

RANCHO MISSION VIEJO

May 14, 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
NWU:658018:bneill

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 ("Order"). We attended the public workshop held last week on this matter, but have not yet had an opportunity to meet with your staff, as they have been occupied with meetings with the co-permittees. The discussions during last week's workshop and the alternative language circulated May 5th indicate that many provisions of the Order are still evolving, including the provisions specific to new development. We are therefore focusing in this letter on the concept of watershed-scale planning. We hope to avoid causing staff to provide written responses to comments that may have become inapplicable. We will, however, provide additional technical comments as the process continues and we look forward to meeting with staff next week.

In our opinion, the drafting of this Order represents a unique opportunity for the Regional Board to 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. The South Orange County municipal storm water permits have, since the first term permit, directed the co-permittees to implement methods of coordinating land use planning at the watershed scale and to address the impacts of development on water resources as early in the planning process as possible. As we discuss further below, RMV has been working diligently over many years in coordination with the County of Orange ("County") and the state and Federal resources agencies to implement these requirements. The County's



approval of the Ranch Plan embodies the results of this process, and exemplifies what can be achieved when the co-permittees and the development community embrace the goals and intent of the water quality regulatory program. Our comments in this letter are intended to insure that the Order does not inadvertently penalize the participants in that process.

Background

Over the past several years, RMV in cooperation with the County, U.S. Army Corps of Engineers (USACE), U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG) has undertaken three coordinated watershed-level planning efforts to determine the future land uses for south Orange County. These planning processes have resulted in approval of the Ranch Plan by the County, the San Juan Watershed/Western San Mateo Watershed Special Area Management Plan (SAMP) by the USACE, the Southern Subregion Habitat Conservation Plan (SSHCP) by USFWS and a Master Streambed Alteration Agreement (MSAA) for the Ranch Plan by CDFG.

To illustrate the relationship between the Regional Board's jurisdiction in Orange County and the study areas of the SAMP, SSHCP and the Ranch Plan/RMV's boundary, we have included two exhibits titled as follows:

- Exhibit A - Relationship of SAMP and SSHCP Study Areas and RMV Boundary to San Diego Regional Water Quality Control Board Jurisdiction in Orange County
- Exhibit B - Relationship of Southern Subregion Habitat Reserve to Regional Water Quality Control Board Jurisdictional Areas

Within your jurisdiction and the SSHCP Study Area, 32,818 acres are planned for protection as Habitat Reserve lands and a further 45,524 acres are identified as Supplemental Open Space. 6,928 acres have been identified as Future Development most of which will occur on RMV (shown in pink and orange cross-hatch on Exhibit B) and 2,545 have been identified as Potential Development (shown in purple on Exhibit B). Thus, new development within the Regional Board's jurisdiction within south Orange County will be very limited in the future, and significant protection of receiving water bodies within this area has occurred. The extent of protected receiving water bodies is illustrated by the attached SAMP figure titled Aquatic Resource Conservation Areas (Exhibit C).

To support the water quality, geomorphic, and habitat goals of the Ranch Plan, SAMP and SSHCP planning processes, RMV developed a comprehensive Water Quality Management Plan (WQMP) that addresses:

- pollutants and conditions of concern through consideration of the existing hydrologic/geomorphic conditions of the RMV watersheds and sub-watersheds,
- pre- and post project flow duration modeling to address hydromodification, and

- pollutant loading modeling.

This WQMP was the first of five levels of WQMP preparation. These levels include the Conceptual WQMP (the Long-Range Regional Water Quality Approach), the Draft and Final Master Area Plan WQMP (for each development Planning Area), the Sub-Area Plan WQMP (for portions of each development Planning Area), and the final Project Specific WQMP (for individual tracts). The Conceptual WQMP set the framework for the future levels of WQMP preparation and identified the site design, source control, treatment control, and hydromodification control WQMP elements that will be implemented for each sub-basin within the RMV Ranch Plan. We believe, as do the participating Federal, state and local agencies, that implementation of the Ranch Plan, SSHCP, SAMP and MSAA and the associated Conceptual WQMP is key to protection of water quality and water bodies in the San Juan Creek and San Mateo watersheds and is consistent with Finding D.4 of the Tentative Order states, in part: *“It is important for the Copermittees to coordinate their water quality protection and land use planning activities to achieve the greatest protection of receiving water bodies...”* .

General Comment

To support the programmatic approach to water quality and water body protection that has taken place in southern Orange County, the Regional Board should incorporate into the Final Order two new Findings in Section D.4 Watershed Runoff Management as follows:

- d. The South Orange County municipal storm water permits have, since the first term permit, directed the co-permittees to implement methods of coordinating land use planning at the watershed scale and to address the impacts of development on water resources as early in the planning process as possible. In response to those permit requirements, the County and cities in South Orange County developed processes to review and approve land use plans in a way that implemented these requirements. The County’s approval of the Ranch Plan embodies the results of this process, and exemplifies what can be achieved when the co-permittees and the development community embrace the goals and intent of the water quality regulatory program.
- e. The San Juan Creek Watershed and Western San Mateo Creek Watershed Special Area Management Plan and Southern Subregion Habitat Conservation Plan, both regional watershed-based planning programs, will contribute to the protection of beneficial uses through i) the conservation and management of the Southern Subregion Habitat Reserve and its associated Aquatic Resource Conservation Areas and ii) implementation of the site design, source control, treatment control, and hydromodification control measures contained in the Conceptual Water Quality Management Plan for Priority Development Projects within the SAMP and HCP Study Areas.

Specific Comment

The proposed development project criteria and requirements contained in Section F.1 (i.e., Sections F.1(c), F.1(d)(4), and F.1(h)(6)) do not provide for Projects that have addressed these requirements through the development and application of basic principles of hydrology and geomorphology at the sub-watershed and watershed scale. For example, the first LID BMP on page 26 of the Revised Tentative Order states “Conserve natural areas, including existing trees, other vegetation and soils”. In our case, this LID BMP has been accomplished at the watershed scale resulting in 20,868 acres of RMV lands that will be preserved as open space (including all main stem creeks) and dedicated to a Habitat Reserve over time. Table 1 (attached) takes each Site Design BMP, Buffer Zone and Infiltration and Groundwater Protection requirement from this section and illustrates how these has been achieved at the watershed and sub-watershed scale on RMV. Additionally, an excerpt from the WQMP that summarizes the Watershed Planning Principles and approaches taken by RMV to implement these principles is provided in Attachment 1.

Because of the protections to water quality and water bodies achieved through watershed-based projects such as the Ranch Plan, the Regional Board should define Watershed Planning as an alternative and co-equal approach to the project-specific requirements as follows:

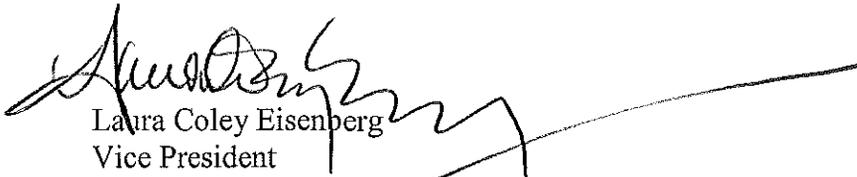
Suggested Language Insert for the Tentative Order Section F. 1.(c) (p. 27):

Suggest inserting the following new item (8) to Section F.1.(c):

“Alternative Performance Criteria for Watershed-Based Projects. Where a Project has been prepared using watershed and/or sub-watershed based water quality, hydrologic, and fluvial geomorphologic planning principles that meet the intent of the criteria and requirements of this Order, such standards shall govern review of Projects with respect to Section F.1.of this Order and shall be deemed to satisfy this Order’s requirements for LID/site design, buffer zone, infiltration and groundwater protection standards, source control, treatment control, and hydromodification control standards.”

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 at (949) 240-3363 Ext. 297.

Sincerely,



Laura Coley Eisenberg
Vice President
Open Space & Resource Management

Attachments:

- Exhibit A
- Exhibit B
- Exhibit C

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

Table 1

Tentative Order Site Design BMP/Buffer Zone/Infiltration and Groundwater Protection Requirement	RMV WQMP Implementation at Watershed & Sub-watershed Scale
Conserve natural areas, including existing trees, other vegetation and soils	20,868 acres of RMV lands will be preserved as open space and dedicated to a Habitat Reserve over time. All mainstem creeks on RMV are preserved, 8,198 acres of riparian habitats will be protected in the SAMP Study Area including RMV lands.
Construct streets, sidewalks, or parking lots aisles to minimum widths necessary provided that public safety is not compromised and in accordance with Section D.1.d.(4)(a)vi	Streets, sidewalks, and parking lot aisles will be constructed to the minimum widths specified in the County Land Use Code and in compliance with regulations for the Americans with Disabilities Act and safety requirements for fire and emergency vehicle access.
Minimize the impervious footprint of the project	Only 5,929 acres will be developed while 20,868 acres will be preserved. The proposed development areas are predominantly located on the less infiltrative soils to preserve the permeable substrate located in the major side canyons and along the valley floor.
Minimize soil compaction to landscaped areas	In areas not subject to mass grading, the smallest site disturbance area possible will be delineated and flagged and temporary storage of construction equipment will be restricted in these areas to minimize soil compaction on site.
Minimize disturbances to natural drainages	All mainstem creeks on RMV are preserved, 8,198 acres of riparian habitats will be protected in the SAMP Study Area including RMV lands.
Disconnect impervious surfaces through distributed pervious areas	The stormwater management system includes flow duration control/water quality basins combined with strategically located infiltration or reuse facilities and bioinfiltration swales that will provide opportunities for additional infiltration. LID BMPs that are distributed within the development bubble will be considered as options that could reduce the size of the combined hydromodification and water quality control facilities, where site conditions are suitable. As the proposed development areas are predominantly located on less infiltrative soils (to preserve the permeable substrate located in the major side canyons and along the valley floor where the combined hydromodification and water quality control facilities are located), opportunities for distributed LID BMPs may be limited.
Buffer zones for natural water bodies where feasible.	Regarding buffers, one of the fundamental SAMP Tenets addressed the provision of adequate buffers from riparian corridors. SAMP Tenet 7 states "Maintain adequate buffer for the protected riparian corridors." Major riparian corridors within the RMV Planning Area can be defined as Chiquita Creek, Gobernadora Creek, San Juan Creek, Verdugo Creek, Cristianitos Creek, Gabino Creek, La Paz Creek, and Talega Creek and would be protected in the following manner:

Tentative Order Site Design BMP/Buffer Zone/Infiltration and Groundwater Protection Requirement	RMV WQMP Implementation at Watershed & Sub-watershed Scale
	<p>Development in Planning Area 2 below the SMWD wastewater treatment plant would be set back from a minimum of 225 feet to over 500 feet from centerline of Chiquita Creek.</p> <p>Development in Planning Area 3 would have a 656-foot-wide (200 meter) setback to buffer northerly San Juan Creek. When combined with the 656-foot-wide (200 meter) setback for Planning Area 4, a 1,312-foot-wide (400 meter) corridor as recommended by Beier would be provided for mountain lion movement along San Juan Creek.</p> <p>Verdugo Creek Canyon would not be directly impacted by the proposed Planning Area 4 development, thereby protecting the Verdugo Creek riparian corridor and its associated coarse sediments.</p> <p>No development is proposed in the Gabino, or La Paz Sub-basins therefore, Gabino Creek, and La Paz Creek would be protected.</p> <p>Very limited development (50 acres of citrus orchard and a 25-acre Rancho Mission Viejo headquarters) is proposed for the Cristianitos Sub-basin and neither use is anticipated to result in significant impacts to this sub-basin.</p> <p>Based on the overstated impact analysis boundary for Planning Area 8, the setback for development from Talega Creek would range from 1,000 to 1,650 feet to the creek and has an elevation range of 80 to 280 feet above the creek.</p>
Runoff must undergo pre-treatment such as sedimentation or filtration prior to infiltration	All runoff will be pretreated in a FD/WQ basin before it enters an infiltration basin.
All dry weather flows containing significant pollutant loads must be diverted from infiltration devices	<ul style="list-style-type: none"> • Landscape drainage features will be designed so that they promote infiltration of runoff, but do not inject runoff so that it bypasses the natural processes of filtering and transformation that occur in the soil. • Infiltration basins will not collect drainage from, or be located near, work areas where wash water or liquid wastes will be generated or where hazardous chemicals are stored. • All runoff will be pretreated in a FD/WQ basin before it enters an infiltration basin.
Pollution prevention and source control BMPs must be implemented at a level appropriate to protect groundwater quality at sites where infiltration treatment control BMPs are to be used	<ul style="list-style-type: none"> • Reasonable steps will be taken to prevent the illegal discharge of wastes to the drainage system. • Infiltration basins will be clearly marked with “no dumping” signs and will be inspected regularly. • Source Control BMPs will be implemented at a level appropriate to protect groundwater quality.
Infiltration treatment control BMPs must be adequately	A maintenance checklist for each facility will be developed and all routine maintenance activities will be

Tentative Order Site Design BMP/Buffer Zone/Infiltration and Groundwater Protection Requirement	RMV WQMP Implementation at Watershed & Sub-watershed Scale
maintained so that remove storm water pollutants to the MEP	recorded in a maintenance log. All combined control system sites will be inspected on a regular, scheduled basis to ensure that the sites are operating properly, to record observations, and to initiate any actions that may be required.
The vertical distance from the base of any infiltration treatment control BMP to the seasonal high groundwater mark must be at least 10 feet. Where ground water basins do not support beneficial uses, this vertical distance criteria may be reduced, provided groundwater quality is maintained	The vertical distance from the base of all infiltration basins to the seasonal high groundwater mark will be at least 10 feet.
The soil through which infiltration is to occur must have physical and chemical characteristics (such as appropriate cation exchange capacity, organic content, clay content, and infiltration rate) which are adequate for proper infiltration durations and treatment of runoff for the protection of groundwater beneficial uses	The soil through which infiltration is to occur has physical and chemical characteristics (such as appropriate cation exchange capacity, organic content, clay content, and infiltration rate) that are adequate for proper infiltration durations and treatment of urban runoff for the protection of groundwater beneficial uses.
Infiltration treatment control BMPs must not be used for areas of industrial or light industrial activity; areas subject to high vehicular traffic (25,000 or greater average daily traffic on main road or 15,000 or more average daily traffic on any intersecting roadway); automotive repair shops; car washes; fleet storage areas (bus, truck, etc); nurseries; and other high threat to water quality land uses and activities as designated by each Copermitttee; and	Stand alone infiltration BMPs will not be used directly for areas of industrial or light industrial activity; areas subject to high vehicular traffic; automotive repair shops; car washes; fleet or RV storage areas (bus, truck, etc.); nurseries; and other high threat to water quality land uses and activities as designated in the Orange County Local Implementation Plan. Drainage from these areas will be combined with runoff from residential and open space areas prior to receiving treatment and infiltrating in a combined control system facility.
Infiltration treatment control BMPs must be located a minimum of 100 feet horizontally from any water supply wells	The horizontal distance between the base of any infiltration basin and any water supply wells will be 100 feet or as determined on an individual, site-specific basis by the County of Orange.

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.

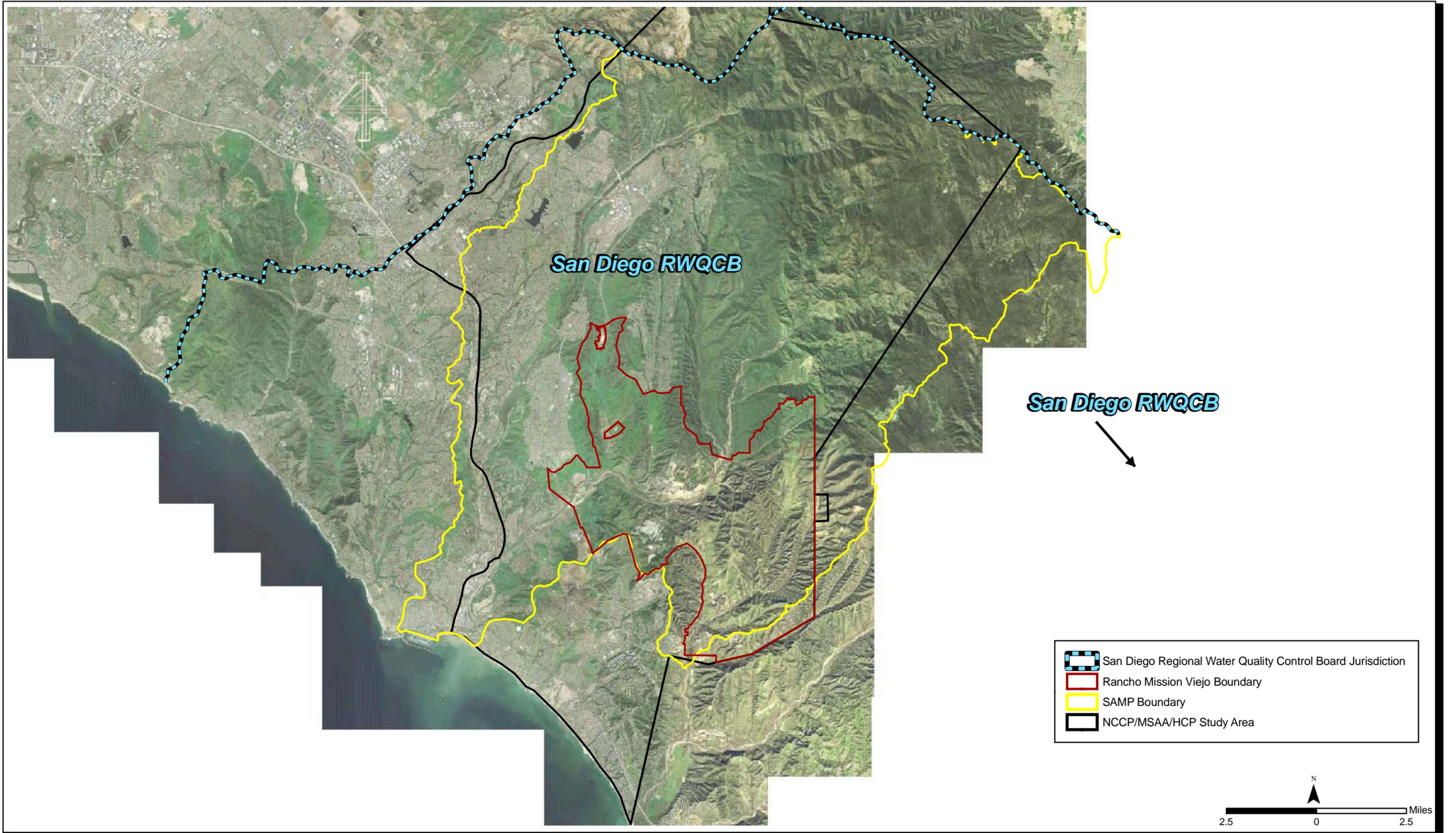
Land use planning should strive to mimic the hydrologic response of existing terrains by primarily locating development in areas which have low infiltrative soils, such as the “hardpan” areas and areas of clay soils found on the ridges in Cañada Chiquita and Canada Gobernadora. Surface runoff flows have 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.

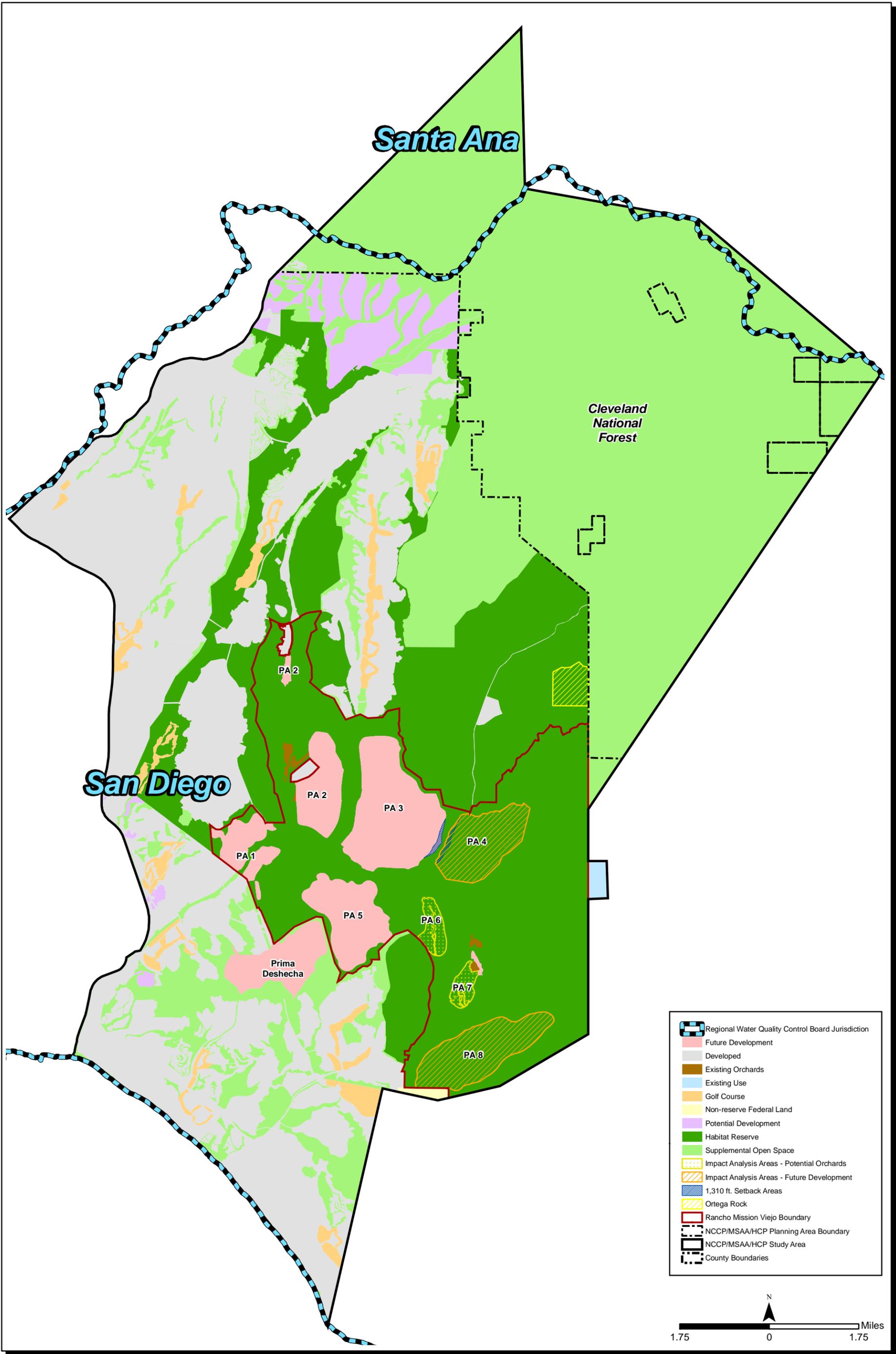
The WQMP approach to address this principle is to design water quality and flow control facilities “offline” of the storm drainage and flood control system, so that large flows and attendant sediment loads will bypass the water quality facilities. The WQMP facilities will be designed to capture primarily 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.

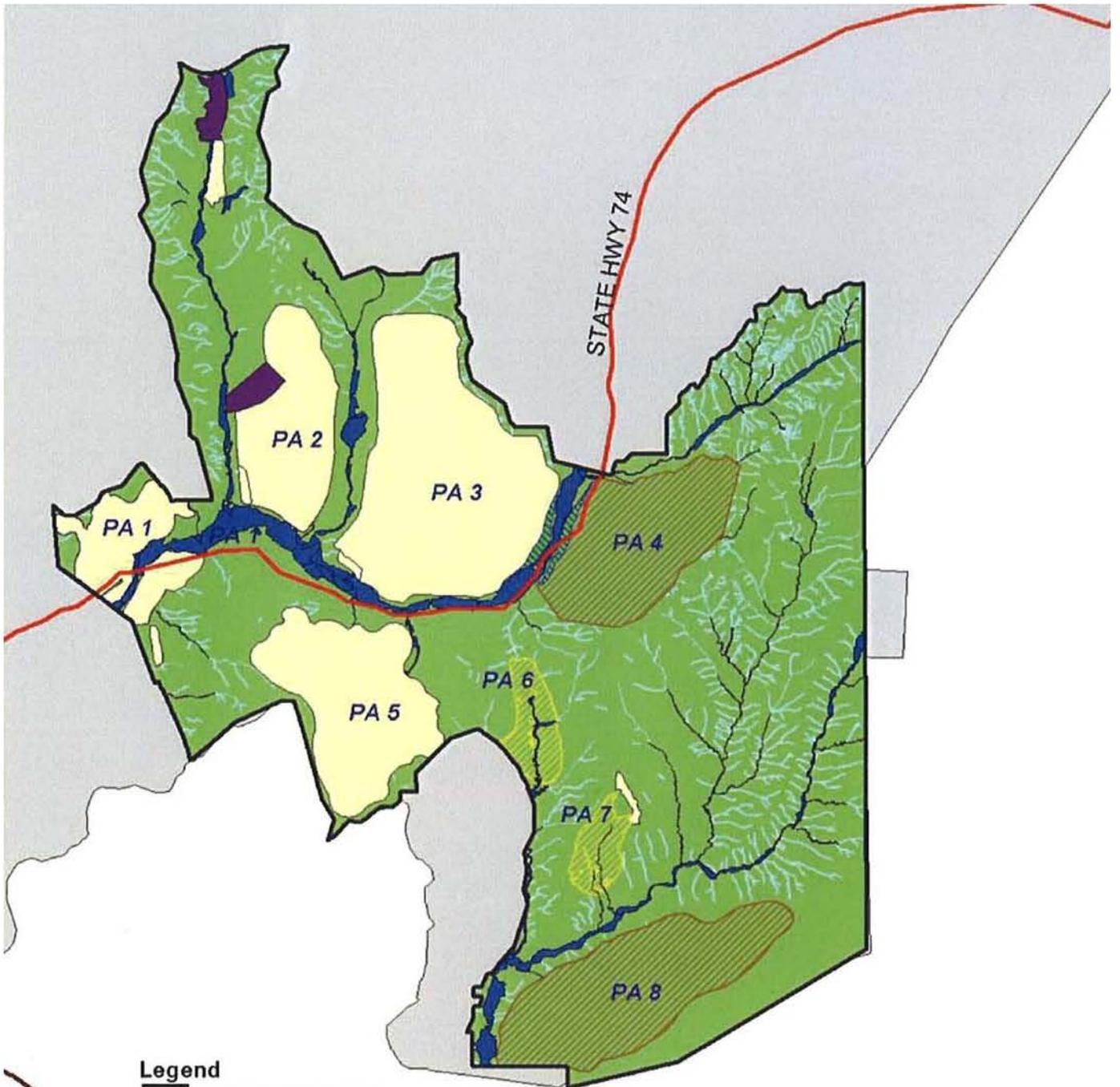


Relationship of SAMP and SSHCP Study Areas and RMV Boundary to San Diego Regional Water Quality Control Board Jurisdiction in Orange County

Exhibit
A



Relationship of Southern Subregion Habitat Reserve to Regional Water Quality Control Board Jurisdictional Areas



- Legend**
- RMV Planning Area
 - NAP
 - Actively Managed Aquatic Resource Conservation Areas (ARCAs)
 - Conserved Ephemeral Streams
 - Contributing Uplands to be Dedicated as Open Space
 - SAMP Study Area Outside Ranch Plan
 - 200 Meter Setback
- Areas Eligible for Abbreviated Permitting**
- Development
 - Development Impact Analysis Area
 - Orchard Impact Analysis Area

SOURCE: Figure 8-10 Special Area Management Plan

Aquatic Resources Conservation Areas