



RON CHAPMAN, MD, MPH  
Director & State Health Officer

State of California—Health and Human Services Agency  
California Department of Public Health



EDMUND G. BROWN JR.  
Governor

July 23, 2012

Public Comment  
Draft Phase II Small MS4 General Permit  
Deadline: 7/23/12 by 12 noon

Jeanine Townsend  
Clerk to the Board  
State Water Resources Control Board  
1001 I Street 24th floor  
Sacramento, CA 95814



Dear Ms. Townsend:

Subject: Water Quality Order No. XXXX-XXXX-DWQ, NPDES General Permit No. CASXXXXXX, Waste Discharge Requirements for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems.

The Vector-Borne Disease Section of the California Department of Public Health (CDPH) is responsible for assisting local public agencies in preventing and controlling the spread of vectors and vector-borne diseases as described in the California Health and Safety Code (Section 116110). Extensive monitoring studies conducted by CDPH between 1999 and 2011 have documented that mosquitoes opportunistically breed in structural stormwater Best Management Practices (BMPs), particularly those that hold standing water for over 96 hours. These structures create a potential public health concern and increase the burden on local vector control agencies that are mandated to inspect for and abate mosquitoes and other vectors within their jurisdictional boundaries. These unintended public health consequences can be lessened when structures incorporate design, construction, and maintenance principles developed specifically to minimize standing water available to mosquitoes while having negligible effects on the capacity of the BMPs to provide water quality improvements as intended.

Pesticide applications to Waters of the United States for the control of mosquitoes and other vectors are covered under a Statewide NPDES Permit (Water Quality Order No. 2011-0002-DWQ, General Permit No. CAG 990004). The obligations of this pesticide permit have created additional burdens on public health and vector control agencies, most importantly causing a direct impact on the efficiency of field operations to control vector mosquitoes. The increasingly stringent regulations targeting the control of vectors are worrisome to the CDPH. In particular, CDPH is concerned that future revisions to existing MS4 permits in California could prohibit the application of public health pesticides to MS4 systems. Stormwater conveyance systems, both above- and belowground, are among the most important sources of vector mosquitoes in the urban environment and are a top priority for control to protect public health. It is critical that the

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capacity for vector control agencies to apply public health pesticides to MS4s is protected by not imposing additional restrictions. To this end, public health pesticides specifically should be included as exempted discharges into permitted MS4s.

CDPH staff has carefully reviewed the 2<sup>nd</sup> draft of the Phase II Small MS4 General Permit, Water Quality Order No. XXX-XXX-DWQ, dated May 18, 2012, and respectfully requests that the Board strongly consider the addition of specific and concise language that:

- draws attention to the potential unintended consequences associated with stormwater management structures (i.e., mosquito production); specifically, structural BMPs and certain Low Impact Development (LID) site design measures such as rainwater capture systems
- requires that small MS4s operating under this NPDES General Permit minimize the potential for mosquito production in structural BMPs and certain LID site design measures capable of holding standing water to the maximum extent practicable
- requires that small MS4s operating under this NPDES General Permit provide, on an annual basis, a list of structural BMPs and certain LID site design measures capable of holding standing water to the local vector control agency to facilitate routine inspections and control of vectors if necessary, and
- specifically exempts the application of public health pesticides into permitted MS4s.

Requiring MS4s to consider mosquito production as part of the permitting process ensures that the public health and safety of Californians remains a top priority. Because NPDES stormwater permits regulate the discharge of pollutants, in part, for the benefit of public health, we feel the Board has the responsibility of ensuring that permit requirements do not unintentionally result in alternate public health threats from disease vectors. Although we understand that this is not an issue the Board is required to enforce, including language in the permit that alerts Permittees of the potential to create other public health violations when complying with this permit should be acceptable and fall under your purview. Our proposed changes follow.

#### **Page 12, Finding #47**

Minor clarification to this Finding would ensure that Permittees are fully aware of the types of stormwater structures that may produce mosquitoes unintentionally. In particular, certain LID site design measures such as rainwater capture systems are highly conducive to mosquito production if not carefully designed and maintained. Please consider adding the following language (in bold) and removing the strikethrough text.

*“Certain **structural BMPs and Low Impact Development site design measures** implemented or required by Permittees for urban runoff management may create a habitat for vectors (e.g., mosquitoes ~~and rodents~~) if not properly designed or maintained<sup>1</sup>. Close collaboration and cooperation among the Permittees, local vector control agencies, Regional Water Board staff,*

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*and the California ~~State~~ Department of Public Health is necessary to identify and implement appropriate vector control measures that minimize potential nuisances and public health impacts resulting from vector breeding”.*

**Page 16. Section B.3**

As previously mentioned, it is critical that the capacity for vector control agencies to apply public health pesticides to MS4s be protected by not imposing additional restrictions. Please consider adding a 16<sup>th</sup> item to the list of exempted discharges, specifically

*“public health pesticides applied by government agencies signatory to a Cooperative Agreement with the California Department of Public Health”.*

**Page 20. Section E.6.a.ii.g.**

It may be beneficial to more specifically refer to the California Health and Safety Code in this subsection. Please consider adding the following language (in bold) and removing the strikethrough text.

(g) “Require information pursuant to local development policy **or the California Health and Safety Code** ~~public health regulations~~, and other information deemed necessary to assess compliance with this Order. The Permittee shall also have the authority to review designs and proposals for new development and redevelopment to determine whether adequate BMPs will be installed, implemented, and maintained during construction and after final stabilization (post-construction)”.

**Page 59. Section E.12.g.ii.(b).**

Minor clarification to this subsection is necessary. Many “hydromodification management controls” provide little or no habitat for vectors, whereas certain LID site design measures that hold standing water are highly conducive to mosquito production and should be included. Please consider adding the following language (in bold) and removing the strikethrough text.

(b) *Coordination with the appropriate mosquito and vector control agency with jurisdiction to establish a protocol for notification of installed **structural** treatment systems and **LID site design measures that hold standing water such as rainwater capture systems.** ~~hydromodification management controls.~~*

**Page 60. Section E.12.g.iii.(b).**

Minor clarification to this subsection is necessary. It is critical that local vector control agencies routinely be notified of new structural stormwater treatment systems and LID site design measures that hold standing water installed within their jurisdictional boundaries to mitigate potential mosquito production if necessary. In order to be most effective, the minimum information needed by vector control agencies is location of the structure, the type of structure (or proprietary name), and owner or responsible party. Determination of when the list of stormwater treatment systems should be made available can be determined locally as required on page 59, Section E.12.g.ii.(b), thus “before the wet season” is unnecessary and should be removed. Please consider adding the following language (in bold) and removing the strikethrough text.

(b) “*On an annual basis, ~~before the wet season, prepare a complete list of newly-installed (installed within the reporting period) structural storm water treatment systems and LID site design measures that hold standing water such as rainwater capture systems hydromodification management controls shall be made available in tabular form to the local mosquito and vector control agency and the appropriate Regional Water Board. This list shall include the facility/ location of the facility / site (e.g. lat-long; street address), and a description and name of the structure / device, storm water treatment measures and hydromodification management controls installed, and the name of the owner / operator responsible for the installation / maintenance of the structure /device~~*”.

**Page 102. Section F.5.g.4.ii.(b).**

This subsection is identical to Section E.12.g.ii.(b) discussed above and we request that the Board consider including the same changes.

**Page 103. Section F.5.g.4.iii.(b).**

This subsection is identical to Section E.12.g.iii.(b) discussed above and we request that the Board consider including the same changes.

**Fact Sheet**

The April 27, 2012 revision to the Fact Sheet for NPDES Permit No. CAS000003 ORDER No. 2012-XX-DWQ, State of California Department of Transportation included a paragraph on page 18 entitled *Potential Unintended Public Health Concerns Associated with Structural BMPs*. We propose that the Board consider the addition of a similar paragraph to the

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Fact Sheet of Water Quality Order No. XXX-XXX-DWQ for the purpose of raising awareness of the potential unintended consequences associated with the implementation of certain stormwater management structures and public health obligations of owner /operators as defined in the California Health and Safety Code. We suggest the following language.

*Potential Unintended Public Health Concerns Associated with Structural Storm Water Treatment Systems and Certain LID site design measures.*

*Extensive monitoring studies conducted by the California Department of Public Health (CDPH) have documented that mosquitoes opportunistically breed in structural storm water Best Management Practices (BMPs), particularly those that hold standing water for over 96 hours. Certain Low Impact Development (LID) site design measures that hold standing water such as rainwater capture systems may similarly produce mosquitoes. These structures create a potential public health concern and increase the burden on local vector control agencies that are mandated to inspect for and abate mosquitoes and other vectors within their jurisdictional boundaries. These unintended consequences can be lessened when structures incorporate design, construction, and maintenance principles developed specifically to minimize standing water available to mosquitoes<sup>1</sup> while having negligible effects on the capacity of the structures to provide water quality improvements as intended. The California Health and Safety Code prohibits landowners from knowingly providing habitat for or allowing the production of mosquitoes and other vectors, and gives local vector control agencies broad inspection and abatement powers<sup>2</sup>. This Order requires regulated MS4s to comply with applicable provisions of the Health and Safety Code and to cooperate and coordinate with CDPH and local mosquito and vector control agencies on vector-related issues.*

**References**

Should the aforementioned suggested changes be incorporated into the final permit, two key references should be placed in the footnotes for the new language in the Fact Sheet and revised language in Finding #47. Superscript numbers are included above that indicate the available references, which are as follows.

<sup>1</sup> *California Department of Public Health. (2012). Best Management Practices for Mosquito Control in California. Retrieved on July 20, 2012 from <http://www.westnile.ca.gov/resources.php>*

<sup>2</sup> *California Health & Safety Code, Division 3, Section 2060 and following.*

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We appreciate the opportunity to comment on the revised draft Water Quality Order and look forward to working with you in the future to ensure that vector concerns are adequately addressed in stormwater NPDES permits to protect the health of all Californians. If you have any questions, please contact Marco Metzger, Ph.D. at [Marco.Metzger@cdph.ca.gov](mailto:Marco.Metzger@cdph.ca.gov) or (909) 937-3448.

Sincerely,

A handwritten signature in blue ink that reads "Vicki L. Kramer". The signature is fluid and cursive.

Vicki Kramer, Ph.D., Chief  
Vector-Borne Disease Section