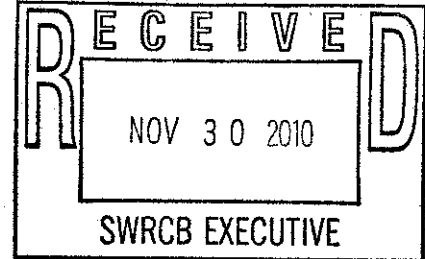


**Comments on State Water Resources Control Board, Division of Water
Quality Draft Effectiveness Assessment Document, October 27, 2010**

November 30, 2010

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The Orange County Water District (OCWD) submits the following comments in response to Notice of Opportunity to Comment on the Effectiveness of the Phase 1 Municipal Separate Storm Sewer System (MS4s) Program (Effectiveness Assessment Document) issued by the State Water Resources Control Board on October 27, 2010.

OCWD was established by the State of California in 1933 to manage the Orange County Groundwater Basin. Water produced from the basin is the primary water supply for approximately 2.4 million people. OCWD operates recharge facilities to actively infiltrate surface water into the groundwater basin to maximize the use of local water resources and support pumping from the basin. OCWD also implements a proactive program to monitor the quality of recharge water and its impact on the groundwater basin and has a comprehensive program to monitor water quality throughout the basin.

OCWD has been actively involved with the County of Orange and other stakeholders in the implementation of the fourth-term MS4 permit in Orange County (Order No. R8-2009-0030). OCWD recognizes the environmental benefits of low-impact development and increasing the infiltration of stormwater. Recharge of the Orange County groundwater basin from surface infiltration plays an important role in groundwater replenishment. However, OCWD is concerned that increasing stormwater infiltration to improve surface water quality, if improperly implemented, could have the unintended result of adversely impacting groundwater quality. The development of more stringent requirements for infiltration of stormwater and urban runoff, as required by Order No. R8-2009-0030, must be implemented carefully so that the water infiltrated into the ground does not negatively impact groundwater quality. Therefore, assessing the effectiveness of stormwater management programs should include provisions for monitoring impacts to groundwater quality.

Although the draft Effectiveness Assessment Document provides for the evaluation of impacts to receiving water bodies from stormwater and urban runoff discharges as well as changes in water quality due to implementation of new MS4 permit conditions, there are no provisions for evaluating the impacts of increased infiltration of stormwater on groundwater quality. Provisions to

document changes to groundwater quality as a result of increased stormwater recharge should be incorporated into the Effectiveness Assessment Document.

Assessment of stormwater infiltration on groundwater quality should include an evaluation of the following:

- impacts from improperly maintained infiltration facilities;
- accidental spills of chemicals into the systems that drain to stormwater recharge systems;
- use of the infiltration or recharge systems for illegal disposal of hazardous materials;
- the potential for stormwater recharge to mobilize pre-existing contamination in the subsurface; and
- the potential for stormwater recharge to cause pre-existing subsurface contamination to migrate more rapidly into groundwater resources.

Groundwater quality data should be collected to demonstrate the treatment effectiveness of infiltration systems, such as vadose zone wells and subsurface horizontal systems, as well as to assess potential impacts on groundwater quality.

OCWD operates and maintains over 20 surface recharge basins and over 30 injection wells. Our experience is that all recharge facilities require regular maintenance to maintain their effectiveness and proper operation. If infiltration facilities are constructed by entities without prior experience in recharge facilities maintenance, we are concerned that the facilities will not be properly maintained. This concern is heightened in the case where the recharge facility is tucked away beneath a parking lot or is otherwise out-of-sight, and the property then changes ownership and the new owner is not aware of the recharge facility or is not motivated to maintain it.

A small number of studies related to stormwater recharge and groundwater quality have been conducted, such as those in the Los Angeles and San Gabriel River Watershed. However, these studies are not sufficient to reflect the wide-range of hydrogeologic conditions across California and in varying land uses and landscapes across the state.

The draft Effectiveness Assessment Document states that the purpose of the assessment program is to evaluate "the storm water program implementation as a whole in order to better understand the relationships between implementation and water quality." (lines 29-31) Based on the draft language that follows in the Effectiveness Assessment Document, it seems that "water quality" is limited to surface water quality. The Assessment Outcomes outlined on pages 5 and 6 and Assessment Elements on pages 8 and 9 are directed exclusively at monitoring and evaluating impacts to receiving waters. This is also the case for the Pollution Source Load Reductions Assessment listed on pages 15 to 16.

Comprehensive evaluation of impacts to both surface water and groundwater resources from stormwater program implementation is vital to assure that MS4 permit implementation will not have the negative unintended consequence of degrading groundwater resources.

Thank you for the opportunity to submit comments on the draft Effectiveness Assessment Document.