# RANCHO MISSION VIEJO

September 28, 2009

Mr. John Robertus, Executive Officer
Regional Water Quality Control Board
San Diego Region
9174 Sky Park Court, Suite 100
San Diego, CA 92123-4353

Reference: Revised Tentative Order R9-2009-0002; NPDES CAS0108740
Orange County Municipal Storm Water Permit Reissuance

Subject: Rancho Mission Viejo Comments

Dear Mr. Robertus:

Thank you for providing Rancho Mission Viejo (RMV) with the opportunity to review and comment on the referenced Revised Tentative Order. We have previously submitted comments on this tentative order. Staff has been most helpful in addressing our comments and we are pleased to see that our request to have the Regional Board consider how the protection of water quality at the watershed scale can provide equal or greater benefits than the protection of water quality at a site-specific scale has resulted in the inclusion of language in support of this concept – see Section F.1.c (8). In recent discussions with staff regarding inclusion of the language "and acceptable to the Regional Board" staff indicated that the lack of certainty regarding what watershed and/or sub-watershed planning principles would be used prompted the inclusion of this language.

In our prior correspondence on the tentative order RMV included an attachment which summarized the Watershed Planning Principles and approaches taken by RMV to implement these principles during development of our water quality management plans. This attachment is included in this comments letter also. In addition, RMV has previously provided the Regional Board with the sub-basin planning principles for each of the sub-basins located on our property as part of the document titled Watershed and Sub-Basin Planning Principles (February 2003).

We respectfully request that the language "and acceptable to the Regional Board" be deleted from the tentative order for the following reasons:

(1) The Regional Board already knows what planning principles we will be and are using in our planning to protect water quality; and



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(2) As it currently is drafted this language could result in the Regional Board reviewing RMV's water quality management plans twice – once in the context of the County's approval of master area plans and once in the context of the Regional Board consideration of 401 certifications and/or waste discharge requirements. This would not appear to be the best use of staff time and RMV financial resources. In addition duplicate review places RMV in double jeopardy regarding an approval that should rightly lie with the County as the MS4 permittee.

We look forward to working with the Regional Board to further our collective desires to protect water quality through watershed planning. Should you have questions regarding our comments, please feel free to contact me or Laura Coley Eisenberg of my staff at (949) 240-3363.

Sincerely,

Richard Broming
Senior Vice President - Planning and Entitlement

Attachment

Cc: Larry McKinney, RBF Consulting
Lisa Austin, Geosyntec Consultants
Laura Coley Eisenberg, RMV

# Attachment 1

## WQMP Approach to Addressing Potential Impacts of Stressors

Urbanization of a watershed can result in environmental stressors which may have adverse effects on ecosystem characteristics such as vegetation communities and species. The RMV WQMP addresses four broad categories of potential "stressors" that could impact habitats and species:

- Altered hydrology due to urban development or public works projects;
- Altered geomorphic processes;
- Pollutants generated by urban development; and
- Elevated temperatures.

The WQMP was developed to address the SAMP Tenets and Baseline Conditions Watershed Planning Principles set forth in the *Watershed and Sub-basin Planning Principles*. The SAMP Tenets policies include:

- Protect headwaters
- Maintain and/or restore floodplain connection
- Maintain and/or restore sediment sources and transport equilibrium

The Watershed Planning Principles address the stressors under the following sets of principles. For each set of Watershed Principles, a summary of the WQMP approach addressing the Principle(s) is provided.

### Pollutants

The Baseline Conditions Watershed Planning Principles Section "v) Water Quality" sets forth the following principle for water quality/pollutants:

- Principle 9 – Protect water quality by using a variety of strategies, with particular emphasis on natural treatment systems such as water quality wetlands, swales and infiltration areas and application of Best Management Practices within development areas to assure comprehensive water quality treatment prior to the discharge of urban runoff into the Habitat Reserve.

The WQMP approach to address this principle is to incorporate into the stormwater system a mix of site design, source control, and treatment control BMPs, pursuant to the

Orange County Local WQMP, that will be protective of both surface and groundwater quality. These BMPs include the use of natural treatment systems such as bioswales and wetlands, extended detention basins, infiltration, cisterns, and provisions for utilizing stormwater for irrigating common area landscaping and golf courses.

## Changes in Surface Water Hydrology

Baseline Conditions Watershed Planning Principles Section "ii) Hydrology" sets forth the following planning principles for surface water hydrology:

- Principle 2 – Emulate, to the extent feasible, the existing runoff and infiltration patterns in consideration of specific terrains, soil types, and ground cover.
- Principle 3 – Address potential effects of future land use changes on hydrology.
- Principle 4 – Minimize alterations of the timing of peak flows of each sub-basin relative to the mainstem creeks.
- Principle 5 – Maintain and/or restore the inherent geomorphic structure of major tributaries and their floodplains.

The WQMP approach to address this principle is to incorporate all of these hydrologic planning principles into the design of the stormwater system. Hydrologic modeling techniques were implemented to estimate the pre-developed runoff flow rates and volumes considering existing terrains, soil types, and ground covers. Detention and infiltration BMPs were then sized accordingly to match, to the extent feasible, post-development hydrologic conditions to the pre-developed conditions at the development bubble, catchment, and sub-basin levels. Hydrologic conditions were matched for monthly water balances and flow versus duration for a continuous segment of the precipitation record. The modeling techniques employed considered the role of longer-term wet/dry cycles and how such cycles influence hydrologic conditions.

## Changes in Groundwater Hydrology

Baseline Conditions Watershed Planning Principles Section "iv) Groundwater Hydrology" sets forth the following principles:

- Principle 7 – Utilize infiltration properties of sandy terrains for groundwater recharge and to off-set potential increases in surface runoff and adverse effects to water quality.
- Principle 8 – Protect existing groundwater recharge areas supporting slope wetlands and riparian zones; and maximize groundwater recharge of alluvial

aquifers to the extent consistent with aquifer capacity and habitat management goals.

To replicate (or emulate to the maximum extent practicable) pre-development infiltration and to protect groundwater quality, flow and water quality control facilities that incorporate infiltration will be located in the head end of side canyons where depth to groundwater is greatest. Extended detention also will provide pre-treatment to the infiltrated water to minimize impacts to groundwater quality. Additional treatment will occur through natural soils processes as infiltrated water moves through soils into the groundwater system.

## Changes in Geomorphic Processes

Baseline Conditions Watershed Planning Principles Section "i) Geomorphology/Terrains" sets forth the following principle:

- Principle 1 – Recognize and account for the hydrologic response of different terrains at the sub-basin and watershed scale.

Land use planning should strive to mimic the hydrologic response of existing terrains by primarily locating development in areas which have low infiltrative soils, such as the "hardpan" areas and areas of clay soils found on the ridges in Cañada Chiquita and Canada Gobernadora. Surface runoff flows have been directed to water quality treatment, detention, and infiltration BMPs located in the permeable substrate of the major side canyons and along the valley floor. Setbacks from the mainstem creek channels are incorporated through a variety of means, including proposed Habitat Reserve areas and water quality buffer strips.

Baseline Conditions Watershed Planning Principles Section "i) Geomorphology/Terrains" and "iii) Sediment Sources, Storage, and Transport" sets forth the following principle:

- Principle 6 – Maintain coarse sediment yields, storage and transport processes.

The WQMP approach to address this principle is to design water quality and flow control facilities "offline" of the storm drainage and flood control system, so that large flows and attendant sediment loads will bypass the water quality facilities. The WQMP facilities will be designed to capture primarily fine sediments that contain the majority of pollutant mass and which cause adverse effects to aquatic species and habitats through increased turbidity and settlement in breeding habitats. Matching post-development flow durations to pre-development flow durations in the flow control facilities will help ensure that the pre-development transport processes in the mainstem channels are preserved.

As noted previously, each of the above Principles includes specific policies providing more specific guidance for maintaining net habitat value at a watershed scale. Further, the sub-basin "Planning Considerations" and "Planning Recommendations" set forth in the draft Watershed and Sub-Basin Planning Principles provide geographic-specific planning and resource protection guidance for each sub-basin within the 22,815 acres of RMV lands that are the subject of this WQMP. Accordingly, the WQMP addresses both the overall principles set forth in the Baseline Conditions Watershed Principles and the specific Planning Considerations and Planning Recommendations for each sub-basin set forth in the draft Watershed and Sub-Basin Planning Principles document.