Appendix C
Response to Comments

California Regional Water Quality Control Board
San Francisco Bay Region

RESPONSE TO WRITTEN COMMENTS
On the Reissuance of an NPDES Permit for Discharges from the
San Francisco Southeast Water Pollution Control Plant, North Point Wet Weather Facility,
Bayside Wet Weather Facilities, and Wastewater Collection System

The Regional Water Board received written comments from the City and County of San Francisco, U.S. EPA, and the Bay Area Clean Water Agencies on a tentative order distributed for public comment. This response to those comments summarizes each comment in *italics* (paraphrased for brevity) followed by a staff response. Revisions are shown with ~~strikethough~~ for deletions and <u>underline</u> for additions. For the full content and context of each comment, refer to the comment letters.

CITY AND COUNTY OF SAN FRANCISCO

City General Comments
San Francisco's combined system provides tremendous protection to San Francisco Bay. *The City points to water quality improvements due to construction of large transport/storage units that have markedly decreased the volume and frequency of combined sewer discharges.*

San Francisco is committed to improving wet weather performance through the implementation of Green Infrastructure. *The City commits to increasing the area for stormwater capture and recharging the groundwater aquifer before stormwater enters the transport/storage units as part of a long-term program to replace aging infrastructure.*

The Receiving Water Limitation language is inappropriately applied to wet weather discharges. *The City's greatest concern is that Receiving Water Limitation V.C of the tentative order could expose it to potential permit violations. The City points to a 1979 order finding that beneficial uses would be protected if the City constructed a storage system and introduced baffles and other means to collect floatables at its combined sewer discharge points. It says the City built the system as agreed. The City says requirements to operate the system are narrative water quality-based effluent limitations for wet weather. It claims Basin Plan section 4.9.1 codifies this approach, recognizing that numeric limits cannot be readily established due to the unpredictability of storms. The City says the receiving water limit broadly prohibits all discharges that cause violations of water quality standards, regardless of wet or dry conditions. The City claims this requirement is inconsistent with U.S. EPA's* Combined Sewer Overflow (CSO) Control Policy *and the Basin Plan. It claims the receiving water limit is unnecessary because the narrative effluent limitation is sufficient to protect beneficial uses.*

The City asserts that the proposed receiving water limitation could be interpreted to prohibit any exceedance of any numeric water quality criteria, regardless of duration or spatial extent. It

claims compliance with such a requirement is impossible because of the variable characteristics of stormwater flows and the impossibility of constructing sufficient storage or treatment capacity to manage all storms of all sizes. The City also says studies show that its combined sewer discharges have little impact on water quality and recreational uses. The City includes more detailed comments among its specific comments below.

Response to City General Comments

The City's first and second general comments do not require a response. However, we disagree with the third comment, i.e., that the tentative order inappropriately applies receiving water limitations to wet weather discharges. In accordance with the federal Clean Water Act (CWA) and regulations adopted thereunder, including U.S. EPA's *Combined Sewer Overflow (CSO) Control Policy*, Receiving Water Limitation V.C states our expectation that the City's operations will protect and maintain water quality standards in the waters that receive its discharges. This is the premise upon which we have based all the permit's provisions.

The *Combined Sewer Overflow (CSO) Control Policy* requires control of combined sewer discharges sufficient to maintain water quality standards. As outlined in the policy, the tentative order establishes implementation of the City's Long-Term Control Plan as a narrative water quality-based effluent limitation necessary to maintain water quality standards. Consistent with the policy, we presume that implementation of the Long-Term Control Plan is sufficient to maintain water quality standards. However, the policy explicitly requires our presumption to be reasonable and supported by evidence obtained through post-construction compliance monitoring. The tentative order requires such monitoring.

Like nearly all individual NPDES permits in the San Francisco Bay Region, the tentative order contains a broad receiving water limitation that prohibits discharges that cause violations of water quality standards. This limitation serves as a backstop in the event that our presumption regarding the adequacy of the Long-Term Control Plan proves to be incorrect. The City's proposed changes to that limitation (see City Comment 5) would gut the provision and render it meaningless and superfluous in light of other permit requirements.

The tentative order is wholly consistent with the description of how the Regional Water Board regulates these discharges. Basin Plan section 4.9.1 states, in part, "the CSO Control Policy requires immediate compliance with water quality standards expressed in the form of a narrative limitation." The 1979 order the City cites is an expired permit superseded many times over by other permits, including the current one to be reissued. It is worth noting, however, that the 1979 order contains nearly word-for-word the same provision as the City objects to today.

Finally, the City's comments are contradictory. While the City asserts that its discharges have little impact on beneficial uses, it also expresses concern about its ability to prevent violations of water quality standards. It worries specifically about how the receiving water limit might be interpreted and enforced. The Regional Water Board will interpret and enforce all requirements judiciously. We address the City's specific comments on this matter in our responses to City Comments 5, 5.1, 5.2, 5.3, 5.4, 5.5, and 5.6 below.

City Comment 1

The specific and limited* new *language regarding enforcement with the previous permit should be removed. *The City notes that the tentative order contains new language clarifying that, if there is a stay of any part of the order, the City must comply with the analogous portion of the previous order. The City asserts that this provision does not allow for changed conditions that could render compliance with the previous order infeasible. The City also asserts that this is not required under federal law; therefore, we must provide an economic analysis pursuant to Water Code section 13241. The City proposes deletion.*

Response to City Comment 1

We disagree. This provision is necessary to ensure that appropriate requirements are in place if there is a temporary stay of the order or any of its provisions. (This provision also appears in the most recent statewide template for NPDES permits.) Without it, discharges could be regulated inadequately in the event of a stay. We reviewed the tentative order and the previous order side-by-side and concluded that there is little potential for confusion over what is analogous text. Most headings and subheadings are essentially the same. Nevertheless, for clarity, we revised the provision as follows:

> THEREFORE, IT IS HEREBY ORDERED that Order No. R2-2008-0007 (previous order) is rescinded upon the effective date of this Order except for enforcement purposes, and, in order to meet the provisions of Water Code division 7 (commencing with § 13000) and regulations adopted thereunder, and the provisions of the CWA and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order. This action in no way prevents the Regional Water Board from taking enforcement action for past violations of the previous order. If any part of this Order is subject to a temporary stay of enforcement, unless otherwise specified, the Discharger shall comply with the analogous portions of the previous order, <u>to the extent analogous portions exist,</u> which shall remain in effect for all purposes during the pendency of the stay.

This provision does not require any special analysis pursuant to Water Code section 13241. The Water Code only requires an economic analysis where numeric limitations are more stringent than those required under federal law. As explained in Fact Sheet section IV.D.3, the tentative order's requirements are no more stringent than those required under federal law. The City has provided no evidence that imposing the limits in the previous order could involve any new economic considerations or that any economic considerations justify allowing an inadequately regulated discharge of a pollutant that could cause or contribute to a violation of water quality standards.

City Comment 2

It appears there was an oversight in that silver is shown as having effluent limits in Table 4. *The City notes that the reasonable potential analysis shown in Fact Sheet Table F-9 indicates there is no reasonable potential for silver. The City proposes deleting the silver effluent limits.*

Response to City Comment 2
We agree. We revised Table 4 as follows:

Table 4. Effluent Limitations—Dry Weather

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
⋮						
Copper, Total Recoverable	µg/L	53	---	76	---	---
~~Silver, Total Recoverable~~	~~µg/L~~	~~7.3~~	~~—~~	~~22~~	~~—~~	~~—~~
Cyanide, Total	µg/L	20	---	43	---	---
⋮						

City Comment 3
The continuous chlorine residual monitoring provision should specify use of reliable data. *Table 4 Footnote 2 and Table 5 Footnote 1 describe continuous monitoring requirements for chlorine. The City notes that wet chemistry analytical methods are more accurate and reliable than continuous monitoring methods. The City requests that the Regional Water Board limit its right to consider all continuous monitoring data for discretionary enforcement to all "reliable" data.*

Response to City Comment 3
We disagree. This text reserves for the Regional Water Board the right to evaluate all monitoring data when considering discretionary enforcement. (It also appears in permits the Regional Water Board has adopted in recent years.) The Regional Water Board may choose not to pursue enforcement if data appear to be unreliable.

City Comment 4
Language in the Receiving Water Limitations should be changed to clarify that the dry weather discharge will not alter certain conditions **outside the zone of dilution.** *The City notes that within the dilution zone, effluent and receiving water typically have different temperature, turbidity, and apparent color. The City proposes to modify Receiving Water Limitation V.A.3.*

Response to City Comment 4
We agree and see no reason to restrict this change to Receiving Water Limitation V.A.3. We incorporated changes into revisions shown in our response to City Comment 5.6.

City Comment 5
The Receiving Water Limitations language should be modified to provide consistency between those provisions and the specific water quality based limitations in the draft permit. *The City proposes to revise Receiving Water Limitation V.C. The City claims the following changes are necessary to remove confusion and contradictory language regarding which water quality standards could provide a basis for permit violation in wet weather:*

> *The discharge shall not cause a violation of any <u>applicable</u> water quality standard for receiving water adopted by the Regional Water Board or the State Water Board as required by the CWA and regulations adopted thereunder. If*

> *more stringent water quality standards are promulgated or approved pursuant to CWA section 303, or amendments thereto, the Regional Water Board may revise or modify this Order in accordance with the more stringent standards.*
>
> *Applicable standards during dry weather are those for which this order establishes effluent limitations following the procedures in the State Implementation Policy and identified in Section IV.A. A violation is established by the exceedance of a water quality-based effluent limitation established in this order.*
>
> *During wet weather, applicable standards consist of implementation of San Francisco's long-term control plan (LTCP) as described in Sections 4.9.1 of the Basin Plan and identified in Order Section VI.C.5. A violation is established by not fully implementing the LTCP.*

The City claims that the proposed change would be consistent with the language used in the permit for the Washington D.C. combined sewer system:

> *Consistent with the Clean Water Act, Section 301(b)(I)(C), the permittee may not discharge in excess of any limitation necessary to meet applicable water quality standards including those of the District of Columbia set forth in Chapter 21 of the District of Columbia Municipal Regulations, Chapter 11 (2006).*
>
> *The limitations and conditions in this permit for the discharges from Blue Plains and the CSS are limitations that are necessary to meet the applicable water quality standards, including those of the District of Columbia referenced above.*

The City lists six reasons for the change, addressed individually below as Comments 5.1 through 5.6).

Response to City Comment 5

We disagree. The City's proposed revisions would gut the meaning and intent of Receiving Water Limitation V.C. The proposal would redefine the applicability of the water quality standards in the Basin Plan, California Toxics Rule, and other laws and regulations (see Fact Sheet section III.C) such that "applicable" water quality standards would only be those for which the Regional Water Board has established effluent limitations for the discharge. This is wholly inconsistent with the CWA because water quality standards exist for waters of the United States independent of any discharges to such waters. Water quality standards apply to these waters regardless of whether there is reasonable potential for a discharge to cause or contribute to exceedance of a water quality standard. The tentative order correctly describes implementation of the Long-Term Control Plan as the effluent limitation necessary to maintain water quality standards, not as a water quality standard in its own right. We place limitations on discharges for the purpose of maintaining water quality standards in receiving waters. Redefining "water quality standards" as "implementation of the Long-Term Control Plan" would fail to differentiate between "standards" and "limitations."

The purpose of Receiving Water Limitation V.C is to serve as a backstop in the event that the reasonable potential analysis described in Fact Sheet section IV.C.3 fails to account for something in the discharge that could, in fact, cause an exceedance of water quality standards. Likewise, it serves as a backstop in the event that our presumption that implementing the Long-Term Control Plan will maintain water quality standards proves to be unreasonable. Without this receiving water limitation, the Regional Water Board could find it more difficult to enforce against possible harmful discharges it cannot foresee at this time.

Receiving Water Limitation V.C, as currently drafted, is consistent with the Washington D.C. permit that the City cites. Like that permit, the tentative order would require the City to comply with limitations derived to maintain water quality standards. It is also consistent with nearly every individual NPDES permit the Regional Water Board has adopted in recent years and the NPDES permits for combined sewer systems in Chicago, Illinois; Portland, Maine; Portland, Oregon; Boston, Massachusetts; and New York, New York. Moreover, the City's previous orders (e.g., Orders R2-79-67, R2-84-28, R2-95-039, and R2-2002-0073) contained essentially the same receiving water limit. Even the receiving water limitations in the most recent order (R2-2008-0007) state, "Receiving water limitations are based on water quality objectives … and are a required part of this Order." To remove this limitation would result in a permit with conditions not as stringent as those in the previous permits.

We address the City's specific comments regarding Receiving Water Limitation V.C below.

City Comment 5.1
Proposed language purports to regulate wet weather discharges without developing wet weather standards, contrary to CSO Policy. *The City asserts that the tentative order requires wet weather discharges to meet water quality standards designed for dry weather, which it claims is contrary to the CWA, citing the* Combined Sewer Overflow (CSO) Control Policy. *U.S. EPA guidance states, "The CSO Control Policy anticipates the review and revision, as appropriate, of water quality standards and their implementation procedures when developing CSO control plans to reflect site-specific wet weather impacts of CSOs." The City claims to have repeatedly requested development of wet weather water quality standards during Basin Plan triennial reviews to no avail. The City finds it unworkable and contrary to the CWA to hold its wet weather discharges to water quality standards not designed for wet weather.*

Response to City Comment 5.1
We disagree because nothing in the Basin Plan, the California Toxics Rule, or any other law or regulation (see Fact Sheet section III.C) states that existing water quality standards are designed only for dry weather. Although the *Combined Sewer Overflow (CSO) Control Policy* states that development of Long-Term Control Plans should be coordinated with review and appropriate revision of water quality standards, it does not mandate that water quality standards be revised. Roughly every three years, the Regional Water Board reviews whether to revise its water quality standards through its triennial review. To date, the Regional Water Board has chosen not to revise its standards to differentiate between wet and dry weather conditions. The City did not raise this issue during the most recent triennial review in 2012.

The City argues that the tentative order should not require its discharges to meet water quality standards that do not specifically account for the nature of its discharges. The City ignores the fact that water quality standards are almost always developed without regard to specific discharges. Water quality standards recognize the beneficial uses of the waters to be protected and set forth water quality objectives necessary to protect those uses (and include antidegradation policies). Although water quality standards could conceivably differ during wet and dry conditions, none of the water quality standards applicable to San Francisco Bay and its tributaries do. For this reason, we revised Receiving Water Limitations V.A and V.B, as shown in our response to City Comment 5.6, to remove wet weather exclusions.

City Comment 5.2

The proposed violation of WQS provision is unacceptably vague without the clarification. *The City claims the proposed receiving water limit is too vague to implement. It says the limit fails to specify the application point (e.g., point of discharge, edge of mixing zone) and does not name the specific water quality objectives that apply (e.g., 1-hour, 4-day, 24-hour average). The City notes that the limit does not state whether a 10:1 dilution factor would be applied, or actual dilution, or whether a 303(d) listing would indicate that a water quality standard is exceeded. The City says the limit fails to specify whether a numeric effluent concentration could be compared directly to a numeric water quality standard. It claims this imprecision could put it at risk of violation, even though the tentative order contains findings that compliance with the permit's water quality based effluent limitations is consistent with the Combined Sewer Overflow (CSO) Control Policy and will protect beneficial uses.*

Response to City Comment 5.2

We disagree. Receiving Water Limitation V.C is appropriately clear. The tentative order does not specify the timeframes for the water quality standards because individual water quality objectives already include relevant timeframes. It also does not restrict the Regional Water Board's discretion in considering effluent concentrations when evaluating compliance. This allows the Regional Water Board to consider whether a violation has occurred on a case-by-case basis based on all relevant facts.

The tentative order does not need to state whether a CWA section 303(d) listing could indicate that a water quality standard is exceeded because that is precisely what a CWA section 303(d) listing means. However, a CWA section 303(d) listing alone would not constitute a violation of the receiving water limit. To find a violation, the Regional Water Board would need to establish both (1) that receiving water conditions violate a water quality standard pursuant to the CWA and regulations adopted thereunder, including the *Combined Sewer Overflow (CSO) Control Policy*, and (2) that the discharge caused the violation.

As shown below in our response to City Comment 5.6, we revised Receiving Water Limitation V.C to refer specifically to the *Combined Sewer Overflow (CSO) Control Policy* as a regulation that addresses implementation of water quality standards. We also revised the limitation to recognize mixing zones in response to City Comment 4.

City Comment 5.3

The proposed provision could be read to require compliance with all narrative and numeric water quality objectives, thereby supplanting the "reasonable potential" procedures in US EPA regulations and the State Implementation Policy. *Federal regulations require effluent limits to ensure that discharges do not cause, have a reasonable potential to cause, or contribute to violations numeric or narrative water quality standards. For the City's dry weather discharges, the reasonable potential procedures used to develop effluent limits are defined in the State Implementation Policy. The City claims limits cannot be imposed in the absence of a reasonable potential analysis; therefore, the proposed receiving water limit can refer only to those water quality-based effluent limitations made "applicable" through the State Implementation Policy process or a similar process compliant with regulations. Regulatory procedures provide flexibility to address pollutants using other than numeric limits. For example, best management practices may be used when numeric limitations are infeasible. This is the approach when requiring implementation of the Long-Term Control Plan in lieu of numeric effluent limits.*

Response to City Comment 5.3

We disagree. The City incorrectly asserts that 40 C.F.R. section 122.44(d) forbids limits, including receiving water limits, on pollutants that do not exhibit reasonable potential. The City misinterprets 40 C.F.R. section 122.44(d), which requires effluent limitations for pollutants with reasonable potential to cause or contribute to exceedances of water quality standards. The City mischaracterizes the purpose of a reasonable potential analysis as an exercise in determining whether water quality standards apply. In fact, one must identify applicable water quality standards before starting a reasonable potential analysis. The reasonable potential analysis focuses regulatory oversight on pollutants of most concern.

We agree that 40 C.F.R. section 122.44(d) allows narrative effluent limits. The tentative order imposes narrative effluent limits during wet weather by requiring implementation of the Long-Term Control Plan in lieu of numeric effluent limitations. This does not address the appropriateness of receiving water limits as a backstop in the event that the reasonable potential analysis and resulting effluent limitations prove to be insufficient to maintain water quality standards.

City Comment 5.4

The proposed provision is inconsistent with the implementation of San Francisco's system and the CSO Policy. *The* Combined Sewer Overflow (CSO) Control Policy *mandates that technology-based effluent limitations for wet weather discharges from combined sewer systems are the Nine Minimum Controls, and that the water quality-based effluent limits are to be based on long-term control plans. The policy recognizes that compliance with numeric limitations may be inappropriate for wet weather discharges and, therefore, allows performance standards for combined sewer overflow control based on average design conditions. The policy provides flexibility to adapt water quality standards and implementation procedures to reflect site-specific conditions, including those related to combined sewer overflows, as long as beneficial uses are protected.*

The City claims the Regional Water Board and U.S. EPA created a special regulatory framework for the City's wet weather discharges. The City claims Order R2-79-67 stated the Regional Water Board's intent to allow wet weather exceptions to numeric water quality objectives, provided that beneficial uses are not adversely affected. That order found that beneficial uses would be protected if the City designed, built, and operated a system that reduced the frequency of combined sewer discharges to four in the North Shore, ten in the Central Basin, and one in the Southeast; ensured that the system's storage capacity is maximized prior to discharge; and equipped all overflow points with baffles or equivalent means to reduce floatables. The City says these implementation requirements were and are consistent with the Combined Sewer Overflow (CSO) Control Policy*'s "demonstration approach." In 1994, after U.S. EPA promulgated the* Combined Sewer Overflow (CSO) Control Policy*, the City claims the Regional Water Board and U.S. EPA confirmed that the City's controls satisfied the* Combined Sewer Overflow (CSO) Control Policy*'s "presumption approach," i.e., they determined that the City's performance was sufficient to meet water quality standards.*

The City claims Basin Plan section 4.9.1 codifies wet weather protection of beneficial uses through development and implementation of narrative requirements. The Basin Plan recognizes that numeric effluent limits cannot be readily established due to the unpredictability of storms, so requirements will be expressed as narrative limits, and the City's wet weather dischargers will be controlled using guidance for the design of overflow discharge structures. The City says the tentative order requires compliance with operational criteria designed to maximize treatment and storage, which ensures achievement of the long-term design criteria determined to be sufficient to protect beneficial uses. In the event that information becomes available demonstrating that (1) system performance deviates significantly from the design performance or (2) the design performance is insufficient to protect beneficial uses, then the City would have to update to its Long-Term Control Plan. The City asserts that, at present, no such information exists.

The City's concern is rooted in the Ninth Circuit's recent decision in Natural Resources Defense Council (NRDC) v. County of Los Angeles*, in which the Ninth Circuit required compliance with a similar receiving water limit.*

Response to City Comment 5.4
Our approach to technology-based and water quality-based effluent limitations is consistent with *Combined Sewer Overflow (CSO) Control Policy* requirements. We agree that the CWA allows site-specific water quality standards, but we note that it does not require them and, to date, the only site-specific water quality standards for waters near the City's outfalls relate to copper, mercury, and cyanide (see Basin Plan Tables 3-3A, 3-3B, and 3-3C). These site-specific standards do not differentiate between wet and dry conditions.

The City misconstrues Order R2-79-67. That order was an NPDES permit adopted 34 years ago for the North Point wastewater treatment plant and related wet weather diversion structures. It predates the Southeast Water Pollution Control Plant and the modern wastewater collection system in place today. When the Regional Water Board adopted that order, wet weather discharges were still completely untreated. Subsequent orders long ago superseded Order R2-79-67, and it contains no provisions that control the Regional Water Board's current actions.

Contrary to the City's portrayal, Order R2-79-67 did not express any intent to allow exceptions to numeric water quality objectives. Instead, that order found that the Basin Plan (at the time) recommended that exceptions to the Basin Plan's prohibition against discharge of untreated waste be allowed for wet weather discharges, provided that beneficial uses would be protected. In fact, a permit cannot provide for any exception to water quality standards not already approved through a regulatory process, such as a Basin Plan amendment. More to the point, Order R2-79-67 (Finding 20) indicated that further mitigation may be required in the future, after facilities are placed in operation, if beneficial uses are determined not to be adequately protected. Provision B.1 of that order contained language substantively the same as the receiving water limitation to which the City now objects:

> This discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Regional Board or the State Water Resources Control Board as required by the Federal Water Pollution Control Act and regulations adopted thereunder. If revised applicable water quality standards are promulgated or approved pursuant to Section 303 of the Federal Water Pollution Control Act, or amendments thereto, the Board will revise and modify this Order in accordance with such standards.

Basin Plan section 4.9.1 does not "codify" that narrative requirements be used during wet weather to implement water quality standards, including protection of beneficial uses. Basin Plan section 4.9.1 simply explains the Regional Water Board's existing approach to permitting wet weather discharges (including compliance with water quality standards). The tentative order is wholly consistent with this approach.

We agree that the water quality-based effluent limitations in the tentative order (i.e., implementation of the Long-Term Control Plan) should be sufficient to ensure that receiving waters comply with water quality standards. In fact, the City should have no problem complying with Receiving Water Limitation III.C if implementation of the Long-Term Control Plan is indeed sufficient. The tentative order requires monitoring to confirm this presumption. Provision VI.C.5.c.v of the tentative order requires the City to synthesize and update its Long-Term Control Plan and, in doing so, requires the City to propose a plan for post-construction compliance monitoring of all wet weather discharges consistent with the *Combined Sewer Overflow (CSO) Control Policy*. The Regional Water Board may use the results of this monitoring, and the monitoring that Provision VI.C.5.b.ix requires, to evaluate how reasonable it is to presume that implementation of the Long-Term Control Plan will maintain compliance with water quality standards. The Regional Water Board could also use the results of this monitoring as a basis for findings regarding whether the City meets the *Combined Sewer Overflow (CSO) Control Policy*'s "demonstration approach" as it asserts.

The City claims the Ninth Circuit's recent ruling in *Natural Resources Defense Council (NRDC) v. County of Los Angeles* could be the impetus for similar lawsuits against the City because the Natural Resources Defense Council sued the County of Los Angeles for violating a municipal separate storm sewer system permit containing a similar receiving water limitation. We do not deny the possibility that the City could be sued on the same grounds; however, it does not appear

likely. The facts underlying the County of Los Angeles permit and this tentative order are readily distinguishable. First, *Natural Resources Defense Council (NRDC) v. County of Los Angeles* involved a separate storm sewer system, not a combined sewer system. Second, Receiving Water Limitation III.C includes the phrase "as required by the CWA and regulations adopted thereunder," whereas the County of Los Angeles stormwater permit did not. The *Combined Sewer Overflow (CSO) Control Policy* sets forth an iterative process whereby dischargers install long-term controls and add additional controls if and when monitoring demonstrates a need for them. No parallel regulatory policy exists for stormwater. For clarity, we revised the tentative order to include an explicit reference to the *Combined Sewer Overflow (CSO) Control Policy* as an example of a regulation directing implementation of water quality standards.

Moreover, to the extent that the City believes *Natural Resources Defense Council (NRDC) v. County of Los Angeles* may incentivize citizen lawsuits, that "threat" has been present for nearly twenty years with no suit filed against the City. In 1995, the Ninth Circuit decided *Northwest Environmental Advocates (NWEA) v. City of Portland*, a case more factually similar to the City's situation. This case involved a citizen suit brought by Northwest Environmental Advocates against the City of Portland (which operates a combined sewer system), claiming, "Portland's CSO events violated a permit condition prohibiting any discharges that would violate Oregon water quality standards."[1] To our knowledge, the City has not been the target of a citizen suit for wet weather violations of water quality standards even though most of its previous orders (e.g., Orders R2-79-67, R2-84-28, R2-95-039, and R2-2002-0073) contained essentially the same receiving water limit. Order R2-89-102 and the previous order (Order R2-2008-0007) contained more specific receiving water limits applicable during both dry and wet weather.

City Comment 5.5

A more justified permit provision would be to clarify that wet weather operations are regulated through the LTCP referenced in Chapter 4 of the Basin Plan rather than being regulated by direct application of the Chapter 3 objectives. *The City cites Order R2-79-67 findings pointing to the Basin Plan's text concerning wet weather discharges from combine sewer systems, then cites portions of the 1982 and current Basin Plans, saying the Basin Plan continues to apply "water quality-based performance standards" in lieu of numeric water quality criteria. For example, Basin Plan section 4.9 says:*

> *The second phase of the process involves implementation of the long-term control plan developed in the first phase. Such implementation must provide for the attainment of water quality objectives and may result in additional site-specific technology-based controls, as well as water quality-based performance standards that are established based on best professional judgment. While numeric water quality-based effluent limits are not readily established due to unpredictability of a storm event and the general lack of data, the CSO Control Policy requires immediate compliance with water quality standards expressed in the form of a narrative limitation.*

[1] The court never reached this question but focused instead on whether the Northwest Environmental Advocates had standing to bring such a claim (they did) and remanded the case back to the lower court. The parties entered into a settlement and consent decree, so the trial court did not decide the issue.

The City characterizes the receiving water limit's reference to all water quality standards, including the numeric objectives in Basin Plan chapter 3, as "new." The City requests that the tentative order contain findings similar to those in prior permits.

Response to City Comment 5.5
The City quotes Basin Plan section 4.9 as if that text imposes a regulatory mandate. It does not. Basin Plan section 4.9 simply describes the Regional Water Board's approach to permitting combined sewer discharges. The tentative order is wholly consistent with that approach.

The City quotes Order R2-79-67 out of context. Findings 5 and 6 of that order relate to untreated sewage discharges and predate the *Combined Sewer Overflow (CSO) Control Policy*. The City also quotes the 1982 Basin Plan, which is irrelevant now.

The City correctly interprets Receiving Water Limitation III.C as requiring compliance with both narrative and numeric water quality objectives. However, it requires compliance in receiving waters, not effluent *per se*, and a violation would only occur if a discharge could be shown to have caused an exceedance of a water quality objective. Over the years, the City's permit, through Orders R2-79-67, R2-84-28, R2-89-102, R2-95-039, R2-2002-0073, and R2-2008-0007, has contained variations of the same receiving water limit, applicable during both dry and wet weather.

City Comment 5.6
The proposed water quality standards provision is not feasible. *The City says its combined sewer discharges consist mainly of stormwater runoff and, as typical in urban runoff, contain pollutants at levels that exceed water quality standards at the point of discharge. The City notes that it removes about 80% of the pollutants in the stormwater it captures. To capture all stormwater runoff, remove all pollutants, and provide disinfection would be economically infeasible. The City claims the* Combined Sewer Overflow (CSO) Control Policy *recognizes the infeasibility of wet weather discharges meeting dry weather water quality standards and requests the modification shown in City Comment 5.*

Response to City Comment 5.6
Implementation of the Long-Term Control Plan is merely a means to an end—namely meeting water quality standards. The City suggests that its combined sewer discharges could cause receiving waters to violate water quality standards. Combined sewer discharges contain some wastewater and mostly stormwater. However, unlike stormwater from separate storm sewer systems, the City's combined wastewater receives equivalent-to-primary treatment. We reviewed available information and considered the potential for these discharges to cause violations of water quality standards. Fact Sheet section VI.C.5.b concludes:

> Over the previous order term, the Discharger monitored combined sewer discharges…. It found that average combined sewer discharge pollutant concentrations are below acute water quality objectives for metals and other priority pollutants, with the exceptions of copper and zinc. The average dissolved zinc concentration was 91 µg/L (based on the default CTR acute translator),

compared to the water quality objective of 90 µg/L. The average dissolved copper concentration was 19 µg/L (based on the Basin Plan Table 7.2.1-2 acute translator), compared to the water quality objective of 10.8 µg/L. Water quality objectives apply in the receiving water, not combined sewer discharges *per se*. Therefore, given the relatively short duration of combined sewer discharges (i.e., just a few hours each time), and accounting for the inevitable dilution within the receiving waters during wet weather, water quality standards appear to be maintained.

Provision VI.C.5.b.ix of the tentative order requires additional monitoring to verify that water quality standards are met. Provision VI.C.5.c.v requires the City to synthesize and update its Long-Term Control Plan and, in doing so, set forth additional measures, to the extent technically and economically feasible, to maximize pollutant removal and minimize combined sewer discharges. It must also propose a plan for post-construction compliance monitoring of all wet weather discharges consistent with the *Combined Sewer Overflow (CSO) Control Policy*.

We agree that the *Combined Sewer Overflow (CSO) Control Policy* provides flexibility to tailor and adapt controls to the circumstances at hand. However, it does not say wet weather discharges cannot meet water quality standards. To the contrary, it requires modifications to Long-Term Control Plans to ensure attainment of water quality standards.

In conclusion, we revised Provision V as follows:

RECEIVING WATER LIMITATIONS

A. ~~During dry weather, t~~The discharge shall not cause the following conditions to exist in receiving waters at any place outside the near-field mixing zone (i.e., where mixing is not controlled by effluent discharge momentum and buoyancy):

1. Floating, suspended, or deposited macroscopic particulate matter or foams;

⋮

B. ~~During dry weather, t~~The discharge shall not cause the following limits to be exceeded in receiving waters at any place within one foot of the water surface outside the near-field mixing zone (i.e., where mixing is not controlled by effluent discharge momentum and buoyancy):

1. Dissolved Oxygen 5.0 mg/L, minimum

⋮

C. The discharge shall not cause a violation of any water quality standard for receiving waters adopted by the Regional Water Board or State Water Board as required by the CWA and regulations adopted thereunder (including the *Combined Sewer Overflow (CSO) Control Policy*) outside near-field mixing zones (i.e., where mixing is not controlled by effluent discharge momentum and buoyancy). If more stringent water quality standards are promulgated or

> approved pursuant to CWA section 303, or amendments thereto, the Regional Water Board may revise or modify this Order in accordance with the more stringent standards.

We also added Provision VI.C.5.d as follows:

> If the Executive Officer determines that the Discharger has caused a violation of any water quality standard for receiving waters, the Discharger shall evaluate its Long-Term Control Plan and its Combined Sewer Operations and Maintenance Plan, and submit a report identifying additional measures, considering its financial capabilities, to address the violation. The report shall include information on the technical and economic feasibility of the additional measures. The Discharger shall submit this report within 180 days after the Executive Officer provides notification of the violation, and the Discharger shall begin implementing the additional measures described in the report, as may be modified by the Executive Officer, within 60 days after report submittal.

We added Fact Sheet section VI.C.5.d as follows:

> This provision sets forth steps the Discharger must take if the Executive Offer finds that its discharges cause violations of water quality standards in receiving waters.

City Comment 6
Provisions and MRP language should clarify that the individual NPDES permit conditions govern if different from the standard Attachment G. *The City notes that the main body of the tentative order and Attachments E and G address overlapping concepts. In particular, it notes that portions of Attachment G were written with separate sanitary systems in mind. The City requests language clarifying that if there is a discrepancy between the order and Attachment G, the order will govern.*

Response to City Comment 6
No change is necessary. Provision VI.A.2 of the tentative order requires the City to comply with only the "applicable" provisions of Attachment G of the tentative order and names specific provisions of Attachment G that do not apply. Provision I.A of the Monitoring and Reporting Program (Attachment E) states that if any discrepancies exist between the Monitoring and Reporting Program and Attachment G, the Monitoring and Reporting Program will prevail. Attachment G appears in essentially every other individual NPDES permit in the San Francisco Bay Region. It has not resulted in confusion and taking the time to refine it simply for the City's permit would result in very little water quality benefit.

City Comment 7
For the effluent characterization, remedial measures should only be required for* new *situations where a concentration is above a water quality objective, and the cause of the exceedance is known. *The City note that, in situations where a concentration has already been observed above a water quality objective and "reasonable potential" has been triggered, there is already an effluent limit. However, the the tentative order indicates that remedial measures*

could be necessary if reasonable potential is triggered, regardless of whether a limit already exists. It notes that sometimes a single isolated measurement of a particular chemical triggers an effluent limit. If chemical constituents for which an effluent limit does not currently exist are consistently detected at concentrations that would result in reasonable potential to cause or contribute to an exceedance of applicable water quality standards, the cause of these higher concentrations should be investigated and addressed to the extent feasible. However, establishing remedial measures may be impossible if investigations are inconclusive. For all of these reasons, the City requests changes to Provision VI.C.2.a of the tentative order. The City also requests that "excursions" be replaced with "exceedance of" to avoid potential confusion with collection system "excursions."

Response to City Comment 7
No change is necessary because the preceding text of Provision VI.C.2.a restricts the sampling effort to priority pollutants "except for those priority pollutants with effluent limitations where the MRP already requires more frequent monitoring." We did revise Provision VI.C.2.a (third paragraph) to avoid confusion with collection system "excursions":

> The Discharger shall evaluate on an annual basis if concentrations of any of these priority pollutants significantly increase over past performance. … The Discharger shall establish remedial measures addressing any increase resulting in reasonable potential to cause or contribute to an exceedance of ~~excursion above~~ applicable water quality objectives during dry weather. This requirement may be satisfied through identification of the constituent as a "pollutant of concern" in the Discharger's Pollutant Minimization Program, described in Provision VI.C.3.

City Comment 8
Language related to implementing the Pollutant Minimization Program should be revised. *The City claims it already goes far beyond current requirements and has long been a leader in pollutant minimization. The City says improvements should be made on an as-needed basis, and continuous improvement should not be mandated without a need. It asks that it be required to "conduct" its Pollutant Minimization Program, rather than "improve" it.*

Response to City Comment 8
We disagree. We believe the tentative order should require continuous improvement of the pollutant minimization program. Essentially every other individual NPDES permit in the San Francisco Bay Region requires continuous improvement.

City Comment 9
San Francisco requests that the reporting requirements related to combined sewer system excursions be modified so as to be applicable to San Francisco's unique combined sewer system. *The City proposes specific changes to Provision VI.C.4.c.ii and Fact Sheet section VI.C.4.c.ii to make technical corrections and better tailor reporting requirements in relation to the reporting and recording of spills.*

Response to City Comment 9

We generally agree, but we wish to retain text clarifying that spills to drainage channels and surface waters are subject to Provision IX.B of the Monitoring and Reporting Program. We also wish to retain text allowing reporting to occur more than two hours after an incident if reporting sooner is impractical or would impede cleanup or emergency measures. We revised Provision VI.C.4.c.ii as follows:

> **Combined Sewer System.** For purposes of this Order, a combined sewer system "excursion" is a release or diversion of untreated or partially treated wastewater from the combined sewer system that exits the system temporarily and then re-enters it. …
>
> **(a) Excursion Database.** By January 1, 2014, the Discharger shall develop and maintain a database containing information about each excursion that occurs within the Southeast Plant service area. ... The database shall contain the following information for each excursion:
>
> (1) Location, including latitude and longitude, street address (if available), zip code, cross street, and asset ~~manhole~~ number;
>
> ⋮
>
> If the Discharger chooses to include information regarding releases from private sewer laterals, it should also record responsible party contact information, if known.
>
> **(b) Routine Reporting.** The Discharger shall report any excursion greater than 1,000 gallons, regardless of whether it enters a drainage channel or surface water, to the Regional Water Board and the San Francisco Department of Public Health not later than two hours after becoming aware of the discharge. ~~in accordance with MRP section IX.B, which modifies Attachment G section V.E.2. (All spills to drainage channels or surface waters are subject to MRP section IX.B.)~~ The Discharger shall make this report as soon as (1) it has knowledge of the excursion, (2) reporting is possible, and (3) a report can be provided without impeding cleanup or other emergency measures. The Discharger shall report excursions by calling the Regional Water Board's spill hotline (currently 510-622-2369) and following standard procedures developed by the San Francisco Public Utilities Commission and the San Francisco Department of Public Health. (Spills to drainage channels or surface waters are subject to MRP section IX.B, which modifies Attachment G section V.E.2.)
>
> **(c) Annual Report.** The Discharger shall submit a report no later than August 15 each year that compiles and summarizes information from the excursion database for the preceding 12 months ending June 30. ...

As the City and U.S. EPA requested, we revised Fact Sheet section VI.C.4.c.ii as follows; however, in doing so, we are not indicating that the previous text was incorrect:

> **Combined Sewer System.** For purposes of this Order, an "excursion" is a release or diversion of untreated or partially treated wastewater from the combined sewer system that exits the system temporarily and then re-enters it. The Discharger and U.S. EPA developed the collection system excursion reporting requirement in this Order so the information would be available. ~~The Nine Minimum Controls include conducting proper operations and maintenance programs, as required by Provision VI.C.5.b.i. Minimizing excursions is consistent with proper operations and maintenance of the combined sewer system. Water Code sections 13267 and 13383, 40 C.F.R. section 122.41(h), and the first and ninth of the Nine Minimum Controls authorize the Regional Water Board to require information about excursions. Such information is necessary to evaluate the Discharger's operations and maintenance practices. It is also necessary to determine whether any excursion results in a discharge to surface water or a drainage system, and whether any excursion could affect public health or result in a nuisance as defined in Water Code section 13050.~~

City Comment 10

The Nine Minimum Controls language should reflect the fact that San Francisco has completed its Long-Term Control Plan (one of the few cities in the nation to do so). *The City notes that U.S. EPA guidance requires wastewater collection and treatment systems to adopt nine minimum controls and develop long-term control plans. The City notes that it completed construction of its transport/storage units in 1997 and thus implemented its Long-Term Control Plan. It designed its controls based on long-term average annual frequencies for combined sewer discharges. The City says Order No.79-67 codified these frequency goals after determining that they would protect beneficial uses. The City requests changes to its Nine Minimum Controls requirements to delete the requirement that its system be operated and maintained "to reduce the magnitude, frequency, and duration of combined sewer discharges."*

Response to City Comment 10

We disagree. The tentative order requires the City to properly operate and maintain its facility to "reduce the magnitude, frequency, and duration of combined sewer discharges" because this wording appears in U.S. EPA guidance for implementing the Nine Minimum Controls (U.S. EPA, *Combined Sewer Overflows Guidance for Nine Minimum Controls,* EPA 832-B-95-003, May 1995).

For the record, Order R2-79-67 did not "codify" the combined sewer discharge frequency goals reflected in the City's Long-Term Control Plan. The Regional Water Board could change them. Nevertheless, the tentative order maintains the same goals as those in previous orders. We disagree that constructing and operating facilities that meet the design goals necessarily protects beneficial uses. We presume so, but the City must confirm this conclusion through post-construction compliance monitoring. Such monitoring is required whether implementing the *Combined Sewer Overflow (CSO) Control Policy*'s "presumption" and "demonstration" approaches.

City Comment 11

The Nine Minimum Controls language regarding dry weather overflows should be clarified. *The City notes that the fifth of the Nine Minimum Controls is to prohibit dry weather overflows, but the tentative order does not distinguish between wet and dry weather overflows. The City suggested revisions to Provision VI.C.5.b.v of the tentative order.*

Response to City Comment 11

For clarity, we revised Provision VI.C.5.v as follows because the fifth of the Nine Minimum Controls relates only to dry weather overflows:

> **Prohibit Dry Weather Combined Sewer Overflows.** Dry weather combined sewer overflows from Discharge Point Nos. 002 through 043 are prohibited. The Discharger shall respond to dry weather ~~prohibited~~ combined sewer overflows in accordance with MRP section IX.B, which modifies Attachment G section V.E.2. During any dry weather combined sewer overflow, the Discharger shall inspect the overflow point each day until the overflow stops. The Discharger shall document in the inspection log each combined sewer overflow event, its duration, its cause, and the corrective measures taken.

However, Prohibitions III.C and III.D of the tentative order go beyond this requirement and prohibit all combined sewer overflows that are not authorized combined sewer discharges. Provision IX.B of the Monitoring and Reporting Program applies to all prohibited combined sewer overflows, whether during dry or wet weather.

City Comment 12

The permit language should acknowledge that street sweeping and catch basin cleaning are already part of San Francisco's Pollution Prevention Program. *Street sweeping and catch basin cleaning are not new programs. The City proposes changes to Provision Section VI.C.5.b.vii of the tentative order.*

Response to City Comment 12

We revised Provision VI.C.5.b.vii as follows:

> **Develop and Implement Pollution Prevention Program.** The Discharger shall continue to implement a Pollution Prevention Program focused on reducing the impact of combined sewer discharges and overflows on receiving waters. ...
>
> The Discharger shall also continue to implement a street sweeping program and clean ~~out~~ catch basins at a frequency sufficient to prevent large accumulations of pollutants and debris.

City Comment 13

San Francisco requests that the permit language be clarified to limit posting of warning signs to those beaches where recreational use has the potential to be affected by combined sewer discharges. *The City says the current language requires warning signs after combined sewer discharges regardless of the potential to affect recreational beaches. The City proposes changes that would require warning signs only at beaches and only when nearby combined sewer*

discharges could affect those beaches. The City indicates that no combined sewer overflows affect Aquatic Park or Crissy Field.

Response to City Comment 13
The City is correct that the tentative order requires posting warning signs where water contact recreational uses occur. These locations are not limited to recreational beaches. The City has conducted recreational use surveys that demonstrate that water contact recreation occurs at locations such as Islais Creek and Mission Creek. The tentative order seeks to protect all water contact recreational uses, not only those that occur at beaches.

We agree, however, that posting is only necessary if a combined sewer discharge could affect a recreational use and revised Provision VI.C.5.b.viii as follows:

> **Notify Public of Combined Sewer Discharges.** The Discharger shall continue to implement a public notification plan to inform citizens of when and where combined sewer discharges occur. The plan shall include the following:
>
> **(a)** A mechanism to alert persons using receiving waters affected by combined sewer discharges for recreation.
>
> **(b)** A system to determine the nature and duration of conditions resulting from combined sewer discharges potentially harmful to receiving water users.
>
> Warning signs shall be posted at ~~beach~~ locations where water contact recreation occurs whenever a combined sewer discharge occurs <u>that could affect recreational users at that location</u>. Warning signs shall be posted on the same day as the combined sewer discharge event unless the combined sewer discharge occurs after 4:00 p.m., in which case, signs shall be posted by 8:00 a.m. the next day. The Discharger shall maintain records documenting public notification.

As discussed below, in response to City Comment 19, the City has not yet demonstrated that combined sewer discharges do not affect Aquatic Park and Crissy Field.

City Comment 14
The requirement to monitor each CSD location for priority pollutants at least once per year is inconsistent with past data collection efforts, and technically infeasible. *The tentative order requires priority pollutant monitoring at each combined sewer discharge location at least once per year. The City requests that we change this to one combined sewer discharge location once per year. The City describes some technical and safety challenges of obtaining combined sewer discharge samples. It notes that often samples cannot be preserved or refrigerated in accordance with standard sampling protocols. The City also requests revisions to require combined sewer discharge monitoring requirements only in the main body of the tentative order and not the Monitoring and Reporting Program. It also asks that the combined sewer discharge monitoring locations be referred to using the names and numbers as shown in Table 2 of the tentative order, not the monitoring location numbers assigned in the Monitoring and Reporting Program.*

Response to City Comment 14

We mostly agree, particularly regarding the priority pollutant monitoring. To clarify the relationships between discharge points and monitoring locations, we revised Monitoring and Reporting Program Table E-1 to change combined sewer discharge monitoring location names as follows (we also rearranged the rows numerically but have not indicated these changes below):

Table E-1. Monitoring Locations

Type of Sampling Location	Monitoring Location Name	Monitoring Location Description [1]
⋮		
Effluent	EFF-003	During wet weather, any point at the North Point Facility between Discharge Point Nos. 003 and 004 (Pier 33 outfalls) and 005 and 006 (Pier 35 outfalls) and the point at which all waste tributary to those outfalls is present and adequate disinfection is assured. *Latitude 37.806667 Longitude -122.407500*
Combined Sewer Discharge	CSD-010	During wet weather, any point between Discharge Point No. 010 (Pierce Street outfall) and the point at which all waste tributary to the outfall is present. *Latitude 37.806944 Longitude -122.440000*
Combined Sewer Discharge	CSD-<u>025</u> ~~012~~	During wet weather, any point between Discharge Point No. 025 (Sixth Street North outfall) and the point at which all waste tributary to the outfall is present. *Latitude 37.071944 Longitude -122.396111*
Combined Sewer Discharge	CSD-<u>029</u> ~~007~~	During wet weather, any point between Discharge Point No. 029 (Mariposa Street outfall) and the point at which all waste tributary to the outfall is present. *Latitude 37.764722 Longitude -122.385278*
Combined Sewer Discharge	CSD-<u>031A</u> ~~008~~	During wet weather, any point between Discharge Point No. 031A (North Islais North outfall) and the point at which all waste tributary to the outfall is present. *Latitude 37.747778 Longitude -122.387500*
Combined Sewer Discharge	CSD-<u>041</u> ~~011~~	During wet weather, any point between Discharge Point Nos. 041 or 042 (Yosemite Avenue or Fitch Street outfalls) and the point at which all waste tributary to the outfalls is present. *Latitude 37.723889 Longitude -122.381389* or *Latitude 37.722222 Longitude -122.381389*
Combined Sewer Discharge	CSD-<u>043</u> ~~009~~	During wet weather, any point between Discharge Point No. 043 (Sunnydale Avenue outfall) and the point at which all waste tributary to the outfall is present. *Latitude 37.747222 Longitude -122.386944*
Shoreline	S-202.5	Crissy Field West *Latitude 37.811667 Longitude -122.490000*
⋮		

To reduce the priority pollutant monitoring requirements, we revised Provision VI.C.5.b.ix(a)(2) of the tentative order as follows (we retained priority pollutant monitoring at Monitoring Location CSD-041 because U.S. EPA has expressed particular interest in discharges to Yosemite Creek):

> **Combined Sewer Discharges.** The Discharger shall collect effluent samples representing Discharge Point Nos. 009 through 043 at Monitoring Locations CSD-010 ~~007~~ through CSD-043 ~~012~~, as defined in the MRP. ... In addition to the monitoring required in MRP Table E 5, the Discharger shall monitor each sample for the following:
>
> - total suspended solids ~~sediment~~
> - settleable matter
> - pH
> - metals (arsenic, cadmium, copper, lead, nickel, selenium, silver, and zinc)
> - cyanide
> - ammonia (total)
>
> The Discharger shall also monitor a ~~each~~ combined sewer discharge at Monitoring Location CSD-041 ~~location~~ for the remaining priority pollutants listed in Attachment G, Table C, at least once per year.

For consistency with these changes, we also revised Provision IV.B.2 of the Monitoring and Reporting Program as follows:

> **Combined Sewer Discharge Outfalls.** During wet weather, when combined sewer discharges are occurring, the Discharger shall monitor combined sewer discharges at Monitoring Locations CSD-010 ~~007~~ through CSD-043 ~~012~~ as follows.
>
> *[Table E-5 is unchanged.]*
>
> The Discharger shall also record and report in its self-monitoring reports the following information for each combined sewer discharge event at Monitoring Locations CSD-010 ~~007~~ through CSD-043 ~~012~~:
>
> **a.** Date and time that combined sewer discharge started;
>
> **b.** Rainfall intensity and amount (aggregated hourly data); and
>
> **c.** Information supporting discharge volume estimate (if estimated).

We revised Fact Sheet Table F-11 as follows (these changes include revisions related to acute toxicity made in response to City Comment 16):

Table F-11. Monitoring Requirements Summary

Parameter	Influent INF-001	Effluent EFF-001A	Effluent EFF-001B, EFF-002, and EFF-003	Effluent CSD-010 ~~007~~ through CSD-043 ~~012~~	Biosolids BIO-001	Receiving Water
⋮						
Total Residual Chlorine		Continuous or 1/Hour	Continuous or 1/Hour			
Acute Toxicity		1/Month	1/Month [8]			Support RMP

Parameter	Influent INF-001	Effluent EFF-001A	Effluent EFF-001B, EFF-002, and EFF-003	Effluent CSD-010 ~~007~~ through CSD-043 ~~012~~	Biosolids BIO-001	Receiving Water
Chronic Toxicity		2/Year				Support RMP
⋮						
Settleable Matter				1/Event		
All other priority pollutants		1/Year	1/Year	1/Year [7]		Support RMP
Volatile Organic Compounds	2/Year	2/Year			2/Year	
⋮						

Footnotes:

[1] The following flow information is to be reported:

- Daily average flow (MGD)
- Monthly average flow (MGD)
- Total monthly flow volume (MG)
- Maximum and minimum daily average flow rates (MGD)

For Monitoring Locations CSD-010 ~~007~~ through CSD-043 ~~012~~, only total flow volume (MG) and event duration are to be reported.

[2] The metals are arsenic, cadmium, copper, lead, nickel, selenium, silver, and zinc.

⋮

[6] Monitoring is to be once per day following nearby combined sewer discharges. Otherwise, monitoring is to be sufficient to characterize ambient background conditions (e.g., weekly).

[7] Monitoring is only required at Monitoring Location CSD-041.

[8] Monitoring is only required at Monitoring Locations EFF-001B and EFF-003.

City Comment 15

Dry weather shoreline monitoring requirements should be deleted from the ninth of the Nine Minimum Controls. *The City claims the Regional Water Board has no authority to require dry weather shoreline monitoring because it is not directly associated with any discharges and State law AB1876 does not apply. The City says sufficient data already exist to characterize ambient conditions. The City requests that shoreline monitoring requirements be removed from the tentative order.*

Response to City Comment 15

We disagree. The Code of Federal Regulations (40 C.F.R. § 122.48) and Water Code sections 13267 and 13383 unambiguously authorize the Regional Water Board to require technical and monitoring reports necessary to understand the nature of wastewater discharges. In this case, we need ambient receiving water monitoring to provide context for discharge monitoring results. We agree that ambient data already exist, but ambient conditions can change and monitoring will determine if changes occur. The tentative order only requires monitoring at a frequency "sufficient to characterize ambient conditions" and provides "weekly" as an example. This seems quite reasonable since the City already collects shoreline samples weekly.

We do not rely on Health and Safety Code sections 115875 and 115880 (AB 1876) as a basis for requiring ambient shoreline monitoring.

City Comment 16

The acute toxicity monitoring requirement for wet weather effluent EFF-002 should be deleted because it has not shown toxicity. *The City notes that 80 tests over 10 years have resulted in a mean survival rate of 99.3% and a minimum survival of 90%. It therefore requests that the acute toxicity monitoring requirement for Discharge Point No. 002 be deleted from the tentative order.*

Response to City Comment 16

We agree and have removed the requirement to monitor acute toxicity at Monitoring Location EFF-002. Specifically, we revised Monitoring and Reporting Program Table E-4, footnote 3, as follows:

> Acute bioassay tests shall be performed only at Monitoring Locations EFF 001B and EFF-003 in accordance with MRP section V.A.

We revised Provision V.A.1 (second paragraph) of the Monitoring and Reporting Program as follows:

> During wet weather, acute toxicity at Discharge Point Nos. 001 and 003 through 006 (Monitoring Locations EFF-001B~~, EFF-002,~~ and EFF-003) shall be evaluated by measuring survival of test organisms exposed to 96-hour static bioassays.

We revised Monitoring and Reporting Program Table F-11 as shown in our response to City Comment 14.

City Comment 17

Language should be modified to be consistent with the Basin Plan's Conceptual Approach for determining consistency with the CSO Control Policy. *The City proposes changing the monitoring requirements in Provision VI.C.5.b.ix(b)(2) of the tentative order (the ninth of the Nine Minimum Controls) to focus only on the design goals for the combined sewer system. It also seeks to limit the data reported to combined sewer discharges, as opposed to all wet weather discharges. The City also suggests deleting some specific requirements for comparing combined sewer discharge data to water quality objectives.*

Response to City Comment 17

We disagree. The required report must reflect all available information necessary to evaluate the impacts and efficacy of the Nine Minimum Controls. Moreover, it must also serve as post-construction compliance monitoring pending the synthesis and update to the Long-Term Control Plan that Provision VI.C.5.c.v of the tentative order requires.

The *Combined Sewer Overflow (CSO) Control Policy* relates to all wet weather discharges, not only combined sewer discharges; therefore, monitoring data for all wet weather discharges should be included. The specific requirements for combined sewer discharges (i.e., comparing average and maximum discharge and receiving water monitoring data with water quality objectives) are included to address shortcomings in the City's recent *Special Study: Overflow Impacts and Efficacy of Combined Sewer Overflow Controls for the San Francisco Bayside*

System, Southeast Water Pollution Control Plant, North Point Wet Weather Facility and Bayside Wet Weather Facilities (June 29, 2012). This study did not report maximum data and did not consider translators or water effects ratios. This additional information is necessary to evaluate the reasonableness of presuming that implementing the Long-Term Control Plan maintains water quality standards.

City Comment 18
San Francisco requests that the definition for wet weather be modified to more accurately represent the start of wet weather events at the Southeast Treatment Plant. *The tentative designates wet weather to occur when the Southeast Plan influent flow reaches 110 MGD. The City proposes changing this to designate wet weather to occur when there is discharge at Discharge Point No. 002.*

Response to City Comment 18
We mostly agree; however, we maintain that instantaneous influent flow to the Southeast Plant must exceed 110 MGD for wet weather conditions to occur. We revised Attachment A as follows:

> **Wet Weather**
> Weather in which any one of the following conditions exists as a result of rain (determined on a day-by-day basis):
>
> 1. Instantaneous influent flow to the Southeast Plant (at Monitoring Location INF-001 as defined in the Monitoring and Reporting Program) exceeds 110 MGD and discharge occurs at Discharge Point No. 002;
> 2. Average influent biochemical oxygen demand (BOD_5) or total suspended solids (TSS) concentration at the Southeast Plant is less than 100 mg/L; or
> 3. North Shore storage/transport wastewater elevation exceeds 100 inches.

City Comment 19
CSD monitoring should continue to be addressed as part of the Nine Minimum Controls rather than as routine compliance monitoring. Shoreline monitoring required by this permit should be limited to shoreline monitoring in association with CSDs. *The City requests that we remove combined sewer discharge monitoring locations from Monitoring and Reporting Program Table E-1 and delete Table E-5. The result would be that all combined sewer monitoring requirements would appear in the main body of the order, not the Monitoring and Reporting Program. The City views combined sewer discharge monitoring more as a study than compliance monitoring, and describes data collection challenges such as meeting sample preservation, refrigeration, or holding time requirements. It thinks having all the combined sewer discharge monitoring requirement in one place would also be less confusing.*

The City requests that we remove Crissy Field and Aquatic Park shoreline monitoring locations from Monitoring and Reporting Program Table E-1 because monitoring at these locations does not currently occur after combined sewer discharges. It provides ambient monitoring results for these locations and claims there is no correlation between combined sewer discharges and exceedances of bacteriological standards. The City also requested that the monitoring location

descriptions for shoreline Monitoring Locations S 301.1 and S-301.2 in Table E-1 indicate when these locations are to be monitored.

The City also requests that Candlestick Park State Recreation Area shoreline monitoring requirements be clarified so monitoring is required only when nearby combined sewer discharges occur.

Response to City Comment 19

We disagree, with a few exceptions noted below. Some combined sewer discharge monitoring is appropriate for the Monitoring and Reporting Program. The tentative order contains combined sewer discharge monitoring requirements in Provision VI.C.5.b.ix of the tentative order and Provision IV.B.2 of the Monitoring and Reporting Program, but the requirements are not redundant. We ask for very basic data (i.e., event duration and flow volume, as listed in Monitoring and Reporting Program Table E-5) to be uploaded to the California Integrated Water Quality System (CIQWS) through electronic self-monitoring reports. Event durations and flow volumes (which may be estimated) should not pose significant data collection challenges. Such data do not depend on sample preservation, refrigeration, or holding times. We ask for more complex data (i.e., those in Provision VI.C.5.b.ix of the tentative order) to be submitted in a separate report where more context can be provided. Fact Sheet Table F-11 is intended to help the City keep track of all these requirements.

Shoreline monitoring at Crissy Field and Aquatic Park appears to be appropriate at this time. The City asserts that bacteria sampling is unwarranted at these locations because no correlation exists between combined sewer discharges and exceedances of bacteriological standards. However, the City did not provide sufficient supporting evidence. Attachment B of the City's comments presents weekly monitoring results. The City says no monitoring occurred after combined sewer discharges. Without such monitoring, no data exist from which to evaluate correlation. We retained shoreline monitoring at Crissy Field and Aquatic Park so the Regional Water Board may draw a proper conclusion in the future. Since combined sewer discharges occur only a few times per year, this requirement will not impose an undue burden on the City.

We did not revise the monitoring location descriptions for shoreline Monitoring Locations S-301.1 and S-301.2 to indicate when these locations are to be monitored. Provision VI.B of the Monitoring and Reporting Program already contains this information. However, we revised Provision VI.B as follows to clarify which combined sewer discharges are to trigger monitoring at which locations:

> **Shoreline Monitoring.** Following any combined sewer discharge event at Discharge Point Nos. 009, 010, 011, 013, or 015, the Discharger shall monitor shoreline receiving waters at Monitoring Locations S-202.4, S-202.5, S-210, and S-211. Following any combined sewer discharge event at Discharge Point Nos. 040, 041, or 042, ~~or 043,~~ the Discharger shall monitor at Monitoring Location~~s S-300.1, S-301.1, and~~ S-301.2. Following any combined sewer discharge event at Discharge Point No. 043, the Discharger shall monitor at Monitoring Locations S-300.1 and S-301.1. Monitoring shall be conducted at each location as follows for up to seven days or until the single-sample

> bacteriological standards of Cal. Code of Regs. tit. 17, section 7958(a)(1), are met at that location (i.e., the enterococcus density is less than 104 most probable number (MPN)/100 mL and the fecal coliform density is less than 400 MPN/100 mL). Samples shall be collected between 8:00 a.m. and 4:00 p.m.

City Comment 20

San Francisco requests that the dry weather monitoring frequency for 1,2-Diphenylhydrazine remain twice per year and not increase. *The City claims that detection of 1,2-diphenylhydrazine was an isolated incident that could have been a laboratory error. The City has not detected it since. The City asserts that there is no need for monthly monitoring and asks for changes to Monitoring and Reporting Table E-3.*

Response to City Comment 20

We disagree. There is reasonable potential for 1,2-diphenylhydrazine, and the tentative order contains daily and monthly effluent limits. At least monthly monitoring is appropriate to evaluate compliance with these limits.

City Comment 21

Several revisions are needed for the wet weather monitoring requirements. *The City requests that we limit wet weather oil and grease monitoring to Monitoring Location EFF-003 and remove this requirement at Monitoring Locations EFF-001B and EFF-002. The City also asks that we limit wet weather acute toxicity monitoring to Monitoring Locations EFF-001B and EFF-003, and remove this requirement Monitoring Location EFF-002. Finally, the City suggests revising when it may choose to continue an acute toxicity test during wet weather based on the revised wet weather definition it proposed in City Comment 18.*

Response to City Comment 21

We disagree in part. The City provided no basis for its request to limit oil and grease sampling to Discharge Point No. 003. Oil and grease sampling is required during dry weather and is also appropriate for all wet weather outfalls because it is indicative of the effectiveness of primary treatment. Some effluent at Discharge Point No. 001 may receive only primary treatment. Effluent at Discharge Point No. 003 receives primary treatment.

Regarding acute toxicity monitoring, see our response to City Comment 16.

We revised Provision V.A.1 of the Monitoring and Reporting Program as follows to reflect the change to the "wet weather" definition described in our response to City Comment 18:

> During dry weather, acute toxicity at Discharge Point No. 001 (Monitoring Location EFF 001A) shall be evaluated by measuring survival of test organisms exposed to 96-hour continuous flow-through bioassays. The Discharger may stop a bioassay if wet weather occurs during a 96-hour test. If so, the Discharger shall initiate another test as soon as possible (i.e., as soon as approximately 96 hours of dry weather is forecasted). The Discharger may choose to continue a test during wet weather unless the instantaneous influent flow to the Southeast Plant (at

> Monitoring Location INF-001 as defined in the MRP) exceeds 110 MGD and discharge occurs at Discharge Point No. 002.

City Comment 22
The due date for the USEPA Biosolids Annual Report should be consistent with federal regulations. *The City notes that wastewater treatment plants with influent flows over 1 MGD must submit its annual biosolids report to U.S. EPA on or before February 19 each year. The City recommends specifying the date in Provision VIII.B.2.b of the Monitoring and Reporting Program.*

Response to City Comment 22
We disagree. The biosolids annual report deadline does not belong in Provision VIII.B.2.b because that provision describes the annual self-monitoring report due February 1 each year and other reports due February 1. Provision VI.C.4.b of the tentative order sets forth sludge and biosolids management requirements, citing 40 C.F.R. sections 258 and 503. U.S. EPA oversees these requirements and establishes deadlines independent of Regional Water Board actions. Therefore, the tentative order need not specify the biosolids annual report deadline.

City Comment 23
San Francisco requests the hard copy DMR reporting requirement be removed. *The City says the requirement to submit the original and one copy of each DMR is inconsistent with current DMR Processing Center directions.*

Response to City Comment 23
We agree and revised Provision VIII.C.2 of the Monitoring and Reporting Program as follows:

> Once notified by the State Water Board or Regional Water Board, the Discharger shall submit hard copy DMRs. The Discharger shall sign and certify DMRs as Attachment D requires. The Discharger shall submit ~~the~~ original DMRs ~~and one copy of the DMR~~ to one of the addresses listed below:

City Comment 24
San Francisco requests several changes to the Modifications to Attachment G. *The City claims that Attachment G sections I.I.2, I.J., and III.A.3.c do not apply to combined sewer systems and suggests their removal. The City also proposes a new "biosolids" definition.*

Response to City Comment 24
We disagree. Provision I.I.2 of Attachment G applies to separate sanitary sewer systems and combined sewer systems alike. It requires that collection, treatment, storage, and disposal systems be operated in a manner that precludes public contact with wastewater, except where infeasible. It also requires posting warning signs. The previous order (as amended by Order No. R2-2010-0054) contained this requirement. Provision VI.A.2 of the tentative order already states that Provisions I.J and III.A.3.c of Attachment G do not apply.

We acknowledge that the definitions of "sludge" and "biosolids" in Fact Sheet section VI.C.4.b and the definition of "biosolids" in Provision VIII.2 of Attachment G are not perfectly consistent,

but we do not find the differences to be so confusing that we need to modify Attachment G in this and future permits. The definitions in section VI.C.4.b apply to the sludge and biosolids provisions of the tentative order, and the definition in Provision VIII.2 applies to the biosolids requirements in Attachment G. We note that the City's proposed modification to Attachment G is also inconsistent with Fact Sheet section VI.C.4.b.

We revised Provision IX.A as follows to avoid confusion because the City does not blend primary-treated and secondary-treated wastewater during dry weather:

> **Attachment G sections V.C.1.f and V.C.1.g are revised as follows, and section V.C.1.h (Reporting data in electronic format) is deleted.**
>
> f. Annual self-monitoring report requirements
>
> By the date specified in the MRP, the Discharger shall submit an annual report to the Regional Water Board covering the previous calendar year. The report shall contain the following:
>
> 1) Annual compliance summary table of treatment plant performance~~, including documentation of any blending events~~ (this summary table is not required if the Discharger has submitted the year's monitoring results to CIWQS in electronic reporting format by EDF/CDF upload or manual entry);

City Comment 25
The dilution series under "Chronic Toxicity Screening Phase Requirements" in the MRP should be corrected. *The dilution series for whole effluent chronic toxicity Provision V.B.1.e of the Monitoring and Reporting Program is correct. The City asserts that it is inconsistent with the dilution series in Monitoring and Reporting Program Appendix E-1, Provision II.B. The City recommends changing Appendix E-1.*

Response to City Comment 25
No change is necessary since the tentative order provides adequate flexibility for the City to propose and use a different dilution series if appropriate. Provision II.B.5 of the appendix states, "Dilution series of 100%, 50%, 25%, 12.5%, 6.25%, and 0%, where '%' is percent effluent as discharged, or as otherwise approved by the Executive Officer if different dilution ratios are needed to reflect discharge conditions." Provision II.C states, "(t)he Discharger shall submit a screening phase proposal. The proposal shall address each of the elements listed above. If within 30 days, the Executive Officer does not comment, the Discharger shall commence with screening phase monitoring."

City Comment 26
All appropriate tests must be included in Table AE-1 to avoid subverting the intent of the requirement. *The City asks that the chronic toxicity screening procedures be updated to include the larval development test for echinoderms.*

Response to City Comment 26
We agree and revised Appendix E-2 Table AE-1 of the Monitoring and Reporting Program as follows:

Table AE-1. Critical Life Stage Toxicity Tests for Estuarine Waters

Species	(Scientific Name)	Effect	Test Duration	Reference
⋮				
Oyster Mussel	*(Crassostrea gigas)* *(Mytilus edulis)*	Abnormal shell development; percent survival	48 hours	2
Echinoderms - Urchins Sand dollar	*(Strongylocentrotus purpuratus, S. franciscanus)* *(Dendraster excentricus)*	Percent fertilization or larval development	1 hour (fertilization) or 72 hours (development)	2
Shrimp	*(Americamysis bahia)*	Percent survival; growth	7 days	3
⋮				

We will endeavor to make this change in other individual NPDES permits as they come up for reissuance.

City Comment 27
Rainbow trout should be shown in the fact sheet as an approved test species for whole effluent toxicity testing. *Since the Monitoring and Reporting Program approves both rainbow trout and fathead minnow for acute toxicity tests, the City requests that Fact Sheet section IV.C.5.b refer to rainbow trout as well as fathead minnow.*

Response to City Comment 27
We agree and revised Fact Sheet section IV.C.5 as follows:

> This Order includes dry weather effluent limitations for whole effluent acute toxicity based on Basin Plan Table 4-3. All bioassays are to be performed according to the U.S. EPA approved method in 40 C.F.R. section 136, currently Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, 5th Edition (EPA-821-R-02-012). The approved test species specified in the MRP ~~is the~~ are rainbow trout (*Oncorhynchus mykiss*) and fathead minnow (*Pimephales promelas*).

City Comment 28
The test species for previous semiannual chronic toxicity testing should be corrected. *The City used the echinoderm larval development test for chronic toxicity testing and requests that the chronic toxicity reasonable potential analysis in Fact Sheet section IV.C.6.b refer to the echinoderm larval development test.*

Response to City Comment 28
We agree and revised Fact Sheet section IV.C.6.b as follows:

> **Reasonable Potential Analysis.** The Discharger conducted semiannual chronic toxicity tests during the previous order term using the echinoderm larval development test ~~sand dollar (*Dendraster excentricus*)~~. The previous order contained chronic toxicity triggers (three-sample median of 10 TUc or single-sample maximum of 20 TUc) for accelerated chronic toxicity testing. ...

U.S. ENVIRONMENTAL PROTECTION AGENCY

U.S. EPA Comment 1
U.S. EPA supports the tentative order's provisions based on the Nine Minimum Controls and the City's Long-Term Control Plan. *U.S.EPA is pleased that the tentative order requires the City to synthesize and update its Long-Term Control Plan.*

Response to U.S. EPA Comment 1
No response is necessary.

U.S. EPA Comment 2
U.S. EPA supports Provision VI.C.4.c of the tentative order. *U.S. EPA supports requiring the City to track and report combined sewer system excursions. However, it recommends changes to Fact Sheet section VI.C.4.c.ii similar to those the City requested in City Comment 9.*

Response to U.S. EPA Comment 2
We agree. See our response to City Comment 9.

U.S. EPA Comment 3
U.S. EPA agrees with the tentative order's effluent limitations, receiving water limitations, and reasonable potential analysis. *The U.S.EPA agrees with the reasonable potential determinations, which properly incorporate all certified data and address backsliding. U.S.EPA also supports the effluent and receiving water limitations.*

Response to U.S. EPA Comment 3
No response is necessary.

BAY AREA CLEAN WATER AGENCIES

Agencies Comment 1
All appropriate tests must be included in Table AE-1 to avoid subverting the intent of the chronic toxicity testing requirement. *The Agencies reiterate City Comment 26, requesting that*

the 72-hour echinoderm larval development test be added to the standard chronic toxicity screening requirements.

Response to Agencies Comment 1
We agree. See our response to City Comment 26.