



California Regional Water Quality Control Board

Los Angeles Region



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Arnold Schwarzenegger
Governor

August 1, 2007

Mr. Donald Wolfe, Director
County of Los Angeles
Department of Public Works
900 South Fremont Avenue
Alhambra, CA 90803-1331

CERTIFICATION OF THE CONNECTOR PIPE SCREEN DEVICE AS A FULL CAPTURE SYSTEM FOR TRASH REMOVAL UNDER THE BALLONA CREEK AND THE LOS ANGELES RIVER TRASH TOTAL MAXIMUM DAILY LOADS

Dear Mr. Wolfe:

We have reviewed the County of Los Angeles' (County) letter and report entitled, "Technical Report, Connector Pipe Screen Design, Full Capture TMDL Compliance, Screen And Bypass Sizing Requirements" dated October 17, 2006, and April 2007, and additional information provided by your staff in support of your request for "Full Capture Certification" for a trash capture device referred to as a "Connector Pipe Screen Design." The purpose of this letter is to inform you of our approval of the County's Connector Pipe Screen Design as a "Full Capture System" for use within catch basins as a trash capture device under the Ballona Creek and the Los Angeles River Trash Total Maximum Daily Loads.

A Connector Pipe Screen is a vertical stainless screen with 5 mm openings, installed inside a catch basin directly upstream of the connector pipe in such a manner that all water entering the basin must pass through the device. A vertical opening is provided around the perimeter of the screen to allow storm water to bypass in the event of a large storm or if the screen becomes clogged.

The definition of "full capture system" for the Ballona Creek Trash Total Maximum Daily Load (TMDL) was amended per Resolution No. 04-023 adopted on March 4, 2004 by the Los Angeles Regional Water Quality Control Board. It is likely that this definition will be applicable in future revisions of the Los Angeles River Trash TMDL. As a result, the Los Angeles Water Board staff have also analyzed your Report for compliance with the Ballona Creek Trash TMDL's full capture system definition. The definition of a "full capture system" as defined in the Resolution No. 04-023 as the following:

"A full capture system is any single device or series of devices that traps all particles retained by a 5 mm mesh screen and has a design treatment capacity of not less than the peak flow rate (Q) resulting from a one-year, one-hour, storm in the subdrainage area. Rational equation is used to compute the peak flow rate: $Q = C \times I \times A$, where Q = design flow rate (cubic feet per

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second, cfs); C = runoff coefficient (dimensionless); I = design rainfall intensity (inches per hour, as determined per the rainfall isohyetal map in Figure A), and A = subdrainage area (acres)."

The Los Angeles Water Board's criterion for certification as a full capture device is that it must trap all particles retained by a 5-mm mesh screen, and have a treatment capacity exceeding peak flow rate resulting from a one-year, one-hour, storm in the subdrainage area. In addition, the following requirements must be met:

1. End-of-Pipe Configuration - Certain BMPs, which can create a pressure drop, must have an end-of-pipe configuration and not rely on diversion weirs;
2. Adequate Pipe Sizing - The pipes carrying the flows from the subdrainage area should be able to handle peak flows; and
3. Regular Inspections and Maintenance - The full capture system must be regularly inspected and serviced to continually maintain adequate flow through capacity.

Summary of the County of Los Angeles' Hydraulic Analysis

Staff from the County of Los Angeles Department of Public Works (Public Works) performed a hydrologic analysis to establish a method of calculating the maximum treatment flow resulting from a one-year, one-hour storm. With this information, extensive hydraulic analyses were conducted using different types and sizes of trash and debris to establish minimum sizing requirements for the CPS screen. Public Works engineers also established minimum sizes for the bypass opening to provide flood protection during large storm events.

Based on the County's Technical Report submitted on October 17, 2006 and revised in April 2007, (Report), the above-mentioned device meets the performance criteria for full capture certification.

Summary of the County of Los Angeles Information Submitted

Based on the County's Report, the Connector Pipe Screen has a 5 mm mesh screen and meets the particle capture criteria for a full capture system. The devices are designed for greater than a 1-year, 1-hour peak flow, and therefore satisfy the minimum 1-year, 1-hour design criteria;

The flow capacity of the devices is greater than the estimated flow rate, therefore the Connector Pipe Screens meet the design criteria for a full capture system;

The drainage criterion is not part of the definition for a full capture system. However, it is important to note that the inserts do not retain storm water and therefore avoid any vector issues; and

The Gross Solids Storage Capacity ranges depending on the size of each catch basin and its configuration. Some trash capture Connector Pipe Screens may require cleaning more frequently.

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Based on the above information, the County of Los Angeles' Connector Pipe Screens meet the definition of full capture system and are certified as a full capture system under the following conditions:

1. Adequate Pipe Sizing: The pipes carrying the flows from the subdrainage area must be able to handle peak flows.
2. Regular Inspections: The Connector Pipe Screens should be visually inspected before and after rain events to allow for cleaning for optimal performance.
3. Regular Maintenance: The Connector Pipe Screens shall be adequately maintained and cleaned to ensure full capture of trash during the design storm.

This letter serves as a determination that the vertical Connector Pipe Screens (as described and identified via photographs in the County's April 2007 Technical Report), when installed and maintained in appropriately sized catch basins, satisfy the full capture definition of the trash TMDL and will allow the systems to be used elsewhere in the region. However, all parties installing these devices will have an on-going obligation to demonstrate that the installation of a particular system is appropriately sized and meets the intent of this program. Likewise, dischargers will be responsible for on-going maintenance to ensure the systems perform to design specifications. The Regional Water Board will review and consider performance data on a continuing basis. In the event data demonstrate that the systems are not performing to the full capture design standard established by the trash TMDL, the Los Angeles Water Board Executive Officer reserves the right and ability to rescind the certification for subsequent installations deemed non-conforming or inappropriate.

If you should have any questions regarding this Full Capture Certification, you may call me at (213) 576-6609, or have your staff contact Carlos Urrunaga at (213) 620-2083 or via email at currunaga@waterboards.ca.gov.

Sincerely,



Deborah Smith
Interim Executive Officer

cc: Mr. Michael Levy, Office of the Chief Counsel, State Water Resources Control Board
Mr. Terry Fleming, Water Division, U.S. Environmental Protection Agency, Region 9
Mr. Eugene Bromley, U.S. Environmental Protection Agency, Region 9
Mr. Paul Thakur, Caltrans, District 7
Mr. Mark Pestrella, Los Angeles County Department of Public Works
Mr. Tom Leary, City of Long Beach
All Los Angeles County Municipal Storm Water Permittees
All Ventura County Municipal Storm Water Permittees

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