Board to consider these improvements prior to developing a strategy.

Sincerely,

for Roger S. Bailey
General Manager

RSB:LS:vp

cc: Jean-Marc Petit, Director of Engineering and Technical Services
Lori Schectel, Environmental and Regulatory Compliance Division Manager
Tim Potter, Environmental Compliance Superintendent
Mary Lou Esparza, Laboratory Superintendent

CITY OF DALY CITY

Department of Water and Wastewater Resources
153 Lake Merced Boulevard
Daly City, CA 94015
(650) 991-8200
Fax (650) 991-8220

Patrick Sweetland, Director

August 18, 2015

VIA EMAIL: Rlooker@waterboards.ca.govc

Mr. Richard Looker
Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, CA 94612

Subject: Comments on 2015 Basin Plan Triennial Review – Lake Merced DO and pH Objectives

Dear Mr. Looker:

The City of Daly City (Daly City) appreciates the opportunity to comment on the 2015 Triennial Review of the San Francisco Bay Basin Water Quality Control Plan (Basin Plan). Daly City supports the triennial review process and the inclusion of Project 3.9 Lake Merced Dissolved Oxygen and pH Objectives in the current list of issues proposed for review in the Brief Issue Descriptions for the 2015 Triennial Review of the San Francisco Bay Basin Water Quality Control Plan (Issue Descriptions). Project 3.9 would assess water quality standards actions and implementation provisions for DO and pH necessary to address the unique, site-specific characteristics of Lake Merced and Clean Water Act Section 303(d) impaired waterbodies listing of Lake Merced by USEPA in 2003.

Daly City, in cooperation with the San Francisco Public Utilities Commission (SFPUC) and other watershed stakeholders, is pursuing the Vista Grande Drainage Basin Improvements Project to address storm-related flooding in the Vista Grande Watershed Drainage Basin, while simultaneously restoring hydrologic connection to Lake Merced and improving lake level management. The City and County of San Francisco, owner and operator of Lake Merced, as well as several local non-governmental groups including CalTrout, have expressed an interest in managing Lake Merced levels within a preliminary target range of 5.0 to 9.5 feet San Francisco City Datum (target levels are not yet finalized). The proposed Vista Grande project would allow the City and County of San Francisco to operate Lake Merced within desired water levels, help to reduce local flooding and partially restore Lake Merced's historic drainage conditions. The project would include diversion of storm water (and authorized non-storm water) flows from the Vista Grande Canal to Lake Merced, a waterbody that appears on the California 2008-2010 Section 303(d) list for dissolved oxygen (DO) and pH. Other engineering alternatives that would continue to convey all Vista Grande Drainage Basin flows to the Pacific Ocean have been considered but are not currently proposed as the preferred Project because they provide minimal if any benefits to Lake Merced.

In a related action, Daly City is working with the San Francisco Public Utilities Commission (SFPUC) and San Francisco Bay Regional Water Quality Control Board (RWB) staff to develop a two part strategy for reassessing the status of the 303(d) listings for Lake Merced that would be pursued under separate, but related actions. First, a Lake Management Plan (LMP) is being developed that provides an implementation plan of measures that will be taken to maintain and, over time, improve water quality in Lake Merced. The Lake Management Plan is included as part of the proposed project. Second, as noted above, given the unique, site-specific characteristics of Lake Merced, the Basin Plan implementation provisions for how the water quality objectives (WQOs) for DO and pH are assessed are proposed to be revised, as indicated in 2015 Triennial Review Project 3.9. Together, these actions are intended to achieve the long-term goal of maintaining and improving water quality, while acknowledging the distinct nature of Lake Merced.

The purpose of this letter is to affirm the need for the Basin Plan modifications outlined in Project 3.9 to facilitate moving forward with the win-win-win Vista Grande Lake Merced Alternative Project. The Project is a win for Daly City since it would alleviate long-standing localized flooding problems, a win for SFPUC and other stakeholders such as CalTrout interested in having Lake levels increased and maintained, and for the Regional Water Board and other regulatory agencies in resolving the 303(d) listing for the Lake and for supporting enhanced stormwater management via the capture, treatment, and beneficial reuse of Vista Grande stormwater that would otherwise be simply discharged to the Pacific Ocean. This latter action is consistent with provisions of the State Water Board's (SWB) 2009 Recycled Water Policy to increase state-wide capture and reuse of stormwater, and more recently with the SWB's Stormwater Strategic Initiative Proposal. Guiding Principle 1 of that Initiative is that the Water Boards' Programs treat stormwater as a valuable water resource.

Daly City has stated previously, and again in this Triennial Review forum, that it, together with SFPUC, stand ready to provide resources to help address the above Basin Planning issues in partnership with RWB staff. Daly City understands that the RWB has limited staff resources to address the myriad of potential Basin Planning issues identified in this Triennial Review. Daly City believes that it can provide technical and as appropriate administrative support to RWB staff beginning in January 2016 to enable preparation of a complete Basin Plan amendment package addressing the Lake Merced DO, pH, and related issues, for RWB consideration by the end of calendar year 2016. The basic strategies for how to address each of these issues have already been identified through joint efforts by Daly City, SFPUC, and RWB staff.

Daly City would continue to support RWB staff, as appropriate, during the first half of 2017, in following up with the subsequent Basin Plan Amendment approvals required by the SWB, the Office of Administrative Law (OAL), and the USEPA. During the latter part of 2017, the City would work with RWB and USEPA staff to develop and complete a regulatory package, consistent with EPA guidance. This effort is expected to provide regulatory certainty in moving ahead on construction improvements associated with the Vista Grande Drainage Basin Improvements Project.

Daly City believes that Project 3.9 should be given a high priority ranking based on the ranking criteria and scoring provisions used in the 2012 Triennial Review, summarized below.

1) Water Board Mission (Protect Beneficial Uses) – Project 3.9 would provide the RWB with refined water quality objectives and implementation provisions for DO and pH to more precisely assess maintenance and protection of beneficial uses in Lake Merced and potentially in other waterbodies throughout the Region (*i.e.,* there may be some synergy between work conducted for Project 3.9 and Project 3.1 "Consider Refinement and/or Development of Site-Specific Objectives for Dissolved Oxygen in San Francisco Bay")

2) Staff Resources Already Invested – RWB staff have been working with the City and SFPUC on various aspects of the Vista Grande Lake Merced Alternative Project since at least mid-2011.

3) External Resources Already Invested – Daly City has invested considerable resources to date coordinating technical information collection (*e.g.,* grab sample and continuous monitoring water quality data), stakeholder outreach, and into investigations into how other States and agencies regulate DO and pH in seasonally stratified lakes like Lake Merced.

4) External Resources Likely Available - As noted above, Daly City intends to continue to provide significant support during the Project 3.9 Basin Plan amendment development and approval processes. Daly City is also funding CEQA/NEPA work for the Project, portions of which will be applicable to the proposed Basin Plan Amendment actions. The draft EIR/EIS is scheduled for release in November 2015.

5) Public Interest – There has been considerable public interest for over a decade in measures to improve lake levels in Lake Merced. California Trout, Inc. filed a petition in January 2001 with the State Water Resources Control Board regarding actions needing to be taken to re-establish and maintain lake levels and

protect beneficial uses. The Lake Merced Alternative Project would help achieve many of the goals cited in the CalTrout Petition.

6) Input from Internal Divisions – Daly City has been coordinating this Project with the Watershed Management/Stormwater NPDES group, the Basin Planning/TMDL group, and with RWB management. The RWB provided a letter of concurrence to Daly City in May 2013 indicating their support for the Basin Plan Amendment and 303(d) process strategy proposed by Daly City for the Vista Grande Project.

7) Implement State Water Board Policy – As noted above, the Lake Merced Alternative Project would capture, treatment and beneficially reuse Vista Grande stormwater that would otherwise by discharged unused to the Pacific Ocean. This is consistent with the SWB Recycled Water Policy, Stormwater Strategic Initiative, and other Green Infrastructure initiatives by the SWB and USEPA.

8) U.S. EPA Priority – Daly City and its consultants have contacted USEPA staff and obtained their general concurrence with the proposed approaches to addressing the DO and pH 303(d) listings of Lake Merced. It was USEPA that added Lake Merced in 2003 to the 303(d) list. However, EPA established "a low priority for this listing based on the considerations that no specific beneficial use impairments have been associated with DO and pH problems in the Lake, and that additional monitoring is warranted to verify these listings prior to developing TMDLs."

9) Geographic Scope – Triennial Review Project 3.9 would be specific to Lake Merced, recognizing the site specific conditions unique to the Lake:

- **Terminal Lake.** No outflow and elevated alkalinity
- **Polymictic.** Intermittent stratification and mixing
- **Coastal influence**. Low temperatures, prevailing winds, fog
- **Artificially maintained coldwater fishery.** CDFW stock rainbow trout
- **Self-sustaining warmwater recreational fishery.** Native and non-native species
- **Potential emergency water supply for San Francisco.** Fire flow and sanitation

However, some aspects of the DO and pH Basin Plan Amendment modifications may help inform related work on refining DO objectives for other waterbodies in the Region (*e.g.,* Project 3.1).

10) Low Controversy and Low Technical Complexity – Much of the background work necessary to support the Basin Plan Amendment changes that would be conducted under Project 3.9 has already been completed. There are precedents for the proposed DO and pH regulatory changes based on approach adopted in other States (DO measured in epilimnion) and by USEPA (pH freshwater quality criteria of 8.5 to 9.0). Therefore it is not believed that Project 3.9 would be considered controversial or technically complex.

In conclusion, Daly City appreciates the opportunity to provide these comments on the 2015 Triennial review and looks forward to working with RWB staff on Project 3.9. If you have any questions, please feel free to contact me.

Sincerely,

Patrick Sweetland, Director
Department of Water and Wastewater Resources

L15-067

2510 Woolsey St.
Berkeley, CA 94705
August 18, 2015

Richard Looker
California Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, CA 94612
Submitted via email: rlooker@waterboards.ca.gov

Subject: Request for Comments for San Francisco Basin Plan Triennial Review

Dear Mr. Looker:

Thank you for the opportunity to submit the attached comments. Please call if you have any questions.

Sincerely,

Fred Krieger
510 843-7889

Attachment: Comments on the 2015 Triennial Review Issue Solicitation

Comments on the 2015 Triennial Review Issue Solicitation

Potential projects to add to the draft project list

Project 1. Modify water quality objectives derived from Title 22 Drinking Water Standards (New task)

Summary. This proposed project would involve adjusting the MUN-based objectives in the Basin Plan to focus only on pollutants presenting a risk to drinking water facility operations or customers. Currently, natural constituents in stormwater will be identified as exceeding the MUN-based objectives if stormwater runoff is monitored at the point of discharge.

San Francisco Bay Region Basin Plan and Title 22 Standards. Most Basin Plans in California include the Title 22 Primary maximum contaminant levels (MCL). Several Basin Plans, including the SF Basin Plan, also include the secondary MCLs (SMCL). Chapter 3 of the SF Basin Plan identifies the water quality objectives applicable to surface waters in the region designated for use as domestic or municipal supply (MUN).

> 3.3.22 CONSTITUENTS OF CONCERN FOR MUNICIPAL AND AGRICULTURAL WATER SUPPLIES
>
> At a minimum, surface waters designated for use as domestic or municipal supply (MUN) shall not contain concentrations of constituents in excess of the maximum (MCLs) or secondary maximum contaminant levels (SMCLs) specified in the following provisions of Title 22, which are incorporated by reference into this plan: Table 64431-A (Inorganic Chemicals) of Section 64431, and Table 64433.2-A (Fluoride) of Section 64433.2, Table 64444-A (Organic Chemicals) of Section 64444, and Table 64449-A (SMCLs-Consumer Acceptance Limits) and 64449-B (SMCLs-Ranges) of Section 64449. This incorporation-by-reference is prospective, including future changes to the incorporated provisions as the changes take effect. Table 3-5 contains water quality objectives for municipal supply, including the MCLs contained in various sections of Title 22 as of the adoption of this plan.

These drinking water standards[1] were developed to protect drinking water as delivered to customers. This approach is over-protective and results in frequent exceedances for natural constituents in storm water and surface waters (e.g., iron and aluminum) that do not present a risk to drinking water consumers.

Suspended Solids Concentrations in Stormwater Runoff. Suspended solids measured in runoff (and natural waters) varies significantly. A typical concentration of TSS in residential runoff is 100 mg/L - see Table 2

Table 1 – Median Event Mean Concentrations for Urban Land Uses

Pollutant	Units	Residential	Mixed	Commercial	Open/ Non-Urban
TSS	mg/l	101	67	69	70

Data from Nationwide Urban Runoff Program (US EPA 1983), reprinted here, Table 4-1

A Caltrans characterization study of state highways[2] found a median TSS of 59.1 and a mean of 112.7.

Potential exceedances of drinking water MCLs. Basin Plan Table 3-5 identifies the Title 22 drinking water standards (primary and secondary MCLs) which apply to surface waters designated as potential or existing

[1] California Drinking Water Regulations

[2] Caltrans *Discharge Characterization Study Report*, Table 3-2, November 2003

sources of drinking water (MUN beneficial use). Inadvertent compliance problems for stormwater runoff or surface waters can result when these waters are monitored for the MCLs although the constituents causing the exceedances may not present a risk to either public health or plant operations. This situation occurs because a relatively low level of suspended solids composed of mostly or only natural soils carries enough natural aluminum to exceed the drinking water standards. Iron from background sources may also create a compliance problem in those Regions, including Region 2, that additionally apply the secondary MCLs.

A permit violation could occur when these drinking water-derived standards have been translated into water quality-based effluent limits or in situations when the permit requires general compliance with water quality standards, as in most stormwater permits. Since most non-saline surface waters are designated with the MUN beneficial use, the potential for violations is widespread. See Table 2.

Table 1 – Potential Exceedances of WQS when Suspended Solids are composed of Natural Soils

Constituent	**Background Concentration in California Soils** (1)	**Concentration in Discharge** (assuming total suspended solids = 100 mg/l)	Basin Plan **Water Quality Objectives for Municipal Supply** (Table 3-5)
Aluminum	7.3%	7.3 mg/l	1.0 *and* 0.2 mg/l (2)
Iron	3.7%	3.7 mg/l	0.3 mg/l

(1) Average; UC Riverside, 1996, posted here
(2) 0.2 mg/l is the secondary standard for aluminum; the 0.3 standard for iron is a secondary standard.

Water treatment plant operations. Typically, sediment in raw waters supplied to drinking water treatment plants is addressed by coagulation and flocculation. Chemicals (coagulants) are added to the water, followed by stirring to transform the suspended particles into larger flock which then settles out. Chemicals typically used to promote flocculation include aluminum sulfate, alum-polymer blend, iron-polymer blends, ferrous sulfate, ferric chloride, and lime. The coagulation step is followed by filtration.

Example of exceedances. The NRDC vs Los Angeles lawsuit for exceedances in the Los Angeles River identified aluminum, fecal coliform, and copper as the three most problematic pollutants, causing over 70% of the monitored exceedances. This lawsuit led to the 2012 LA permit which was subsequently modified on June 16, 2015, when the State Water Board adopted Order 2015-0075 resolving the petitions of the 2012 permit. This Order is intended by the State Board to be the model for subsequent MS4 permits in the state.

Suggestion for Triennial Review Project

For MUN waterways, the Regional Water Board could modify the Basin Plan to apply the Title 22 Standards only for pollutants that present a risk to humans or treatment plant operations. This assessment of relevant pollutants requiring objectives to protect the MUN beneficial use would take into consideration water treatment plant effectiveness in addressing particulates from background sources (e.g., soils with iron and aluminum). Filtering the samples before analyses is another option to address constituents from natural soils.

Comment 2. Revise objective for copper based on EPA copper criteria (New task)

Background and Summary

In August, US EPA revised the regulations which govern adoption of water quality standards (WQS) – posted here. One of these changes affects triennial reviews – specifically, when completing the triennial reviews of WQS, states must now provide justification when they do not update their standards to incorporate new water quality criteria published by EPA.

Pollutant criteria published by EPA since 2000 and but not updated in the Basin Plan includes ammonia, cadmium, copper, nonylphenol, diazinon and several other toxic organics. The copper objective is particularly important.

The current freshwater objectives in the Basin Plan for copper are based on the criteria promulgated by EPA in the May 18, 2000, California Toxics Rule (CTR). The CTR values are based on EPA's recommendation for copper criteria issued in 1984. EPA revised the freshwater aquatic life copper criteria with the 2007 update. The CTR and current Basin Plan copper criteria are hardness-based. The new 2007 criteria use the Biotic Ligand Model (BLM) which takes into account temperature, pH, dissolved organic carbon (DOC), and other parameters. EPA states: "We expect that application of this model will result in more appropriate criteria and eliminate the need for costly, time-consuming site-specific modifications using the water effect ratio."

EPA has also indicated that use of the copper BLM will result in fewer water bodies being listed as impaired due to copper because the current hardness-based criteria are potentially over-protective for many waters, particularly in point-source effluent dominated waters and those with high DOC levels. DOC reduces copper toxicity. Except for low pH waters or waters will very limited constituents (e.g., high Sierra waterways), the BLM will likely result in fewer 303(d) listings for copper and fewer discharges exceeding the copper standards at the point of discharge.

Suggestion for Triennial Review Project

The Board could consider adopting the 2007 EPA freshwater criteria for this triennial review. After approval by the State Water Board and EPA Region 9, these criteria will replace the CTR criteria. The BLM-based criteria should result in significantly fewer exceedances of the criteria by stormwater, reduce the need for site-specific criteria, and result in fewer 303(d) listings for copper. This will allow the regulatory agencies and MS4s to direct limited resources at pollutants presenting a real risk to aquatic health and also devote more effort to developing stormwater as a resource.

GEI Consultants

August 13, 2015

Geotechnical
Environmental
Water Resources
Ecological

Richard Looker
California Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, CA 94612

Re: Proposal to Support the Use of the Biotic Ligand Model for Copper Aquatic Life Criteria in the San Francisco Bay Region

Dear Mr. Looker,

We would like to participate in the upcoming California Regional Water Quality Control Board, San Francisco Bay Region's (Board) triennial review of the Water Quality Control Plan on behalf of our client, the Copper Development Association (CDA). CDA played a significant role in sponsoring scientific research used in development of the freshwater Biotic Ligand Model (BLM) for copper, which was adopted by the United States Environmental Protection Agency (USEPA) in its latest national ambient water quality criteria (USEPA 2007). CDA is now interested in encouraging efforts by state agencies and tribes to incorporate these latest recommended USEPA national criteria for copper into their water quality standards programs.

It is our understanding that the Board is in the process of accepting comments on the proposed priority projects to consider during the 2015 Triennial Review of the San Francisco Bay Basin Plan. The purpose of this letter is to encourage the Board to consider updating their standards to allow the use of BLM to calculate aquatic life criteria for copper, as currently recommended by USEPA.

Incorporation of the BLM as the basis for copper standards has already been adopted, or is being considered, by over half the states across the country, while the current aquatic life criteria in the California Toxics Rule (CTR), used to derive freshwater copper aquatic life standards, only take into account hardness as a factor that modifies toxicity. Using only hardness as a modifying factor for metals criteria is an outdated approach that excludes a substantial body of peer-reviewed scientific literature demonstrating that additional modifying factors can and should be incorporated into regulatory benchmarks or standards, while providing the same levels of aquatic life protection required under the Clean Water Act (USEPA 1985, 1994, 2001, 2007). Like most metals, copper toxicity is a function of its bioavailability, which in addition to being controlled by hardness, is also strongly related to other important factors such as dissolved organic carbon (DOC), alkalinity, pH, and temperature. The key strength of the BLM is that it accounts for

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multiple factors—in addition to hardness—that mitigate or exacerbate copper's toxic effect on aquatic life. And in addition to the freshwater copper BLM, a saltwater BLM has also been developed which leverages the significant amount of research on the effects of copper to saltwater organisms that has been done since the 1985 revision of the criteria document and is currently being reviewed by the USEPA.

Similar to copper, BLMs have been developed, validated, and are available for regulatory use for several other metals, including zinc, lead, nickel, and cadmium. While EPA has yet to develop formal recommended national ambient water quality criteria using BLMs for these other metals, the models are widely available (e.g., for zinc BLM-based criteria, see DeForest and Van Genderen 2012) and are being applied in regulatory programs in several European countries and Canada. CDA fully supports and shares their desire to move towards bioavailability models such as the BLM as being the current state of both scientific and regulatory practice.

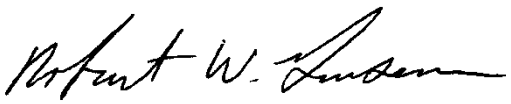
There also are practical advantages for using the BLM; it is a cost effective regulatory tool compared to other site-specific toxicity test procedures (e.g., water-effect ratios), and the BLM software is publicly available, sanctioned by USEPA, and requires only brief training to generate rapid and useable output. While the model is widely considered to be useful for derivation of site-specific water quality criteria, we suggest its best application is on a basin-wide basis for any discharger with sufficient water quality data to run the BLM. This would enable individual permit writers and permittees to collaborate directly to use the BLM to derive permit limits, thereby minimizing or eliminating the need to go through a lengthy and expensive rulemaking process. BLM-based criteria provide a practical means of deriving demonstrably more accurate levels of aquatic life protection across a broad range of water quality conditions, and with sufficient flexibility to support most any regulatory application framework.

Please let us know how we can assist the Board in its consideration of the BLM during this review. GEI or CDA could help in a variety of ways, including preparation of written or oral testimony supporting the technical basis of the BLM, or providing guidance on application of the BLM to water quality criteria and what type of implementation approach would best fit your available datasets.

We appreciate the opportunity to provide you with these comments in support of your proposal. Please let us know if you have any questions. We look forward to discussing this with you further.

Sincerely,

GEI CONSULTANTS, INC.



Robert W. Gensemer, Ph.D.
Senior Ecotoxicologist

RWG
cc: Robert Dwyer, CDA
Steven Canton, GEI
John Gondek, GEI
David DeForest, Windward Environmental
Eric Van Genderen, International Zinc Association

References

DeForest, D.K., and E.J. Van Genderen. 2012. Application of U.S. EPA guidelines in a bioavailability-based assessment of ambient water quality criteria for zinc in freshwater. Environ. Toxicol. Chem. 31(6):1264-1272.

U.S. Environmental Protection Agency (USEPA). 1985. Guidelines for deriving numerical national water quality criteria for the protection of the aquatic organisms and their uses. PB85-227049, U.S. Environmental Protection Agency, Washington, DC.

U.S. Environmental Protection Agency (USEPA). 1994. Interim guidance on determination and use of water-effect ratios for metals. EPA-823-B-94-001, U.S. Environmental Protection Agency, Washington, D.C.

U.S. Environmental Protection Agency (USEPA). 2001. Streamlined water-effect ratio procedure for discharges of copper. EPA-822-R001-005, U.S. Environmental Protection Agency, Washington, D.C.

U.S. Environmental Protection Agency (USEPA). 2007. Aquatic Life Ambient Freshwater Quality Criteria – Copper. EPA-822-R-07-001. U.S. Environmental Protection Agency, Washington, D.C.

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August 18, 2015

Mr. Richard Looker
Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, CA 94612
VIA EMAIL: rlooker@waterboards.ca.gov

Subject: Comments on 2015 Basin Plan Triennial Review – Lake Merced DO and pH Objectives

Dear Mr. Looker:

The Golden Gate Audubon Society (GGAS), representing more than 5,000 members in San Francisco and Alameda Counties, agrees with and supports the City of Daly City's comment letter regarding the 2015 Triennial Review – Lake Merced DO and pH Objectives.

GGAS has led field trips and been involved in the conservation of Lake Merced since 1917. We support the highest possible standards for water quality in the lake. Water with reduced levels of dissolved oxygen (DO) and pH will benefit the wildlife that depends on the waters, marshes and uplands of Lake Merced. We have commented on and support the Vista Grande Drainage Basin Improvements Project and think the City of Daly City and it's partner agency, the San Francisco Public Utilities Commission (SFPUC) have developed a plan that will lead to improved water quality and more consistent water levels at the lake.

Water quality issues with DO and pH seem to have been exacerbated by flooding during past extreme weather events. In the past, significant portions of the shoreline and surrounding roadway have washed into to the lake, carrying significant amounts of organic and inorganic materials which further polluted the lake. It is very important to implement Daly City's Vista Grande Plan to minimize this problem in the future. From what we understand, the Basin Plan modifications outlined in Project 3.9 seem to provide a thoughtful means of solving some of Lake Merced's water quality and lake level issues.

As GGAS looks forward to a second century of advocacy for Lake Merced. It seems that Daly City's efforts to correct issues of water flow and flooding in the Vista Grande Watershed will have a positive impact on the health and functionality of Lake Merced for wildlife and people. We therefore strongly support their comments regarding the 2015 Triennial Review.

Very truly yours,

Cindy Margulis
Executive Director

cc: GGAS SF Conservation Committee (attn.: Dan Murphy)

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Looker, Richard@Waterboards

From: Dick Allen <batteryrow@gmail.com>
Sent: Tuesday, August 18, 2015 6:56 AM
To: Looker, Richard@Waterboards
Cc: Morten; Dan and Joan Murphy; Dick Allen; Patrick Sweetland; Richard Roos-Collins
Subject: Fwd:

August 18, 2015

Mr. Richard Looker
Francisco Bay Regional Water Quality Control Board
Clay Street, Suite 1400
CA 94612

San
1515
Oakland,

VIA EMAIL: rlooker@waterboards.ca.gov

Subject: Comments on 2015 Basin Plan Triennial Review

Dear Mr. Looker:

By way of introduction we have long been involved with and interested in efforts to rehabilitate and fix the condition of Lake Merced located in San Francisco. Our efforts individually and collectively span at least 12 to 15 years and have been associated with California Trout's 2000 Public Trust Doctrine Complaint filed with the State Water Resources Control Board, membership on the Lake Merced Task Force, and public mediation participants before Judge William Cahill of JAMS. Collectively we have been referred to in some circles as the Lake Merced Cowboys with deference to our late friend and colleague Jerry Cadagan.

To date our efforts can reasonably take credit for working to achieve the use of recycled water by the golf courses surrounding Lake Merced, active monitoring toward sustainable management of groundwater use within the Westside Basin Groundwater Aquifer, and continued advocacy and support toward enforceable water levels in Lake Merced. Toward that last goal we have been particularly interested and actively involved in Daly City's joint planning and environmental review efforts with the San Francisco Public Utilities Commission on the Vista Grande Drainage Basin Improvement Project. You might recall our attendance and participation at meetings between these agencies and your senior executive staff in charting a regulatory course toward a win-win-win approach benefiting Lake Merced.

We are pleased to know Lake Merced has been included in the 2015 Triennial Review of the San Francisco Basin Water Quality Control Plan (Basin Plan). Project 3.9 would assess water quality standards provisions for DO and pH to address the 303(d) impaired water body listing of Lake Merced. We are supportive of the effort and further believe the Lake Merced Project should receive a high priority ranking. It is our understanding both Daly City and San Francisco Public Utilities

Commission recognize the importance of this effort and the need to provide local assistance to facilitate the Basin Planning process. This is a welcome development toward moving forward with the Lake Merced Project Alternative associated with the Vista Grande Drainage Basin Improvements. The ability to use stormwater as a valuable resource to restore lake levels is consistent with the State Board's Stormwater Strategic Initiative Proposal and is an opportunity we would not want to miss.

Progress is being made toward a Lake Merced solution long sought by our involvement. The public trust complaint before the State Board remains in abeyance because of good faith efforts demonstrated among all parties to proactively address Lake Merced. Although we have at times been frustrated over these past years, the addition of Lake Merced to this round of Basin Plan review presents an opportunity in which we can focus our attention toward finding long-sought solutions that fix Lake Merced.

Thank you, Mr. Looker, for your attention and assistance in making Lake Merced a priority in your Basin Plan review.

Sincerely,

Dick Morten Murphy Allen

Dan Dick

Cc: Richard Roos-Collins

PUBLIC WORKS

CITY OF PALO ALTO
2501 Embarcadero Way
Palo Alto, CA 94303
650.329.2598

August 18, 2015

Richard Looker
1515 Clay Street, Suite 1400
Oakland, CA 94612
(510) 622-2451

VIA EMAIL: rlooker@waterboards.ca.gov

Subject: City of Palo Alto Comments on the 2015 Triennial Review for the Water Quality Control Plan, San Francisco Bay Basin

Dear Mr. Looker:

The City of Palo Alto appreciates the opportunity to comment on the 2015 Triennial Review of the San Francisco Bay Basin Water Quality Control Plan (Basin Plan). The City of Palo Alto owns and operates the Regional Water Quality Control Plant (RWQCP), a wastewater treatment plant that serves approximately 230,000 residents from the communities of the East Palo Alto Sanitary District, the City of Mountain View, City of Los Altos, Town of Los Altos Hills, City of Palo Alto, and Stanford University. The RWQCP discharges highly treated wastewater to the South San Francisco Bay.

The City of Palo Alto supports the triennial review process and applauds the improvements made to the Basin Plan through this process in recent years. The current list of issues proposed for review in the *Brief Issue Descriptions for the 2015 Triennial Review of the San Francisco Bay Basin Water Quality Control Plan* that was developed by the San Francisco Bay Regional Water Quality Control Board (Regional Water Board) addresses roughly two dozen topics that affect broad sections of the residents, businesses, and public agencies of the San Francisco Bay Area.

The City of Palo Alto offers the following comments made with reference to the issues in the order of the Triennial Review for consideration:

1. ***Issue 2.1 – Add Unnamed Water Bodies That Receive Discharges***
   The City is in support of naming these water bodies and Palo Alto is interested in naming the outfall channel from the RWQCP to the South Bay.

2. ***Issue 3.1 – Consider refinement and/or development of site-specific objectives for dissolved oxygen in San Francisco Bay***
   The City supports reviewing the applicability of the current dissolved oxygen standard for tidal sloughs and the South Bay based on our knowledge of the data. The City of Palo Alto supports lowering of the dissolved oxygen limit in the South Bay from the 5mg/L to a range or zone of

tolerance that will allow the discharge to continue to meet discharge limits and protect the beneficial uses in the South Bay and sloughs. This may also be accomplished by amending the Basin Plan to drop the existing dissolved oxygen objectives and instead develop a narrative dissolved oxygen objective that is linked to beneficial use attainment.

3. ***Issue 3.8 – Review Un-ionized Ammonia Water Quality Objectives***
   The City of Palo Alto recommends using existing data for this effort. The City has already collected data that can be reviewed for use in developing unionized ammonia water quality objectives.

4. ***Issue 4.3 - Update Regional Board Wastewater Wetlands Policy Resolution 94-086***
   The City of Palo Alto agrees with this issue and supports the use of wetlands to provide additional water quality enhancement of treated wastewater effluent while concurrently increasing the amount of wetlands habitat around the Bay. We support alternative solutions with multiple benefits including nutrient reduction and sea level rise resiliency.

5. ***Issue 4.4 - Update Conditions for Exemption to Discharge Prohibitions***
   The City of Palo Alto supports updating the Basin Plan to acknowledge that highly treated effluent can contribute to ecosystem enhancement and continue to grant exception to the prohibitions to discharge.

6. ***Issue 4.5 – Develop Regulatory Strategy for Contaminants of Emerging Concern***
   The City of Palo Alto recommends waiting on this action as additional data is gathered and work by other groups continues. A large amount of analytical data is being collected in addition to the effort of NGOs and dischargers on increased product stewardship that is currently seeing some success in eliminating the potential discharge of some contaminants.

7. ***Issue 4.6 - Update Cyanide Dilution Credits***
   The City of Palo Alto agrees and strongly recommends that Table 4-6 be updated to add cyanide dilution credits for shallow water dischargers and other discharge locations that are not listed on the table.

The City of Palo Alto incorporates by reference comments made by the Bay Area Clean Water Agencies (BACWA). Thank you for the opportunity to comment on the 2015 Triennial Review and for considering our input. The City of Palo Alto is available for any discussion and further participation in this process.

Sincerely,

Phil Bobel
Assistant Director of Public Works
Environmental Services Division

jm/PB

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Santa Clara Valley Water District

August 18, 2015

Mr. Richard Looker e-mail: rlooker@waterboards.ca.gov
California Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, CA 94612

Subject: Comment Letter – Triennial Review of the Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan)

Dear Mr. Looker:

Santa Clara Valley Water District (District) staff has reviewed the July 2015 Brief Issue Descriptions for the Triennial Review of the San Francisco Bay Basin Water Quality Control Plan (Basin Plan). The District appreciates this opportunity and respectfully submits the following comments.

Item 2.1 Add Unnamed Water Bodies That Receive Discharges

The District supports the proposal to add unnamed water bodies that receive discharges to the Basin Plan. The District suggests that unnamed water bodies, also be added to TMDLs and incorporated into the Basin Plan for non-point sources. It would be helpful to include map(s) to depict the water bodies.

Item 2.2 Review for Presence of the Commercial and Sportfishing Use (COMM)

In Table 2.1, the Guadalupe Reservoir should be designated as E* (Water quality objectives apply; water contact recreation is prohibited or limited to protect public health). In addition, it would follow that the streams and other water bodies downstream of the listed E* reservoirs/water-sources also be designated as E* listed in Table 2.1 (i.e., Guadalupe and Alamitos Creeks, and other locations).

Item 3.1 Consider Refinement and/or Development of Site-Specific Objectives for Dissolved Oxygen in San Francisco Bay

The numeric targets adopted in 1975 for dissolved oxygen concentrations should be reconsidered. In addition to attainability and the given complexity of tidal water (movement, temperature, and seasonal aquatic-organism life histories), there may be room to modify the Basin Plan's CMC and CCC (respectively acute and chronic) dissolved oxygen success criteria tolerance range. No one value, or range of values, is applicable to all aquatic organisms. Depending on species and life history phase, the current Basin Plan CMC and CCC tolerance criteria do not align with certainty for a given species or their life history phase. Data defining optimal dissolved oxygen ranges for aquatic organisms in California, particularly euryhaline, are few[1, 2]. Consequently, attainable goals should be considered as the metric that emphasize the overall health of the ecosystem and not individual species (however, success criteria should be

developed to foster the greatest diversity of species). Focusing on numeric nutrient endpoints (NNE) and related NNE component variables may be the best alternative to direct, "one-size-fits-all", dissolved oxygen measurement goals and success criteria[2]. However, this will likely require more research, especially for site-specific application and further study of native California species. The Southern California Coastal Water Research Project NNE Framework is further referenced in Item 3.5.

Item 3.6 Development and Implementation of Biological Objectives

Analogous to the dissolved oxygen discussion in Item 3.1, biological objectives will need to be appropriately developed to account for regional life history differences of aquatic organisms including the regional differences of the same species (i.e. steelhead). The District recommends that biological objectives be consistent between the Basin Plan and Municipal Regional Permits.

Item 3.7 Incorporate Revised 2012 U.S. EPA Recreational Water Quality Criteria (RWQC) for Bacteria

The District supports the proposal to incorporate Revised 2012 EPA Recreational Water Quality Criteria (RWQC) for Bacteria into the Basin Plan

Item 4.2 – Low-Threat Chlorinated Solvent Site Closure Requirements

San Francisco Water Board (Water Board) staff includes this issue as a candidate for updating the Basin Plan. The Basin Plan would be amended to include a description of the low-threat criteria for closure of chlorinated solvent sites to complement the State's Low-Threat Closure policy for Underground Storage Tanks (UST) sites. This update would allow Water Board staff to focus on sites that pose a higher threat to human health and/or the environment.

The District supports this update of the Basin Plan. This update would help the Water Board staff to focus resources on issues with the greatest potential for significant impacts. Whereas the State policy spells out specific contaminants (benzene and methyl tertiary butyl ether) and specific concentration levels for UST sites, the District recommends that the Water Board criteria for low-threat chlorinated solvent sites maintain more general criteria that are not contaminant specific. The criteria should also consider the vulnerability of the groundwater basins (i.e. a site may meet the criteria for a low threat closure if it is overlying thick layers of bay mud, but the same site may not meet the criteria if it was located in the recharge area of the basin).

Item 6.2 - Miscellaneous Editorial Changes

Water Board lists a series of potential editorial changes to the Basin Plan. The District has the following additional editorial comments:

- Table 3-5 should be updated to include current MCLs. Perchlorate and Chromium VI are not included in this table.
- Table 3-6 (Water Quality Objectives for Agricultural Supply) includes a range of 0.2-3.0 mmhos/cm for electrical conductivity. The use of this range should be discussed and the units should be clarified.

- Section 4.25 (Groundwater Protection and Management) and other relevant sections should be updated to discuss the requirements of the Sustainable Groundwater Management Act.
- Section 25.2.1 (State Water Board Policies for Groundwater Clean-Up) - The state is currently evaluating the anti-degradation policy as it relates to groundwater. If changes are made during this period, the triennial review should update the Basin Plan to reflect these changes. The District supports retaining an overriding anti-degradation objective in the Basin Plan as a goal to guide decisions on groundwater cleanup cases and discharge permits.
- Chapter 5 is a list of statewide policies. This list should be updated to include the links to the most current versions of these policies and any that are obsolete should be deleted.
- Section 4.26 (Emerging Program Areas) – Alternative sources of water supply are being considered in many areas due to the drought and potential long term impacts of climate change. Indirect and Direct Potable Reuse programs should be discussed in the Basin Plan.
- The Basin Plan should address the implications of UCMR3 findings on basin water quality.

Thank you for your consideration of these comments.

Sincerely,

Garth Hall
Deputy Operating Officer
Water Supply Division

cc: L. Lee, L. Porcella, S. Dharasker, V. De La Piedra, G. Cook

[1] U.S. Fish and Wildlife Service, 2005. Recovery Plan for the Tidewater Goby (*Eucyclogobious newberri*). U.S. Fish and Wildlife Service, Portland, Oregon.

[2] Sutula M., H. Bailey, and S. Poucher, 2012. Science Supporting Dissolved Oxygen Objectives in California Estuaries. Southern California Coastal Water Research Project Technical Report No. 684. December 2012.

SAN FRANCISCO ESTUARY INSTITUTE
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August 12, 2015

Bruce Wolfe, Executive Officer
San Francisco Bay Regional Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, CA 94612

Re: 2015 Basin Plan Triennial Review

Dear Mr. Wolfe:

The San Francisco Estuary Institute (SFEI) is one of California's premier aquatic and ecosystem science institutes. Our mission is to provide scientific support and tools for decision-making and communication through collaborative efforts. We provide independent science to assess and improve the health of the waters, wetlands, wildlife and landscapes of San Francisco Bay, the California Delta and beyond.

SFEI scientists are experts on many of the issues being considered for the 2015 Basin Plan Triennial Review. In the Triennial Review announcement, Issues 3.1 and 3.4 call for development of numeric objectives for dissolved oxygen and nutrients in San Francisco Bay. As the scientific lead for the Nutrient Management Strategy, SFEI is already conducting multiple nutrient-related studies, including the deployment of real-time sensors to measure dissolved oxygen and other parameters, monitoring for algal toxins and identifying their sources, and developing water quality models to assess the effectiveness of management actions[1]. Issue 4.5 calls for a regulatory strategy for contaminants of emerging concern (CECs). SFEI scientists have already prepared a CEC strategy[2] for the Bay and our CEC research has been recognized nationally[3]. Finally, the Baylands Ecosystem Habitat Goals 2015 Science Update report, with SFEI playing a leading science role, is cited for Issues 4.3 and 5.2 regarding wastewater reuse and climate change, respectively. Addressing these topics will require innovative science and demonstration on the ground of new approaches to restoring ecosystem processes. SFEI scientists can help the Regional Board to update the Basin Plan by providing scientific information on these and many other topics.

The solicitation letter for the 2015 Basin Plan Triennial Review requested comments on priorities. While all the issues identified by the Regional Board are important, one issue stands out as top priority: *Climate Change and Water Resources Policy* (5.2). The impacts of climate change and sea level rise on the Bay Area will be profound. There is an urgent need to put into place policies that promote sustainability and resiliency. SFEI anticipates the need for both forward-thinking and detailed scientific information to inform these policies. For example, for the 2015 Pulse of the Bay Report, SFEI developed

a vision for water quality in the Bay in 2065. Likewise, through extensive collaboration among estuarine science experts, the Baylands Ecosystem Habitat Goals 2015 Science Update will provide a blueprint for the critical processes that need to be restored to maintain key ecological functions and ecosystem services for a healthy Bay. These products plus our suite of Environmental Informatics[4] visualization tools can give the Regional Board a solid foundation to tackle this challenging goal.

Respectfully,

Warner Chabot

Warner Chabot, Executive Director

Notes and Resources

1. Nutrient Management Strategy for San Francisco Bay, http://sfbaynutrients.sfei.org/
2. Sutton, R., M. Sedlak, and D. Yee. 2013. Contaminants of Emerging Concern in San Francisco Bay: A Strategy for Future Investigations. SFEI Contribution 700. San Francisco Estuary Institute, Richmond, CA. Published Online: http://www.sfei.org/sites/default/files/biblio_files/SFEI_CEC_strategy_FINAL.pdf.
3. Sutton, R., M.D. Sedlak, D. Yee, J.A. Davis, D. Crane, R. Grace, and N. Arsem. 2015. Declines in Polybrominated Diphenyl Ether Contamination of San Francisco Bay following Production Phase-Outs and Bans. *Environ. Sci. Technol*. **49**(2): 777-784.
4. http://www.sfei.org/programs/ei

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August 18, 2015

Submitted via email: rlooker@waterboards.ca.gov

Richard Looker
California Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, CA 94612

Subject: Solicitation of Comments for San Francisco Basin Plan Triennial Review

Dear Mr. Looker:

The San Francisco Public Utilities Commission (SFPUC) appreciates the opportunity to comment on the list of issues to be considered during the Triennial Review. Our recommendations are based on our responsibilities for managing both the wastewater and drinking water programs for the City.

In the attachment to this letter, we have included specific recommendations regarding issues identified by the Regional Board. We have also suggested a few additional issues which address items of importance concerning water and wastewater management in the City and drinking water watersheds in San Mateo, Alameda, and Santa Clara counties.

Please contact me if you have any questions or would like more information. In addition, Laura Pagano, (415) 554-3109, is available to discuss wastewater issues and Ellen Natesan, (415) 554-1556, is available for drinking water issues.

Sincerely,

Michael P. Carlin
Deputy General Manager.
San Francisco Public Utilities Commission

Attachment: SFPUC Response to Triennial Review Issue Solicitation

SFPUC Comments on the 2015 SF Basin Plan Triennial Review Issue Solicitation

Comments on projects described in the Regional Water Board Issue Descriptions:

2.3 Alignment of Ocean Plan and Basin Plan relative to REC1 Use

3.1 Consider Refinement and/or Development of Site-Specific Objectives for Dissolved Oxygen in San Francisco Bay

3.6 Development and Implementation of Biological Objectives.

3.7 Incorporate Revised 2012 U.S. EPA Recreational Water Quality Criteria (RWQC) for Bacteria

3.8 Review Un-ionized Ammonia Water Quality Objective

3.9 Lake Merced Dissolved Oxygen and pH Objectives

4.4 Update Conditions for Exemption to Discharge Prohibitions

5.1 Priority Ranking for TMDL Development

5.2 Climate Change and Water Resources Policy

6.1 Clarify Turbidity Water Quality Objective

Proposed additional issues to be addressed during the Triennial Review

A. Alternative Compliance Approach for Wet Weather Flows

B. Modification of Chlorine Residual Instantaneous Objective (0.0 mg/L)

C. Modification of Groundwater Sub-Basin Boundaries

Issue 2.3 Alignment of Ocean Plan and Basin Plan relative to REC1 Use

This project would make the Basin Plan water contact recreation (REC1) beneficial use designation consistent with the California Ocean Plan. The Ocean Plan restricts effluent limits intended to protect REC1 to: 1) a zone bounded by the shoreline and a distance of 1,000 feet from the shoreline or the 30-foot depth contour; and 2) areas designated REC1 by a Regional Water Board. The Issue Description notes that the Basin Plan provides no specific details on where REC1 applies and therefore by default assigns REC1 to the entire Pacific Ocean.

Recommendation: SFPUC strongly supports aligning the Basin Plan with the Ocean Plan with respect to the application of the REC1 beneficial use in Ocean waters. We believe it will be beneficial for the REC1 designation to be applied more accurately and more consistently with the Ocean Plan parameters.

Issue 3.1 Consider Refinement and/or Development of Site-Specific Objectives for Dissolved Oxygen in San Francisco Bay

Recommendation: SFPUC supports comments by the Bay Area Clean Water Agencies (BACWA) on this issue.

3.6 Development and Implementation of Biological Objectives

As explained in the Issue Descriptions, "biological assessment methods are more integrative and environmentally relevant goals for the protection of aquatic life than the objectives based on pollutants that are currently in the Basin Plan."

Recommendation: SFPUC supports the effort to develop biological objectives and suggests the effort be considered for Bay water as wells. In applicable situations, biological objectives would enable the Board and permittees to bypass non-issues and focus on the real causes of water quality impairment.

Issue 3.7 Incorporate Revised 2012 U.S. EPA Recreational Water Quality Criteria (RWQC) for Bacteria

The State Water Board plans to adopt the 2012 U.S. EPA Recreational Water Quality Criteria for Bacteria as amendments to the Ocean Plan and the future Inland Surface Waters, Enclosed Bays and Estuaries (ISWEBE) Plan. The criteria use measurement of enterococci in marine waters to assess the risk to human health. The total and fecal coliform indicators are not recommended by U.S. EPA and will likely not be included in the water quality plan objectives adopted at the state level. As discussed in the issue description, the Regional Water Board will need to make corresponding changes to the Basin Plan to make it consistent with the statewide amendments.

Recommendation: SFPUC supports the efforts of the Regional Water Board to provide clarity and consistency in the Basin Plan with the amendments as adopted by the State Water Board. We have the following suggestions:

1) EPA developed two sets of recommended criteria values that protect the designated use of primary contact recreation. Assuming the Regional Water Boards have the option, we recommend that the adopted standard for the Basin Plan geometric mean be 35 cfu/100 mL

Enterococci, marine waters, rather than 30 cfu/100 mL. The corresponding statistical threshold value (STV) would be 130 cfu/100 mL.

2) In the Basin Plan, Table 3-1: *Water Quality Objectives for Bacteria*, identifies the following enterococcus objectives for marine waters (all MPN/100ml):

   Geometric mean < 35
   No sample > 104 (single sample maximum – SSM)

   It would be useful to maintain the single sample maximum (SSM) and the geomean for advisory postings and de-postings. In this case, EPA's suggested but not mandated beach action values (BAV) would not be used.

3) We recommend that enterococcus be the only indicator for posting/notification in marine waters in conformity with the U.S. EPA 2012 Criteria. We understand that the State Health and Safety Code requirements based on AB 411 (1997) also identify fecal and total coliform as primary indicators in addition to enterococci bacteria. We note that a new state law–SB-1395 (Corbett 2014) –alters the AB 411 requirements by allowing the use of enterococcus as the sole indicator, as specified by U.S. EPA, if certain procedures are followed. We suggest that the Basin Plan maintain as much flexibility as possible to allow dischargers to marine waters to use enterococcus as the sole indicator in order to not waste monitoring effort on indicators which do not provide useful information and may result in erroneous public notifications. In addition, we recommend that enterococci bacteria be used as the sole indicator for identification of impairments of marine water quality and placement on the Clean Water Act 303(d) list.

4) Combined sewer discharges (CSD) occur several times a year when the treatment and storage facilities are at maximum capacity. These sites are monitored after the CSD until bacteria standards are met. This post-CSD monitoring occurs at several sites which are not monitored routinely. In other words, the only data from these locations is that collected after CSDs occur. This results in worse-case data for these sites which is not characteristic of the overall water quality of the location and should not be the sole basis for 303(d) evaluations. We recommend that a procedure be developed to address this unique set of monitoring data so that the data does not result in inappropriate impairment listings.

5) It would be very helpful if the Basin Plan included clarification regarding appropriate reference sites, if any, for use in San Francisco Bay Bacteria or Pathogen TMDLs and a discussion of a natural source exclusion process as applied in the Bay area. Beginning this process relatively early will help facilitate bacteria-related TMDLs.

6) It would also be helpful to clarify the application of mixing zones specific to the Bacteria standards.

7) Table 3-1 also includes Fecal Coliform standards for Non-contact Water Recreation (REC2). These are based on the 1968 Report of the Committee on Water Quality Criteria, National Technical Advisory Committee. We recommend reconsideration of the need for such standards for non-contact waters.

Issue 3.8 Review Un-ionized Ammonia Water Quality Objective

This project would be used to modify the Basin Plan un-ionized ammonia objectives to make them consistent with the magnitude and averaging period of U.S. EPA's 1989 acute and chronic saltwater criteria for un-ionized ammonia.

Recommendation: Given the lack of evidence that ammonia presents a toxicity risk in San Francisco Bay, SFPUC suggests that revising the current objectives is not a high priority.

3.9 Lake Merced Dissolved Oxygen and pH Objectives

As explained in the Issue Descriptions, this project investigates water quality standards actions (Chapter 3 – WQ Objectives) for dissolved oxygen and pH, and it would also memorialize Lake Merced water quality management efforts in Chapter 4 of the Basin Plan regarding accepting storm flows from the Vista Grande Drainage Basin.

Recommendation: SFPUC supports the proposed effort to investigate water quality standards actions for pH and DO and incorporating the plans for the lake within Chapter 4 of the Basin Plan. This action would support the implementation and ability to obtain regulatory assurance needed for implementation of the Vista Grande Drainage Basin Stormwater Improvement Project. This project addresses flooding in the Vista Grande Basin by reconnecting the natural watershed to the lake and would also provide a sustainable source of stormwater to augment lake levels which currently are almost entirely controlled by direct precipitation. The City of Daly City is the lead agency for the Vista Grande Drainage Basin Stormwater Improvement Project, and the SFPUC strongly supports it.

4.4 Update Conditions for Exemption to Discharge Prohibitions

This effort would remove the reference to *improved treatment reliability* in the criteria for an approvable exception to the Basin Plan's prohibition on shallow water discharges.

Recommendation: SFPUC proposes that "improved treatment reliability" should remain as a possible basis for demonstrating an equivalent level of protection. In some cases, reliability projects such as providing alternative power sources or backup storage would be beneficial and should remain as an option.

5.1 Priority Ranking for TMDL Development

The TMDLs with the highest priority for completion as Basin Plan amendments over the next three years include San Francisco Bay Beaches (pathogens) which is listed in the top three. This TMDL includes six beaches, three of which are located in San Francisco (Crissy Field Beach, Candlestick Point, and Aquatic Park Beach). The impairment listing was made by USEPA in 2006.

The list of projects identified for completion as Basin Plan amendments also includes the Statewide Policy on Mercury in Reservoirs. The state has included over 70 reservoirs and lakes on the Clean Water Act 303(d) list due to impairment by mercury (USEPA recently added another). Two of these are operated and managed by the SFPUC (Calaveras, Hetch Hetchy). Additional reservoirs are likely to be listed in the future.

With a few exceptions, the major source of mercury is atmospheric deposition either directly onto the reservoir or in the watershed. "New" mercury, i.e., recently deposited is more important in the creation of methylmercury than "old" mercury in the sediments.

Corrective measures at the local level are limited with oxygenation, aeration, or forced mixing possibly showing the most promise. However, performance data regarding methylmercury benefits is essentially absent. In addition, these measures will be very expensive to implement especially for large reservoirs. Consequently, to be effective, we recommend that source control on an international basis be part of any proposed solution.

For atmospherically deposited mercury, we recommend that the policy development include load allocations which distinguish between local, global, and natural mercury emissions that produce deposition in California. Some countries are working to reduce mercury emissions and have signed a global treaty to reduce mercury pollution, but it is expected that mercury emissions will continue to increase in developing nations including those in Asia.

Recommendation:

1) SFPUC requests that work on the San Francisco Bay Beaches TMDL be postponed until the Bacteria Amendments are completed by the State Water Board. For example, if the Amendments replace the single sample maxima (SSM) as a criterion with the statistical threshold value (STV) as expected, this change may impact TMDL targets. Similarly, the change from multiple pathogen indicators to enterococcus as the sole indicator may also affect TMDL allocations.

2) To be effective in reducing the levels of methylmercury in fish in reservoirs, we recommend that the Water Boards work with U.S. EPA on a national and international level to pressure developing nations to control their mercury emissions (similar to CO2 initiatives). Otherwise, local initiatives will likely fall short regardless of the expense and level of effort. We believe this broader source control effort should be a key part of the statewide policy and strategy.

5.2 Climate Change and Water Resources Policy

Climate change is already affecting water and wastewater operations on multiple levels. Sea level rise +higher storm surge impact wastewater compliance, especially in wet weather when permanent (sea level rise) or temporary (storm surge on top of sea level rise) levels impede discharge capabilities. Regulatory modifications are needed to accommodate these changes. Another example is reservoirs – rising temperatures related to climate change will cause reservoirs to stratify earlier in the year and de-stratify later resulting in greater anoxia and therefore more production of methylmercury. The Regional Water Board can help coordinate and support a regional effort to better prepare for these changes, especially by identifying appropriate regulatory modifications to accommodate the climate induced changes that are already underway. It is essential for the Board and other state agencies to adapt existing policies to encourage and allow for stormwater capture and use and wastewater reuse, including as part of groundwater sustainability plans.

Recommendation: SFPUC supports Basin Plan modifications to support water and wastewater agencies planning for the infrastructure and operational changes needed to address climate change. Some of the issues include: 1) identification of long-term infrastructure needs; 2) methodologies for balancing environmental benefits and risks (i.e., tradeoffs) associated with beneficial uses; and, 3) enforcement flexibility during increasingly erratic weather, more extreme precipitation events and sea level rise.

6.1 Clarify Turbidity Water Quality Objective

Recommendation: SFPUC supports clarifying this text regarding turbidity. We also suggest adding text providing for temporary exceedances or exceptions to the turbidity objectives when necessary and appropriate to protect other beneficial uses, especially municipal water supply. For example, a fire such as the 2013 Rim Fire or landslides in the watershed may result in highly-turbid flows which cannot be adequately treated and threaten the drinking water supply. In this case, a short-term

release of these turbid waters to storage reservoirs or other waterways is essential to protect the drinking water and should not result in an enforcement action.

Additional topics for consideration

A. Alternative Compliance Approach for Wet Weather Flows (New issue)

Compliance of wet weather flows with water quality standards is a statewide issue. The State Water Board's draft Proposal for a *Storm Water Program Workplan and Implementation Strategy* is intended to change how stormwater is regulated and managed. Twenty-two specific projects are being considered. Project 5 is *Alternative Compliance Approaches for Municipal Storm Water Permit Receiving Water Limitations*. Receiving Limitations (RWL) in this context refers to compliance with water quality standards. If measured at the point of discharge, stormwater typically contain concentrations of pollutants which exceed the water quality criteria or objectives. Options to address this issue include:

- A Seasonal or Wet Weather Suspension or variance for stormwater or flows that are primarily stormwater (such as combined sewer discharges) which cannot be effectively disinfected. A Region-wide Use Attainability Analysis (UAA) would be needed to support this change in beneficial uses.
- Establishment of a wet weather sub-category of standards. Regulatory agencies have supported wet weather uses related to recreation and the bacteria objectives,[1] however, the wet weather designation would necessarily include other parameters. A UAA would be required.

This issue is also related to several of the other projects outlined in the Issue Descriptions:

2.3 - Alignment of Ocean Plan and Basin Plan relative to REC1 Use

3.7 - Incorporate Revised 2012 U.S. EPA Recreational Water Quality Criteria (RWQC) for Bacteria (a high flow exclusion is being considered for this project and may be appropriate for enclosed channels such as Islais Creek and Mission Creek).

4.4 - Update Conditions for Exemption to Discharge Prohibitions

Recommendation: Consider development of alternative approaches for regulating wet weather discharges which are primarily stormwater, including combined sewer discharges. This effort could potentially be accomplished in coordination with the statewide stormwater initiative. SFPUC can provide support to the Regional Water Board for development of this project.

B. Modify instantaneous chlorine residual objective of 0.0 mg/L (New project)

This issue affects both the SFPUC wastewater program and drinking water system operations. We note that the recently adopted State Board statewide permit for drinking water systems discharges (Order WQ 2014-0194-DWQ) effectively sets the chlorine limitation at 0.1 mg/L due to technical constraints on monitoring equipment. Dechlorination of drinking water system discharges is particularly difficult because the flow volume may vary quickly and correct dosing of chlorination and dechlorination chemicals is technically very difficult.

[1] See "When is it appropriate to modify primary contact recreation uses to reflect high flow situations?" in *Implementation Guidance for Ambient Water Quality Criteria for Bacteria* , U.S. EPA, March 2004.

Recommendation: SFPUC supports BACWA's request for modification of the chlorine residual objective of 0.0 mg/L. The Basin Plan could adopt a limitation similar to the one in the Los Angeles Region Basin Plan Chapter 3:

> *Chlorine residual shall not be present in surface water discharges at concentrations that exceed 0.1 mg/L and shall not persist in receiving waters at any concentration that causes impairment of beneficial uses*.

Another possible approach for implementing the standard for highly variable water system discharges is to include procedures that take into account the technical difficulty of precisely controlling chemical additional and the need to not over treat with dechlorination chemicals.

C. Modification of Groundwater Sub-Basin Boundaries (New project)

Recommendation: We propose revisions to the boundaries of two groundwater basins located in San Francisco and San Mateo Counties to be consistent with the CA Department of Water Resources Bulletin 118. As noted in Footnote 7 to Table 2-2 of the Basin Plan, the sub-basins identified on Figure 2-10C and described in Table 2-2 of the Basin Plan (Westside 2-35A, B, C and D, and Islais Valley 2-33A and B) are "informal names assigned by the Water Board to preserve the beneficial use designations in the 1995 Basin Plan and do not represent sub-basins identified by the Department of Water Resources" (DWR) in Bulletin 118. DWR's Bulletin 118 defines the Westside Basin and the Islais Valley Basin each as one entire groundwater basin with no delineated sub-basins.

The Bulletin 118 boundaries are used as the basis for statewide water resource, planning, management, and funding decisions, as well as the California Statewide Groundwater Elevation Monitoring Program. DWR's draft Basin Boundary Regulations, published on July 17, 2015, state that, "revision of any basin boundaries or creation of new sub-basins approved by the Department shall be consistent with the State's interest in the sustainable management of groundwater as expressed in the Sustainable Groundwater Management Act (SGMA)." While elements of the Basin Plan are not required to be consistent with SGMA, maintaining consistency in statewide groundwater management will make planning efforts more effective and efficient.

On March 10, 2015, in voluntary compliance with SGMA, SFPUC established itself as the Groundwater Sustainability Agency for the seven groundwater basins that underlie San Francisco, including the Westside and Islais Valley Groundwater Basins. SFPUC intends to manage these basins in accordance with SGMA; is preparing a Groundwater Sustainability Plan for the North Westside Basin; and intends to enter into coordination agreements with partner agencies in San Mateo County to promote coordinated groundwater management for the entire Westside Basin. In addition, SFPUC is currently constructing municipal supply wells across the Westside Basin, as part of the San Francisco Groundwater Supply Project and the Regional Groundwater Storage and Recovery Project.

SFPUC does not view the sub-basin designations for the Westside and Islais Valley basins as being useful for groundwater resource management in light of drought conditions and the increasing and changing needs for water and groundwater resources. Our understanding is that the Regional Water Board added the sub-basin designations in 2010 to preserve the beneficial uses from the 1995 Basin Plan. The four beneficial water supply use categories (municipal and domestic; industrial process; industrial service; and agricultural) are existing uses across the Westside Basin. In the Islais Valley Basin, the existing beneficial uses of groundwater are industrial process, industrial service, and agricultural water supply; municipal and domestic water supply is categorized as a potential use. To be consistent with other statewide groundwater management and monitoring programs, SFPUC proposes using the DWR Bulletin 118 boundaries for both the Westside and Islais Valley Groundwater Basins for the forthcoming Water Quality Control Plan for the San Francisco Bay

Region. In summary, the SFPUC requests that the Water Board revise Figure 2-10C and Table 2-2 to be consistent with DWR Bulletin 118. Attached are the following supporting documents:

Attachment 1 - Existing Figure 2-10C

Attachment 2 - Proposed Revisions to Figure 2-10C

Attachment 3 - DWR Basins Map - San Francisco Bay

Attachment 4 - Existing Table 2-2

Attachment 5 - Existing Table 2-2, Islais Valley and Westside Groundwater Basins

Attachment 6 - Proposed Revisions to Table 2-2, Islais Valley and Westside Groundwater Basins

Figure 2-10C Groundwater Basins: San Francisco

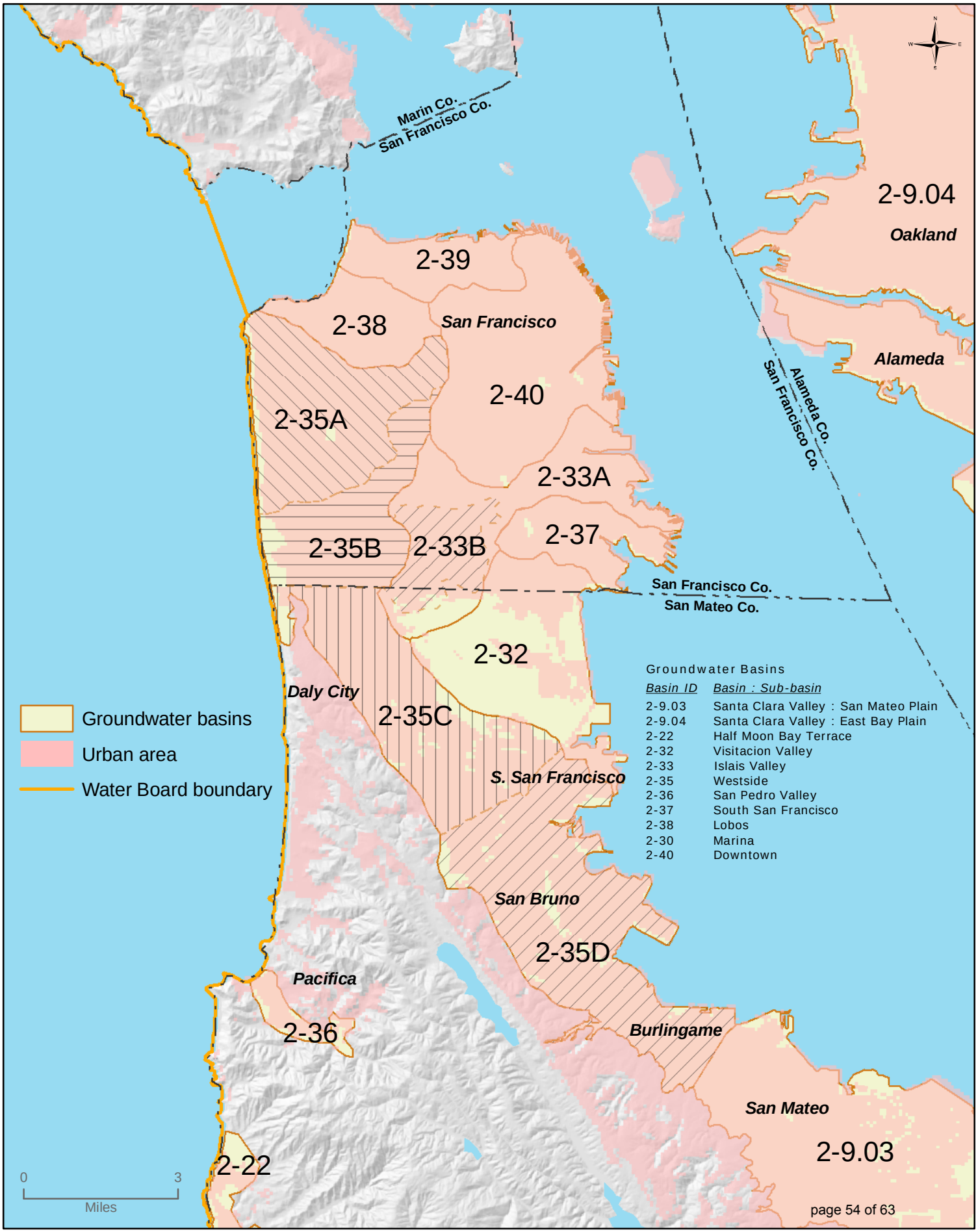
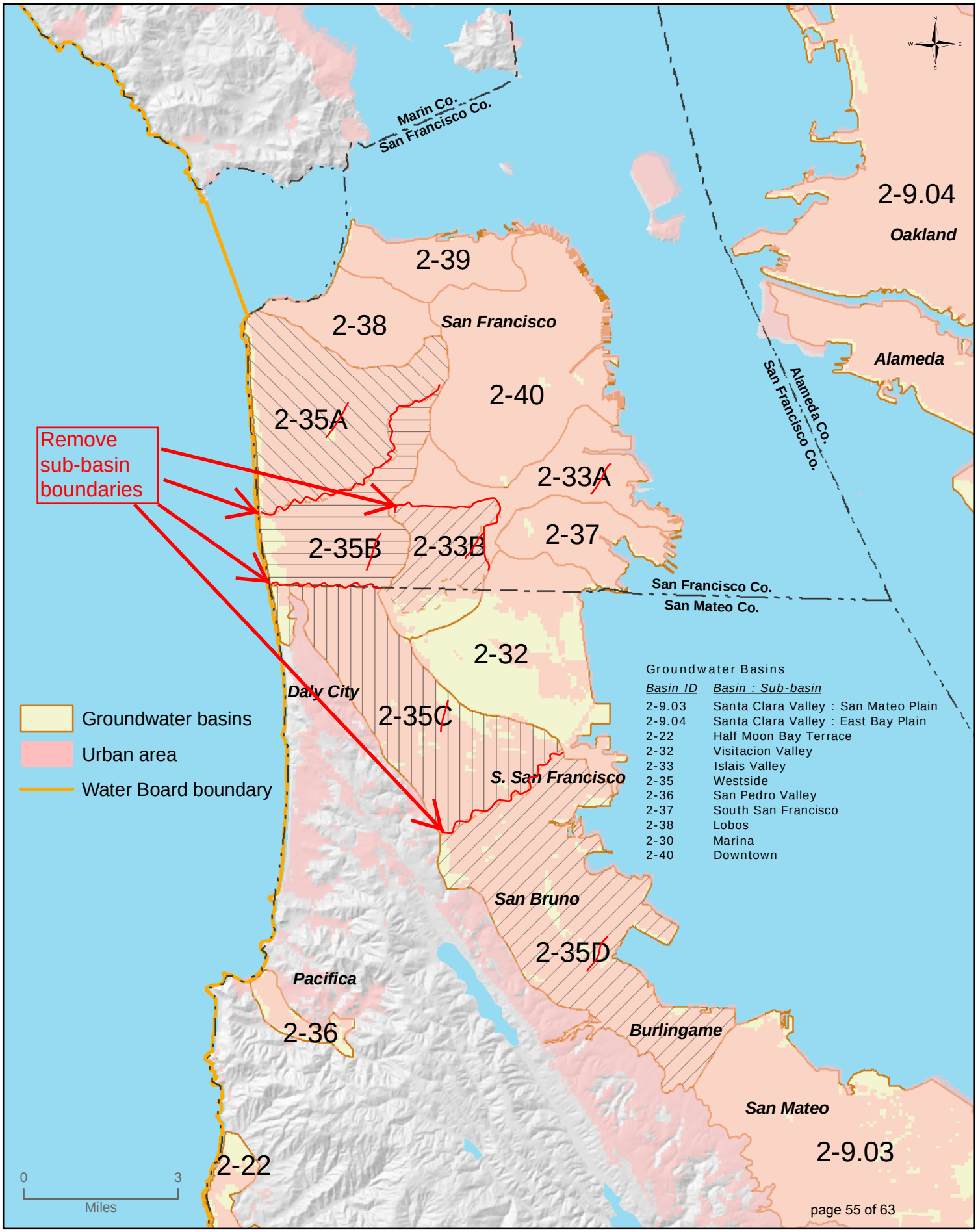


Figure 2-10C Groundwater Basins: San Francisco



Attachment 3 -
DWR Basins Map

Alluvial Groundwater Basins and Subbasins within the San Francisco Bay Hydrologic Region

Source: Department of Water Resources, CWP 2013

Table 2-2: Existing and Potential Beneficial Uses in Groundwater in Identified Basins

County	Groundwater Basin Name[1]	Groundwater Sub-Basin[1]	Basin Number[1]	MUN[2]	PROC[3]	IND[4]	AGR[5]	FRESH[6]
Alameda	Castro Valley	--	2-8	P	P	P	P	--
Alameda	Santa Clara Valley	Niles Cone	2-9.01	E	E	E	E	--
Alameda and Contra Costa	Santa Clara Valley	East Bay Plain	2-9.04	E	E	E	E	--
Alameda and Contra Costa	Livermore Valley	--	2-10	E	E	E	E	--
Alameda	Sunol Valley	--	2-11	E	E	E	E	--
Contra Costa	Pittsburg Plain	--	2-4	P	P	P	P	--
Contra Costa	Clayton Valley	--	2-5	E	P	P	P	--
Contra Costa	Ygnacio Valley	--	2-6	P	P	P	P	--
Contra Costa	San Ramon Valley	--	2-7	E	P	P	E	--
Contra Costa	Arroyo del Hambre Valley	--	2-31	P	P	P	P	--
Marin	Sand Point Area	--	2-27	E	P	P	P	--
Marin	Ross Valley	--	2-28	E	P	P	E	--
Marin	San Rafael Valley	--	2-29	P	P	P	P	--
Marin	Novato Valley	--	2-30	P	P	P	P	--
Napa	Napa-Sonoma Valley	Napa Valley	2-2.01	E	E	E	E	--
Napa and Solano	Napa-Sonoma Valley	Napa-Sonoma Lowlands	2-2.03	E	E	E	E	--
San Francisco and San Mateo	Visitacion Valley	--	2-32	P	E	E	P	--
San Francisco and San Mateo	Islais Valley A[7]	--	2-33A	P	E	E	P	--
San Francisco	Islais Valley B[7]	--	2-33B	P	P	P	E	--
San Francisco	South San Francisco	--	2-37	P	E	E	P	--
San Francisco and San Mateo	Westside A[7]	--	2-35A	E	P	P	E	--
San Francisco	Lobos	--	2-38	E	P	P	E	--
San Francisco	Marina	--	2-39	E	P	P	E	--
San Francisco	Downtown	--	2-40	E	P	P	E	--
San Francisco	Westside B[7]	--	2-35B	P	P	P	E	--
San Mateo	Westside C[7]	--	2-35C	E	P	P	E	--

County	Groundwater Basin Name[1]	Groundwater Sub-Basin[1]	Basin Number[1]	MUN[2]	PROC[3]	IND[4]	AGR[5]	FRESH[6]
San Mateo	Westside D[7]	--	2-35D	E	E	E	P	--
San Mateo	Santa Clara Valley	San Mateo Plain	2-9.03	E	E	E	P	--
San Mateo and Santa Clara	Santa Clara Valley[8]	Santa Clara	2-9.02	E	E	E	E	--
San Mateo	Half Moon Bay Terrace	--	2-22	E	P	P	E	--
San Mateo	San Gregorio Valley	--	2-24	E	P	P	E	--
San Mateo	Pescadero Valley	--	2-26	E	P	P	E	--
San Mateo	San Pedro Valley	--	2-36	P	P	P	P	--
Solano	Suisun-Fairfield Valley	--	2-3	E	E	E	E	--
Sonoma and Marin	Petaluma Valley	--	2-1	E	P	P	E	--
Sonoma	Napa-Sonoma Valley	Sonoma Valley	2-2.02	E	P	P	E	--
Sonoma and Marin	Wilson Grove Formation Highlands	--	1.59	E	P	P	E	--
Sonoma and Marin	Wilson Grove Formation Highlands	--	1.59	See RB1 Basin Plan[9]				
Sonoma	Kenwood Valley	--	2-19	E	P	P	E	--
Sonoma	Napa – Sonoma Volcanic Highlands	--	2-23	X	X	X	X	X
Santa Clara	Gilroy – Hollister Valley	Llagas Area	3-3.01	See RB3 Basin Plan[10]				

Notes:

1. Department of Water Resources (DWR) Bulletin 118 “California Groundwater”, 2003.
2. MUN = Municipal and domestic water supply.
3. PROC = Industrial process water supply.
4. IND = Industrial service water supply.
5. AGR = Agricultural water supply.
6. FRESH = Freshwater replenishment to surface water; designation will be determined at a later date; for the interim, a site-by-site determination will be made.
7. The existing and potential beneficial uses for groundwater basins listed in the 1995 Basin Plan (Table 2-3) were assigned to the new groundwater basins based on the geographic location of the old basins compared to the new basins. The basin names, such as Westside A,

Westside B, etc., are informal names assigned by the Water Board to preserve the beneficial use designations in the 1995 Basin Plan and do not represent sub-basins identified by the Department of Water Resources.

8. The Santa Clara Valley groundwater basin/Santa Clara groundwater sub-basin is also known as Coyote Valley.
9. This groundwater basin is also located in the North Coast Region (RB1); beneficial uses of groundwater are specified in the Basin Plan for RB1.
10. This groundwater basin is also located in the Central Coast Region (RB3); beneficial uses of groundwater are specified in the Basin Plan for RB3.

E = Existing beneficial uses; based on best available information.
P = Potential beneficial uses; based on best available information.
X = This groundwater basin was not listed in the 1995 Basin Plan; designation will be determined at a later date; for the interim, a site-by-site determination will be made.
See DWR Bulletin 118 (2003) for groundwater basin characteristics.

Attachment 5 - Existing Table 2-2,
Islais Valley and Westside
Groundwater Basins

Excerpted from Table 2-2: Existing and Potential Beneficial Uses in Groundwater in Identified Basins

County	Groundwater Basin Name	Groundwater Sub-Basin	Basin Number	MUN	PROC	IND	AGR	FRESH
San Francisco and San Mateo	Islais Valley A[7]	--	2-33A	P	E	E	P	--
San Francisco	Islais Valley B[7]	--	2-33B	P	P	P	E	--
San Francisco and San Mateo	Westside A[7]	--	2-35A	E	P	P	E	--
San Francisco	Westside B[7]	--	2-35B	P	P	P	E	--
San Mateo	Westside C[7]	--	2-35C	E	P	P	E	--
San Mateo	Westside D[7]	--	2-35D	E	E	E	P	--

Footnote 7. The existing and potential beneficial uses for groundwater basins listed in the 1995 Basin Plan (Table 2-3) were assigned to the new groundwater basins based on the geographic location of the old basins compared to the new basins. The basin names, such as Westside A, Westside B, etc., are informal names assigned by the Water Board to preserve the beneficial use designations in the 1995 Basin Plan and do not represent sub-basins identified by the Department of Water Resources.

Attachment 6 - Proposed Revisions
to Table 2-2, Islais Valley and
Westside Groundwater Basins

Excerpted and Revised from Table 2-2: Existing and Potential Beneficial Uses in Groundwater in Identified Basins

County	Groundwater Basin Name	Groundwater Sub-Basin	Basin Number	MUN	PROC	IND	AGR	FRESH
San Francisco and San Mateo	Islais Valley	--	2-33	P	E	E	E	--
San Francisco and San Mateo	Westside	--	2-35	E	E	E	E	--

Looker, Richard@Waterboards

From: Fleck, Diane <Fleck.Diane@epa.gov>
Sent: Wednesday, July 22, 2015 8:19 AM
To: Looker, Richard@Waterboards
Cc: hashimoto.janet@epa.gov; Feger, Naomi@Waterboards
Subject: San Francisco Regional Water Board Triennial Review - draft comment letter

Hi Richard,
Thank you for the opportunity to comment on the San Francisco Regional Water Board's (Regional Board's) "Brief Issue Descriptions for the 2015 Triennial Review of the San Francisco Bay Basin Water Quality Control Plan" dated July 2015. EPA supports the projects described in the document; we have only a few minor comments.

1. Under Section 2, Update Beneficial Uses, EPA supports all of the activities listed. We strongly support 2.1 Add Unnamed Water Bodies that Receive Discharges, and 2.2 Review for Presence of the Commercial and Sportfishing Use. These additions will assist the Regional Board in ensuring that all waters within the Board's jurisdiction are appropriately protected.

2. Under Section 3, Update Water Quality Objectives, EPA supports all of the activities listed. We strongly support 3.1 Consider Refinement and/or Development of Site-Specific Objectives for Dissolved Oxygen in San Francisco Bay; 3.4 Develop Nutrient Water Quality Objectives for San Francisco Bay; and 3.5 Develop Numeric Nutrient Endpoints (NNEs) in Estuaries and Freshwater. Updated objectives for these constituents are important for improving and maintaining the health of these waterbodies.

3. In subsection 3.2, Update the Basin Plan's Toxicity Testing Requirements, we suggest changing "we" to "the Regional Water Board" in paragraph 3. Also, we understand the State Board now refers to a toxicity amendment (and no longer refers to a toxicity policy); we recommend the Regional Board use consistent language.

4. Subsection 3.7, Incorporate Revised 2012 U.S. EPA Recreational Water Quality Criteria (RWQC) for Bacteria, states that when the State Water Board adopts new recreational water quality criteria and other associated policies (pursuant to EPA's revised criteria recommendations), the Regional Board will make corresponding changes to its Basin Plan to provide clarity and consistency. It is important that the Regional Board is consistent with the State Board's actions and intent, although if clarifications are necessary to assist with implementation, we would support clarifying additions to the Regional Board Basin Plan. We hope the State Board actions will be clear and comprehensive, and that regional clarifications will not be necessary.

5. We also note that EPA has revised Clean Water Act section 304(a) guidance criterion for ammonia, and for several human health criteria. For ammonia, see:
http://water.epa.gov/scitech/swguidance/standards/criteria/aqlife/ammonia/index.cfm . For human health, see:
http://water.epa.gov/scitech/swguidance/standards/criteria/current/hhfinal.cfm .

6. Under Section 4, Update Implementation Plans, EPA supports all of the activities listed. We strongly support 4.3 Using Wastewater to Create, Restore, and Enhance Wetlands; 4.4 Update Conditions for Exemption to Discharge Prohibitions; and 4.6 Update Cyanide Dilution Credits.

7. Under Section 4. Update to Implementation Plans, please consider adding an activity consistent with our recent comment to you on the Administrative Draft Municipal Regional Stormwater Permit concerning temperature limits for the protection of salmonids (March 30, 2015 letter from David Smith to Thomas Mumley). In that letter, we supported the Regional Board's efforts to gather the most recent science applicable to Bay Area streams to set an appropriate temperature trigger or establish an acceptable range of temperatures. In coordination with the National Marine Fisheries Service (NMFS), upon their expected fall release of the Multi-Species Recovery Plan which includes steelhead,

EPA supports consideration of NMFS's "Intrinsic Potential" model to help define stream reaches to which temperature criteria should apply. Other recent data the Regional Board should consider include data collected in local creeks as part of the Santa Clara Valley Water District's Fisheries and Aquatic Habitat Collaborative Effort (FAHCE) negotiations. These data may be valuable in understanding the multiple stressors to steelhead in Bay Area creeks and whether local steelhead populations are adapted to local conditions.

8. Subsection 5.3 Develop Policy for Managing Mercury in Restored Wetlands, states that the Regional Board will develop policy to help provide regulatory certainty in the context of managing mercury in wetlands. The policy may cover issues such as required monitoring and regulatory consequences of monitoring results, as well as using dredged materials for wetland restoration. We note that the Central Valley Regional Water Board is working on similar issues, as part of the Methylmercury TMDL for the Sacramento San-Joaquin Delta. We recommend the two Regional Water Boards coordinate to minimize any consistencies.

Thank you again for the opportunity to review and comment on your upcoming Basin Plan Triennial Review. If you have any questions, please contact me at the numbers below, or reply to this e-mail.

Diane

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