

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

RESOLUTION NO. R5-2004-0109

ESTABLISHMENT OF TOTAL MAXIMUM DAILY LOADS OF DIAZINON AND  
CHLORPYRIFOS IN SACRAMENTO AREA URBAN CREEKS

WHEREAS, Arcade Creek, Elder Creek, Elk Grove Creek, Morrison Creek, Chicken Ranch Slough, and Strong Ranch Slough have been identified under the federal Clean Water Act Section 303(d)(1)(A) as impaired water bodies due to elevated concentrations of diazinon and/or chlorpyrifos; and

WHEREAS, the federal Clean Water Act Section 303(d)(1)(C) requires the State to establish the total maximum daily load for those pollutants causing the impairment; and

WHEREAS, the U.S. Environmental Protection Agency (U.S. EPA) has taken actions under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) that ban the sale of all non-agricultural uses of diazinon and most non-agricultural uses of chlorpyrifos and significantly reduces the allowed application rate of remaining non-agricultural uses of chlorpyrifos; and

WHEREAS, the Central Valley Regional Board adopted resolution R5-2002-0206, which established waste discharge requirements and monitoring and reporting requirements for stormwater discharges in Sacramento County; and

WHEREAS, R5-2002-0206 requires: the MS4 discharge not to cause or contribute to toxic conditions in receiving waters; the MS4 dischargers to develop a pesticide toxicity control plan; monitoring of diazinon and chlorpyrifos in creeks and rain water; surveys of pesticide use patterns; and the development of a chlorpyrifos and diazinon mitigation plan should the U.S. EPA FIFRA actions not provide sufficient control; and

WHEREAS, R5-2002-0206 provides numerical diazinon and chlorpyrifos concentration values to assess the effectiveness of the U.S. EPA FIFRA actions and the Permittees' pesticide reduction efforts. Those numerical values are the water quality criteria for diazinon and chlorpyrifos developed by the California Department of Fish and Game; and

WHEREAS, the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins (Basin Plan) includes a formula for considering the cumulative impact of more than one pesticide in the water column and states how the cumulative impact will be determined. The Basin Plan includes a narrative pesticide objective that states "No individual pesticide or combination of pesticides shall be present in

concentrations that adversely affect beneficial uses”, and a narrative toxicity objective that applies to diazinon and chlorpyrifos in the Sacramento area urban creeks; and

WHEREAS, the TMDL Report, *Total Maximum Daily Load (TMDL) Report for the Pesticides Diazinon and Chlorpyrifos in: Arcade Creek, Elder Creek, Elk Grove Creek, Morrison Creek, Chicken Ranch Slough, and Strong Ranch Slough; Sacramento County, California*, dated July 2004, includes an analysis of existing Regional Board and federal requirements and the anticipated water quality improvements associated with those requirements; and

WHEREAS, the TMDL (Attachment 1) is established in accordance with federal regulations and is established at a level necessary to attain the applicable water quality objectives with respect to diazinon and chlorpyrifos while taking into account seasonal variations and any lack of knowledge concerning the relationship between effluent limitations and water quality (40 CFR 130.7(c)(1)); and

WHEREAS, based on the analysis in the TMDL Report the Regional Board concludes that existing Regional Board and federal regulatory requirements are sufficient to attain water quality objectives in Arcade Creek, Elder Creek, Elk Grove Creek, Morrison Creek, Chicken Ranch Slough, and Strong Ranch Slough with respect to diazinon and chlorpyrifos; and

WHEREAS, the Regional Board finds that existing regulatory requirements make any further regulatory action (i.e., any “project”) unnecessary; and

WHEREAS, this action is not a “project” that requires compliance with the California Environmental Quality Act (California Public Resources Code § 21000 et seq.) and the Regional Board is not directly undertaking an activity, funding an activity or issuing a permit or other entitlement for use by this action (Public Resources Code § 21065; 14 Cal. Code of Regs. §15378); and

WHEREAS, the Regional Board is not approving any activity, but merely finding that ongoing activities and regulatory requirements also satisfy other legislative requirements; and

WHEREAS, the TMDL does not allow degradation or lower water quality, and does not approve an activity that produces or may produce a waste or increased volume or concentration of waste or an activity that discharges or proposes to discharge to existing high quality waters and, therefore, complies with State Water Resources Control Board Resolution No. 68-16 and 40 CFR §131.12; and

WHEREAS, the Regional Board can amend the Basin Plan or use its other authorities to address localized sources of diazinon and chlorpyrifos should existing regulatory requirements prove insufficient to attain water quality objectives; and

WHEREAS, Regional Board staff held a public workshop on 25 May 2004 to receive comments on the Draft TMDL Report. A revised TMDL Report was prepared and made available concurrently with the publication of the notice of public meeting; and

WHEREAS, the Regional Board held a public meeting on 10 September 2004, for the purpose of receiving testimony on the proposed TMDL. Notice of the public meeting was sent to all interested persons and published in accordance with California Water Code, section 13244:

THEREFORE BE IT RESOLVED, that, pursuant to Section 303(d)(1)(C) of the Clean Water Act, the Regional Board, after considering the entire record, including oral testimony at the meeting, hereby establishes total maximum daily loads of diazinon and chlorpyrifos in Arcade Creek, Elder Creek, Elk Grove Creek, Morrison Creek, Chicken Ranch Slough and Strong Ranch Slough, as set forth in Attachment 1; and be it further

RESOLVED, that the Executive Officer is directed to forward copies of this resolution and the TMDL Report to the U.S. EPA for approval in accordance with Section 303(d)(2) of the Clean Water Act; and be it further

RESOLVED, that the Regional Board may amend the Basin Plan or use its other authorities to address localized sources of diazinon and chlorpyrifos should current regulatory requirements prove insufficient to attain water quality objectives; and be it further

RESOLVED, that the Regional Board will establish no new regulatory requirements based on this TMDL; and be it further

RESOLVED, that any further regulatory action by the Regional Board to adopt a program of implementation through a Basin Plan Amendment to implement this TMDL is unnecessary; and be it further

RESOLVED, that this resolution shall remain valid as long as Arcade Creek, Elder Creek, Elk Grove Creek, Morrison Creek, Chicken Ranch Slough and Strong Ranch Slough meet applicable water quality objectives for diazinon and chlorpyrifos by 2 December 2007; and be it further

RESOLVED, that, if during its approval process the U.S. EPA determines that minor, non-substantive corrections to the language of the TMDL are needed for clarity or consistency, the Executive Officer may make such changes, and shall inform the Regional Board of any such changes.

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I, THOMAS R. PINKOS, Executive Officer, do hereby certify that the forgoing is a full, true, and correct copy of a Resolution adopted by the California Regional Water Quality Control Board, Central Valley Region, on 10 September 2004.

original signed by

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THOMAS R. PINKOS, Executive Officer

### Attachment 1

The Loading Capacity is based on existing Basin Plan requirements for consideration of additive toxicity of pesticides (Equation 1) and is equal to a sum of one (1). The water quality criteria in the denominator of Equation 1 were developed by the California Department of Fish and Game. Regional Board resolution R5-2002-0206 states that those criteria will be used to evaluate the effectiveness of the Sacramento area storm water permittees' pesticide reduction efforts and the phase out of residential uses of diazinon and chlorpyrifos. If the sum is greater than (1.0), then the Loading Capacity is exceeded and the applicable narrative water quality objectives are not being attained.

$$S = \frac{C_{\text{diaz}}}{O_{\text{diaz}}} + \frac{C_{\text{chlor}}}{O_{\text{chlor}}} \quad \text{[Equation 1]}$$

Where:

$C_{\text{diaz}}$  = concentration of diazinon in the water body  
 $O_{\text{diaz}}$  = diazinon criterion  
 = 0.080 µg/L (acute) 1-hour average  
 = 0.050 µg/L (chronic) 4-day average

$C_{\text{chlor}}$  = concentration of chlorpyrifos in the water body  
 $O_{\text{chlor}}$  = chlorpyrifos criterion  
 = 0.020 µg/L (acute) 1-hour average  
 = 0.014 µg/L (chronic) 4-day average

S = The sum.

#### Waste Load Allocations and Load Allocations for Diazinon and Chlorpyrifos in Sacramento County Urban Creeks<sup>1</sup>

Water Quality Criterion Type	Constituent	Criterion Value	Waste Load Allocations (for Point Sources) for all NPDES sources	Load Allocations (for Non-Point Sources) for agricultural sources and rainwater
Chronic <sup>2</sup>	Diazinon	50 ng/L	S (from Equation 1) less than or equal to 1.0	S (from Equation 1) less than or equal to 1.0
	Chlorpyrifos	14 ng/L		
Acute <sup>3</sup>	Diazinon	80 ng/L	S (from Equation 1) less than or equal to 1.0	S (from Equation 1) less than or equal to 1.0
	Chlorpyrifos	20 ng/L		

<sup>1</sup>The actual waste load or load is calculated using the appropriate criterion values and relevant diazinon and chlorpyrifos concentration data in Equation 1.

<sup>2</sup> Four-day average, not to be exceeded more than once every three years, on average

<sup>3</sup> One-hour average, not to be exceeded more than once every three years, on average

**Margin of Safety**

The load allocations and waste load allocations are set equal to the Loading Capacity, so no credit for potential dilution flow is given. This provides an implicit margin of safety.

**Seasonal Variations**

Since the TMDL is concentration-based, the level necessary to attain water quality objectives (see Equation 1) is the same throughout the year.