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Economic Analysis of CTR Criteria/Objectives for Regulating NPDES Permitted Urban Area Stormwater Runoff

Mary Jane Forster
State Water Resources Control Board
PO Box 100
Sacramento, CA 95801

Dear Mary Jane and Members of the Board:

I am following up on the announcement of the September 1, 1999 State Board workshop Item 6, "Consideration of a proposed resolution authorizing the Executive Director to amend a sole source contract with Scientific Applications International Corporation (SAIC) to complete the economic analysis for the policy for implementation of toxics standards for inland surface waters, enclosed bays, and estuaries of California in fiscal year (FY) 1999-2000," to indicate the importance of the State Water Board's evaluation of the California Toxics Rule (CTR) implementation costs of applying CTR criteria based water quality objectives to NPDES permitted urban area stormwater runoff.

Periodically I have provided you and other members of the State Water Board with information on the problems with the current regulatory approach for urban area stormwater runoff water quality management in which, ultimately through the BMP ratcheting down process, NPDES permitted urban area and highway stormwater runoff will have to meet the CTR criteria at the point where the runoff enters the state's waters. A number of estimates, including my own, conclude that the cost of complying with this requirement will be in the order of several dollars per person per day for the population served by the stormwater management system. Thus far neither the US EPA nor the State Water Resources Control Board or the Regional Boards have assessed these costs and begun to develop programs to more appropriately regulate urban area stormwater runoff than is being done today.

It is essential that the public and their elected representatives, regulatory agencies and others understand that the current regulatory approach in which NPDES permitted urban area stormwater runoff will have to be treated to meet CTR criteria based and other water quality objectives in the runoff waters will require that advanced wastewater treatment technology be used. While there is no timetable for when the BMP ratcheting down process must be completed, environmental groups have made it clear that they will be requiring that compliance with water quality standards (objectives) be achieved in the near future.

It is possible, through court action, that within a few years NPDES permitted stormwater runoff management agencies will face the installation, operation and maintenance of storm sewer collection systems and storage, as well as advanced wastewater treatment of the collected stormwater runoff so that no constituent in the runoff exceeds a water quality objective by any amount more than once every three years. The costs of land acquisition in urban areas for collection, storage and treatment, as well as the development of collection, storage and treatment systems, for urban area and highway stormwater runoff to meet CTR water quality criteria/state water quality objectives based on these criteria in the Los Angeles area is estimated to exceed \$50 billion.

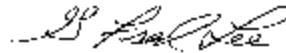
Thus far the US EPA, nationally and Region 9, has failed to make public the ultimate high cost associated with their current urban area and highway stormwater runoff water quality management program. It is essential, as part of Porter-Cologne, that since the CTR criteria will soon become the water quality objectives, which will be the goals of the BMP ratcheting down process, that the Regional Boards and the NPDES stormwater management agencies is currently implementing, the costs to the public of having to meet these criteria/objectives in stormwater runoff should be reliably evaluated. This should be done as part of the current State Water Board's economic analysis of the implementation of the CTR criteria as the state's water quality objectives for inland waters, enclosed bays and estuaries.

Last winter I provided members of the State Board with a write-up that Dr. Anne Jones-Lee and I developed on the potential water quality standards compliance problems that urban area and highway stormwater runoff water quality management agencies and the Regional Boards face in implementing the CTR criteria as stormwater runoff water quality standards (objectives). That review is available from our web site, www.gfredlee.com, as, "Assessment of Potential Urban Area and Highway Stormwater Runoff Water Quality Standards Compliance Problems," which was reproduced in our Stormwater Runoff Water Quality Science/Engineering Newsletter, Volume 1, No. 5, January 30, 1999. That Newsletter, as well as previous issues of the Newsletter which discuss problems with the current regulatory approach for urban area and highway stormwater runoff water quality management, is available from this web site.

Attached is issue 6/7 of this Newsletter, which provides a detailed discussion of what we find are the needed changes in regulatory approaches to regulate chemical constituents and pathogen indicator organisms in urban area stormwater runoff to protect the beneficial uses of the receiving waters for the runoff without significant unnecessary expenditures for constituent control. In order to begin to effectively implement these changes it is essential that the true costs of the current urban area stormwater runoff water quality management program involving ultimately meeting water quality standards in the stormwater runoff be understood. This understanding quickly leads to the conclusion that there is need to change the regulatory approach from a worst-case-based approach that was not designed for urban area and highway stormwater runoff to one that recognizes that many of the constituents in urban area and highway stormwater runoff are in nontoxic/nonavailable forms and that short term pulses of even toxic/available forms associated with runoff events are not necessarily adverse to the beneficial uses of the receiving water for the runoff.

If you have questions about these comments, please contact me. They are being made by me as an individual who has worked on urban area and highway stormwater runoff water quality impact evaluation and management in various areas over the past 40 years. If there is any way I can be of assistance to the State Board on this issue, please let me know. I will not be able to attend the September 1st workshop since it conflicts with the US EPA West Coast Regional “Beach” Conference that is being held in San Diego at that time.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "G. Fred Lee".

G. Fred Lee, PhD, DEE

GFL:jk

Enclosures

Copies to: WRCB Board Members
W. Pettit