Storm Water Panel Report
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State Water Resources Control Board
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Dear Chair Doduc and Board Members

Subject: Comment letter—Storm Water Panel Report

The Board's willingness to openly address this most fundamental issue of the stormwater regulatory program is most sincerely appreciated. This comment letter will attempt to provide a framework in which to consider the applicability of the Panel's conclusions and recommendations; and to address the closing comments of the Workshop Chair on July 21, 2006.

The Board's consideration of these comments would probably be aided by some knowledge of my qualifications to make them. In that regard, I have been actively involved in developing and implementing stormwater quality initiatives at the local, state and national levels since 1975. I managed a local urban stormwater system (Fresno) for 34 years, was one of the 26 volunteer participants in EPA's Nationwide Urban Runoff Program (receiving national recognition by AWWA for our research), was indirectly connected to the 1987 CWA negotiations that produced the MEP standard, was the founding chair of the Stormwater Quality Task Force (CASQA), served on both EPA's Urban Wet Weather Federal Advisory Committee and Stormwater Phase II Federal Advisory Committee; and participated in the nationwide training program which introduced the stormwater Phase II regulation. My comments are shaped by a demonstrated commitment to stormwater quality, and by the experience gained in pursuit of that commitment.

Stormwater Historical Perspective

The question the Board has chosen to address has entangled the storm water program since the earliest days of the Clean Water Act. Even then, the

professional expertise of the EPA recognized stormwater would not fit the NPDES point source numeric effluent limit model.

The uncontrollable source of stormwater, the untreatable volumes of stormwater, its unpredictable variability and episodic character, and the fact that stormwater quality was the product of every human and non-human activity that happens outdoors all led to the MEP/BMP model. It was in fact the courts, not science, that drove the stormwater regulatory program into the NPDES framework. It was this court action which led the Congress and EPA to again consider the feasibility of point source numeric effluent limits to stormwater NPDES permits (1987 CWA amendments). Again it was concluded (by all those involved in crafting the 1987 stormwater provisions, including the NGO's) that the numeric effluent limit approach was not feasible for stormwater. It was that conclusion which produced the BMP driven MEP standard.

Consistently since 1987 EPA has determined in its policy and guidance that while the CWA has been construed by the courts to require stormwater NPDES permits, the use of numeric limits is discretionary and as yet still practicably infeasible. Subsequently, as you know the courts have confirmed EPA's position on the MS4 permits.

Application of the Stromwater Panel Report

The question of the feasibility of permits based on numeric limits continues before this State Board just as it did before the Congress, EPA and each previous Board. The question, however, is not "can numeric effluent limits be applied to stormwater permits". Any permit writer can put numbers in a stormwater permit and some have done so.

The real question is "will numeric limits in stormwater permits produce an attainment of receiving water objectives not achievable by the BMP/MEP approach?". The answer of the Panel, and most other knowledgeable folks is clearly "NO". The reason, the attainment of receiving water objectives is not determined by numbers in a permit, but by the physical character of the influent parameters, available technology and the sustainable economics associated with the cost of the effort.

The fundamentals of stormwater have not changed since 1972 (uncontrollable source, untreatable volumes, unpredictable variability and episodic character, ubiquitous pollutant sources), and our data and applicable technology have not sufficiently advanced to overcome this reality. Care must be taken to not lose sight of the fact that there is no applicable stormwater treatment technology which can sufficiently control and treat enough stormwater to attain all current receiving water objectives. [If herbicides, pesticides, fertilizers, pharmaceuticals (and other pollutants of concern) should not be in receiving water, they are more

effectively controlled by source regulation that by stormwater permit limits for which there is no applicable technology.]

Pursuing the presumption that the presence of these pollutants is the fault of, and can be controlled by or treated into non-existence by the owner of the storm drain, is at best a major misdirection of effort. Further, it puts in place an enforcement and penalty system based on disconnected responsibility, unachievable objectives, and produces a chain of unintended consequences (treatment plants at the end of storm drains, streams without storm flows, urban pollutants simply parked in new places, program resources diverted from science and engineering to lawyers and courts).

The Panel's strong central conclusion is that the wise and effective course for the stormwater quality program is in the advancement of BMP science, practicability and efficacy (selection, design, operation, and maintenance criteria). The Panel further recommends the development of a trigger mechanism (action levels) to determine when current efforts can be and should be advanced.

In regard to the application of the Panel's recommendations, I have three specific comments.

- Action levels must consider both the state of technology as well as the receiving water objectives. Using an action level to trigger advanced practices in the absence of new technology is likely pointless. However, requiring application of emerging more cost-effective technology can produce benefits on both sides of the permit.
- The feasibility of advanced treatment for construction sites must also consider the wisdom of such treatment. Unintended consequences of downstream, groundwater or public safety impacts can be substantial (MTBE a case in point).
- The application of numeric limits to industrial stormwater permits, on the presumption of total site control (no external sources) is problematic. Few, if any, industrial sites are not impacted by atmospheric deposition and run-on sufficient in themselves to violate some current standards and distort on-site treatment results.

Two Views of Current Stormwater Program

In his closing remarks on July 21, 2006, the Workshop Chair observed that no one speaking at the workshop had supported the current stormwater NPDES program. As the focus of the workshop was the functionality of the Panel's recommendations, the evaluation of the current program was not the issue of the day.

However, the basis of determining how to proceed with program change does indeed emanate from one's perspective of the current program. There are currently two predominate views. Both were expressed during the public input to the Panel on September 14, 2005.

In their statement before the Panel, the environmental organizations declared the stormwater program a categorical failure. The reason given was that stormwater discharges still violate water quality standards. Their determination of program value is either "useful" or "worthless" based on an all–or-nothing test of full receiving water standards attainment.

The opinion of the stormwater folks was quite different. They believe the stormwater program is a story of remarkable accomplishment. This conclusion is based on the breadth of permitting achieved, the extent of practices and programs implemented, the mass load of pollutants reduced, and the demonstrable change in cultural attitude, all accomplished in a very short time frame.

Their definition of progress is that of being strongly headed in the right direction, reducing the discharge of pollutants to the maximum practicable. Their position is supported by a review of the program's history and accomplishment.

- 1987 CWA stormwater NPDES/MEP amendment
- 1988 Formation of statewide Stormwater Quality Task (CASQA)
- 1989-90 Early regional NPDES permitting of major metropolitan areas
- 1995 End of 1st permit term: 220 stormwater municipalities covered by NPDES permits; statewide municipal, industrial, construction BMP manuals published by SWQTF; statewide industrial and construction general permits in place
- 1999 End of 2nd permit term: NPDES permits renegotiated to iterative adaptive management format, SUSMP's incorporated

As of 2006:

- Every significant stormwater entity in the state has an NPDES compliance program, dedicated professional resources, and a major annual budget allocation for stormwater quality objectives.
- Every significant industry, development company, contractor and project in the state has an on-going NPDES compliance program.
- Total stormwater quality program and capital spending to date is (by my guesstimate) between $1-$2 billion.
- Top science and engineering talent from across the state and nation has been enlisted in our programs.
- Thousands of structural BMP's are now in place, with thousands more planned.
- Thousands of direct stormwater discharges to receiving waters have been redirected.

- Millions of tons of pollutant load no longer reach receiving waters.
- Thousands of acre feet of stormwater now receive some form of treatment prior to discharge.
- Many pollutants of concern in local systems are now diminishing.
- There is a tremendous continuing increase in stormwater science and data, and in public awareness and cooperation, producing a growing clean stormwater culture.

All of this and more has been achieved in just 15 years. Given that this has been accomplished without the federal and state funding that accompanied other regulatory programs, the stormwater program accomplishment ranks among the fastest, most significant, most effective and most successful of any undertaken. From this perspective effort does equal progress, and this progress has indeed involved effective activity and produced successful results toward the goal of reducing pollutant discharges to the MEP.

By so reducing pollutant discharges, stormwater NPDES permittees believe they are indeed protecting water quality and moving receiving waters toward attainment of the CWA water quality objectives. Unfortunately, in the absence of a state stormwater quality program policy which defines progress and success, the permittees are continually at risk of poorly targeted mandates which waste effort and resources, and at risk of the penalization of good effort, which creates resistance to initiative.

Conclusion: Numeric Effluent Limits Or BMP's

Much of the demand for numeric effluent limits in stormwater permits is based on the fallacy that the BMP/MEP program has been a failure. While all recognize the limitations in this program, one cannot deny its accomplishment.

In its report, the Panel has clearly acknowledged that future progress in program effectiveness is dependent on program refinements that come from a growing body of experiential data, improved BMP design and selection, and improved BMP operation and maintenance.

What those who propose the jump to numeric effluent limits for permits don't acknowledge is that even with such a move, the program is still left with BMP technology as the treatment medium. The move to numeric limits therefore only produces a new failure and penalty threshold.

If the program goal is to penalize numeric effluent limits in stormwater, permits will do so. However, if the goal is continually improving receiving water quality, then BMP technology, advanced through improving design, selection, operation and maintenance criteria, and paired with appropriately defined and applied action level triggers is the only viable option.

This is the conclusion and recommendation of the Blue Ribbon Panel, a recommendation supportable, I believe, by most if not all experienced stormwater management, science and engineering professionals.

Very truly yours

Doug Harrison