



California Regional Water Quality Control Board San Francisco Bay Region



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Staff Report

Significant Issues Associated with the February 2009 Revised Tentative Order for the Municipal Regional Stormwater Permit

In this report we discuss significant issues raised by commenters in response to the February 2009 Revised Tentative Order for the Municipal Regional Stormwater Permit (MRP), and our general reaction to those issues.

The key issues include:

- Costs of Compliance with new requirements
- New and Re-Development Treatment Measures – Provision C.3
- Water Quality Monitoring – Provision C.8
- Trash Reduction – Provision C.10
- Mercury and PCBs Controls – Provisions C.11 and C.12
- Exempted and Conditionally Exempted (Non-Stormwater) Discharges – Provision C.15

Costs of Compliance

The overriding concern expressed by Permittees is the cost of compliance with requirements beyond those in their existing permits. We continue to acknowledge that new resources will be needed and recognize that even small increases in costs are a challenge in the current economic climate. Even under better economic circumstances, the municipalities' ability to generate additional resources is constrained by Proposition 218. We also acknowledge that effective urban runoff management will require federal and State assistance above and beyond the level of revenue that can be generated at the local level. We remain committed to assisting the Permittees in seeking such federal and State assistance.

In the Revised Tentative Order, we have strived to balance cost concerns with the challenge of producing permit requirements that meet the legal mandate to reduce pollutants in urban runoff to the maximum extent practicable and to effectively prohibit non-stormwater discharges to storm drain systems. We are further challenged with the need to implement already adopted TMDLs that call on Permittees to effectively manage their contributions to exceedances of water quality standards. Unfortunately, urban runoff is the most significant source (or pathway) of pollutants causing impairment or threat of impairment of waters in the Region.

We considered all the comments on the initial Tentative Order and further eliminated or minimized any requirements that may have limited or no water quality benefit relative to their costs. We also reviewed all new requirements to ensure the level of effort was meaningful and the time allowed for their implementation allows adequate opportunity to plan for any increased

efforts and costs. Requirements that pose the most significant new costs are deferred for two to four years after permit adoption.

Nonetheless, as noted above, we recognize that all new requirements will be difficult to meet without either new revenue sources or more efficient use of existing revenue sources. New revenue sources will likely never be pursued until there are permit requirements creating the need. Permittees have been aware of aspects of all the anticipated new requirements for two or more years, but, until they have actually been “required”, have not pursued or been able to generate new revenue sources. While we are optimistic that recent and projected federal increases to the State Revolving Fund will be available to the Permittees via forgivable or subsidized loans and that State bond-funded grants will also be available to meet some short-term costs, we view this regionwide permit as an opportunity for all Permittees to more efficiently work together and with other stakeholders to use existing resources for meaningful urban runoff control.

Except as discussed below, any further reduction in the permit’s requirements will undermine the integrity of the permit. Our preferred alternative is to consider amending the permit in the future after demonstration by the Permittees that they have implemented regionwide efficiencies and have exhausted opportunities to generate new revenue or secure grants. Such a demonstration would provide a basis to modify levels of effort and compliance schedule requirements in this permit cycle and define the appropriate levels of effort and requirements in the next permit cycle.

New Development and Redevelopment - Provision C.3

Low Impact Development - The term Low Impact Development (LID) has come to stand for a concept of effective treatment of stormwater runoff pollutants and control of adverse hydrologic impacts from new development and redevelopment. LID involves landscape-based stormwater treatment, conservation of the natural landscape hydrology by slowing and infiltrating runoff where safe and practical, and storage or capture of stormwater for reuse. LID is rapidly being established as the new “maximum extent practicable” standard for new and redevelopment. We are now considering ways, in response to comments received, to establish LID requirements in a more objective manner.

In this Region, the Permittees’ existing permits have required comprehensive hydromodification control measures and treatment requirements based on hydraulic sizing design criteria, and have pushed the Permittees to rely primarily on landscape-based treatment measures. Unfortunately, we still find an over-reliance on treatment measures that do not meet the LID “maximum extent practicable” standard. We attempted to solve this problem by restricting “non-LID” approaches in the February 2009 Revised Tentative Order via additional reporting and Executive Officer approval of certain non-LID projects, but this approach has significant implementation problems and was criticized many Permittees and other commenters including USEPA.

Based on stakeholder comments received, such as those from U.S. EPA and environmental groups operating statewide, we are reviewing the approaches proposed in the Los Angeles Region’s Ventura draft municipal stormwater permit and the Santa Ana Region’s Orange County draft municipal stormwater permit, since they likely will define the maximum extent practicable

standard for LID implementation in California. While a similar requirements in the MRP would need phase-in time to fully develop and implement, these regions' approaches contain five key elements that could be included in the MRP using elements that are, for the most part, already in the New Development and Redevelopment provision of the MRP. The five key elements are: (1) defining the design elements considered to be LID; (2) setting a definite hydraulic sizing standard for LID implementation, such as the hydraulic sizing design criteria already in permits; (3) setting definite infeasibility criteria to demonstrate when LID is not feasible on a given site; (4) allowing an off-site mitigation and/or in-lieu fee system, called alternate compliance in the MRP, for sites that are not able to fully treat through LID means; and (5) establishing a credit system to reduce overall LID requirements for projects that demonstrate infeasibility and that have other development environmental benefits, such as transit-oriented developments, Brownfields developments, or high density urban infill.

Grandfathering/“in the pipeline” language – Many Permittees are objecting to language in the February 2009 Revised Tentative Order for exempting projects “in the planning process pipeline” from new requirements for controls on sites as small as 5000 ft². This language only applies to the new 5000 ft² threshold for parking lots, gas stations, restaurants, auto repair. This language was revised in the February 2009 version to “final, major, staff-level discretionary review and approval date” rather than the December 2007 Tentative Order’s use of “final discretionary approval” date which Permittees objected to. Permittees want to use “application deemed complete”, but we have observed that some municipalities misused this in the implementation of their current permits’ existing new development and redevelopment requirements by allowing for exemption of projects for which there was still opportunity to affect the project design. We are surprised by the objections since the Permittees’ representatives indicated our revised language was workable during discussions last summer.

Alternative Compliance – In response to concerns raised by Permittees that Alternative Compliance via an off-site project or contribution to a regional project should not be limited to infill and redevelopment, and is especially useful for road-widening projects, we are now recommending allowing the opportunity for Alternative Compliance for all new and redevelopment projects.

Green Streets Pilot Projects – The February 2009 Revised Tentative Order replaced the road construction treatment requirement with a requirement for ten Green Streets Pilot Projects. However, many Permittees have expressed the concern that it will be difficult to find ten existing or planned projects that meet the proposed requirements even though we expected Green Streets Pilot Projects eligible for funding via the Metropolitan Transportation Commission would meet the requirements. There is the additional complication that compliance with the hydraulic-sizing design criteria will be very difficult due to adjacent property stormwater run-on. We plan to work further with the Permittees to resolve these issues.

Water Quality Monitoring – Provision C.8

Monitoring Scope and Costs – The primary purpose of monitoring is to gather quantitative information to identify water quality problems associated with urban runoff and to determine whether management actions are effective at controlling urban runoff pollution. Ideally, we want

to show that management actions are producing measurable and meaningful results. The Permittees continue to express concern with the costs of meeting the monitoring requirements, whereas other stakeholders challenge the adequacy of the monitoring requirements.

Water Quality Monitoring requirements encompass five areas:

1. Participation in the Regional Monitoring Program or its equivalent;
2. Assessment of water quality status in creeks and waterways within the Permittees' jurisdictions on a rotating basis;
3. Assessment of long-term trends in water quality in representative creeks and waterways;
4. Identification of stressors or pollutant sources, investigation of treatment measures, and other special monitoring projects; and
5. Assessment of the loads of pollutants of concern to the Bay from urban runoff.

We maintain that the scope of the monitoring requirements for each of these areas in the February 2009 Revised Tentative Order is at the minimum level necessary to generate meaningful and adequate information. The status monitoring requirements are consistent with our own Surface Water Ambient Monitoring Program efforts to assess the physical, biological, and chemical conditions in creeks during the spring and dry weather. The Revised Tentative Order already reflects reductions in the status monitoring requirements that were in the initial Tentative Order. Water column sampling for metals and organic pollutants has been removed in favor of toxicity testing and sediment chemistry, which can integrate pollutant effects over time. Storm-event sampling was removed for most status monitoring, with the exception of nutrients, but is included in the long-term trends and pollutant-load monitoring areas. We also added flexibility to the selection of streams and monitoring locations by Permittees.

The monitoring requirements have been reduced in the Revised Tentative Order to render the overall costs manageable. We have reviewed the cost estimates provided by the Permittees and disagree with the costs portrayed, particularly for the status monitoring element. In many cases, these estimates anticipate that a permittee would perform all monitoring itself, when the Revised Tentative Order is designed to promote regionwide collaboration in monitoring. We also have experience with similar sampling and analysis efforts by our own Surface Water Ambient Monitoring Program and generate results at much lower costs. We envision substantial cost savings through regional collaborative monitoring and through integration of monitoring program elements as described below.

Collaboration and Integration – The initial and Revised Tentative Orders both provide encouragement and incentives to pursue regional collaboration that results in a comprehensive and consistent regional approach to monitoring. This also provides opportunity to coordinate and/or integrate the Permittees' monitoring efforts with those of others. For example, the Regional Monitoring Program is developing a strategy to monitor loads from local tributaries (including storm drains). By participating in a regional monitoring collaborative, the Revised Tentative Order allows Permittees more time and flexibility to implement monitoring requirements.

To resolve remaining concerns expressed by the Permittees regarding the scope of long-term and pollutant-load monitoring, we anticipate further revisions that provide more clarification on

monitoring locations and types, quantities, and quality of data that must be met by a regional monitoring collaborative. Furthermore, if regional collaborative efforts result in a monitoring program that is better but different than that prescribed by the monitoring requirements, the permit can be reopened in the future to incorporate revisions that reflect the regional monitoring collaborative.

We are also pursuing some additional revisions that would allow integration of monitoring program elements. For example, stations for long-term trend monitoring could be co-located with pollutant-load monitoring stations. Additionally, some status monitoring wet weather elements, such as nutrient monitoring, may be integrated with the long-term trend and pollutant-load monitoring.

Trash Reduction – Provision C.10

Trash Reduction Costs – We substantially revised the initial trash reduction requirements in a manner that reduces overall costs and increases flexibility, while providing accountability. In lieu of the broad implementation of trash capture devices proposed in the December 2007 Tentative Order, the revised trash reduction requirements are performance-based action levels associated with trash hot spots and focused implementation of trash capture devices. We recognize that many stakeholders want more trash capture and control in this permit, but we expect the phased implementation of this revised, two-pronged approach will result in meaningful short term reductions in trash discharges, and set the stage for efficient expansion of trash reduction actions, including trash capture, over the next permit term.

We recognize that trash reduction will require significant increases in stormwater management resources and, as noted above, that the municipalities' ability to generate additional resources is constrained by Proposition 218 and other factors. For example, we estimate that trash capture device requirements will cost nearly \$28 million, based on comparable efforts in the Los Angeles Region. To the extent we can, we will work with the Permittees to make trash reduction a high priority for federal and State resources.

We have also deleted the prescriptive street sweeping and inlet cleaning requirements from the December 2007 Tentative Order to allow redirection or focus of those actions, or resources associated with those actions, to trash reduction. We also expect the regional nature of the MRP will generate regional or potentially statewide solutions and revenue generating and sharing mechanisms.

Trash Action Level and Assessments –The Trash Action Level is not an effluent limit or a water quality standard. It represents a target that calls for actions until it is reached and maintained. If it is not reached after three years of effort, Permittees must report on additional actions needed to attain the target. We are also considering further refinements to the Trash Hot Spot requirements to allow redirection of resources from areas producing diminishing returns at levels in excess of the targets to other hot spots during this permit term.

We are also considering further refinements to the trash assessment requirements. The trash assessment method is comprised of a series of scored traits for a stream reach or shoreline trash

condition based on a count of individual trash items as they are removed, types of trash items and visual impressions. A reduced or focused assessment effort may be warranted once the trash problem is characterized, the trash source is obvious or has been determined, and a solution is being implemented. Also, after some number of assessments, if a pattern is established, there may be less need to categorize each trash item, and a count of total trash items may suffice along with general visual conditions, and general estimates of the percentage of each major trash type.

Mercury and PCBs Controls– Provisions C.11 and C.12

Mercury and PCBs Control Actions and Costs – The mercury and PCBs control requirements are based on implementation of the urban stormwater runoff wasteload allocations set forth in the San Francisco Bay mercury and PCBs TMDLs adopted by the Board. The implementation plans adopted with each of the TMDLs calls for a phased implementation strategy, which results in permit requirements that reflect the current state of knowledge on mercury and PCBs controls. The strategy calls for implementation of controls via an iterative, permit term-based approach that leads to attainment of the allocations within 20 years (four permit terms).

We are challenged by limited knowledge of mercury and PCBs controls at this time. We do not currently know which controls are technically feasible and cost-effective. Consequently, this first permit requires implementation of pilot projects to evaluate mercury and PCBs controls in four action areas: cleanup and abatement of sources of mercury and PCBs (five projects); enhanced sediment removal via storm drain system operation and maintenance (five projects); retrofit of stormwater treatment units into existing storm drain systems (ten projects); and strategic diversion of dry weather and first-flush flows in storm drains to municipal wastewater systems (five projects). The knowledge and experience gained through pilot implementation will be used to determine the scope of implementation in subsequent permit terms that will result in timely pollutant load reductions.

We recognize that mercury and PCBs control actions will also require significant increases in stormwater management resources. The pilot studies that likely will cost several million dollars collectively over this permit term are intended to answer the bigger question of whether the full costs of mercury and PCBs controls will be tens or hundreds of millions of dollars. Similar to our trash discussion above, we will work with the Permittees to make mercury and PCBs control implementation a high priority for grant resources. We also expect some redirection or focus of existing street sweeping and inlet cleaning actions, or resources associated with those actions, to mercury and PCBs controls.

Collaboration and Integration – By design, the mercury and PCBs pilot projects are intended to be implemented via a regional collaborative effort, and mercury is expected to be included in PCBs pilot projects rather than separate projects. Permittees are now asking that the number of pilot projects in each of the action areas required over the five-year permit term be reduced to four. We recommend maintaining the current proposed number of projects at this time. There is sufficient information available to allow Permittees to identify five suitable locations to implement pilot projects for cleanup and abatement, enhanced operation and maintenance, and routing to wastewater systems, and ten suitable locations to pilot test retrofit of stormwater treatment units throughout the Region. We also expect integration of the different types of pilot

projects in the same drainage area. In other words, we expect that a specific pilot project can be designed to address multiple action areas. There are several types of treatment retrofits, so it is particularly important to have multiple instances of these types of solutions to gain timely knowledge and experience. The number of pilot projects corresponds to our need to learn about technical details, costs, benefits and feasibility.

We are considering further revisions that clarify the intent of the pilot projects, such that it may be possible to gain sufficient knowledge about effectiveness of controls via fewer pilot studies, as long as it can be demonstrated that scaling back the effort does not jeopardize progress toward achieving wasteload allocations in 20 years. At the same time, we want to avoid pursuing studies based on diluted use of limited resources by implementing five “weak” studies versus four “robust” studies in an action area. On the other hand, the request for reducing the number of pilot projects in each area to four is tied to each of the four countywide programs implementing a project, and does not assure that studies have regionwide relevance. Such relevance will be best demonstrated via a collaborative approach rather than calling for a pilot in each category by each major countywide program. Rather than changing the number of pilot projects at this time, we would propose a narrow permit re-opener clause that allows submittal of an alternative collaborative approach that results in an equivalent level of improved knowledge before the end of this permit term, subject to Board approval via a permit amendment.

Exempted and Conditionally Exempted (Non-Stormwater) Discharges – Provision C.15

This provision allows exemptions to the prohibition of non-stormwater discharges for classes of discharges that do not adversely affect water quality, and allows conditional exemptions for classes of discharges that do not adversely affect water quality if they are properly managed. The Permittees have expressed considerable concern with the conditionally exempted requirements, particularly the monitoring and reporting requirements that pertain to discharges of potable water. The challenge is that unmanaged discharges of such chlorinated waters can cause fish kills and other aquatic impacts.

We are looking at ways to ease the burden on the Permittees. This may include putting the conditionally exempted requirements into a general or individual NPDES permits for these discharges. Responsibilities of Permittees would then be limited to surveillance and inspections consistent with their illicit discharge detection and elimination efforts. We also intend to propose additional revisions to exempt residential foundation drainage, since it is seldom polluted, and residential car washing, since it is best approached through public outreach. We mistakenly overlooked these latter revisions in the February 2009 Revised Tentative Order.