

## C.9. Pesticides Toxicity Control

To prevent the impairment of urban streams by pesticide-related toxicity, the Permittees shall implement a pesticide toxicity control program that addresses, within their jurisdictions, their own and others' use of pesticides that pose a threat to water quality and that have the potential to enter the municipal conveyance system.

This provision implements requirements of the TMDL for Diazinon and Pesticide-Related Toxicity for Urban Creeks in the region. The TMDL includes urban runoff allocations for Diazinon of 100 ng/l and for pesticide-related toxicity of 1.0 Acute Toxicity Units (TUa) and 1.0 Chronic Toxicity Units (TUc) to be met in urban creek waters. However, urban runoff management agencies (i.e., the Permittees) are not solely responsible for attaining the allocations because their authority to regulate pesticide use is constrained by federal and state law. Accordingly, the Permittees' requirements for addressing the allocations are set forth in the TMDL implementation plan and are included in this provision.

Urban-use pesticides of concern to water quality include: diamides (chlorantraniliprole, cyantraniliprole); fipronil and its degradates; indoxacarb, organophosphorous insecticides (chlorpyrifos, diazinon, and malathion); pyrethroids (metofluthrin, bifenthrin, cyfluthrin, beta-cyfluthrin, cypermethrin, deltamethrin, esfenvalerate, lambda-cyhalothrin, and permethrin); carbamates (e.g., carbaryl, aldicarb).

### C.9.a. Maintain and Implement an Integrated Pest Management (IPM) Policy or Ordinance and Standard Operating Procedures

All Permittees have developed a pesticide toxicity control program for use of pesticides in municipal operations and on municipal property based on the concepts of IPM<sup>1</sup> and have adopted an IPM policy or ordinance and standard operating procedures to implement the policy or ordinance.

- i. **Task Description** – The Permittees shall implement their IPM policies or ordinances and standard operating procedures and update their IPM policies or ordinances and standard operating procedures as needed to ensure their use of pesticides do not cause or contribute to pesticide-caused toxicity in receiving waters.
- ii. **Implementation** - Each Permittee shall require municipal employees and contractors to adhere to its IPM policy or ordinance and standard operating procedures in all the Permittee's municipal operations and on all municipal property.

---

<sup>1</sup> IPM is an ecosystem-based strategy that focuses on long-term prevention of pests or their damage through a combination of techniques such as biological control, habitat manipulation, modification of cultural practices, and use of resistant varieties. Pesticides are used only after monitoring indicates they are needed according to established guidelines, and treatments are made with the goal of removing only the target organism. Pest control materials are selected and applied in a manner that minimizes risks to human health, beneficial and non-target organisms, and the environment. IPM techniques could include biological controls (e.g., ladybugs and other natural enemies or predators); physical or mechanical controls (e.g., hand labor or mowing, caulking entry points to buildings); cultural controls (e.g., mulching, alternative plant type selection, and enhanced cleaning and containment of food sources in buildings); and reduced risk chemical controls (e.g., soaps or oils).

iii. **Reporting**

- (1) In their Annual Reports, the Permittees shall certify they are implementing their IPM policy or ordinance and standard operating procedures, report trends in quantities and types of pesticide active ingredients used, and explain any increases in use of pesticides of concern to water quality as listed in the introduction section of this Provision.
- (2) In their Annual Reports, the Permittees shall provide a brief description of a minimum of three IPM actions implemented in the reporting year, focusing to the extent possible on new or enhanced actions taken.
- (3) IPM policies or ordinances and IPM standard operating procedures shall be submitted to the Water Board upon request.

**C.9.b. Train Municipal Employees**

i. **Task Description**– The Permittees shall ensure that all municipal employees who, within the scope of their duties, apply or use pesticides are trained in IPM practices and the Permittee’s IPM policy or ordinance and standard operating procedures. This training may also include other training opportunities such as Bay-Friendly Landscape Maintenance Training & Qualification Program and EcoWise Certified.

ii. **Reporting**

- (1) In their Annual Reports, the Permittees shall report the percentage of municipal employees who apply pesticides who have received training in their IPM policy or ordinance and IPM standard operating procedures within the last year. This report shall briefly describe the nature of the training, such as tailgate training provided by a Permittee’s IPM coordinator, IPM training through the Pesticide Applicators Professional Association, etc.
- (2) The Permittees shall submit training materials (e.g., course outline, date, and list of attendees) upon request.

**C.9.c. Require Contractors to Implement IPM**

i. **Task Description** – The Permittees shall hire IPM-certified contractors and include contract specifications requiring contractors to implement IPM, so that all contractors practice IPM on municipal properties. The Permittees shall observe contractor pesticide applications to verify that contractors implement their contract specifications in accordance with the Permittee’s IPM policies or ordinance and standard operating procedures. Contractor certification as a pest control advisor (PCA) alone is not evidence of IPM implementation, because PCA training is not necessarily based on IPM strategies. Similarly, IPM certifications that are awarded to a pest control company may not guarantee an individual employee will always use IPM strategies. Thus, periodic Permittee observation of contractor performance is necessary.

- ii. **Implementation** – Permittees shall observe contractor activities to verify full implementation of IPM techniques. This shall include, at a minimum, evaluation of lists of pesticides and amounts of active ingredient used.
- iii. **Reporting** – In their Annual Reports, the Permittees shall state how they verified contractor compliance with IPM policies and any actions taken or needed to correct contractor performance.

**C.9.d. Interface with County Agricultural Commissioners**

- i. **Task Description** – The Permittees shall maintain regular communications with county agricultural commissioners to (a) get input and assistance on urban pest management practices and use of pesticides, (b) inform them of water quality issues related to pesticides, and (c) report violations of pesticide regulations (e.g., illegal handling and applications of pesticides) associated with stormwater management, particularly the California Department of Pesticide Regulation surface water protection regulations for outdoor, nonagricultural use of pyrethroid pesticides by any person performing pest control for hire ([http://www.cdpr.ca.gov/docs/legbills/rulepkgs/11-004/text\\_final.pdf](http://www.cdpr.ca.gov/docs/legbills/rulepkgs/11-004/text_final.pdf)).
- ii. **Reporting** – In their Annual Reports, the Permittees shall briefly describe each of the three types of communications with county agricultural commissioners and report follow-up actions to correct violations of pesticide regulations.

**C.9.e. Public Outreach**

- i. **Task Description** – Permittees shall undertake outreach programs to (a) encourage communities within the Permittee’s jurisdiction to reduce their reliance on pesticides that threaten water quality; (b) encourage public and private landscape irrigation management that minimizes pesticide runoff; and (c) promote appropriate disposal of unused pesticides.
- ii. **Implementation** – The Permittees shall conduct each of the following:
  - (1) **Point of Purchase Outreach:** The Permittees shall:
    - Conduct outreach to consumers at the point of purchase;
    - Provide targeted information on proper pesticide use and disposal, potential adverse impacts on water quality, and less toxic methods of pest prevention and control; and
    - Participate in and provide resources for the “Our Water, Our World” program or a functionally equivalent pesticide use reduction outreach program.
  - (2) **Pest Control Contracting Outreach:** The Permittees shall conduct outreach to residents who use or contract for structural pest control by (a) explaining the links between pesticide usage and water quality; (b) providing information about EcoWise Certified IPM certification in structural pest management, or functionally equivalent certification program; and (c) disseminating tips for hiring structural pest control

operators, such as the tips prepared by the University of California Extension IPM Program (UC-IPM).

- (3) **Outreach to Pest Control Professionals:** The Permittees shall conduct outreach to pest control operators, urging them to promote IPM services to customers and to become IPM-certified by Ecowise Certified or functionally equivalent certification program. Permittees are encouraged to work with the Pesticide Applicators Professional Association; the California Association of Pest Control Advisors; California Department of Pesticide Regulation; county agricultural commissioners; UC-IPM; BASMAA; EcoWise Certified Program (or functionally equivalent certification program); Bio-integral Resource Center and others to promote IPM to PCOs.

- iii. **Reporting** – In each Annual Report, Permittees shall describe their actions taken in the three outreach categories above. Outreach conducted at the county or regional level shall be described in Annual Reports prepared at that respective level; reiteration in individual Permittee reports is discouraged. Reports shall include a brief description of outreach conducted in each of the three categories, including level of effort, messages and target audience. (The effectiveness of outreach efforts shall be evaluated only once in the Permit term, as required in Provision C.9.f.)

#### **C.9.f. Track and Participate in Relevant Regulatory Processes**

- i. **Task Description** – The Permittees shall conduct the following activities, which may be done at a county, regional, or state-wide level:
  - (1) The Permittees shall track U.S. EPA pesticide evaluation and registration activities as they relate to surface water quality, and, when necessary, encourage U.S. EPA to coordinate implementation of the Federal Insecticide, Fungicide, and Rodenticide Act and the CWA and to accommodate water quality concerns within its pesticide registration process;
  - (2) The Permittees shall track California Department of Pesticide Regulation (DPR) pesticide evaluation activities as they relate to surface water quality, and when necessary, encourage DPR to coordinate implementation of the California Food and Agriculture Code with the California Water Code and to accommodate water quality concerns within its pesticide evaluation process;
  - (3) The Permittees shall assemble and submit information (such as monitoring data) as needed to assist DPR and county agricultural commissioners in ensuring that pesticide applications comply with water quality standards; and
  - (4) As appropriate, the Permittees shall submit comment letters on U.S. EPA and DPR re-registration, re-evaluation, and other actions relating to pesticides of concern for water quality.

- ii. **Reporting** – In their Annual Reports, the Permittees shall summarize participation efforts, information submitted, and how regulatory actions were affected. Permittees who contribute to a county, regional, or state-wide effort shall submit one report at the county or regional level. Duplicate reporting is discouraged. Permittees who do not contribute to a regional or county-wide effort shall list their own participation efforts, information submitted, and how regulatory actions were affected.

**C.9.g. Evaluate Implementation of Pesticide Source Control Actions**

- i. **Task Description** – This task is necessary to gauge how effective the implementation actions taken by Permittees are in (a) achieving TMDL targets, and (b) avoiding future pesticide-related toxicity in urban creeks. Once during the permit term, Permittees shall conduct a thoughtful evaluation of their IPM efforts, how effective these efforts appear to be, and how they could be improved.
- ii. **Implementation** – The Permittees shall evaluate the effectiveness of the pesticide control measures implemented by their staff and contractors, evaluate attainment of pesticide concentration and toxicity targets for water and sediment from monitoring data (collected by Permittees, research agencies, and/or state agencies), and identify additions and/or improvements to existing control measures needed to attain targets, with an implementation time schedule.
- iii. **Reporting** – In their 2019 Annual Reports, the Permittees shall submit this evaluation, which shall include an assessment of the effectiveness of their IPM efforts required in Provisions C.9.a-e and g; a discussion of any improvements made in these efforts in the preceding five years; and any changes in water quality regarding pesticide toxicity in urban creeks. This evaluation shall also include a brief description of one or more pesticide-related area(s) the Permittee will focus on enhancing during the subsequent permit term. Work conducted at the county or regional level shall be evaluated at that respective level; reiteration in individual Permittee evaluation reports is discouraged.