

**Orange County Water District Comments on draft Order No. R8-2009-0030
(NPDES No. CAS 618030)**

The Orange County Water District (OCWD) was established by the State of California in 1933 to manage the Orange County Groundwater Basin. We are involved with projects and activities to manage the infiltration of water into the groundwater basin and protect and improve groundwater quality. Infiltration of water into the basin is very important, since infiltration or 'recharge' helps support pumping from the basin. The basin is the primary water supply for approximately 2.5 million people.

OCWD implements a proactive monitoring program for water recharged by the District. OCWD infiltrates water from the Santa Ana River, Santiago Creek, and water from other sources. We also recharge recycled water from the Groundwater Replenishment System. The District carefully monitors the quality of the water recharged and its impact on the groundwater basin.

We have reviewed the most recent draft of the MS4 Permit issued by the Santa Ana Regional Water Quality Control Board. OCWD recognizes and appreciates the environmental benefits of low-impact development and the goal of reducing pollution caused by urban runoff. However, infiltration of stormwater or urban runoff needs to be implemented carefully so that the water infiltrated into the ground does not negatively impact groundwater quality. The provisions in section XII(B)(5) of the draft permit need to be enhanced to protect groundwater quality.

Determining where infiltration is possible and appropriate within Orange County is a common goal shared by many parties. We believe it is prudent to evaluate the occurrence of hydrogeologic conditions such as shallow groundwater that may hinder infiltration and also evaluate potential impacts to groundwater quality. This analysis would help to evaluate whether infiltration is an effective and safe best management practice in Orange County. Accordingly, OCWD encourages the Regional Board, the permittees and stakeholders to coordinate on funding and creating a comprehensive map of Orange County identifying areas suitable for infiltration. This map (or maps) should identify hydrogeologic factors such as the elevation of the groundwater table, liquefaction potential, soil types, and related features such as where infiltration is not feasible due to topography, known plumes and other contamination concerns. OCWD would be pleased to share information which could be used for this mapping process.

Given the regional significance of the Orange County Groundwater Basin, the management of subsurface contamination and pollution migration are paramount concerns for the District. The District strongly supports the water quality protection efforts aimed at reducing stormwater pollutants. From a management and monitoring standpoint, it would likely be easier to ensure that the systems are properly managed and monitored if infiltration systems are grouped or

clustered on a regional basis, compared to having individual systems at a larger number of locations.

In light of these issues, we provide the following additional comments:

- Paragraph 90 in the fact sheet states the permitted discharge is consistent with the anti-degradation provisions of 40 CFS 131.12 and the State Board Resolution 68-16. The draft Order focuses on the quality of surface water and there is information presented to support the statement that the permitted discharge is consistent with anti-degradation provisions with respect to surface water quality. However, there is very limited analysis or discussion in the draft Order regarding potential impacts to groundwater quality. The draft Order references the studies conducted by the Los Angeles and San Gabriel Watershed Council on storm water recharge. It is important to note that the location of this study is not within the Santa Ana River Watershed. We are concerned that there are minimal data in Orange County regarding the potential impacts to groundwater quality that may result from infiltration systems, particularly when the infiltration systems are poorly maintained or infiltrate runoff from industrial land use areas. Data need to be collected in Orange County to assess the potential impacts to groundwater quality from infiltration systems such as vadose zone wells (also called 'dry wells') and subsurface horizontal systems such as infiltration galleries or French drains.
- The draft Order does not have an adequate analysis of anti-degradation provisions in State Board Resolution 68-16 with respect to potential adverse impacts to groundwater quality; an anti-degradation analysis in terms of groundwater quality should be provided in the Order.
- We should not rely too heavily on the studies conducted by the Los Angeles and San Gabriel Watershed Council; the studies are important, but groundwater quality data from Orange County are needed.
- We encourage the grouping or clustering of infiltration systems to the extent practical.
- The draft Order should provide for the collection of groundwater quality data in Orange County to assess potential groundwater quality impacts from infiltration systems such as vadose zone wells and subsurface horizontal systems; data collection could be focused on a selected number of sites.
- The groundwater quality data that should be collected in relation to the Order should be utilized to demonstrate the treatment effectiveness of the infiltration systems and that there is no adverse impact on groundwater quality; if the data indicate there was an adverse impact to groundwater quality, the infiltration system should of course be modified or terminated, and a plan developed and implemented to mitigate the negative impact to groundwater quality;

- We are concerned about the implications of footnote 50; the first part of footnote 50 reads “This restriction applies only to sites that are known to have soil and groundwater contamination.”
 - The word ‘and’ should be changed to ‘or’. It would not be appropriate to allow the restriction to be applied only in cases where both soil and groundwater contamination exists. If only soil contamination exists, the restriction should apply.
 - We are concerned that the restriction would not apply to certain land uses that may pose an elevated risk of having contaminated runoff. For example, if a new gas station is constructed and there is no soil or groundwater contamination, which might be the case for a new gas station, could an infiltration system could be built? There are some land uses that should have the restriction applied regardless of the presence of soil or groundwater contamination. If additional treatment prior to infiltration and increased monitoring is required, this may obviate some of our concerns but we are concerned about any and all land uses infiltrating their runoff unless there is careful monitoring.

Thank you for your consideration of these comments.