



**California Regional Water Quality Control Board**  
**San Francisco Bay Region**



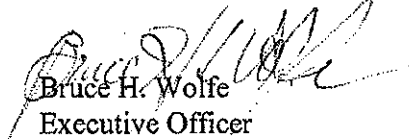
Linda S. Adams  
 Secretary for  
 Environmental Protection

1515 Clay Street, Suite 1400, Oakland, California 94612  
 (510) 622-2300 • Fax (510) 622-2460  
<http://www.waterboards.ca.gov/sanfranciscobay>

Arnold Schwarzenegger  
 Governor

3/6/07 BdMtg Item 5  
 EBMUD  
 Deadline: 2/20/07 5pm

**TO:** Ms. Song Her  
 Clerk to the Board  
**STATE WATER RESOURCES CONTROL BOARD**

**FROM:**   
 Bruce H. Wolfe  
 Executive Officer  
**SAN FRANCISCO BAY  
 REGIONAL WATER QUALITY CONTROL BOARD**

**DATE:** February 20, 2007

**SUBJECT:** A-1771 -- MARCH 6, 2007, BOARD WORKSHOP  
 COMMENTS TO DRAFT ORDER ON STATE WATER BOARD REVIEW OF  
 EAST BAY MUNICIPAL UTILITY DISTRICT WET WEATHER FACILITIES  
 PERMIT AND TIME SCHEDULE ORDER



This memorandum presents our comments on the State Water Board's January 12, 2007, draft order (hereafter "Draft Order") for review of the East Bay Municipal Utility District ("EBMUD") Wet Weather Facilities permit (Order No. R2-2005-0047; hereafter, "Permit") and companion time schedule order (Order No. R2-2005-0048; hereafter, "TSO"), both adopted by the Regional Water Board in September 2005. The Draft Order raises many issues beyond those that the State Water Board inquired about in August 2006 when it was considering review of the Permit and TSO on its own motion. These additional issues, particularly compliance schedules and bacteria and ammonia limits, will have far reaching implications to nearly all of this Regional Water Board's adopted and future NPDES permits.

We understand that the State Water Board has directed its staff to develop a draft compliance schedule policy for its consideration this spring. We support development of such a policy to ensure consistency between and within all regions of the State. As such, we recommend that the State Water Board defer consideration of the Draft Order until that policy has been developed and adopted by the Board.

Our response to the Draft Order is prefaced by a brief background of EBMUD's wet weather facilities ("WWFs"), so that there is a full understanding and appreciation of the long regulatory history associated with, and strategy embodied in, the Permit and TSO. We continue to maintain that this strategy best addresses both the water quality and regulatory challenges presented by EBMUD's WWFs and protects water quality. The strategy embodied in the Permit and TSO took over a year to negotiate, and reflects consensus reached by all stakeholders, including several

environmental advocacy groups. Even U.S. EPA, which had reversed itself on whether secondary treatment standards applied to the WWFs, supported the consensus eventually reached and embodied in the Permit and TSO. See Letter from Alexis Strauss, U.S. EPA, to Dennis Diemer, EBMUD, dated February 16, 2005. The strategy also resulted in a dismissal of a lawsuit against the Regional Water Board and the State Water Board by one of the environmental advocacy groups. It further resulted in a settlement agreement between EBMUD and environmental advocacy groups to resolve their differences on whether secondary treatment requirements apply to the WWFs. In light of the above, the Regional Water Board unanimously adopted the Permit and TSO, and no party has challenged either order.

## **BACKGROUND**

### **The Problem: Old and Leaky Collection Systems**

The sanitary sewer collection systems feeding into EBMUD's wastewater treatment system encompass over 2,000 miles of sewer lines from a total area of about 83 square miles within nine East Bay cities and communities. Most of this area was developed in the early twentieth century, with some as early as the Gold Rush. As such, in many areas, sanitary sewage and storm water runoff were initially collected in combined sewer systems, where all sanitary sewage and storm water runoff are routed to a single sewer system that ultimately discharges to the Bay. Older sanitary sewer collection systems were almost universally combined sewer systems due to being cheaper to build than separate sanitary sewer and storm water collections systems, and a lack of recognition of the water quality problems potentially caused when large storms would cause the combined system to overflow to creeks and the Bay.

As the East Bay grew, sanitary sewage and storm water runoff were increasingly collected by separate sanitary sewer and storm water collection systems. However, it took time to retrofit the existing portions of the combined system into separate systems. By about the 1970's, the majority of the work to convert the combined portion of the system into separate sanitary sewer and storm water collection systems had been completed. Despite this, much of the historic collection system remained from the early part of the 21<sup>st</sup> century and flow in the sanitary collection systems during wet weather continued to be very high due to infiltration and inflow (I&I) into the systems, a lot of it from private sewer laterals. Wet weather caused sanitary sewage overflows onto streets and to San Francisco Bay.<sup>1</sup>

### **The 1987 Solution: A Balance of Reduced I&I, Increased Storage and Transportation, and Increased Treatment.**

In the 1980s, EBMUD and the East Bay communities performed a 6-year I&I study, which identified a plan to reduce I&I and control sanitary sewage overflows during wet weather.

<sup>1</sup> For a more detailed history of the regional wet weather problems and abatement strategy, see Basin Plan, Chapter 4, at 4.11.5 "East Bay Municipal Utility District (EBMUD) and Local Agencies" section.

EBMUD and the East Bay communities also performed cost analyses to determine the most cost-effective level of I&I elimination, balanced against the costs of increased interceptor and storage capacity and treatment.

In 1986 and 1987, the Regional Water Board issued cease and desist orders to the East Bay communities and EBMUD requiring completion of measures to eliminate sanitary sewage overflows except during extreme wet weather events. These measures included elimination of known cross-connections, collection system rehabilitation, additional storage and transportation capacity, and additional wastewater treatment. Priority was given to addressing areas where overflows posed a high threat to public health. EBMUD and two communities have completed their actions, while others are still in the process, with a final compliance date in 2017. All of the East Bay communities are in compliance with their cease and desist orders.

U.S. EPA determined in a June 18, 1986, letter that EBMUD's wet weather overflow structures are not publicly owned treatment works (POTWs) as defined in the Clean Water Act (33 U.S.C. section 1251 *et seq.*), and are therefore not subject to secondary treatment requirements. These overflow structures (historically a total of seven) were part of EBMUD's system to handle high I&I-laden sanitary sewage flows during wet weather by acting as a kind of relief system to avoid damage and flooding of treatment units and pumping facilities, and equally important, to minimize backup of these high flows onto streets through manholes. U.S. EPA's conclusion was based on the fact that the structures functioned similarly to combined sewers due to high I&I, and that the wet weather sanitary sewage overflows did not convey flow to EBMUD's wastewater treatment plant. Based on this determination, the Regional Water Board adopted a permit for EBMUD in 1987 that replaced secondary limits from the previous permit with technology-based limits using Best Conventional Pollution Control Technology and Best Available Technology Economically Achievable (BCT/BAT).

Relying on U.S. EPA's 1986 determination and the 1987 permit, EBMUD developed a wet weather program—one endorsed by U.S. EPA and the Regional Water Board, and funded with grants approved by the State Water Board—to construct the three wet weather overflow facilities that are the subject of the Permit, along with other measures, at a cost of \$310 million, to reduce overflows into the Bay. These WWFs were completed in 1996, and replaced two of the seven wet weather overflow structures. These facilities provide storage of elevated sanitary sewage flows during wet weather. During extreme events when storage capacities are exhausted, sanitary sewage is treated at the WWFs to remove floatables and some solids, disinfected, and then discharged. These facilities have significantly reduced the frequency and impact of untreated wet weather flows that used to occur prior to the construction of these facilities.

#### Regulatory Landscape Change

For the Permit's most recent reissuance, it was recognized that the regulatory landscape had changed since the 1987 solution. In terms of water quality-based permitting, the California Toxics Rule and the Policy for Implementation of Toxic Standards for Inland Surface Waters,

Enclosed Bays, and Estuaries of California ("SIP") in 2000 were the largest change. On the technology-based front was U.S. EPA's September 2004 retraction of its 1986 determination. Specifically, U.S. EPA concluded that its June 18, 1986, letter no longer reflected its position and that EBMUD's wet weather facility discharges must comply with secondary technology limits. With these significant issues, the reissuance process that started in early 2003 was not concluded until over two years later.

The control measures to eliminate sanitary sewage overflows except during extreme wet weather events agreed to in 1987 and constructed since then were not designed to meet secondary limits. Secondary limits are consistently met only using biological treatment. Biological treatment systems are not sustainable at facilities, such as EBMUD's WWFs, that receive only occasional flows. EBMUD's WWFs are dry and empty a majority of the year. They operate only for a few hours at a time and only during severe storm events. Discharge is even more infrequent because if rains subside, the sanitary sewage stored at the WWFs is routed back into EBMUD's interceptor system for transport to EBMUD's main treatment plant, which provides complete secondary treatment. Over the past five years, the most often used of the three facilities, Pt. Isabel, discharged on average nine times a year. Discharges from these WWFs encompass less than 1 percent of EBMUD's total wastewater discharge volume to the Bay.

#### The 2005 Strategy: Investigate New Technologies and a Watershed Permit Approach

With the Permit, the Regional Water Board did not change its position from EBMUD's previous permit with respect to the applicability of secondary treatment standards. Nevertheless, in light of U.S. EPA's change, the Regional Water Board adopted a new strategy to ensure EBMUD's wastewater system remains in compliance with applicable standards. Because it was not feasible for the WWFs to immediately start producing effluent that consistently meets secondary limits, the Regional Water Board decided that a TSO was appropriate to require investigations to develop measures and actions to be taken by EBMUD to improve its technology-based performance for conventional pollutants towards meeting secondary limits. The TSO also requires investigations on how to comply with water quality-based limits once the Permit's compliance schedules end.

The TSO was written with maximum flexibility to investigate both new technologies as well as regulatory solutions such as mass offsets for toxic pollutants. Information and control measures will be generated from this effort that will have a net water quality benefit. For example, net pollutant reductions are very likely to result from the treatment of dry weather and first flush urban storm runoff (currently untreated) at EBMUD's main treatment plant and/or at its WWFs. These data would also contribute towards development of mass offset policies that have been of interest to both Regional Water Board and State Water Board members.

Additionally, the TSO requires EBMUD to investigate reductions or eliminations of the discharge for the WWFs altogether through additional storage and/or enhanced transportation of peak storm flows and more aggressive I&I inflows.

U.S. EPA, EBMUD, and the environmental advocacy groups that were involved in the stakeholder process ultimately concurred with this strategy and did not oppose the Regional Water Board's adoption of the Permit and TSO.

Rightly so, what the Regional Water Board did with the Permit and TSO was to recognize the difficult situation presented by the WWFs—which situation was not solely of EBMUD's making—and that even if secondary treatment requirements did in fact apply, it is impossible to meet those requirements without the significant time and expense involved in developing and implementing a new control measure strategy. Specifically, the following compelling facts were difficult to ignore:

- The WWFs were constructed in reliance of U.S. EPA's determination that EBMUD's overflow structures were not subject to secondary treatment requirements.
- The WWFs were constructed based on an overall strategy endorsed by U.S. EPA and the Regional Water Board, and funded with grants approved by the State Water Board, to reduce overflows into San Francisco Bay.
- By their very design, the WWFs were not constructed to meet secondary treatment requirements.

Rather than being blind to these facts, the Regional Water Board incorporated a consensus-based strategy into the Permit and TSO to comprehensively address the difficult and unique challenges presented by the WWFs and to consider solutions beyond just building mini-treatment plants at each of the three WWFs, such as through other new treatment technologies, alternative regulatory means to comply, and/or reducing and eliminating discharges from the WWF altogether.

## **RESPONSES TO DRAFT ORDER FINDINGS**

### **A. Secondary Treatment**

The Draft Order notes that the EBMUD WWFs are located in a highly urbanized area and discharge to waters that support significant water contact and non-contact recreation and shellfish beds. As such, it states that the State Water Board is gravely concerned about the potential public health and other water quality impacts from the discharges. As part of its evidence, the Draft Order notes that EBMUD's Point Isabel facility discharges in the areas of the Point Isabel Regional Shoreline which is the largest off-leash dog park in the nation. The Draft Order fails to recognize that dog feces can be a significant source of coliform bacteria to storm water runoff and that this runoff enters the bay untreated as compared to the EBMUD facilities' discharges which are treated and disinfected.

While we agree that there is cause for some public health concern, we believe the potential for impact is overstated in the Draft Order for several reasons. The Permit requires the discharges to be disinfected. The discharges occur from the WWFs on very rare occasions: as few as twice per year on average from San Antonio, and up to nine times a year from Pt. Isabel. The duration of the discharges is very short: on the order of a few hours. Most importantly, the discharges occur only during extreme wet weather when recreation, such as windsurfing, kayaking, rowing, and dragon boating<sup>2</sup>, and shellfish harvesting as mentioned in the Draft Order, are not likely to occur. High winds and dangerous waves are typically associated with storm events that bring rainfall quantities sufficient to cause a WWF discharge.

Further, during the extreme storm events that bring rainfall quantities sufficient to cause a WWF discharge, the sanitary sewer collection system is overwhelmed by high levels of I&I. This effectively significantly dilutes the sanitary sewage even before it is treated and discharged at one of the WWFs.

Moreover, when the WWFs discharge, there are also large volumes of untreated urban runoff entering the same water bodies. Studies have shown high levels of bacteria in urban storm runoff. One such study by Caltrans<sup>3</sup> summarizes the data from a three-year statewide study. It shows the average total coliform count to be above 13,000 MPN/100 ml in highway runoff. This level is 10 to 1,000 times higher than the WWFs discharges, and is higher than the limits in the Permit. All three WWFs are close to major highways. Based on this indicator, the WWFs discharges pose less potential for health impact than urban runoff. A similar conclusion can be drawn from comparison of the levels for fecal coliform.

On the applicability of the Montgomery decision, the Draft Order concludes that the WWFs are POTWs subject to secondary treatment standards and that the case Montgomery Env. Coalition v. Costle, 646 F.2d 568 (D.C. Cir. 1980), does not apply because the WWFs are significantly different than the facilities in question in the Montgomery case. The Regional Water Board has already advanced its rationale for not having reversed its course by requiring the WWFs to meet secondary treatment standards and will not reiterate them here.<sup>4</sup> See Memorandum from Bruce H. Wolfe to Sheila Vassey, dated September 1, 2006.

---

<sup>2</sup> Dragon boating cannot be impacted by the WWFs because WWF discharges and dragon boat racing do not coincide. Dragon boat racing is associated with the Chinese festival commemorating Qu Yuan who served as minister to the Zhou Emperor around the 2nd century BC. This festival is customarily celebrated on the 5<sup>th</sup> day of the fifth lunar month, which corresponds to sometime between June and August of the Gregorian calendar. The WWFs have never discharged during these months.

<sup>3</sup> *Storm Water Monitoring & Data Management, Discharge Characterization Study Report*, California Department of Transportation, November 2003

<sup>4</sup> It is worth noting, however, that despite the Montgomery court's reasoning that overflow points were not for "storage, treatment, recycling, or reclamation," but rather for uninhibited discharges, the specific overflow structures at issue in the case were in fact subject to treatment requirements (see, e.g., Montgomery at 592), much like EBUD's WWFs. Accordingly, it is inaccurate for the Draft Order to state that the facilities in Montgomery are "significantly different" than the WWFs. Both discharge excess capacity caused by wet weather events, both allow

The Draft Order expresses concerns over the need to control separate sanitary sewer overflows and mentions efforts both nationwide and in California to prevent sanitary sewer overflows. The Regional Water Board also strongly supports the State Water Board's efforts in preventing and reducing sanitary sewer overflows. In fact, the Regional Water Board initiated its own program in 2003 and has established a schedule for development of sewer system management plans by its regional collection systems that are more aggressive than the State Water Board's recent general waste discharge requirements. The Regional Water Board also developed and implemented in 2004 an electronic sanitary sewer overflow reporting system, which has served as the model for the statewide system being developed now by State Water Board staff.

The Draft Order correctly points out that the WWFs were not built to provide secondary treatment and that it is unknown whether they can be upgraded to secondary treatment. The Draft Order then goes on to state that other alternatives, like I&I improvements, may enable EBMUD to achieve the minimum treatment levels required by the Clean Water Act. The Regional Water Board agrees and has in fact required investigations to reduce or eliminate discharges through I&I controls in the TSO, along with a host of other study requirements to produce a comprehensive suite of options to address the WWF discharges.

The Draft Order concludes that the Regional Water Board lacked discretion to decline to include secondary treatment requirements in the Permit. We disagree. The Regional Water Board did not include secondary treatment requirements in the Permit because it believed there were no material changes in the facts or in the law since U.S.EPA's 1986 determination that the EBMUD's WWFs were not subject to secondary treatment standards to change its decades-old course. Of course, U.S. EPA's reversal of its 1986 position in 2004 did and does matter; however, at that time, counsels for the Regional Water Board and U.S. EPA both agreed that the differing legal opinions as to whether secondary treatment standards apply to the WWFs was an issue without a practical difference in terms of requirements to be imposed on EBMUD during the Permit term and need not be resolved as of the Permit issuance. In other words, the WWFs were not designed to and cannot comply with secondary treatment requirements such that EBMUD would have to be put on a schedule to get to compliance, which is exactly what the Regional Water Board did in the TSO. Specifically, the Regional Water Board required EBMUD in the TSO to investigate and study new treatment technologies, and reductions or eliminations of discharges through additional storage and/or enhanced transportation of peak storm flows to the treatment plant and more aggressive I&I controls. As the Regional Water Board previously pointed out to the State Water Board, these are the very requirements that would be imposed on EBMUD in a companion enforcement order if it required secondary treatment requirements in the Permit.

---

for flows to be maximized to the main treatment plant prior to discharge, and both involve a level of technology-based treatment prior to discharge.

Nevertheless, the Draft Order states that the Permit and TSO would have looked significantly different had the Regional Water Board required compliance with secondary treatments requirements, specifically pointing to the lack of secondary treatment requirements and a time schedule to achieve them in the Permit and the TSO, respectively. The TSO *does* contain a time schedule of actions that will eventually lead to achievement of secondary standards by requiring investigations and studies of new treatment technologies, and reductions or eliminations of discharges through additional storage and/or enhanced transportation of peak storm flows to the treatment plant and more aggressive I&I controls. The TSO does not currently contain a final date by which secondary standards must be met because the Regional Water Board took into consideration the reality that compliance cannot happen immediately, and there is much yet to be investigated to learn how EBMUD can meet the real and daunting challenge of successfully applying secondary treatment technologies to intermittent discharges like the WWFs, which, as even the State Water Board acknowledges, was not designed to meet secondary standards. Imposing an artificial date of final compliance precludes a full investigation of the options available to resolve the challenge presented by the WWFs. Moreover, how a regional water board crafts enforcement orders like TSOs is very much within its discretion, and the Regional Water Board maintains that had secondary treatments requirements been actually imposed in the Permit, any companion enforcement order would have looked very similar, if not identical, to the TSO. Finally, we note even U.S. EPA viewed and supported the measures in the TSO as a means to achieve compliance. See Letter from Alexis Strauss, U.S. EPA, to Dennis Diemer, EBMUD, dated February 16, 2005.

The Draft Order erroneously states that the TSO did not require investigations of treatment upgrades to secondary standards. Provision A.1 of the TSO requires investigations of treatment upgrades and states, “[u]pgraded treatment alternatives studied shall focus on alternatives that achieve the pollutant reduction achievable at continuous flow facilities.” Pollutant reduction achievable at continuous flow facilities means only one thing: reductions achieved through application of secondary treatment technologies.

With respect to the wet weather provisions of the Basin Plan, to the extent they allow POTWs not to comply with minimum secondary treatment standards, we agree that they are in conflict with the Clean Water Act. The wet weather provisions embody the historical strategy for wet weather discharges once agreed upon by the Regional Water Board, U.S. EPA, and the State Water Board.

## **B. Water Quality-Based Effluent Limitations**

### **Coliform, Toxicity, and Un-ionized Ammonia Objectives**

The Draft Order finds that the Permit inappropriately implemented Basin Plan objectives for total coliform and un-ionized ammonia and failed to address whole effluent toxicity (“WET”).



In summary, on the issue of the coliform and ammonia limits, the Permit is consistent with the Regional Water Board's Basin Plan policy and past practices for EBMUD's and most other facilities, but agree with the Draft Order that better explanation should be provided in the Fact Sheet, which we intend to do in the next permit cycle. We agree with the Draft Order's conclusion concerning implementation of the toxicity objective and intend to use our existing authority to require EBMUD to collect data sufficient to initiate the process.

### Coliform

The Permit's coliform limits are protective of water quality and do appropriately implement current Basin Plan policy. We, however, agree that the rationale should be more clearly documented in the Fact Sheet, and intend to do that in the next permit cycle. Furthermore, we recognize that the Basin Plan's objectives should be updated to incorporate U.S. EPA standards from its 2004 Beach Act, and should more clearly outline the implementation measures in practice by staff since the 1980s. This has been identified as a high priority in our most recent Basin Plan triennial review, and we have been in discussion with U.S. EPA staff to scope out the update effort. We hope to initiate work on these issues later this year.

### Whole Effluent Toxicity

We agree with the Draft Order's conclusion that the Permit must address and implement the Basin Plan's policy for WET. During this permit cycle, we plan to address reasonable potential for WET and, if reasonable potential exists, we will propose adding appropriate WET limits based on the Basin Plan. We have authority to require WET testing now, and we intend to issue a requirement to EBMUD in the next 30 days for the testing to start the process.

### Un-ionized Ammonia

The Permit is consistent with the Basin Plan's un-ionized ammonia objective and past Regional Water Board practices implementing that objective. Basically, the Basin Plan is silent in how to implement its un-ionized ammonia objective. Though not specifically stated in the Basin Plan, it has been this Regional Water Board's practice to implement the un-ionized ammonia objective as a receiving water limit in all its permits because effluent limits are infeasible. In the next permit cycle, we will add a discussion of the basis described below in the Fact Sheet.

Un-ionized ammonia limits in the effluent are infeasible because ammonia is present in both ionized and un-ionized forms in a state of equilibrium. The portion in the un-ionized ammonia form is dependent on the water's pH, salinity, and temperature. The characteristics of these variables in the WWF discharges are very different than in the receiving water. For example, the salinity of the discharge is less than 2 parts per thousand; the salinity in the receiving water in the wet weather months is around 15 to 25 parts per thousand. Similarly, the pH of the discharge is neutral around 7, whereas the Bay is typically around 8. The fraction as un-ionized ammonia is less in higher salinity waters, but is greater in higher pH waters. This complex relationship results

in shifting concentrations of un-ionized ammonia, making it infeasible to establish an effluent limit for un-ionized ammonia or for total ammonia based on the un-ionized objective.

So for EBMUD, the Permit establishes a receiving water limit at D.3.d on page 24. However, we recognize that although the Permit requires compliance with the Regional Monitoring Program (RMP), the current RMP design, which is focused on more remote stations, may not be sufficient to evaluate compliance with the limit. Since we have the authority to require EBMUD to conduct monitoring now, we intend to issue a requirement to EBMUD in the next 30 days to develop a plan for such monitoring.

#### Basin Plan Objectives for Lead, Nickel, and Zinc

We agree with the Draft Order's conclusion that the Permit should conduct reasonable potential analyses using the 2005 Basin Plan objectives for lead, nickel, and zinc. However, we do not agree that because the 2005 objectives are less stringent than prior Basin Plan objectives, it is inappropriate to provide compliance schedules for these constituents.

Because of the unusually long time it took to reach consensus with multiple stakeholders on the Permit, its priority pollutant reasonable potential analysis was completed in early 2004, prior to the effective date of the 2005 Basin Plan. In the final months of permit and TSO development, we did not update the objectives because the focus of the remaining issues was secondary limits. This use of out-dated objectives has caused us to review the Permit's bases and calculations for other pollutants. We have discovered several other errors and omissions which we intend to correct.<sup>5</sup> We intend to modify the Permit to make these corrections as soon as practicable in consideration of other priorities. It is worth noting that the incorrect final WQBELs are currently under a compliance schedule (as discussed below) and will not come into affect for several years. Also, most of the corrections will result in higher calculated final WQBELs.

On the issue of compliance schedules for lead, nickel, and zinc, we disagree with the Draft Order's conclusion that compliance schedules are inappropriate because the 2005 objectives are less stringent than prior Basin Plan objectives. The Basin Plan provides that the Regional Water Board may consider compliance schedules for newly adopted objectives or standards where revised effluent limits are not currently being met and are justified. This provision is not limited to newly adopted objectives that are more stringent than prior objectives, just those that result in limits that are not currently being met. In the case of EBMUD, not only are the objectives newly adopted, but no priority pollutant objectives have ever been applied to the WWFs discharges until the Permit despite the fact that priority pollutant objectives have been in the Basin Plan since 1986. It could be reasonably interpreted that those objectives were not intended to apply. In

---

<sup>5</sup> The omissions include no reasonable potential for 4,4-DDE at all three facilities because review of the data shows all non-detects instead of the detects noted in the original analyses--similarly for dieldrin at San Antonio. For copper, the dissolved objective was mistakenly used instead of the total recoverable, and available data on a water effects ratio was inadvertently omitted. For nearly all of the organic priority pollutants, the final limits were incorrectly calculated using human health objectives for protection of aquatic life resulting in overly stringent limits.

fact, in the 1986 Basin Plan at table IV-1, it states that toxic pollutant limits apply to POTWs; at that time EBMUD's WWFs were not POTWs based on U.S. EPA's determination. Thus, relying on principals of fairness, compliance schedules are appropriate and necessary now to allow EBMUD time to implement measures to address compliance.

#### Limits for All Pollutants with Reasonable Potential

The Draft Order concludes that the Permit does not contain effluent limits for constituents with reasonable potential in conflict with the Clean Water Act, federal regulations and the SIP.

We disagree with the Draft Order's finding because the Permit establishes limits in accordance with federal regulations and the SIP. Final limits for all constituents having reasonable potential are established in the Fact Sheet referenced in Findings 26 and 40, and incorporated into the Permit by reference as indicated in Finding 54. The Fact Sheet clearly identifies the final limits for constituents with reasonable potential in its tables titled "Final Limitations for Toxic Pollutants" on pages 11 and 12. These final limits are in the Permit's findings and Fact Sheet in accordance with SIP 2.2.1 because the term of their compliance schedules extends beyond the term of the permit.

Furthermore, in accordance with federal regulations and the SIP, the Permit establishes interim limits for quite a few of the pollutants with reasonable potential at Effluent Limitations C.2. For the remainder, the number of data points, in large part because of non-detects, is not adequate to develop reliable performance-based numeric interim limits. Relying upon 40CFR122.44(k)(3), where numeric effluents are not feasible, a permit may establish BMPs. The Permit does this at Provision E.6, which requires EBMUD to continue to implement and improve its pollution prevention and minimization program. Part of this program's requirements includes identification of pollutants of concern. Pollutants with reasonable potential would be required to be identified as a pollutant of concern and be addressed by the program. EBMUD's Infeasibility Analysis dated July 14, 2004, addresses the specific measures planned for those pollutants. EBMUD has won numerous awards for its pollution prevention and pretreatment program. Most recently, it received the first place 2004 National Clean Water Act Recognition Award from U.S. EPA.

#### Compliance Schedules

The Draft Order finds fault with the way in which compliance schedules are expressed in the Permit in that it does not require a series of actions leading to compliance nor does it clearly state an enforceable end point. We note that the Permit's language is nearly identical to that used in three earlier permits that were not identified as unclear by the State Water Board in its reviews in 2001 and 2002.<sup>6</sup> But we agree that clarity is necessary, and in response to U.S. EPA comments in December 2006 on other draft permits, we changed the way compliance schedules were specified in those permits by reorganizing existing provisions into one. Though no new requirements were

<sup>6</sup> State Water Board Orders WQ 2001-16, WQO 2002-0011, WQO-2002-0012.

imposed, U.S. EPA was satisfied by our changes. For the Permit, we will make a similar rearrangement in the next permit cycle, but it is worth noting that the actions leading to compliance are already spelled out in the Permit and TSO.

On the necessity of permits to specify final limits, the Regional Water Board complied with the SIP at 2.2.1, which states that final WQBELs shall be incorporated into the permit findings if the compliance schedule exceeds the length of the permit. The compliance schedules for all the priority pollutant limits in the Permit extend beyond the Permit's expiration date. Therefore, the Permit is consistent with SIP policy by stating all effluent limits in the Fact Sheet (pages 11 through 13), which are referenced in Finding 40. Furthermore, in Finding 54, the Permit incorporated by reference the Fact Sheet as part of the Permit.

Similarly, with U.S. EPA's recent disapproval of SIP TMDL-based provisions, in the next permit cycle, we intend to delete the Permit's requirement to support TMDLs and SSOs (Provision E.4).

We take particular issue with the Draft Order's conclusion that the Regional Water Board's shortening the term of the Permit to avoid final limits is an abuse of discretion and egregious. The actual intent of this was to avoid final limits automatically taking effect before the State Water Board has had a chance to evaluate and act on the case-by-case exemption EBMUD intends to file. Moreover, the strategy of adjusting permit terms was previously applied in two earlier permits that were not identified as problematic by the State Water Board in its review in 2002.<sup>7</sup>

We disagree with the Draft Order's policy conclusion that it is inappropriate to allow compliance schedules beyond 2010 for objectives that are identical to CTR criteria. As a matter of law, the Basin Plan specifically allows for compliance schedules when new objectives are adopted that result in limits for which the permittee cannot meet. The Basin Plan does not limit this time frame to 2010. Furthermore, limiting the schedule to 2010 for EBMUD at this time would provide EBMUD with only three years to achieve compliance, not the five noted by the Draft Order.

The Draft Order concludes that compliance schedules are not authorized for existing numeric Basin Plan water quality objectives like mercury and National Toxics Rule ("NTR") pollutants like cyanide, reasoning that the mercury objective is not "new" and that the adoption of the SIP did not result in a "new interpretation" of the mercury objective and that compliance schedules are not available for NTR pollutants.

Since 2001 and based on the State Water Board's Order No. 2001-06 (the "Tosco Order")<sup>8</sup>, the Regional Water Board has been granting compliance schedules for existing Basin Plan

---

<sup>7</sup> State Water Board Orders WQO 2002-0011, WQO-2002-0012.

<sup>8</sup> The Tosco Order pertained to a refinery permit issued by this Regional Water Board that granted a compliance schedule for dioxin based on the Regional Water Board's new interpretation of its narrative toxicity water quality objective, the basis for regulating dioxin.

objectives, both numeric and narrative, as well for NTR pollutants when there has been a new interpretation of these objectives. Specifically, the Regional Water Board has been applying the SIP<sup>9</sup> in newly interpreting these existing water quality objectives and granting compliance schedules under the Basin Plan where compliance with more stringent effluent limitations based on the new interpretation is infeasible.<sup>10</sup> The State Water Board left three permits with this compliance schedule approach intact during its petition reviews in 2001 and 2002.<sup>11</sup>

Obviously, the State Water Board may reject current practice and for the first time affirmatively pronounce that the Tosco Order's sanctioning of the use of compliance schedules for new interpretations of existing water quality objectives applies only to narrative water quality objectives. Prior to making such a significant determination, which would have implications not only for future permits but for those adopted by the Regional Water Board for approximately the past five years, the State Water Board should consider several important points. First, the Regional Water Board's interpretation of the Tosco Order leading to the practice of granting compliance schedules for existing numeric water quality objectives was and remains a reasonable one under the express language of the Tosco Order. Second, the approach used by the Regional Water Board in granting compliance schedules for new interpretations of existing objectives is fundamentally no different than what it did in the Tosco permit, which was upheld by the Tosco Order. Third, the rationale for allowing compliance schedules for new interpretations of existing narrative water quality objectives applies with equal force to new interpretations of existing numeric water quality objectives.

The reasonableness of the Regional Water Board's interpretation of the Tosco Order to allow compliance schedules where there is a new interpretation of an existing standard can be seen by merely looking to what the Tosco Order says:

The [State Water] Board concludes that a compliance schedule [for 2,3,7,8-TCDD dioxin equivalents] is authorized under the Regional Water Board's 1995 Basin Plan because the Regional Water Board reinterpreted its narrative toxicity objective in the latest permit. The 1995 Basin Plan allows compliance schedules of up to ten years for new objectives or standards. This language can reasonably be construed to authorize

<sup>9</sup> The SIP applies to priority pollutants under the CTR, the NTR, and basin plan priority pollutant objectives. SIP, Note 1. It may also be used as a guide for Basin Plan narrative water quality objectives. State Board WQO 2001-0016, footnote 121.

<sup>10</sup> As the Draft Order correctly points out, the NTR does not include compliance schedule authority; however, the preamble to the NTR clarifies that, "schedules of compliance for these criteria are not provided for in these rules, but that such schedules of compliance are available in NPDES permits if authorized by State regulations." 57 Fed. Reg. 60648, 60868 (December 22, 1992). The Regional Water Board's Basin Plan does contain such authority, which the Regional Water Board has been invoking for NTR pollutants when there has been a new interpretation of NTR pollutants (e.g., through application of the SIP) leading to more stringent effluent limitations with which permittees cannot comply.

<sup>11</sup> State Water Board Order WQO 2001-0016 (Napa Sanitation District), WQO 2002-0011 (Chevron), and WQO 2002-0012 (EBMUD).

- compliance schedules for new interpretations of existing standards. When the Regional Water Board issued the 1993 permit for the refinery, they adopted a 2,3,7,8-TCDD equivalents limit based on the now-rescinded Enclosed Bays and Estuaries Plan. In 1995 the Regional Water Board clarified the basis of the effluent limitation in response to rescission of the Enclosed Bays and Estuaries Plan. In 2000 the Regional Water Board newly interpreted the narrative toxicity objective for 2,3,7,8-TCDD equivalents. Under the latest interpretation, final water quality-based effluent limitations will be based on a TMDL or, alternatively, on no net loading.

Tosco Order, pp. 53-54 (footnotes omitted; emphasis added). Although it is true that the Tosco permit itself dealt with a new interpretation of an existing narrative water quality objective, nothing in the above text limits the use of compliance schedules only to new interpretations of an existing narrative water quality objective only. In fact, the key sentence pronouncing the use of compliance schedules for new interpretations is quite broad: “[t]his language can reasonably be construed to authorize compliance schedules for new interpretations of existing standards.” Tosco Order, p. 53.

More fundamentally, what the Regional Water Board did in 2000 in the Tosco permit is no different than what it has been doing the last five years, including in the Permit with respect to mercury and cyanide.

In the 2000 Tosco permit (Order No. 00-056), the Regional Water Board changed its strategy from earlier permits of imposing a final limit for a category of dioxins known as 2,3,7,8-TCDD equivalents to granting a compliance schedule with a final limit to be based on a TMDL, or in the absence of one, no net loading, because of the multi-media nature of the dioxin problem and because Tosco had significantly reduced its discharge of it. The State Water Board characterized this shift as the Regional Water Board, “newly interpret[ing] the narrative toxicity objective for 2,3,7,8-TCDD equivalents.” Tosco Order, p. 54. The State Water Board further found that given the uncertainty surrounding dioxin controls the “Regional Water Board acted properly in reinterpreting its narrative toxicity objective for dioxins and furans to mean final water quality based limits based on either the wasteload allocations in a TMDL or no net loading.” Tosco Order, p. 55 (emphasis added).

Based on the Tosco Order’s example of what a “new interpretation” or a “reinterpretation” means, during the last five years, the Regional Water Board has construed application of the SIP to existing water quality objectives, narrative or otherwise, which leads to more stringent effluent limitations than before as a new interpretation of an existing objective. In both the Tosco permit and in recent permits, there is a “reinterpretation” of an existing objective to mean final water quality limits other than what they were previously. If this is not what the State Water Board intended with the Tosco Order, the Regional Water Board seeks clearer guidance as

to what a "new interpretation" or a "reinterpretation" of an existing water quality objective means.

If it matters for purposes of granting compliance schedules whether the objective that is being newly interpreted is narrative or numeric, the Regional Water Board asserts that when one peels away this distinction, any meaningful difference between the two cease to exist for purposes of implementing the water quality objective. With narrative water quality objectives, the federal regulations require permitting entities to apply various criteria to translate the narrative objective into a final numeric effluent limitation. See, e.g., 40 C.F.R. § 122.44(d)(vi). Similarly, with numeric water quality objectives, permitting entities must also translate the objective into a final numeric effluent limitation using various criteria (the SIP, for example).

Finally, the same policy reasons that underlie allowing compliance schedules for newly interpreted narrative objectives also apply when newly interpreting numeric objectives. The Draft Order opines that as a matter of fairness, when a narrative objective is reinterpreted to establish a new or more-stringent numeric effluent limitation, dischargers, who were not on notice of the more stringent effluent limitation, should be given time to comply with the new effluent limitations using the Regional Water Board's Basin Plan compliance schedule authority.

When numeric water quality objectives are newly interpreted to impose more stringent effluent limitations, dischargers are similarly not on notice and should be given time to comply.

### **C. Additional Issues**

#### **Prohibition of Discharge from Overflow Structures**

While agree with the Draft Order's conclusion to revise the prohibition because those revisions would make the prohibition easier to enforce, we contend that the prohibitions as stated are enforceable. In fact, since the Regional Water Board's adoption of the Permit, the Regional Water Board recently enforced<sup>12</sup> against EBMUD for a 10 million gallon overflow from two of its overflow structures.

#### **Basin Plan Prohibition No. 1**

We partially disagree with the Draft Order conclusion that conditions for an exception to the Basin Plan's prohibition No. 1 were inadequately addressed in the Permit. Two conditions must be met for an exception: inordinate burden and equivalent level of environmental protection.

On the issue of inordinate burden, the Permit references the basis for the exception in the previous permit (Order No. 98-005), which was included in the Permit's record. Finding 11 of the previous permit states the minimum cost to achieve 10:1 dilution at the Point Isabel and Oakport WWFs would have been in excess of \$60 - 80 million. If the State Water Board believes this is not adequate, we can require EBMUD to provide the original documentation for this

<sup>12</sup> Administrative Civil Liability Complaint No. R2-2006-0028

finding, and would then request that the State Water Board allow that documentation to be included into the record for the 2005 Permit.

On the issue of equivalent environmental benefit, the Permit at Finding 20 references the previous permit's exception basis of \$100,000 on an environmental enhancement project. The Permit's Finding 21 states that EBMUD will be required to spend at least \$200,000 on another project that will meet the goal of substantial pollutant reduction<sup>13</sup>. By inference, the Regional Water Board is concluding that EBMUD has met the second condition of equivalent level of environmental protection if it fulfills this project work plan. If the State Water Board believes this does not satisfy this condition, we request that the Draft Order be revised to provide a basis for why the State Water Board believes this condition is not met.

#### Self-Monitoring Program

We agree with the Draft Order's conclusions regarding necessary changes to the monitoring requirements. As with the receiving water monitoring plan for un-ionized ammonia mentioned above, we plan to revise the Permit's Self-Monitoring Program to incorporate the changes described in the Draft Order in the next 30 days.

#### Standard Provisions

We agree with the Draft Order's conclusion to revise the statement in Provision E.9 to require compliance with standard provisions at a minimum, unless the permit contains more stringent provisions. In our experience, this issue has never arisen as a significant point of dispute. As such, we believe it is appropriate to make this modification in the next permit cycle.

#### CONCLUSION

The Draft Order raises issues that not only significantly impact the Permit, but will have far reaching implications to nearly all of the permits adopted by the Regional Water Board over the past five years. However, relative to the Permit, in most instances, the Regional Water Board is able to address these issues immediately or in the next permit cycle. Additionally, relative to the express inclusion of secondary treatment requirements in the Permit, we continue to find that the consensus-based approach the Permit and TSO embodies provides the same level of water quality protection, while promoting more cost effective and watershed-wide control measures as would likely occur through the express inclusion of secondary treatment requirements in this permit cycle. Further, the Regional Water Board has been applying compliance schedules to permits consistent with the Tosco Order for the past five years. Should the State Water Board now find new direction is needed for the application of compliance schedules to permits, we

---

<sup>13</sup> The work plan for the environmental enhancement project involves construction of facilities that will route urban storm water runoff to EBMUD's main treatment for treatment. The work plan for this project was not included in the record for the Permit because it was finalized after Permit adoption.



now find new direction is needed for the application of compliance schedules to permits, we recommend that the State Water Board complete its planned development and adoption of a statewide compliance schedule policy before considering the compliance schedule-related provisions in the Draft Order. In sum, we recommend that the State Water Board table consideration of the Draft Order until the next permit cycle for EBMUD's WWFs.

Copy to:

Sheila Vassey  
Senior Staff Counsel, Office of Chief Counsel  
State Water Board

Dennis M. Diemer, General Manager  
EBMUD  
P.O. Box 24055  
Oakland, CA 94623-1055

David R. Williams, Director of Wastewater  
EBMUD  
P.O. Box 24055  
Oakland, CA 94623-1055