



June 23, 2014

Ms. Susan Glendening
Environmental Specialist
California Regional Water Quality Control Board
San Francisco Bay Region
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VIA EMAIL: susan.glendening@waterboards.ca.gov

SUBJECT: Comments on Tentative Order – General Waste Discharge Requirements for Discharges of Water from Drinking Water Supply Distribution, Transmission and Groundwater Systems

Dear Ms. Glendening:

The East Bay Municipal Utility District (District) appreciates the opportunity to submit comments on the San Francisco Regional Water Quality Control Board's (RWQCB) General Waste Discharge Requirements for Discharges of Water from Drinking Water Supply Distribution, Transmission and Groundwater Systems (Tentative Order).

The District provides safe, high quality drinking water to 1.3 million water customers in Alameda and Contra Costa Counties over a 325-square mile service area that has approximately 4,000 miles of distribution system pipe, 380,000 service connections, 30,000 hydrants, and approximately 200 reservoirs. Additionally, the District operates water treatment and supply distribution and transmission systems in Amador and Calaveras Counties for customers in the Pardee Reservoir and Camanche Reservoir areas. Thus, District facilities are regulated by both the San Francisco Bay (Region 2) and the Central Valley (Region 5) Regional Water Quality Control Boards. This Tentative Order will have a direct impact on the District and its operations.

Drinking water system releases are critical and essential public service activities that must be performed in order to maintain and meet drinking water quality standards and system reliability requirements. The State Water Resources Control Board (SWRCB) classifies potable water discharges as "de minimis" because it has found such discharges are unlikely to cause or contribute to an adverse impact on beneficial uses of receiving waters:

De minimis discharge activities include, but are not limited to, the following: ... discharges from fire hydrant testing or flushing; discharges resulting from construction dewatering; discharges associated with supply well installation, development, test pumping, and purging; discharges resulting from the maintenance of uncontaminated water supply wells, pipelines, tanks, etc.; discharges resulting from hydrostatic testing of water supply vessels, pipelines, tanks, etc.; discharges resulting from the disinfection of water supply pipelines, tanks, reservoirs, etc.; discharges from water supply systems resulting from system failures, pressure releases, etc.; ... and other similar types of wastes that have low pollutant concentrations and are not likely to cause or have a reasonable potential to cause or contribute to an adverse impact on the beneficial uses of receiving waters yet technically must be regulated under an NPDES permit. (Cal. Code Regs, tit. 23, § 2200, n. 18.)

The District believes that the Tentative Order requirements should reflect the very low threat nature of these discharges from drinking water systems and be commensurate with the relative risk associated with these discharges and has provided comments and recommendations herein to reflect these characteristics.

As you are aware, the District has been actively engaged in obtaining a clear regulatory framework for de minimis drinking water discharges and has supported Region 2 efforts both technically and financially for over two years. The District sincerely appreciates the efforts of Region 2 staff to work collaboratively on the development of the Tentative Order. The following comments are respectfully submitted with the intent to improve protection of water quality in the San Francisco Bay region and to establish practically achievable and economically feasible management practices for water utilities, including the District, across regulatory regions.

COMMENTS AND RECOMMENDATIONS

1. Clarification of Water Transfer Permit Exclusion

As you are aware, the federal Water Transfer Rule (40 C.F.R. § 122.3(i)) exempts water transfers from NPDES permit requirements. Consistent with that exemption, the Tentative Order expressly does not cover discharges subject to the Water Transfer Rule. The District supports this exclusion from coverage. However, it should be noted that a federal trial court in New York recently issued a decision addressing the Water Transfer Rule that generated new uncertainty regarding the scope of the rule. (*Catskill Mountains Chapter of Trout Unlimited, Inc. v. U.S. EPA*, 2014 WL 1284544 [S.D.N.Y., Mar. 28, 2014], *appeal filed May 27, 2014*.) The decision partially vacated the rule and remanded it to EPA for further consideration. Importantly, the court expressly declined to vacate the full rule. The decision was recently appealed, and the matter is likely to remain unresolved for a considerable period of time. To provide regulatory certainty while the legal process continues, we propose amending paragraph I.B.1 of the Tentative Order to incorporate the text of the existing Water Transfer Rule verbatim. As amended, the paragraph would read in full as follows:

Discharges from a water transfer. Water transfer means an activity that conveys or connects waters of the United States without subjecting the transferred water to intervening industrial, municipal, or commercial use. This exclusion does not apply to pollutants introduced by the water transfer activity itself to the water being transferred.

2. Reduced Monitoring for Unplanned and Emergency Discharges

The Tentative Order makes no distinction between the monitoring requirements for planned and unplanned discharges. Planned and unplanned discharges have different characteristics and require different responses but the Tentative Order treats them as the same and only considers volume and distance thresholds of events but none of the other extenuating event circumstances. These differences need to be recognized in the Tentative Order and reflected in the required monitoring.

Drinking water discharges from District facilities result from both planned and unplanned events. Planned discharge examples include reservoir dewatering, pipeline dewatering, pipeline flushing, and hydrant testing. By their nature, all aspects of these discharges may be carefully planned ahead of time.

The same is not true of unplanned discharges. They are far more difficult to control than planned discharges due to their unpredictable nature and location. Examples include water main breaks, illegal hydrant openings, accidental hydrant shearing by private vehicles, construction damage by contractors conducting other utility work, reservoir overflows, and emergency main flushing to address public health issues as required by drinking water regulations. Unplanned water main breaks may be caused by a number of factors, including soil movement caused by landslides and fault creep, ground swelling during wet weather, soil corrosivity, pressure surges, and defective

materials. When main breaks happen, an emergency response is initiated. By necessity, the emergency responses differ from scheduled preplanned events because the discharge has been ongoing before staff has arrived and much if it may have already flowed offsite, they tend to occur in public streets with traffic and pedestrian concerns, as well as public health and commerce concerns, affording limited work space and limited time to accomplish the repairs. The repair crew needs to maintain positive pressure in the water pipe, and hence, a continuous flow from the leak in order to locate the break as well as to minimize the chance of contaminating the public drinking water system by allowing trench water to enter the pipe. The District recommends that monitoring of unplanned discharges should only be applied when the discharge is likely to adversely effect or impact beneficial uses of a receiving water body only.

In addition to reducing monitoring requirements for unplanned discharges, the District suggests that the Tentative Order define a category of “emergency discharges” and not require monitoring for emergency discharges as the primary focus during these events is protection of public health, safety and property.

The District recommends the following addition to paragraph I.A. of the Tentative Order (as cited in SFPUC Drinking Water Transmission System Permit, R2-2008-0102):

- 3. Emergency Discharges.** Drinking water releases caused by a sudden, unexpected occurrence and involving a clear and imminent danger, demanding immediate action to prevent or mitigate loss of, or damage to life, health, property, or essential public services such as:
 - a.** Discharges caused by fire, flood, earthquake, or other soil or geologic movements, as well as such occurrences as riot, accident, or sabotage.

The District recommends the following revision to paragraph III.D. of Attachment E to the Tentative Order:

- D.** A Discharger is not required to conduct effluent monitoring when it would be unsafe, such as at night, when visibility is low (e.g. fog), during severe weather, or when terrain conditions are unstable or steep. Sampling is also not required when it is infeasible to collect a representative sample. For emergency discharges, effluent monitoring is not required and BMPs shall be implemented as soon as feasible following assurance that public safety, property, and infrastructure are protected. In all of these instances, The Discharger shall explain the circumstances in annual self-monitoring reports as required by Provision VII.C.3.b.ii of the Order or, if applicable, in five-day reports required by Provision VII.C.3.b.i of the Order.

The District also recommends the following footnote addition to Table E-2 of Tentative Order:

- * Effluent monitoring is not required to be conducted for emergency discharges.

3. *Reduced Monitoring for Planned Discharges*

The proposed monitoring frequency in Table E-4 is excessive and unnecessary for these de minimis discharges. When utilizing industry-standard BMPs on large-volume discharges, initial and periodic monitoring may be helpful in verifying the effectiveness of the BMPs, but once their effectiveness is demonstrated, additional monitoring is unnecessary. In fact, extensive unnecessary monitoring can actually hinder the goal of minimizing the discharge by otherwise occupying limited resources on site. The priority should be placed on the most important engineering control which is to cease the discharge.

The District recommends replacing Table E-4 (on page E-7 of the MRP) with the more appropriate and practical Table E-1 from the State’s MRP:

Duration of Discharge	Sampling Requirements
Less than 20 minutes	One sample is required during the first 10 minutes of the discharge
20 minutes To 60 minutes	One sample is required during the first 10 minutes of the discharge, plus a second sample is required within the last 10 minutes of the discharge.
Greater than 60 minutes	One sample is required within the first 10 minutes, a second sample is required within the next 50 minutes, and a third sample is required approximately within the last 10 minutes of the discharge.

4. *Turbidity Numeric Action Level*

The District believes implementation of the numeric action level (NAL) for turbidity in the Tentative Order is not feasible or appropriate in two respects. First, the Tentative Order Fact Sheet explains that the proposed 500 NTU action level is borrowed from a construction stormwater general permit and based on background turbidity levels. However, it is inappropriate to use an action level from a construction stormwater permit due to those discharges’ significant differences from unplanned potable water discharges, and insufficient information regarding the background data was provided to allow it to be evaluated. Second, the Fact Sheet also explains how the NAL is intended to be used: “[i]f the action level is exceeded routinely, BMP enhancements are needed to ensure that water quality standards are maintained.” In fact, the proposed NAL cannot be used in this manner because the available evidence shows that 500 NTU cannot be consistently achieved with available BMP technology.

a. Construction general permit improper source of turbidity NAL

First, potable water discharges – especially unplanned events – cannot meet the turbidity requirements imposed on construction sites. A construction site is a controlled environment, fenced off from the public domain, larger than an acre in size where engineering controls can be

implemented proactively to properly manage discharges in a planned fashion. BMP implementation on construction sites is generally not limited by time or available space.

By contrast, potable water discharges are highly variable in their flow rate, duration, and sediment load. Their turbidity can range from single-digit NTU values for a discharge from a potable water reservoir draining operation to several thousand NTUs during trench dewatering. The District has measured Total Suspended Solids (TSS) prior to the BMPs for initial discharges from trench excavations associated with water main repairs. The data indicates a massive variability. The distribution of the sediment was primarily fines (i.e., silts and clays associated with bay muds).

All potable water discharges are also subject to individual site constraints not common among construction-related discharges. For example, potable water main breaks – which make up the majority of potable discharges – require retroactive emergency response, occur in public streets with traffic and pedestrian concerns, involve public health and commerce concerns, and afford limited space to work in and limited time to accomplish the repairs. The repair crew needs to maintain a continuous flow from the leak to locate the break and minimize the chance of contaminating the public drinking water system by allowing trench water to enter the pipe.

In recognition of the unique difficulties inherent in unplanned discharges, the statewide Construction General Permit (CGP) did not even attempt to apply turbidity requirements to the types of discharges regulated by the Tentative Order. The section of the CGP that is most closely analogous to potable water discharges is that discussing Linear Underground Projects (LUP). Notably, the CGP exempts from permit requirements all LUPs that are conducted for routine maintenance purposes, which is defined to include leak repair and the update of existing facilities.

In sum, discharges covered by the construction stormwater general permit are too dissimilar from the discharges covered by the Tentative Order to justify the use of a similar approach to turbidity here.

b. Citation to unspecified statewide background turbidity data is insufficient justification for 500 NTU action level

The Fact Sheet's other justification for selecting a 500 NTU action level is an "analysis of one dataset" based on "statewide ... information" which showed that turbidity values in background receiving water "in California's ecoregions range from 16 NTU to 1716 NTU (with a mean of 544 NTU)." This rationale is plainly insufficient to justify the chosen action level and raises a series of unanswered questions. Which dataset was analyzed? How and where was the data gathered, and for what purpose? Do the receiving waters included in this single dataset adequately represent all receiving waters within the Bay region which will receive the potable water discharges regulated by the proposed permit? Why is data gathered from "California's ecoregions" outside of Region 2 relevant to conditions in this region? Moreover, assuming the analyzed dataset is relevant, isn't the proposed 500 NTU NAL both underprotective and overprotective given the wide observed range in turbidity? Furthermore, the chosen NAL was chosen to approximate the arithmetic mean of the dataset, and as a result, the existing

background levels already exceed the NAL in at least half of the observed samples. How could discharges consistently comply with a standard that is already exceeded half the time? Finally, even if these questions are disregarded, the Fact Sheet's stated logic of background turbidity + plus 10% should result in a NAL of 598, not 500 (544 NTU + 54.4 NTU).

These unaddressed issues suggest that 500 NTU is arbitrarily chosen based on inadequate data. Because relevant data of background turbidity is unavailable, we believe a NAL is premature. Even if appropriate data were to be developed, the District still believes a NAL based on an arithmetic mean is not closely linked to potable water discharges' actual contributions to turbidity in specific, individual receiving waters – which each vary in turbidity – and therefore the NAL is not a useful proxy to assess the performance of BMPs.

c. Proposed NAL is unachievable using available BMPs, unnecessarily setting dischargers up for failure

The District objects to the 500 NTU action level because it cannot be achieved consistently even if available BMPs are effectively deployed. The industry has determined that the most effective method to manage turbid discharges is to use check dams filled with pea gravel. Instead of filtration, the check dams slow the flow to allow the sediment in the discharge water to settle out.¹ Considering the limited space in the roadway, variability of individual sites (e.g., road slopes, distant to drop inlet, curb and gutter dimensions), the effectiveness of this method varies from site to site. Turbidity can be reduced, but it cannot often be reduced below background levels.

RWQCB staff has responded to concerns with the NAL by stating that the proposed action level is not an effluent limit. However, a NAL that most assuredly cannot be reached is of great concern to the District. The Tentative Order requires deployment of “additional or changed BMPs” each time the turbidity NAL is exceeded (paragraph VII.C.5.b.iii.), without regard to the fact that gravel-bag BMPs cannot reduce turbidity without limit. Up to a certain point, additional bags could be expected to yield incremental turbidity improvements, but this permit would require endless addition of BMPs beyond the point of rapidly diminishing returns. Because the permit's turbidity requirements exist to assess BMP performance, the requirements need to take into account the practical limits on the performance of available BMPs. Furthermore, the Tentative Order would require dischargers to engage in a circular yearly process of “enhancing” BMPs and updating BMP plans in years where the 500 NTU action level is exceeded at least 20% of the time – which it predictably will be. If the best available BMPs are being consistently and properly deployed, at best this cycle would appear to be futile at best, and at worst, it has the unintended consequence of setting the dischargers up to fail.

¹ The District has hired engineering specialists to evaluate sediment control BMPs for water main repairs. Although the study identified filter bags as the most effective means to eliminate sediment from trench dewatering operations, the filter bags could not be implemented effectively in field conditions. Filter devices were shown to be incompatible with main break trench dewatering operations because they get clogged with fine sediment and either fail or cause flooding. The potential for these failures erase any benefits the filter bags would otherwise provide.

d. Recommendation

We believe it would be more effective to address turbidity with an iterative, adaptive approach, whereby permittees implement mechanisms to evaluate and formally document the use and performance of BMPs, and make adjustments as necessary to protect water quality. This adaptive approach can be successfully implemented without relying on an arbitrary, unsupported, and unachievable numeric action level. Accordingly, the District recommends that the Tentative Order be amended to delete the turbidity NAL and instead require appropriate BMP deployment to the maximum extent practicable, documentation of such deployment and documented evaluation of said BMPs and make all records of deployment and evaluation available for regulatory review for a specified period.

5. Short Term and Seasonal Discharges

The Tentative Order currently provides coverage for discharges or combinations of discharges, occurring continuously or intermittently for more than 2,200 hours per year only for seepage from underdrains of water storage reservoirs that are not treated with copper based herbicides. As the rationale is stated in the Fact Sheet, coverage is provided because underdrain seepage does not have reasonable potential to exceed applicable water quality objectives. The District agrees that these discharges do not have reasonable potential to exceed water quality objectives and are indeed de minimis. By the same logic, the District believes that other necessary and legally mandated drinking water system discharges, such as reservoir filling, that exceed 2,200 hours per year duration should be covered by the Tentative Order for the same reasons as underdrain seepage.

The District recommends that the RWQCB reconsider its arbitrary “2,200 hours or less” definition of “short-term and seasonal” and utilize the same rationale employed by the SWRCB in its statewide draft permit and draft resolution adopting the categorical exemptions to the State Implementation Plan/California Toxics Rule (SIP/CTR). The SWRCB did not believe it necessary to include precise time limitations on “short term and seasonal” discharges. Requiring intermittent discharges that may exceed 2,200 per year to seek coverage under another separate permit would be an unnecessary burden on the resources of both RWQCB staff and District staff. In the alternative, the RWQCB could consider adding coverage for specific categories of intermittent discharges, such as reservoir filling, that it finds do not have reasonable potential to exceed water quality objectives, regardless of the total hourly duration of the discharges.

Lastly, the Tentative Order does not currently define specific monitoring or reporting requirements for the covered underdrain discharges. It is not feasible to comply with the MRP requirements in Table E-2 for these types of discharges as they may run intermittently. The District requests that a footnote be added to Table E-2 that states that the monitoring in Table E-2 is not applicable to these underdrain seepage discharges.

6. BMP Plan Contents

The District understands the need for detailed BMP plans in that they provide a framework for compliance with Tentative Order requirements. However, some elements of the proposed BMP

Plans are over-reaching and not relevant to regulation of these de minimis permitted discharges. The District recommends removing paragraph VII.C.4.b.ii. and VII.C.4.b.iii. (see Tentative Order, page 11) as plans for the provision of alternate water supplies are not relevant to the purpose of this permit: controlling the quality and quantity of discharges to surface water bodies. Water supply contingency plans are already a part of every water purveyor's water distribution program and are inappropriate to include as a mandate of this permit. This request applies equally to the Tentative Order's requirement for emergency response procedures for traffic and crowd control. Lastly, the District recommends that the parenthetical reference about emergency response "(In emergencies, Dischargers will first protect human health, safety and property.)" be placed after the title of ***b. Contingency and Emergency Response Planning*** due to the significance of this statement and its applicability to all contingency and emergency and response planning.

7. Biologist Certification

The District recommends modification of the biologist certification requirement. The Tentative Order treats each and every discharge as an individual "project" requiring a biologist to certify that beneficial uses are no longer being actively impacted for each discharge resulting in adverse water quality impacts.

By contrast, the SWRCB certification by a qualified biologist must be submitted only after a water purveyor completely and permanently stops discharging from a drinking water system. As the SWRCB noted in their Initial Study/Proposed Mitigated Negative Declaration, the biologist certification is a mitigation measure required "upon completion of the project." In the SWRCB's view, potable water system operations and related discharges are ongoing "projects" and not considered complete unless the water purveyor ceases discharges from its system or when the State and/or Regional Water Board terminates NPDES permit coverage for the discharge(s), whichever is sooner. The SWRCB justified this conclusion by noting that the discharges from these systems are existing discharges that will continue to take place, and serve as the baseline for determining the significance of any impacts that could result from the project. The SWRCB concluded that "[a]s compared to existing conditions, there is not significant impact on the environment due to routinely occurring planned discharges." The SWRCB concludes that discharges from water purveyors are mandatory system-development and system-maintenance activities and are essential operations to comply with the federal Safe Drinking Water Act and the California Health and Safety Code for providing reliable and safe drinking water.

The District suggests the RWQCB use the same rationale to streamline this requirement provided by the SWRCB in the draft statewide draft permit for potable water discharges in regards to the requirement for a biologist certification and not impose an onerous, legally unnecessary requirement to certify after each and every discharge.

8. Effluent Limits

The Tentative Order includes an effluent limitation for total chlorine residual of 0.019 mg/L as a 1-hour average (Section V. Effluent Limitations). Compliance is based on a total measurable chlorine residual of < 0.13 mg/L (Provisions V.B.6 and V.B.7 of the MRP (Attachment E)). The

District understands that the 0.019 mg/L figure is based on U.S. EPA testing applicable to continuous extended exposure discharges. This data is not relevant to derive water quality criteria for organisms exposed to intermittent discharges of chlorine. Further, the basis for any numeric effluent limit for chlorine residual is unclear. The Tentative Order provides no documentation of actual water quality problems caused by the thousands of essential potable water system discharges that occur every year throughout the Region. There is also no information presented demonstrating that NELs have been appropriately calculated on a non-water quality basis, or that they would be any more effective than benchmarks or action levels in ensuring that BMPs are effectively implemented for protecting water quality. In fact, the District believes the available evidence demonstrates that numeric effluent limits are infeasible within the meaning of 40 C.F.R. 122.44(k)(3) because potable water discharges require an iterative approach to control pollutants, are highly variable in frequency and duration, are difficult to characterize, and because system variability and minimal available data “make it difficult to determine with precision or certainty actual and projected loadings for individual dischargers or groups of dischargers”.² The District suggests that the numeric effluent limit NEL for chlorine residual proposed in this permit be eliminated and replaced by BMP requirements, or alternatively an action level.

The District appreciates the opportunity to provide comments on the San Francisco Regional Water Quality Control Board’s General Waste Discharge Requirements for Discharges of Water from Drinking Water Supply Distribution, Transmission and Groundwater Systems and we look forward to continuing to work with you to implement a meaningful program to protect water quality. If you have any comments or questions regarding the content of this letter, please feel free to contact me at 510-287-0412 or via email at cjohanne@ebmud.com.



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² See Nov. 22, 2002 letter from Robert H. Wayland, Director of U.S. EPA Office of Wetlands, Oceans and Watersheds, to Water Division Directors, Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on Those WLAs. Available at water.epa.gov/lawsregs/lawsguidance/cwa/tmdl/upload/final-wwtmdl.pdf.