

Transmittal: December 16, 2013  
To: losangeles@waterboards.ca.gov

Sam Unger, Executive Officer  
Regional Water Quality Control Board, Los Angeles Region  
320 4th Street Suite 200  
Los Angeles, California 90013

Attention: Renee Purdy

SUBMITTAL OF AN AMENDMENT TO THE NOTICE OF INTENT FOR THE DEVELOPMENT OF AN ENHANCED WATERSHED MANAGEMENT PROGRAM FOR THE PENINSULA WATERSHED EWMP AGENCIES.

Attached:


Please find the attached Amendment to the Notice of Intent (NOI) to develop an Enhanced Watershed Management Program (EWMP) that was submitted to your office on June 27, 2013 by the cities and agencies comprising the Palos Verdes Peninsula Watershed (Peninsula EWMP Agencies). This amendment is being submitted by the Peninsula EWMP Agencies in response to your letter dated November 26, 2013 requesting additional information and documentation, and provides the following:

- Revised Table 10 including additional information identifying Permittees that will implement proposed structural BMPs
- Quantification and summary of water quality improvements resulting from the Model Equestrian Center Project
- Quantification and summary of water quality improvements resulting from the San Ramon Canyon Stormwater Flood Reduction Project

The Peninsula EWMP Agencies thank you for your review of our NOI, and look forward to working with your staff on the continued development of the Enhanced Watershed Management Program.

Please contact me at AndyW@rpv.com or (310)-544-5249 if you have any questions.

Thank you

  
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Andy Winje  
Program Chair

Cc:

Renee Purdy, California Regional Water Quality Control Board, Los Angeles Region  
Ivar Ridgeway, California Regional Water Quality Control Board, Los Angeles Region  
William Johnson, Los Angeles County Department of Public Works  
Andy Winje, City of Rancho Palos Verdes  
Director of Public Works, City of Palos Verdes Estates  
Greg Grammer, City of Rolling Hills Estates  
John Hunter, John L. Hunter and Associates  
Kathleen McGowan, Geosyntec

**Amendment to the Peninsula Agencies  
Enhanced Watershed Management Plan (EWMP)  
Notice of Intent (NOI)**

1. Revisions to Table 10 of the NOI to identify Permittees who will implement proposed structural BMPs.

REVISED Table 10: Structural BMPs to be implemented in the Peninsula EWMP Watersheds.

<b>Watershed</b>	<b>Structural BMP or Suite of BMPs to be Implemented</b>	<b>Planned Implementation Date</b>	<b>Agency Implementing Proposed BMP</b>
<b>Dominguez Channel Watershed</b>	Model Equestrian Center	Completion anticipated by June 2015	City of Rolling Hills Estates
<b>Santa Monica Bay Watershed</b>	San Ramon Canyon Stormwater Flood Reduction Project	Underway: Completion anticipated by June 2015	City of Rancho Palos Verdes

2. Water Quality Improvements Provided by the Model Equestrian Center

The Model Equestrian Center project is located on an existing municipal equestrian center operated by the City of Rolling Hills Estates since the 1960s which provides boarding facilities to the public, training facilities for both Western and English riding, and popular pony camps for children. The facility houses 110-120 horses at any given time and as such this project will directly achieve 18% of the nutrient load reduction needed from the estimated 650 horses within the Machado Lake area of the Palos Verdes Peninsula. The project design will address a drainage area of 9 acres and will mitigate the first ¼ inch of wet weather runoff (approximately 24,000 cubic feet of stormwater runoff) as well as continue to prevent dry weather discharges from the facility.

A nutrient source assessment of significant anthropogenic sources of nitrogen and phosphorus was conducted as part of the PVP Nutrient TMDL Implementation Plan (Palos Verdes Peninsula Subwatershed 2011). That nutrient source assessment identified horse manure as being one of the two most significant sources of phosphorus (along with fertilizer) and one of the three most significant sources of nitrogen (along with fertilizer and dry air deposition).

The technical approach for water quality management for the Model Equestrian Center project includes source control plus biofiltration (infiltration is technically infeasible due to site conditions). Source controls seek to prevent exposure of manure and urine to stormwater via:

- Roof runoff either captured for reuse or directed around/away from high use areas
- Permanent covered area for short-term manure storage with impervious floor
- Daily pick-up of manure from stalls, paddocks, turn-outs and other high-use areas
- Manure hauled to off-site composting facility (outside Machado Lake tributary area)
- Minimize stormwater in contact with high use areas by improving drainage, directing run-on from off-site around high use areas

Assuming that source controls can achieve 90% control of manure without contact with stormwater, the project treatment approach is to achieve the remaining nutrient load reduction via biofiltration designed to achieve 80% removal of Nitrogen and 85% removal of Phosphorus from the nutrient load in stormwater runoff from the facility.

Additional water quality benefits provided by the Model Equestrian Center Project include:

- provide an example for retrofit opportunities and optimal BMPs at several other large equestrian facilities on the Palos Verdes Peninsula
- demonstrate effective horse keeping BMPs for water quality to owners of 45% of horses kept on residential property
- provide basis for development of PVP guide for new stable design and horse keeping BMPs on residential properties
- provide a variety of water quality public outreach and education activities directed at the equestrian community on the Palos Verdes Peninsula and greater Los Angeles area

3. Water Quality Improvements Provided by the San Ramon Canyon Stormwater Flood Reduction Project

San Ramon Canyon is a natural, typically dry canyon streambed in the City of Rancho Palos Verdes that sits directly north of and above Palos Verdes Drive South (PVDS)/25th Street in the City of Los Angeles. It is surrounded by residential homes to the north, Friendship Park to the east, Palos Verdes Drive East (PVDE) switchbacks to the west, and PVDS/25th Street and 242 mobile homes to the south. Accelerated erosion of the canyon and localized slope movement are contributing to heavy sediment loads, and causing excessive amounts of mud and debris to be washed down the canyon. During moderate to severe rain events, the canyon conveys sediment laden storm water runoff generated from the upstream tributary watershed approximately 3,300 feet downstream. It is then directed to a storm drain inlet system at PVDS/25th Street, which discharges to the Pacific Ocean. Floodwater, mud and debris regularly overwhelm the inlet during a storm event (see picture below).



Figure 1. Overwhelmed storm drain inlet at PVDS/25th St.

The proposed project consists of the construction of a mid-canyon inlet structure, located slightly upstream of the upper switchback along PVDE and the highly-erodible section of the canyon. The inlet structure will be connected to a shoreline outfall with a 3,900-foot long, 54-inch pipe in a “tunnel alignment” that outlets below the oceanfront bluff in the City of Rancho Palos Verdes.



The goals and objectives of this project are to:

- Manage stormwater runoff to reduce flood damage in the area.
- Diminish erosion and undercutting in the canyon to protect the PVDE switchbacks and adjacent sewer line.
- Substantially reduce the amount of flow being delivered to the existing, and overwhelmed, storm drain at PVDS/25th Street, and improve water quality by substantially reducing erosion and minimizing debris transport to this drain.
- Better accommodate flow from the side slopes within the canyon.
- Restore and protect the existing streambed and the surrounding ecosystem to encourage infiltration and biologic uptake.
- Provide the highest level of flood protection with the lowest amount of environmental impact.

The estimated sediment loading to the storm drain system at PVDS/25<sup>th</sup> Street averages approximately 44 cubic yards of material per ¼ inch storm event, and 207 cubic yards per storm event greater than ¼ inch. The San Ramon project is expected to divert all stormwater runoff from a greater than ¼ inch rain event to the underground pipe, diverting it from the erosive canyon and thus eliminating the discharge of sediment to this system altogether. In addition, the project will enhance habitat in the canyon by restoring and protecting the existing streambed and the surrounding ecosystem, providing riparian habitat along the previously scoured canyon floor, and providing a low flow bypass to direct smaller flows and “first flush” through the restored streambed taking advantage of infiltration and biologic pollutant uptake available in this riparian system.