



California Regional Water Quality Control Board

San Francisco Bay Region



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Arnold Schwarzenegger
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Storm Water Panel Report
Deadline: 9/1/06 5pm

TO: Gerald Secundy
Vice Chair
State Water Resources Control Board

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

DATE: September 1, 2006

SUBJECT: Feasibility of Numeric Limits Applicable to Storm Water Discharges

Thank you for the opportunity to provide the following comments regarding the feasibility of numeric effluent limits in storm water permits:

General Comments

The State Water Board should consider establishing a statewide storm water management training program that includes applicability of structural and non-structural storm water best management practices (BMPs) to particular sources, activities, land uses and watershed characteristics with clear design, construction, operation, and maintenance performance criteria. The State Water Board should also establish a program similar to the wastewater operator certification program to certify BMP designers, builders and operators.

Specific Comments - Municipal permits

We concur with the Panel of experts that it is relatively infeasible to apply numeric concentration effluent limits to municipal storm water dischargers. However, there are alternative forms of numeric measures that could be used to measure outcome as opposed to effort. For example, we can apply the amounts of new impervious surface created and from which runoff is treated, the amount of existing impervious surface retrofitted, and the amount of runoff and dry weather flows diverted to the POTWs for treatment, etc. The nexus between the amount of impervious surface and the quality of storm water runoff has been well established. This makes impervious surface a good numeric surrogate. Also, it may be possible to establish a numeric performance



measure based on BMP design, operation, and maintenance criteria that represents what can and should be achieved by those measures.

We support the Action Level concept proposed by the Panel. It is certainly possible to determine “bad actor” catchments, sources and/or activities. Use of action levels provides a logical mechanism to progressively acquire more and better information to develop and improve numeric performance measures and ultimately numeric limits. Action levels could also be used in a progressive enforcement context. Depending on the degree of certainty behind an action level, it could trigger “shall do” or “should do” actions. By design, action levels would trigger a response or corrective action, a key objective of enforcement. No response or poor response to an exceedance of an action level would trigger further enforcement. Also, action levels need not be limited to constituent levels measured in storm water runoff. For example, levels of a constituent in deposited sediments can be a good indicator of runoff quality, and avoids many of the logistical challenges of monitoring pollutants in runoff during storm events.

Since the initial adoption of municipal storm water permits in the early 1990s, we have focused on how best to get the BMP-based regulatory approach to demonstrate results. Unfortunately, we have not seen the desired outcome of demonstrated reductions of pollutants in storm water runoff. Effectiveness measurements and compliance determinations of municipal storm water programs have been difficult without a legal definition of maximum extent practicable (MEP) and associated enforcement guidelines. In addition, there is a fundamental issue with relying on BMPs to the MEP standard as the final permit limit in the MS4 permits. BMPs to the MEP standard amounts to a performance-based standard. Performance-based standards are appropriate as interim limits when compliance schedules are adopted to ensure compliance with appropriate final limits. The drawback of performance-based standards is that such standards can penalize good performance and reward poor performance because the better the performance, the more stringent the standards will become. This creates a disincentive for municipalities to improve performance. Only when there is a final limit (e.g., waste load allocation (WLA) from a TMDL) is there a regulatory incentive to improve performance. However, in this case, the WLA is available as a final limit only after a water body has been impaired.

To proactively prevent pollution, we should more broadly use numeric measures (e.g., impervious surface area, BMP design criteria, action levels, WLAs, etc.) for municipal discharges to improve the accountability and to achieve water quality improvement.

Industrial Permit

Numeric concentration effluent limits have been applied to storm water from categorical industries (e.g., petroleum refineries), which are technology-based limits and thus feasible. The State Water Board should consider revising its statewide industrial storm

water permit to incorporate appropriate technology-based effluent limits for storm water from categorical industries for which effluent limit guidelines have been established. The problem of applying action levels, as pointed out by the Panel, is our data limitations. The Action Level concept certainly has applicability and promise, and over time, could generate sufficient data needed to establish technology-based limits, if necessary. We support the development of effluent limits or action levels, with priority given to those industries believed to be more polluting, such as auto dismantlers, scrap metal recyclers, and existing concrete batch plants.

Construction Permit

To control construction-related impacts, technology-based numeric limits or action levels are feasible for certain technologies (e.g., advanced treatment). The future construction permit should focus on impacts both during and post construction.

We recognize that the current statewide construction storm water permit's approach is challenging, because it does not provide a clear regulatory standard for how much is enough. This rewards bad actors by allowing them to claim compliance despite discharging polluted water, and makes it difficult for good actors to know how stringent a program of controls to implement. The San Francisco Bay Regional Water Board has worked for more than ten years, including in a partnership with the San Francisco Estuary Project, to provide written guidance materials and to conduct education and outreach to the regulated community. However, we recognize that this has not been enough.

As such, we support the Panel's finding that it is feasible to establish numerical limits for certain construction site discharges (e.g., TSS and turbidity), particularly for sites of 5 acres or larger. We would also support an Action Level approach, particularly as a means to allow site operators to know whether they need to do more. As noted above, this approach would also strengthen our ability to regulate inadequate actions by allowing enforcement when sufficient remedial actions are not taken despite exceedances of a numeric limit or action level.

We do not support the Panel's suggestion that, if numerical limits are established, they not be applied to "stabilized" sites. In practice, what constitutes "full" stabilization of a site is a subjective judgment, and the intent of having a "stabilized" category would be to have a category of sites that clearly would not be discharging polluted water. That is, a stabilized site is one that should be able to meet numeric limits. If it cannot, then it should not be considered fully stabilized, and appropriate remedial actions should be taken.

As a way of helping to control post-construction impacts, the State Water Board should consider assessing permit fees partly based on the amount of impervious surface added to create an incentive to reduce the amount of a site's impervious surface post-

construction. Reducing the amount of imperviousness will reduce the pollutant loads and the runoff volumes and duration. While permit fees are very low relative to other building costs, this may still help elevate awareness of impervious surface as an issue.

Conclusions

Municipal Permits

We support use of numeric measures (e.g., impervious surface area, BMP design criteria, action levels, WLAs, etc.) for municipal discharges to improve accountability and to better achieve water quality improvement.

Industrial Permit

We support applying appropriate technology-based effluent limits for storm water from categorical industries for which effluent limit guidelines have been established. For industries that do not have effluent limit guidelines, we support developing effluent limits or action levels, with priority given to those industries believed to be more polluting, such as auto dismantlers, scrap metal recyclers, and existing concrete batch plants.

Construction Permit

The future statewide construction permit should focus on both post-construction and during-construction impacts. We support the Panel's finding that it is feasible to establish numerical limits for certain construction site discharges (e.g., TSS and turbidity), particularly for sites of 5 acres or larger. We also support an Action Level approach. We recommend that the State Water Board consider assessing permit fees partly based on the amount of impervious surface added during construction to create an incentive to reduce the amount of impervious surface post-construction.

If you have any questions, please contact Shin-Roei Lee at srlee@waterboards.ca.gov or 510-622-2376.