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Mr. Mark Brown  
 California Regional Water Quality Control Board  
 Santa Ana Region  
 3737 Main Street, Suite 500  
 Riverside, CA 92501

CRWQCB - REGION 8	
MES	
February 13, 2009	

FEB 18 2009

MRB	

RE: Tentative Order No. R8-2008-0030,  
 NPDES No. CAS618030

Dear Mr. Brown:

Thank you for the opportunity to comment on the Waste Discharge Requirements for the County of Orange, Orange County Flood Control District, and the Incorporated Cities of Orange County, Tentative Order No. R8-2008-0030, NPDES No. CAS618030, Areawide Urban Storm Water Runoff. We appreciate that in recent years, the Santa Ana Regional Water Quality Control Board (the Board) has recognized the relationship between structural storm water treatment control BMPs and the propensity of these features to produce disease vectors (i.e., mosquitoes). The Board's incorporation of vector control considerations into pertinent permits and guidance documents is important in initiating changes needed to better protect public health.

The Orange County Vector Control District (the District), over the course of the last two years, has worked independently with staff from Regions 8 and 9 Boards and the Orange County Stormwater Program to raise awareness and address public health concerns associated with storm water BMPs and urban runoff. It has been the District's experience that structural storm water treatment control BMPs (i.e., media filters, vault separator units, bioswales, extended detention basins, constructed wetlands, and the like) can become significant mosquito breeding sources if not properly designed and regularly maintained. Difficulty with tracking responsible party/ownership information further compounds the problem. Additionally, the year-round non-storm water nuisance flows, more commonly known as urban runoff, in the municipal separate storm sewer system (MS4) conveyance infrastructure especially poses a threat to public health during the mosquito breeding season.

"An Independent Special District Serving Orange County Since 1947"

The mission of the Orange County Vector Control District is to provide the citizens of Orange County with the highest level of protection from vectors and vector-borne diseases.

Measures called for in this draft tentative order and draft tentative order No. R9-2007-0002, the Orange County Municipal Storm Water Permit for the San Diego Region, begin to help address these issues at a time when West Nile Virus (a disease transmitted by mosquitoes to humans) is making a resurgence in the County and across the State. In 2008, Orange County had the highest incidence of West Nile Virus (WNV) cases since the local introduction of the disease in 2003. There were 71 human cases reported, four of which resulted in fatalities, and 692 dead birds tested positive for WNV. Any and all measures that can be taken to ensure the inclusion of vector minimization principles in the planning, design, operation, and management of structural storm water BMPs along with efforts to reduce nuisance flows will assist the District in our joint mission to protect and serve the public.

New NPDES requirements for the wide-scale implementation of structural storm water BMPs and some Low Impact Development (LID) features coupled with the threat of West Nile Virus have further exacerbated the need for cooperative efforts to find preventative solutions and long-term management strategies. The District is already faced with many such challenges and obstacles when treating hundreds of storm water BMPs that routinely breed mosquitoes throughout Orange County. Often District staff is unaware of storm water BMP features until they are reported by the public and have already become a nuisance or hazard. Those that are problematic are either poorly designed, improperly installed, or inadequately maintained (especially lacking in regular sediment removal and vegetation management). Structural storm water BMPs require proper and timely maintenance to ensure they meet water quality objectives and minimize potential for mosquito and vector production during the seasons when urban runoff flows continually into storm water structures. Vector control agencies, under the authority of the California Health and Safety Code (Sec. 2040), have the obligation and authority to require “the person or agency claiming ownership” to remove conditions that contribute to mosquito production (California Health and Safety Code Sec. 2060)

Some storm water BMPs are less likely to produce mosquitoes than others, depending on the structural design and surrounding conditions. Incorporating vector minimization principles and, when necessary, involving the District early in the planning process would help ensure that the most effective options are implemented and that disease vector production is avoided to the maximum extent practicable. This proactive approach would save project proponents, developers, and property owners the cost of having to make required changes after the BMP is installed. This would also allow for planning of appropriate and safe access for inspection and treatment when necessary by vector control staff.

Furthermore, the District is forced to spend disproportionate amounts of the tax-payers resources on treating the most problematic storm water BMPs (like water quality treatment wetlands/basins). Some of these features require frequent treatment (at times as much as three to four times per week during mosquito breeding season), large amounts of biorational pesticides, and hundreds of man hours are required. This sort of intensive treatment, year

after year, can be avoided if these features included vector prevention elements. Compounding the problem, under certain circumstances, neglected BMPs are eventually viewed as providing “habitat” for certain species of animals. When this occurs, any subsequent maintenance procedures can be in violation of some other state, federal or international wildlife statute. It is not uncommon for the party responsible for the BMP to be in violation of the Health and Safety Code because of mosquito production, and potentially facing a violation of the Endangered Species Act (ESA) or other laws and regulations when they take the steps necessary to curtail mosquito production.

Since September of 2007 OCVCD has worked closely with the Orange County Stormwater Program (the Program) to examine and address the public health concerns and issues associated with stormwater BMPs as detailed above. The Program has been most gracious and agreeable to exploring ways to cooperatively minimize and mitigate vector control issues through, education, data sharing and reporting.

The District would like to emphasize the need for the Board to more adequately address dry weather nuisance flows in the context of the proposed Order, as such flows tend to concentrate pollutants and are a more persistent water sources in the MS4 and the watershed as a whole, which promote mosquito production.

In light of our current challenges and in anticipation of the additional, numerous storm water BMP features and Low Impact Development features that will be implemented and/or retrofitted in the future, we ask that the Board consider the following recommendations which would help to avoid, mitigate, and manage potential vector related issues associated with structural storm water BMPs.

- All storm water treatment BMPs should be planned and designed using vector minimization principles.
- Copermittees should submit relevant Priority Projects (and any others which may have an elevated potential create a vector-borne disease risk to public health) to the Orange County Vector Control District (OCVCD) for review.
- Copermittees should provide a list of properties (public and private) and responsible operators for, at a minimum, all treatment measures implemented from the date of adoption of the proposed Order. Information on the location and ownership of all existing and proposed storm water treatment measures should be sent to OCVCD.
- All storm water treatment BMPs should be outfitted with signage that identifies the type of BMP and responsible parties contact information in clear view (when applicable).
- OCVCD would like to receive copies of all storm water BMP annual reports.
- OCVCD would like to provide all municipalities with a vector education training workshop suitable for planning, public works, and management staff.
- Vector control considerations should be added to the municipal plan check approval process.

- The OCVCD website link should be added to all municipal website's storm water page.
- A section should be included in all Water Quality Management Plans (WQMPs) and /or Standard Urban Stormwater Mitigation Plans (SUSMPs) which details the vector minimization principles incorporated into project storm water BMPs. This section should detail access provisions for vector control staff for inspection and treatment. The WQMP should also include educational materials which discuss the potential for storm water BMPs to breed mosquitoes and harbor other vectors. These materials can be acquired from the OCVCD website.
- In an effort to minimize the threat to public health and liability resulting from mosquito production, the District proposes to work cooperatively with Board staff, municipalities, and storm water program managers to identify and report malfunctioning or neglected BMPs. During the mosquito breeding season the District staff of inspectors and seasonal personnel in the field numbers approximately 60. Our staff's daily presence throughout Orange County could help to serve as an extra layer of reporting on bad BMPs to the appropriate agency.

It is the District's belief that these recommendations will help minimize many of the mosquito and vector production problems associated with storm water BMPs required for compliance with water quality regulations. We recognize that the proposed tentative Order establishes a framework for areas that will aide in addressing our concerns and provide better opportunities to work cooperatively and share data. Below are specific changes that we would like the Board to consider incorporating into Tentative Order No. R8-2008-0030 which would more adequately address and ensure minimization of vectors associated with storm water BMPs. We believe that these suggestions will accomplish the intent of Finding No. 65.

Page 13. I. Potential Pollutants in Storm Water Runoff/ Impacts on Beneficial Uses  
Add underlined:

- #36. Add a reference to address vectors: Stagnant water trapped in trash and debris provides creates breeding conditions for disease vectors (i.e., mosquitoes).
- #37. Add a reference to address public health threat caused by vector production.

Page 19 L. New Development/Significant Redevelopment

- #61. Vector control concerns should be addressed in the Low Impact Development Manual for Southern California.

Page 25 P. Public Education/Participation

- #80 Vector control issues should be incorporated into public education outreach to bring public awareness to the association of vector production and storm water BMPs and urban runoff.

Page 48 B. Water Quality Management Plan (WQMP) for Urban Runoff (For New Development/Significant Redevelopment):

WQMPs should have section where project proponent discussed vector minimization measures designed into structural treatment control BMPs and any measures to mitigate for vectors. Additionally, specific measures for vector control should be described in the Operation and Management Plan.

Add underlined:

- #5. c) Structural infiltration treatment BMPs shall not cause a nuisance (i.e., breed mosquitoes) or pollution, as defined in .....

Page 52 C. Low Impact Development to Control Pollutants in urban Runoff From New Developments/Significant Redevelopment:

3. a. In general LID measures “at the project site” will increase the amount of standing water in and around homes and businesses where they are applied if aggressive maintenance is not conducted or if they are improperly sized. Our concern with this is that these features will not percolate in less than 96 hours if they are clogged. Unlike a more regional treatment approach which is more accessible for vector control treatment, this “project site” LID is less accessible and may create numerous more mosquito breeding sources in and around where people live and work.

Page 57 I. Operation and Maintenance of Post-Construction BMPs

In general, Operation and Maintenance Plans should have a section where the the project proponent details specific vector control mitigation measures that will be conducted to avoid and/or minimize vector production for all post-construction structural treatment control BMPs and LIDs. This should also clearly state who the responsible party is and the funding mechanism and maintenance and any needed vector control treatment.

Page 62 XIV. Training Program for Storm Water Managers, Planners, Inspectors and Municipal Contractors.

OCVCD provides a free annual (or as needed) vector control workshop for municipal staff.

The District appreciates this opportunity to comment on the tentative Order and looks forward to working with the Board to ensure that vector concerns are addressed as they relate to storm water BMPs.

Sincerely,

A handwritten signature in black ink that reads "Amber Semrow". The signature is written in a cursive, flowing style.

Amber Semrow  
Biologist, OCVCD

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