

ITEM:

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SUBJECT:

Hearing on Proposed Amendment to the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins for the Control of Diazinon and Chlorpyrifos Runoff into the Lower San Joaquin River

BOARD ACTION:

*Consideration of Adoption of Proposed Amendment*

BACKGROUND:

The San Joaquin River was placed on the Clean Water Act Section 303(d) List in 1998 for aquatic toxicity due to the organophosphate pesticides diazinon and chlorpyrifos. The San Joaquin River impairment listing is for the 130 river miles from the Mendota dam north to the Airport Way bridge near Vernalis. The sources of these pesticides are agricultural and urban runoff. Agriculture will be the dominant source in the SJR Basin since the United States Environmental Protection Agency (US EPA) has banned the sale of all non-agricultural uses of diazinon and most non-agricultural uses of chlorpyrifos.

Agricultural sources can be subdivided by season of application. Dormant season pesticide applications occur in the SJR Basin during the winter months, generally from December through February. Irrigation season applications generally occur from March through September. Pesticides applied to orchards and fields are transported primarily by stormwater runoff, and by drainage or runoff of irrigation water.

Board staff has developed a Basin Plan Amendment and staff report to address diazinon and chlorpyrifos discharges into the San Joaquin River and to control pesticide runoff. Eight public workshops and a CEQA Scoping meeting have been held during the development of the Basin Plan Amendment, to identify and address issues regarding the amendment. The proposed Basin Plan Amendment and staff report has been revised in response to scientific peer review comments and comments from the public. The staff report and appendices are available on our web site at:

<http://www.waterboards.ca.gov/centralvalley/programs/tmdl/sjrop/index.html>

Written comments on the proposed amendment are due 5 October 2005.

The proposed amendment contains all the required elements of a Total Maximum Daily Load (TMDL), satisfying U.S.EPA and Clean Water Act requirements. The amendment proposes new numeric water quality objectives for chlorpyrifos and Total Maximum Daily Loads (TMDLs) for diazinon and chlorpyrifos. Diazinon and chlorpyrifos waste load allocations for point sources and load allocations for non-point sources are included. This amendment also satisfies Bay Protection requirements for a Clean-up Plan for the Delta, which includes a requirement to develop a Basin Plan Amendment for diazinon and chlorpyrifos in the San Joaquin River.

The amendment (Resolution Attachment 1) contains the following recommendations:

**Introduction** – The Basin Plan now includes an inaccurate description of the planning boundary between the San Joaquin Basin and the Tulare Lake Basin. This amendment recommends changes to correct this error. This amendment also recommends that the Lower San Joaquin River watershed be divided into seven major geographic subareas. The addition of these subareas will allow implementation efforts to be prioritized on the most important sources of

pollution. These changes will only be incorporated in this amendment if they have not already been incorporated through the Basin Plan Amendment for Salt and Boron in the San Joaquin River.

**Designated Uses** - This amendment recommends that no changes be made to existing designated uses for the SJR. The use that is most sensitive to diazinon and chlorpyrifos (freshwater habitat beneficial use designation) has already been designated, so additional use designations are not necessary at this time.

**Water quality objectives** - This amendment recommends no new numeric water quality objectives for diazinon at this time. Until further information is available, the best available information on diazinon toxicity should be used to evaluate compliance with the narrative toxicity and pesticide water quality objectives. Alternative Basin Plan Amendment language to adopt diazinon water quality objectives has been prepared for Regional Board consideration (Resolution Attachment 1A). For chlorpyrifos, this amendment recommends adoption of Water Quality Objectives derived using the US EPA method and applied to a dataset screened by the California Department of Fish and Game.

**Implementation and Time Schedule**- This amendment recommends that, if neither Waste Discharge Requirements (WDRs) nor a Waiver of WDRs apply to diazinon and chlorpyrifos discharges, then a prohibition of discharge would apply when objectives or allocations are not met. The prohibition is constructed to address the two seasons of use. A medium term time schedule for compliance with chlorpyrifos water quality objectives and diazinon and chlorpyrifos allocations and loading capacity is recommended. Approximately three years from Regional Board adoption of the Basin Plan Amendment should provide sufficient time to attain the objectives and allocations and should be sufficient to get a comprehensive system for control of pesticide runoff into place.

**TMDL Elements**-The amendment establishes the loading capacity, waste load allocations, and load allocations for diazinon and chlorpyrifos discharges to the San Joaquin River. The loading capacity and allocations are established at levels necessary to attain the applicable numeric and narrative water quality objectives. A combined toxic units formula, found in the Basin Plan, is used to account for the joint toxicity of diazinon and chlorpyrifos. Load allocations are established by subarea. The allocations apply to both the irrigation and dormant season. Equating the allocations to the loading capacity provides an implicit margin of safety, since no dilution credit is given. Alternative Basin Plan Amendment language has been prepared that is consistent with the peer reviewer's recommendation for calculating the loading capacity and allocations (Resolution Attachment 1B).

**Submission of Management Plans**-Dischargers must submit a management plan that describes the actions that the discharger will take to reduce diazinon and chlorpyrifos discharges during the dormant season and the irrigation season, and to meet the applicable allocations by the required compliance dates.

**Surveillance and Monitoring** -Surveillance and monitoring required of dischargers will include water quality monitoring to determine compliance, evaluation of management practices to reduce diazinon and chlorpyrifos in runoff, and evaluation of potential impacts of alternatives to diazinon and chlorpyrifos.

**Consideration of Economics-** The total annual costs for implementation of this amendment are estimated between \$4.6 million and \$20 million. This includes costs for implementation of pesticide management practices, compliance monitoring, planning and evaluation. These costs represent a worst-case estimate because they assume that no dischargers are currently implementing pesticide management practices, and they do not account for the partially redundant nature of the costs of compliance with this amendment with costs required for compliance with the Irrigated Lands Conditional Waiver and the Basin Plan Amendments for Salt and Boron and Dissolved Oxygen that are pending State Board approval.

**CEQA** - This Basin Plan Amendment does not require or allow any changes in pesticide application practices that could degrade the quality of the environment or have environmental effects that could cause substantial indirect or direct adverse effects on human beings.

ISSUES:

The diazinon water quality objectives that were adopted for the Sacramento and Feather Rivers diazinon TMDL were considered for this TMDL. These objectives were based upon criteria developed by the California Department of Fish and Game (DFG). Data quality issues with one of the primary studies underlying these criteria were evaluated by staff, and were part of the basis for staff's recommendation not to adopt diazinon water quality objectives at the present time.

A couple of commenters stated that urban use is still a contributing factor to the OP pesticide impairment in the San Joaquin River.

The issues do not reflect written comments submitted, which are due 5 October 2005.

Mgmt. Review \_\_\_\_\_  
Legal Review \_\_\_\_\_

**20/21 October 2005**  
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