



California Regional Water Quality Control Board

Santa Ana Region



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TO: Bruce Fujimoto
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FROM: Michael J. Adackapara
Santa Ana Water Board

DATE: September 1, 2006

SUBJECT: NUMERIC EFFLUENT LIMITS FOR STORM WATER PERMITS - BLUE RIBBON PANEL'S REPORT

We have the following comments regarding the feasibility of numeric effluent limits in storm water permits. The State Board appointed a Blue Ribbon Panel to look into the feasibility of including numeric effluent limits in industrial, construction and municipal storm water permits. The Blue Ribbon Panel's report indicated that for municipal storm water permits, it is not feasible at this time to set enforceable numeric effluent limits; for large construction sites with active treatment systems, numeric effluent limits may be feasible for certain constituents; and for industrial sites, additional monitoring data are needed to establish numeric limits or action levels.

We are in general agreement with the findings and recommendations of the Blue Ribbon Panel. Our comments on the issue of feasibility of numeric effluent limits in storm water permits are more related to the regulatory and logistical issues.

Large Universe of Storm Water Permittees and Current Regulatory Approaches

The Santa Ana Region has over five thousand permittees under the storm water program (this includes 57 permittees under the MS4 permits, 1,398 permittees under the general industrial permit and 3,595 permittees under the general construction permit). Our goal for the MS4 permittees is to audit all permittees at least once during the five-year term of the permit. We are close to completing this task. However, a few enforcement actions are still pending against the MS4 permittees based on these audits. We prioritize and inspect approximately 25% of the industrial and construction sites per year.

Currently construction sites regulated under the State's general permit are not required to submit any report to the regional boards unless specifically requested by Board staff or to report violations or monitoring data. In most cases, compliance determinations are through inspections conducted by Board staff. Most of the enforcement actions that we

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have taken for construction sites are for permit violations involving unauthorized non-storm water discharges and for failure to develop, implement and maintain proper erosion and sediment control measures. It is relatively easy to monitor and document inadequate, improper, or poorly maintained erosion and sediment controls. Board staff can easily document the erosion gullies and rills and sediment controls that have failed or that are not properly installed and/or maintained. For industrial facilities, most of our enforcement actions have been for paper work violations such as non-submittal of annual reports and for poor housekeeping or a lack of BMP implementation. A significant amount of staff resources are spent on tracking annual reports submitted by the approximately 1,400 industrial permittees, and issuing notices of non-compliance and mandatory penalty complaints under Section 13399.33 of the Water Code. Enforcement of the MS4 permits has been through program audits and annual report reviews. These are all resource intensive tasks and we prioritize our field presence to address the most likely problem areas. Likewise, the enforcement actions are also prioritized to address significant threats to beneficial uses.

Our current level of program resources barely allows us to address the most severe threats to water quality from storm water runoff.

Numeric Effluent Limits and Compliance Determination

If we include numeric effluent limits in storm water permits, we would also have to include appropriate monitoring and reporting requirements to determine compliance. We must also prescribe a method for compliance determination, including the minimum number of samples to be collected and analyzed. For a small facility, it may not be economically feasible to collect a large number of samples. In dry years, there may not be a sufficient number of qualifying storm events to collect the required number of samples. Unless a large number of samples are collected, it would be difficult to account for the temporal and spatial variability in the quality of storm water runoff. Even with an over-prescriptive sampling and analysis protocol, it would be extremely difficult to achieve any level of consistency in sampling and analyses for storm water. These factors would make it difficult to determine compliance with the numeric effluent limits.

Even if all the permittees were required to submit the self-monitoring data electronically, it would be a monumental task to review this data (over 5,000 permittees just in our region) for accuracy and to determine compliance.

Generally storm events within different parts of the region occur at the same time and runoff from most of the facilities would occur simultaneously. If Board staff attempted to collect samples of runoff from the first storm event of the season (first-flush) for compliance determination, it would be impossible for staff to accomplish this task even for a small percentage of the permitted facilities.



Even if numeric effluent limits were technically and economically feasible, without the proper tools and the needed resources to enforce the numeric effluent limits, it would become a meaningless regulatory tool.

Mandatory Penalties

A "serious violation" (as defined in Section 13385(h)(2) of the Water Code) or a "chronic violation" (see Section 13385(i) of the Water Code) of an effluent limit in an NPDES permit triggers mandatory minimum penalties. Once mandatory penalties are tied to the permits, compliance determination becomes critical for mandatory enforcement actions under Sections 13385(h) and (i). With the threat of mandatory penalties, some dischargers could collect samples from a location that may not provide a true representative sample. Unlike treated process wastewater and sewage treatment plant discharges, it would be almost impossible to collect independent verification samples for storm water discharges unless Board staff is present at the site during a storm event.

Even though CIWQS is currently equipped to determine compliance with numeric effluent limits, Board staff would have to verify the accuracy of the data entered into CIWQS prior to any enforcement action. Because of the mandatory minimum penalty provisions in the Water Code, the Board would have no choice but to issue mandatory minimum penalty complaints even for those violations that may not pose a significant threat to water quality. To accomplish this, we may have to divert resources from other enforcement actions, which may pose a greater threat to water quality. This in effect reduces the maximum water quality benefit that could have been derived from our actions. This could be an unintended consequence of prematurely introducing numeric effluent limits in storm water permits.

Hydraulic Conditions of Concern

Urbanization introduces significant changes to hydraulic flow regimes. Such changes could have considerable impact on water quality. Merely imposing numeric effluent limits, without any consideration of changes in the hydraulic conditions within the entire watershed, may not prove to be an effective regulatory approach.

TMDLs

The Clean Water Act requires the states to identify impaired waterbodies, identify the pollutants causing the impairment, list them under Section 303(d) of the Clean Water Act, develop TMDLs for the pollutants causing the impairment and to develop an implementation plan. Most regions are developing or have developed a number of TMDLs. These TMDLs generally address pollutants of concern in storm water runoff



such as bacteria, nutrients, metals, toxicity, trash, and sediment. The TMDL implementation plans gravitate towards the municipal permittees as a major stakeholder.

The Water Boards should compare the practicality of enforcing numeric effluent limits and its benefits with other water quality priorities. We should focus our immediate attention to restoring the beneficial uses of impaired waters through programs and policies that would have the maximum benefit for the people of the State. We need to consider if it would be possible to achieve water quality standards through a holistic and integrated watershed management approach using TMDLs as the major tool. The storm water statutes and regulations and State Board and Court decisions to date give us the option of not having numeric effluent limits in storm water permits. That option is not available for TMDL implementation. The wasteload allocations in the TMDLs are a de facto numeric effluent limit for the stakeholders. Once the wasteload allocations are included in the MS4 permits, the MS4 permittees should clamp down on industrial and construction sites if they cause a violation of the wasteload allocation for the permittee. These wasteload allocations should address the pollutants of concern in the receiving waters. Once the TMDLs are fully implemented, the beneficial uses of the receiving waters should be restored.

The USEPA and the State Board have indicated that the development and implementation of TMDLs should be the highest priority program for the Water Boards. Given this priority and our limited resources for implementing TMDLs and the storm water program, this coordinated and integrated approach seems to be the most logical approach to addressing the water quality problems associated with storm water runoff.

Conclusion

Considerable additional resources would be required to have an effective storm water program that includes numeric effluent limits. Even with additional resources, enforcement of the numeric effluent limits would be challenging due to the temporal and spatial variability in storm water runoff quality. However, action levels or benchmark numbers could be included in storm water permits for a number of constituents without imposing additional burdens on the permittee or the regulator. The inclusion of action levels alone would not be sufficient to achieve water quality standards. We recommend the use of wasteload allocations as a first step to protecting the beneficial uses of the receiving waters. This in turn should control pollutants of concern in storm water runoff to a level that is protective of the beneficial uses.

If you have any questions, please contact me at (951) 782-3238.

Cc: Strom Water Roundtable (via email only)

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