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(3/1/16) Board Meeting  
Spray Applications Permit Reissuance  
Deadline: 1/29/16 by 12:00 noon



January 29, 2016

Jeanine Townsend, Clerk to the Board  
State Water Resources Control Board  
1001 I Street, 24th Floor [95814]  
P.O. Box 100  
Sacramento, CA 95812-0100

*Submitted via email: [commentletters@waterboards.ca.gov](mailto:commentletters@waterboards.ca.gov)*

**Re: Comment Letter – NPDES Permits for Residual Pesticide Discharges from Vector Control Applications, Aquatic Animal Invasive Species Control Applications, and Spray Applications**

Dear Chair Marcus and Board Members:

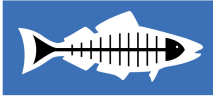
On behalf of Heal the Bay, we submit the following comments on the proposed NPDES Permits for Residual Pesticide Discharges from Vector Control Applications, Aquatic Animal Invasive Species Control Applications, and Spray Applications (“Draft Permit” or “Permit”). We appreciate the opportunity to provide comments. Heal the Bay is an environmental organization with over 15,000 members dedicated to making the coastal waters and watersheds of greater Los Angeles safe, healthy, and clean. Heal the Bay has previously submitted comments to the State Water Resources Control Board on NPDES permits for pesticide discharges and has been involved in and long advocated for the development and implementation of the State Board toxicity policy.

We have concerns with several of the provisions in the Draft Permits. Most importantly, we believe that biological monitoring and numeric limits should be included in the Draft Permits.

**The Draft Permits should include Biological Monitoring and Associated Numeric Limits**

We are concerned that toxicity monitoring has been previously dropped from the Vector Control and Aquatic Animal Invasive Control Permits and that it is currently being removed from the Spray Applications Permit. Monitoring on a constituent-by-constituent basis ignores the potential synergistic and complex effects of pesticides on an ecosystem. We recommend a more holistic approach to monitoring, which would examine the health of the stream with a focus on possible biological impacts from pesticides.

Moving away from monitoring of individual chemicals towards assessing overall stream health is a more modern approach to monitoring and is in fact consistent with what the State Board is hoping to achieve through the Biological Integrity Assessment



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Implementation Plan and the Toxicity Policy. Toxicity monitoring, while not necessarily the best method because it is conducted in a laboratory and not in the stream environment, is one way of assessing integrated impacts to the biological community of a stream. Dropping toxicity testing requirements weakens the Draft Permits.

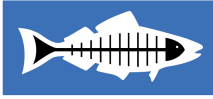
Furthermore, the reasoning for dropping toxicity testing is not clear or transparent. A State Board “toxicity study” is referenced in the Draft Permits that was completed in December 2012. In addition to the lack of a citation in the Permit for this study, we are concerned that this study is not available through the State Board and is only available as a scientific journal article<sup>1</sup> that must be purchased. We were ultimately able to obtain the article and after reading it, we are not confident that the results support the stated conclusions cited in the Permit, that there were no significant impacts to waters and non-target organisms resulting from pesticide applications. The article states that “15% of the postapplication water samples were significantly toxic” and “monitoring for a single active ingredient does not provide a complete picture of potential impacts to receiving systems.” Further, “toxicity testing is a tool that integrates effects of the active ingredient and its degradates, formulation components, and any chemical stressors that may already be present in the receiving system.” These conclusions highlight the importance of toxicity testing and we are confused as to how this study led the State Board to recommend and adopt removal of toxicity testing in the Draft Permits. Further, the toxicity study was conducted in 2012 and should be updated regularly to examine the toxicity of new pesticides and new mixtures of pesticides.

At a minimum we ask that permits require toxicity testing along with a numeric toxicity limit. Toxicity testing is the safety net for NPDES permits because these permits do not require monitoring or have limits for all constituents that can cause receiving water toxicity. The State Board staff developing this Draft Permit should coordinate with the team working on the Toxicity Policy in order to develop an appropriate numeric target. Alternatively, an effluent limit of 1 TUC would protect beneficial uses and meet the narrative toxicity objective of “no toxics in toxic amounts.” This limit has been used in POTW NPDES permits and TMDLs, particularly in the Los Angeles Region.

The preferred monitoring method that we recommend to be added to the Draft Permits is biological assessment monitoring, specifically through assessment of the benthic macroinvertebrate communities. The biological condition of a stream tells a meaningful and comprehensive story of the condition of the stream’s water quality, habitat, and biota. The benthic macroinvertebrate community of a stream represents the actual conditions of the stream from an ecological perspective, incorporating the effects of many factors that are difficult or impossible to replicate in a laboratory setting. It is incredibly important that we utilize and rely on the most comprehensive, ecologically relevant metrics to monitor impacts to California’s waterbodies. With the development of the California Stream Condition Index (CSCI) or utilizing the Index of Biological Integrity (IBI), we suggest requiring a numeric limit for biological health. For instance, in southern California, a site

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<sup>1</sup> Phillips, BM, Anderson, BS, Voorhees JP, Siegler, K, Denton, D, TenBrook, P, Larsen K, Isorena, P, and RS Tjeerdema. 2014. Monitoring the aquatic toxicity of mosquito vector control spray pesticides to freshwater receiving water. *Integrated Environmental Assessment and Management* 10: 449-455.



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with an IBI score of less than 39 is considered impaired. The Draft Permits state that the discharges shall not degrade aquatic communities. However, without any monitoring of aquatic communities we do not feel confident that the monitoring of receiving water triggers solely will ensure that aquatic communities are not degraded that biological beneficial uses will be maintained.

**The Draft Permits should require Additional Justification of the Need for Pesticide Applications**

We are concerned that pesticides applications have become standard accepted practices and that critical cost-benefit analyses on pesticide applications are not routine. The Pesticide Application Plans (PAP) for the Draft Permits require “Identification of the Problem.” However, the requirements do not adequately assess the threat that the pest (whether it be an invasive species, vector, or other pest) poses to public health or ecological health. Not all pests are equal and there needs to be a careful evaluation of whether pesticides are needed (i.e., whether the threat from the pest is serious), whether pesticides can be effective (i.e., whether the pesticides will actually protect public or ecological health), and whether there are any unintended consequences of the pesticides. Examining these factors and justifying them through scientific studies is a missing component to the PAPs. We recommend that the PAPs require further justification of the need and efficacy of pesticide applications to protect public and ecological health. Scientific studies documenting the impacts to public health or ecological health in addition to studies that show efficacy of pesticide application for the specific problem or pest should be required as part of the justification.

**The Draft Permits should not allow Discharges to Moderately Contaminated Systems**

The Draft Permits do not allow discharge of pesticides to waters that are impaired by the same pesticides, which we support. However, protection should go further to include streams that are moderately contaminated by the same or similar pollutants. The addition of pollutants to a system that is already contaminated has the potential of pushing pollutants over a threshold to a toxic level. Again, monitoring for one constituent or suite of constituents is unlikely to adequately capture the impacts to the entire system of the pesticide discharge.

We appreciated the opportunity to provide comments. If you have any questions, please contact us at 310-451-1500.

Sincerely,

Katherine Pease, PhD  
Watershed Scientist

Rita Kampalath, PhD, PE  
Science & Policy Director