

OCTOBER 2014 PRELIMINARY DRAFT FOR DISCUSSION
PYRETHROID BASIN PLAN AMENDMENT LANGUAGE

Changes to Chapter III, Water Quality Objectives TABLE III-2A.

Add the following to Table III-2A as follows:

TABLE III-2A

SPECIFIC PESTICIDE OBJECTIVES

PESTICIDE	MAXIMUM CONCENTRATION AND AVERAGING PERIOD	APPLICABLE WATER BODIES
<i>Pyrethroid Pesticides (including all stereoisomers) – Aqueous concentrations</i>		
Bifenthrin	4 ng/L; 1-hour average (acute) 0.6 ng/L; 4-day average (chronic) Not to be exceeded more than once in a three year period.	Waters with designated or existing¹ WARM and/or COLD beneficial uses Arcade Creek, Chicken Ranch Slough, Curry Creek (Placer and Sutter Counties), Del Puerto Creek, Elder Creek, Hospital Creek (San Joaquin and Stanislaus Counties), Ingram Creek (from confluence with Hospital Creek to Hwy 33 crossing), Ingram Creek (from
Cyfluthrin	0.3 ng/L; 1-hour average (acute) 0.05 ng/L; 4-day average (chronic) Not to be exceeded more than once in a three year period.	
Lambda-Cyhalothrin	1 ng/L; 1-hour average (acute) 0.5 ng/L; 4-day average (chronic) Not to be exceeded more than once in a three year period.	
Cypermethrin	1 ng/L; 1-hour average (acute) 0.2 ng/L; 4-day average (chronic) Not to be exceeded more than once in a three year period.	
Esfenvalerate	20 ng/L; 1-hour average (acute) 3 ng/L; 4-day average (chronic) Not to be exceeded more than once in a three year period.	

¹ Existing as defined in Title 40 of the Code of Federal Regulations, section 131.3(e)

Permethrin	10 ng/L; 1-hour average (acute) 2 ng/L; 4-day average (chronic) Not to be exceeded more than once in a three year period.
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When there is more than one pyrethroid pesticide in samples from the applicable averaging period (acute or chronic), the pyrethroid pesticides water quality objectives are defined as:

$$S = \frac{C_{bif}}{O_{bif}} + \frac{C_{cyf}}{O_{cyf}} + \frac{C_{cyp}}{O_{cyp}} + \frac{C_{esf}}{O_{esf}} + \frac{C_{lcy}}{O_{lcy}} + \frac{C_{per}}{O_{per}} < 1$$

Where:

C_{bif} = The concentration of bifenthrin in ng/L.

C_{cyf} = The concentration of cyfluthrin in ng/L.

C_{cyp} = The concentration of cypermethrin in ng/L.

C_{esf} = The concentration of esfenvalerate in ng/L.

C_{lcy} = The concentration of lambda-cyhalothrin in ng/L.

C_{per} = The concentration of permethrin in ng/L.

O_{bif} = The acute or chronic bifenthrin water quality objective in ng/L.

O_{cyf} = The acute or chronic cyfluthrin water quality objective in ng/L.

O_{cyp} = The acute or chronic cypermethrin water quality objective in ng/L.

O_{esf} = The acute or chronic esfenvalerate water quality objective in ng/L.

O_{lcy} = The acute or chronic lambda-cyhalothrin water quality objective in ng/L.

O_{per} = The acute or chronic permethrin water quality objective in ng/L.

S = The sum. A sum exceeding one (1.0) indicates an exceedance of the pyrethroid pesticides water quality objectives.

Available samples collected within the applicable averaging period for the water quality objective will be used to determine attainment of the objectives.

Concentrations of pyrethroid pesticides must be above limits of quantitation (reporting limits) to be included; concentrations reported as not-detected or as below the limit of quantitation will be considered as zero (0) in the above equation.

Note: Text additions are noted by being underlined and ~~deletions~~ of existing Basin Plan text are noted by ~~strikeout~~. Additions since the first draft (9/22/14) are noted by double underline and ~~deletions~~ are marked as ~~double strikeout~~.

Changes to Chapter IV, Implementation

Under “Regional Water Board Prohibitions”

Add the following:

X. Pyrethroid Pesticides Discharges

A discharger is prohibited from discharging pyrethroid pesticides at concentrations that exceed water quality objectives to water bodies identified in Table III-2A unless that discharge is regulated under individual or general waste discharge requirements, a conditional waiver of waste discharge requirements, a national pollutant discharge elimination system (NPDES) permit, or other Regional Board order.

Under “~~Pesticide Discharges~~ Pesticide Discharges from Nonpoint Sources” “Pesticide Discharges”

Make the following additions and deletions (p. IV-33.12-34.00):

The control of pesticide discharges to surface waters from nonpoint sources will be achieved primarily by the development and implementation of management practices that minimize or eliminate the amount discharged. The Board will use water quality monitoring results to evaluate the effectiveness of control efforts and to help prioritize control efforts.

Regional Board monitoring will consist primarily of chemical analysis and biotoxicity testing ~~of major water bodies receiving irrigation return flows~~. The focus will be on pesticides with use patterns and chemical characteristics that indicate a high probability of entering surface waters at levels that may impact beneficial uses. Board staff will advise other agencies that conduct water quality and aquatic biota monitoring of high priority chemicals, and will review monitoring data developed by these agencies. Review of the impacts of "inert" ingredients contained in pesticide formulations will be integrated into the Board's pesticide monitoring program.

When a pesticide is detected more than once in surface waters, investigations will be conducted to identify sources. Priority for investigation will be determined through consideration of the following factors: toxicity of the compound, use patterns and the number of detections. These investigations may be limited to specific watersheds where the pesticide is heavily used or local practices result in unusually high discharges. Special studies will also be conducted to determine pesticide content of sediment and aquatic life when conditions warrant. Other agencies will be consulted regarding prioritization of monitoring projects, protocol, and interpretation of results.

To ensure that new pesticides do not create a threat to water quality, the Board, either directly or through the State Water Resources Control Board, will review the pesticides that are processed through the ~~Department of Food and Agriculture's (DFA)~~ U.S. Environmental Protection Agency (EPA) and the Department of Pesticide Regulation (DPR) pesticide registration and evaluation programs. Where use of the pesticide may result in a discharge to surface waters, the Board staff will make efforts to ensure that label instructions or use restrictions require management practices that will result in compliance with water quality objectives. When the Board determines that despite any actions taken by ~~DFA~~USEPA or DPR, use of the pesticide may result in discharge to surface waters in violation of the objectives, the Board will take regulatory action, such as adoption of a prohibition of discharge or issuance of waste discharge requirements to control discharges of the pesticide. Monitoring may be required to verify that management practices are effective in protecting water quality.

The Board will notify pesticide dischargers through public notices, educational programs and ~~the Department of Food and Agriculture's~~DPR's pesticide regulatory program of the water quality objectives related to pesticide discharges.

Make the following additions and deletions p. IV-35.00-36.00):

The Board recognizes that implementation of the authorities of agencies that regulate pesticide use, including CDPR, USEPA Office of Pesticide Programs, and County Agricultural Commissioners, should be one of the primary mechanisms for addressing pesticide-caused water quality impairments. To ensure the best possible program, the Board will coordinate its pesticide control efforts with other agencies and organizations and assist them in identifying pesticides that have the potential to harm water quality. This coordination may include education and outreach activities such as encouraging integrated pest management and less toxic pest management practices and supporting grant funding for activities likely to reduce pesticide discharges. Wherever possible, the burdens on pesticide dischargers will be reduced by working through the DFA (now CDPR) or other appropriate regulatory processes. The Board may also designate another agency or organization as the responsible party for the development and/or implementation of management practices, but it will retain overall review and control authority. The Board will work with water agencies and others whose activities may influence pesticide levels to minimize concentrations in surface waters.

Since the discharge of pesticides into surface waters will be allowed under certain conditions, the Board will ~~take steps to~~ ensure that this control program is conducted in

compliance with the federal and state antidegradation policies. This will primarily be done as pesticide discharges are evaluated on a case by case basis.

Regional Board recommendations of specific actions other agencies should take to reduce pesticide discharges are listed below.

A. USEPA Actions

USEPA is responsible for implementing the Federal Insecticide, Fungicide, and Rodenticide Act and the Clean Water Act. USEPA is therefore responsible for ensuring that both federal pesticide laws and water quality laws are implemented. USEPA should exercise its authorities to ensure that foreseeable pesticide applications do not cause or contribute to water column or sediment toxicity in the Region's waters. Because some pesticides pose water quality risks, USEPA should implement the following actions:

- 1) Continue internal coordination efforts to ensure that pesticide applications and resulting discharges comply with water quality standards and avoid water quality impairment (i.e., restrict uses or application practices to manage risks);
- 2) Continue and enhance education and outreach programs to encourage integrated pest management and less toxic pest control; and
- 3) Complete studies to address critical data needs.

B. California Department of Pesticide Regulation Actions

Like the Regional Board, DPR is part of the California Environmental Protection Agency. It regulates pesticide product sales and use within California pursuant to the California Food and Agricultural Code. When DPR evaluates whether to register a pesticide product, it must consider the potential for environmental damage, including interference with attainment of water quality standards. DPR is mandated to protect water quality from environmentally harmful pesticide materials and should implement mitigation measures when violations of water quality standards caused by pesticides are identified, which may include canceling registration. DPR should also recognize pesticides used such that their use or runoff poses a reasonable potential to violate water quality standards and take action to prevent foreseeable risks. Whenever DPR obtains information concerning actual or potential water quality standard violations, DPR should initiate a review in order to implement appropriate protective actions.

To be effective, this strategy relies on DPR to use its authorities in concert with the Regional Board. Consistent with its authorities, DPR should implement the following actions:

- 1) Work with the Regional Board to identify pesticides applied in such a manner that runoff does or could cause or contribute to water quality standard violations;
- 2) Condition registrations, as appropriate, to require registrants to provide information necessary to determine the potential for their products to cause or contribute to water quality standard violations and to implement actions necessary to prevent violations;
- 3) Continue and enhance efforts to evaluate the potential for registered pesticide products to cause or contribute to water quality standard violations (DPR need not wait for the Regional Board to evaluate potential water quality effects);
- 4) Implement actions to eliminate pesticide-related water quality standard violations caused by registered pesticides;
- 5) Implement actions to prevent potential pesticide-related water quality standard violations before they occur;
- 6) Notify U.S. EPA of potential deficiencies in product labels for products that threaten water quality;
- 7) Continue and enhance education and outreach programs to encourage integrated pest management and less toxic pest control (work with County Agricultural Commissioners, urban runoff management agencies, and the University of California Statewide Integrated Pest Management Program to coordinate activities);
- 8) Continue and enhance efforts to prevent the introduction of new exotic pests to the Region; and
- 9) Complete studies to address critical data needs.

Add the following subheading and text:

Pyrethroid Pesticides Discharges

1. Regional Board orders that address the control of discharges of pyrethroid pesticides shall include provisions that:
 - a. Ensure attainment of the pyrethroid pesticides water quality objectives in water bodies identified in Table III-2A and total maximum daily load allocations in water bodies identified in Table X;
 - b. Ensure measures that are implemented to reduce pyrethroid pesticides discharges do not lead to an increase in the discharge of other pesticides at concentrations that cause or contribute to exceedances of applicable water quality objectives.
 - ~~c. Encourage implementation of measures or practices by all dischargers that result in concentrations of pyrethroid pesticides in all discharges that are below the water quality objective concentrations.~~
2. The Regional Board shall take actions that support attainment of the pyrethroid pesticides water quality objectives and encourage actions by other agencies that support attainment of the pyrethroid pesticides water quality objectives, as specified in the Basin Plan under the heading Pesticide Discharges (IV-33.12-36).
3. Dischargers are responsible for ensuring that pyrethroid pesticides discharges to surface water and groundwater, including discharges of pesticides used as alternatives to pyrethroid pesticides, do not cause or contribute to exceedance of applicable water quality objectives.
4. **Implementation Schedules**
 - a. *Water Bodies with Known Pyrethroids Pesticides Impairments*

For water bodies specifically named in Table III-2A with known pyrethroid pesticides impairments, attainment of the pyrethroid pesticides water quality objectives and total maximum daily load allocations shall be as soon as practicable. The Regional Board shall establish time schedules in waste discharge requirements or waivers in accordance with existing laws and policies that require reductions in discharge concentrations in order to attain the water quality objectives and allocations. Where no existing law, policy, or permit provision directs the length of the compliance schedule, discharges shall be reduced to ensure attainment of the proposed water quality

objectives and allocations no later than [10 years from the effective date of this amendment].

The Regional Board shall ensure that discharges of pyrethroid pesticides are controlled so that the pyrethroid pesticides water quality objectives and total maximum daily load allocations are attained by modifying existing waste discharge requirements and existing waivers (where necessary provisions are not already in place), by adopting new waste discharge requirements or waivers, or by enforcing the pyrethroid pesticides discharge prohibition. If necessary to ensure attainment of water quality objectives and allocations where known impairments exist as of [effective date of this amendment], the Regional Board will ensure that existing waste discharge requirements and waivers will be modified no later than [7 years from the effective date of this Amendment].

b. Future Exceedances of Pyrethroid Pesticides Water Quality Objectives

If there is an exceedance of the pyrethroid pesticides water quality objectives after [effective date of this amendment], pyrethroid pesticides in discharges must be reduced so that water quality objectives are attained as soon as practicable. The Regional Board shall establish time schedules in waste discharge requirements or waivers when necessary that require reductions in discharge concentrations so that water quality objectives are attained.

5. **TMDLs for Pyrethroids in the Water Bodies listed in Table X**

The loading capacity for each water body segment listed in Table X is equal to the numeric targets given below. Wasteload allocations equal to the numeric targets given below are assigned to all permitted municipal separate storm sewer systems (MS4's) that discharge to Table X water bodies.

The following TMDL numeric targets are used to ascertain if water quality objectives are achieved and beneficial uses are protected.

a. Pyrethroid Pesticides Water Column Additivity Numeric Target

Pyrethroid pesticides have additive toxicity, thus to protect beneficial uses, additive toxicity must be considered in the TMDL as a numeric target. The numeric target for pyrethroid pesticides in the water column is equal to the additivity equation given in the pyrethroid pesticides water quality objectives in Table III-2A.

b. Sediment Toxicity Numeric Target

The sediment toxicity numeric target is the evaluation of the narrative toxicity objective in the Basin Plan (III-8.01-9.00) using standard aquatic toxicity tests to determine toxicity in bed sediments. The toxic determination is based on comparison of the test organism's response to the sample and a control. The

following standard aquatic toxicity test in Table Y will be used to determine compliance with the sediment toxicity numeric target:

Table Y.

<u>Parameter</u>	<u>Test</u>	<u>Biological Endpoint Assessed</u>
<u>Sediment Toxicity</u>	<u><i>Hyalella azteca</i> (10-day)</u>	<u>Survival</u>

6. The pyrethroid pesticides water quality objectives represent maximum allowable concentrations and exceedance frequencies the six pyrethroids shall be considered additively as follows:

$$S = \frac{C_{bif}}{O_{bif}} + \frac{C_{cyf}}{O_{cyf}} + \frac{C_{cyp}}{O_{cyp}} + \frac{C_{esf}}{O_{esf}} + \frac{C_{lcy}}{O_{lcy}} + \frac{C_{per}}{O_{per}} \leq 1$$

Where:

C_{bif} – The concentration of bifenthrin in ng/L.

C_{cyf} – The concentration of cyfluthrin in ng/L.

C_{cyp} – The concentration of cypermethrin in ng/L.

C_{esf} – The concentration of esfenvalerate in ng/L.

C_{lcy} – The concentration of lambda cyhalothrin in ng/L.

C_{per} – The concentration of permethrin in ng/L.

O_{bif} – The acute or chronic bifenthrin water quality objective in ng/L.

O_{cyf} – The acute or chronic cyfluthrin water quality objective in ng/L.

O_{cyp} – The acute or chronic cypermethrin water quality objective in ng/L.

O_{esf} – The acute or chronic esfenvalerate water quality objective in ng/L.

O_{lcy} – The acute or chronic lambda cyhalothrin water quality objective in ng/L.

O_{per} – The acute or chronic permethrin water quality objective in ng/L.

S – The sum. A sum exceeding one (1.0) indicates an exceedance of the pyrethroid pesticides water quality objectives.

Available samples collected within the applicable averaging period for the water quality objective will be used to determine attainment of the objectives. Only pyrethroid pesticides results from the same sample will be used in calculating the sum. Concentrations of pyrethroid pesticides must be above limits of quantitation (reporting limits) to be included; concentrations reported as not detected or as below the limit of quantitation will be considered as zero (0) in the above equation.

This additivity equation for pyrethroid pesticides is consistent with the Policy for Application of Water Quality Objectives (IV 16.00 – 18.00) and the equation

~~specified in the Basin Plan for considering the cumulative impact of pesticides (IV-35.00). The Regional Board shall require additional reductions in pyrethroid pesticides concentrations and exceedance frequencies if such reductions are necessary to account for additive or synergistic effects or to protect beneficial uses.~~

7. ~~The Regional Board intends to review the pyrethroid pesticides allocations and implementation provisions of the Basin Plan no later than [8 years from the effective date of this amendment.]~~

8. **Municipal Storm Water Discharges**

a. Implementation of Water Quality Objectives

~~Wasteload allocations are equal to the pyrethroid pesticides water quality objectives and are assigned to all permitted municipal separate storm sewer sources that discharge to Table X water bodies.~~

~~Municipal separate storm sewer (All MS4 NPDES permits shall require implementation of best management practices and control measures to reduce pyrethroid pesticides in urban runoff to the maximum extent practicable in order to attain the pyrethroid pesticides water quality objectives. The responsibilities of the MS4 permittees for attaining addressing applicable the pyrethroid pesticides wasteload allocations water quality objectives will be satisfied by implementing the best management practices listed below (in 8c) complying with the requirements set forth below and complying with permit-related requirements based on them. Requirements in each MS4 NPDES permit issued or reissued and applicable for the term of the permit shall be based on an updated assessment of control measures intended to reduce pyrethroid pesticides in urban runoff. Control measures implemented by MS4 permittees shall reduce pyrethroid pesticides in urban runoff to the maximum extent practicable. These requirements shall be included in permits no later than [7 years from the effective date of this Amendment]. If these requirements prove inadequate to meet the water quality objectives and wasteload allocations, the Regional Board will require additional control measures and/or call for additional actions by other agencies until the objectives and allocations are attained.~~

b. Total Maximum Daily Loads

~~MS4 permittees assigned wasteload allocations shall attain the wasteload allocations by implementing the best management practices listed below (in 8c) to the maximum extent practicable. Applicable MS4 NPDES permits shall require implementation of best management practices and control measures to reduce pyrethroid pesticides in urban runoff to the maximum extent~~

practicable. Requirements in each MS4 NPDES permit issued or reissued and applicable for the term of the permit shall be based on an updated assessment of control measures intended to reduce pyrethroid pesticides in urban runoff. These requirements shall be included in permits no later than [7 years from the effective date of this Amendment].

c. Best Management Practices

The following general requirements shall be implemented through MS4 NPDES permits issued or reissued for urban runoff discharges:

- 1) Reduce reliance on pyrethroids and other pesticides that threaten water quality by adopting and implementing policies, procedures, or ordinances that minimize the use of pesticides that threaten water quality in the discharger's operations and on the discharger's property;
- 2) Track progress by periodically reviewing the discharger's pesticide use and pesticide use by its hired contractors;
- 3) Train the discharger's employees to use integrated pest management techniques and require that they ~~rigorously~~ adhere to integrated pest management practices to the maximum extent practicable;
- 4) Require the discharger's contractors to practice integrated pest management; and
- 5) Study the effectiveness of the control measures implemented, evaluate attainment of the wasteload allocations, identify effective actions to be taken in the future, and report conclusions to the Regional Board.

The following education and outreach requirements shall also be implemented through MS4 NPDES permits issued or reissued for urban runoff discharges:

- 1) Undertake targeted outreach programs to encourage communities within a discharger's jurisdiction to reduce their reliance on pesticides that threaten water quality, focusing efforts on those most likely to use pesticides that threaten water quality;
- 2) Work with ~~the California Department of Pesticide Regulation~~ DPR, County Agricultural Commissioners, and the University of California Statewide Integrated Pest Management Program to coordinate education and outreach programs to minimize pesticide discharges.
- 3) Encourage public and private landscape irrigation management that minimizes pesticide runoff; and
- 4) Facilitate appropriate pesticide waste disposal, and conduct education and outreach to promote appropriate disposal.

The following requirements related to regulatory programs shall also be implemented through MS4 NPDES permits issued or reissued for urban runoff discharges:

- 1) Track U.S. EPA and ~~California Department of Pesticide Regulation~~ DPR pesticide evaluation and registration activities as they relate to surface water quality and encourage these agencies to accommodate urban water quality concerns within their pesticide registration processes;
- 2) Assemble and submit information (such as monitoring data) to U.S. EPA and ~~DPR California Department of Pesticide Regulation~~ during public comment periods as needed to assist in their pesticide evaluation and registration activities and in ensuring that pesticide applications within the Basin comply with water quality standards; and
- 3) Report violations of pesticide regulations (e.g., illegal handling) to County Agricultural Commissioners.

The actions above may be implemented by individual urban runoff management entities, jointly by two or more entities acting in concert, or cooperatively through a regional or statewide approach, as appropriate.

9. Municipal and Domestic Wastewater Discharges

- a. Municipal and domestic waste water NPDES permittees found to have reasonable potential based on any of the pyrethroid pesticides water quality objectives shall be required to implement best management practices and control measures to reduce discharges of pyrethroid pesticides. In these cases, the best management practices and control measures listed below (in 9b) shall be included in a discharger's Pollution Prevention Plan for pyrethroid pesticides. Requirements in each NPDES permit issued or reissued and applicable for the term of the permit shall be based on an updated assessment of control measures intended to reduce pyrethroid pesticides in wastewater effluents.

~~Municipal and domestic waste water NPDES permits shall require implementation of best management practices and control measures.~~

~~Requirements in each NPDES permit issued or reissued and applicable for the term of the permit shall be based on an updated assessment of control measures intended to reduce pyrethroid pesticides in wastewater effluents. Control measures implemented by permittees shall reduce pyrethroid pesticides in wastewater effluents to the maximum extent practicable. These requirements shall be included in permits no later than [7 years from the effective date of this Amendment]. If these requirements prove inadequate to meet the water quality objectives, the Regional Board will require~~

~~additional control measures or call for additional actions by other agencies until the objectives and allocations are attained.~~

b. Best Management Practices

The following general requirements shall be implemented through NPDES permits issued or reissued for wastewater discharges:

- 1) Reduce reliance on pyrethroids and other pesticides that threaten water quality by adopting and implementing policies, procedures, or ordinances that minimize the use of pesticides that threaten water quality in the discharger's operations and on the discharger's property;
- 2) Track progress by periodically reviewing the discharger's pesticide use and pesticide use by its hired contractors;
- 3) Train the discharger's employees to use integrated pest management techniques and require that they rigorously adhere to integrated pest management practices;
- 4) Require the discharger's contractors to practice integrated pest management; and
- 5) Study the effectiveness of the control measures implemented, evaluate attainment of the water quality objectives, identify effective actions to be taken in the future, and report conclusions to the Regional Board.

The following education and outreach requirements shall also be implemented through NPDES permits issued or reissued for wastewater discharges:

- 1) Undertake targeted outreach programs to encourage communities within a discharger's jurisdiction to reduce their reliance on pesticides that threaten water quality, focusing efforts on those most likely to use pesticides that threaten water quality;
- 2) Work with the ~~California Department of Pesticide Regulation~~DPR, County Agricultural Commissioners, and the University of California Statewide Integrated Pest Management Program to coordinate education and outreach programs to minimize pesticide discharges.
- 3) Encourage public and private pest management practices that minimize pesticides from entering sewer systems; and
- 4) Facilitate appropriate pesticide waste disposal, and conduct education and outreach to promote appropriate disposal.

The following requirements related to regulatory programs shall also be implemented through NPDES permits issued or reissued for wastewater discharges:

- 1) Track U.S. EPA and ~~California Department of Pesticide Regulation~~DPR pesticide evaluation and registration activities as they relate to surface

- water quality and encourage these agencies to accommodate water quality concerns within their pesticide registration processes;
- 2) Assemble and submit information (such as monitoring data) to U.S. EPA and ~~California Department of Pesticide Regulation~~ DPR during public comment periods as needed to assist in their pesticide evaluation and registration activities and in ensuring that pesticide applications within the Basin comply with water quality standards; and
 - 3) Report violations of pesticide regulations (e.g., illegal handling) to County Agricultural Commissioners.

The actions above may be implemented by individual NPDES permittees, jointly by two or more permittees acting in concert, or cooperatively through a regional or statewide approach, as appropriate.

10. **Agricultural Discharges**

a. Waters Bodies with Known Pyrethroid Pesticides Impairments

Discharges of pyrethroid pesticides to water bodies with known pyrethroid pesticides impairments due to agricultural runoff will be controlled using existing Regional Board regulatory programs. Unless a management plan addressing pyrethroid pesticides already exists for the water bodies specifically named in Table III-2A, the Executive Officer will require agricultural dischargers to submit a management plan to control discharges of pyrethroid pesticides in those water bodies no later than **[60 days from the effective date of this amendment]**. The management plan shall describe the actions that the discharger will take to reduce pyrethroid pesticides discharges to ~~meet~~ attain the water quality objectives by the required compliance date.

At a minimum, management plans must describe:

- 1) The ~~causes~~ sources of pyrethroid pesticides causing the nonattainment of the water quality objective(s);
- 2) The actions that the discharger will take to reduce pyrethroid pesticides discharges and meet the water quality objectives as soon as practicable, but no later than 10 years from **[the effective date of this amendment]**;
- 3) A schedule for the implementation of those actions;
- 4) A monitoring plan to track effectiveness of pollution control practices;
- 5) The process for revising the management plan if the actions do not effectively reduce pyrethroid pesticides discharges or the implemented actions have water quality impacts that must be addressed.

The Executive Officer may allow individual dischargers or a discharger group or coalition to submit management plans. The management plan must comply

with the provisions of any applicable waste discharge requirements or conditional waiver of waste discharge requirements. Management plans may address discharges to multiple downstream water bodies for which discharge reductions are required. Management plans may include actions required by state and federal regulations. The Executive Officer may require revisions to the management plan if applicable water quality objectives are not attained. If a water body that is not attaining the pyrethroid pesticides objectives is being used by the discharger to represent water quality conditions in multiple water bodies, the Executive Officer shall require the submittal of a management plan that addresses pyrethroid pesticides in all of the represented water bodies.

b. *Future Exceedances of the Pyrethroid Pesticides Water Quality Objectives*

The following requirement applies to agricultural dischargers that are governed by a Regional Board order that does not include management plan submittal requirements triggered by exceedances of water quality objectives. After [effective date of amendment], if the Executive Officer determines that a Table III-2A applicable water body is not attaining the pyrethroid pesticides water quality objectives, the Executive Officer shall require dischargers of pyrethroid pesticides to that water body to submit a management plan. Management plans are due no later than ~~60 days~~ **6 months** after the discharger receives notification that such a determination has been made.

11. **Vector Control Discharges**

Discharges of pyrethroid pesticides from vector control applications are subject to the *Statewide NPDES Permit for Biological and Residual Pesticide Discharges to waters of the United States from Vector Control Applications*. Vector control dischargers are not subject to any additional implementation provisions for attainment of the pyrethroid pesticides water quality objectives.

Add the following Table in the section “Pyrethroid Pesticides Discharges”

Table X. Water Body Segments with Total Maximum Daily Loads (TMDLs) for Pyrethroid Pesticides

<u>Water Body Segment</u>
<u>Arcade Creek</u>
<u>Chicken Ranch Slough</u>
<u>Curry Creek (Placer and Sutter Counties)</u>
<u>Elder Creek</u>
<u>Kaseberg Creek (tributary to Pleasant Grove Creek, Placer County)</u>
<u>Morrison Creek</u>
<u>Pleasant Grove Creek</u>
<u>Pleasant Grove Creek, South Branch</u>
<u>Strong Ranch Slough</u>

DRAFT

Add to the “Estimated Costs of Agricultural Water Quality Control Programs and Potential Sources of Financing” section:

Pyrethroid pesticides discharges into Sacramento River and San Joaquin River basin waters

Placeholder for cost analysis.

DRAFT

Changes to Chapter V, Surveillance and Monitoring

Add the following:

Pyrethroid Pesticides Discharges

The Regional Board will require pyrethroid pesticides dischargers to provide information to the Board. This information may come from the dischargers' monitoring efforts; monitoring programs conducted by state or federal agencies or collaborative watershed efforts; or from special studies that evaluate the effectiveness of management practices. If reliable commercial methods are available with limits of quantitation (reporting limits) at or below the pyrethroid pesticides water quality objective concentrations, those methods shall be considered by dischargers for monitoring of pyrethroid pesticides. The chemical analysis method shall be approved by the Executive Officer before monitoring begins.

~~If commercial methods are available with limits of quantitation (reporting limits) at or below the pyrethroid pesticides water quality objective concentrations, those methods shall be used for monitoring of pyrethroid pesticides. If methods are not available with limits of quantitation at or below the pyrethroid pesticides water quality objectives, then the chemical analysis method shall be approved by the Executive Officer before monitoring begins.~~

Municipal Storm Water

The monitoring and reporting program for any waste discharge requirements ~~or conditional waiver of waste discharge requirements~~ that addresses municipal storm water discharges to Table X or Table III-2A applicable water bodies ~~must~~ shall be designed to collect information necessary to:

- 1) Determine whether receiving waters ~~and~~ are attaining the pyrethroid pesticides water quality objectives, and where applicable, the Pyrethroid Pesticides Water Column Additivity Numeric Targets;
- 2) Determine whether bed sediments are attaining the Sediment Toxicity Numeric Targets ~~pyrethroid pesticides water quality objectives and wasteload allocations and the narrative toxicity objective~~, where applicable. ~~It is generally expected that this requirement would be met by monitoring for pyrethroid pesticides in the water column and sediment toxicity testing with *Hyalomma azteca* with~~ In order to link sediment toxicity to pyrethroid pesticides, chemical analysis of the sediment for pyrethroid pesticides shall be performed if the sediment is toxic;

- 3) Determine whether the implementation of best management practices and control measures are sufficient to meet the pyrethroid pesticides water quality objectives and ~~wasteload allocations~~ TMDL Numeric Targets, where applicable; and
- 4) Determine whether alternatives to pyrethroid pesticides are being discharged at concentrations with the potential to cause or contribute to exceedances of applicable water quality objectives. The Regional Board, in consultation with DPR, will assist dischargers in determining if monitoring and reporting programs for alternatives to pyrethroid pesticides are necessary and in identifying alternatives for which monitoring might be appropriate with consideration of the commercial availability of acceptable analytical methods.

With Executive Officer approval, representative monitoring programs, including coordinated regional monitoring programs, may be used to meet the monitoring requirements ~~listed above~~. Routine monitoring for pyrethroid pesticides and alternatives can be discontinued upon a discharger showing that the specific pesticide is not found in receiving waters ~~the effluent~~ at concentrations with the potential to cause or contribute to exceedances of applicable water quality objectives; however, ~~the requirement to monitor for~~ pyrethroid pesticides concentrations shall be assessed during permit renewal ~~every 5 years as a part of the Report of Waste Discharge will continue to be required~~ at least as long as the pyrethroid pesticides specified in Table III-2A have registered outdoor uses in the source area.

Municipal and Domestic Wastewater

The monitoring and reporting program for any waste discharge requirements ~~or conditional waiver of waste discharge requirements~~ that addresses municipal or domestic wastewater discharges to Table III-2A applicable water bodies ~~must~~ shall be designed to collect information necessary to:

- 1) Determine whether the discharge causes or contribute to an exceedance of the pyrethroid pesticides water quality objectives, where applicable;

~~Determine whether pyrethroid pesticides in the discharge have the potential to cause or contribute to an exceedance of the narrative toxicity water quality objectives by testing effluents with the amphipod *Hyalollla azteca*, where applicable;~~

- 2) Determine whether alternatives to pyrethroid pesticides are being discharged at concentrations with the potential to cause or contribute to exceedances of applicable water quality objectives. The Regional Board, in consultation with DPR, will assist dischargers in determining if monitoring and reporting programs for alternatives to pyrethroid pesticides are necessary and identifying alternatives for which monitoring

might be appropriate with consideration of the commercial availability of acceptable analytical methods.

With Executive Officer approval, representative monitoring programs, including coordinated regional monitoring programs, may be used to meet the monitoring requirements listed above. Routine monitoring for pyrethroid pesticides and alternatives can be discontinued upon a discharger showing that the specific pesticide is not found in the effluent at concentrations with the potential to cause or contribute to exceedances of applicable water quality objectives; however, the requirement to monitor for pyrethroid pesticides every 5 years as a part of the Report of Waste Discharge will continue to be required, at least as long as pyrethroid pesticides specified in Table III-2A are registered for use in the source area. If routine monitoring for pyrethroid pesticides is discontinued, then toxicity testing of effluents with the amphipod *Hyalomma azteca* may also be discontinued.

Discharges from Agricultural Operations

The monitoring and reporting program for any waste discharge requirements or conditional waiver of waste discharge requirements that addresses agricultural pyrethroid pesticides discharges to water bodies specifically named in Table III-2A must shall be designed to collect information necessary to:

- 1) Determine whether receiving waters are attaining the pyrethroid pesticides water quality objectives, where applicable;
- 2) Determine whether bed sediments are attaining the narrative toxicity objective as it relates to pyrethroid pesticides. It is generally expected that this requirement would be met by sediment toxicity testing with *Hyalomma azteca* and chemical analysis of the sediment for pyrethroid pesticides if the sediment is toxic;
- ~~1) Determine whether water and sediment are attaining the pyrethroid pesticides water quality objectives and narrative toxicity objective, where applicable. It is generally expected that this requirement would be met by monitoring for pyrethroid pesticides in the water column and sediment toxicity testing with *Hyalomma azteca* with chemical analysis of the sediment if the sediment is toxic;~~
- 3) Determine the extent of implementation of management practices to reduce off-site movement of pyrethroid pesticides;
- 4) Determine whether alternatives to pyrethroid pesticides are being discharged at concentrations that have the potential to cause or contribute to exceedances of applicable water quality objectives; and

Representative monitoring may be used to determine attainment of the water quality objectives. Monitoring shall be representative of water bodies specifically named in Table III-2A, either directly or through a representative monitoring program. Changes in monitoring frequency may result if information such as pesticide use data, pesticide registration status, management practices, runoff potential, or other monitoring studies indicates additional or less monitoring is needed to meet the monitoring requirements, which may include discontinuation of pyrethroid pesticides monitoring.

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