

ITEM 9. REVISIONS TO RESOLUTION NO. R5-2007-XXXX
CONTROL OF DIAZINON AND CHLORPYRIFOS RUNOFF
INTO THE SACRAMENTO AND FEATHER RIVERS

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

RESOLUTION NO. R5-2007-XXXX

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
SACRAMENTO AND FEATHER RIVERS

WHEREAS, the California Regional Water Quality Control Board, Central Valley Region (Central Valley Water Board) finds that:

1. In 1975 the Central Valley Water Board adopted the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins (Basin Plan), which has been amended occasionally.
2. The Basin Plan may be amended in accordance with the California Water Code (Water Code) section 13240, et seq.
3. Water Code section 13241 authorizes the Central Valley Water Board to establish water quality objectives and Water Code section 13242 sets forth the requirements for a program for implementation for achieving water quality objectives.
4. Water Code section 13243 authorizes the Central Valley Water Board to specify certain conditions or areas where the discharges of certain types of waste will not be permitted.
5. The Sacramento River has been identified under the federal Clean Water Act section 303(d) as impaired due to elevated concentrations of diazinon.
6. The Feather River has been identified under the federal Clean Water Act section 303(d) as impaired due to elevated concentrations of diazinon and chlorpyrifos.
7. The Central Valley Water Board recognizes that new information has been submitted which calls into question the scientific basis for the existing diazinon objectives; therefore, a Basin Plan Amendment is appropriate.
8. The Central Valley Water Board recognizes that the Basin Plan does not include numeric water quality objectives for chlorpyrifos, nor a plan to

- address combined diazinon and chlorpyrifos concentrations in the Sacramento and Feather Rivers; therefore, a Basin Plan Amendment is appropriate.
9. The Basin Plan currently requires the Central Valley Water Board to review the allocations and implementation provisions for diazinon discharges to the Sacramento and Feather Rivers by 30 June 2007.
 10. In a judgment denying a writ, the Sacramento County Superior Court required the Central Valley Water Board to reconsider the diazinon objectives no later than 30 June 2007 (*Makhteshim Agan of North America v. State Water Resources Control Board; Regional Water Quality Control Board-Central Valley Region, Sac. Cty. Sup. Ct. - Case No. 04CS00871*).
 11. The proposed amendment modifies Basin Plan Chapter III (Water Quality Objectives) to revise the site-specific numeric objective for diazinon and establish site-specific numeric objectives for chlorpyrifos in the Sacramento and Feather Rivers.
 12. The proposed amendment identifies the requirement to meet the additive formula already in Basin Plan Chapter IV (Implementation), for the additive toxicity of diazinon and chlorpyrifos.
 13. The proposed amendment modifies the existing implementation program contained in Basin Plan Chapter IV (Implementation) to modify the existing implementation program to reduce pesticide runoff and diazinon and chlorpyrifos discharges into the Sacramento and Feather Rivers, including the establishment of The proposed amendment establishes the loading capacity and allocations for diazinon and chlorpyrifos. The loading capacity and allocations are needed to provide a clear basis to determine compliance with and implement applicable water quality objectives. The loading capacity and allocations also satisfy the requirements of a Total Maximum Daily Load (TMDL).
 14. The proposed amendment modifies Basin Plan Chapter V (Surveillance and Monitoring) to include monitoring requirements to allow the Central Valley Water Board to assess progress in reducing diazinon and chlorpyrifos discharges and preventing toxicity from pesticide runoff.
 15. The proposed amendment requires dischargers of diazinon and chlorpyrifos to develop and implement a plan to ensure the loading capacity of diazinon and chlorpyrifos in the Sacramento and Feather Rivers is not exceeded.

16. The Central Valley Water Board has considered the factors set forth in Water Code section 13241, including economic considerations, in developing this proposed amendment. The costs of implementing the proposed amendment are reasonable relative to the water quality benefits to be derived from implementing the proposed amendment, considering the size of the geographic area affected by the amendment, and that the estimated costs of compliance with this amendment duplicate to some extent the costs of complying with existing Basin Plan water quality objectives, the Irrigated Lands Conditional Waiver, and pesticide use regulations from the Department of Pesticide Regulation.
17. The proposed amendment includes an estimate of the cost of the proposed implementation program to agriculture and identifies potential sources of financing, as required by Water Code section 13141.
18. The scientific portions and scientific basis of the proposed amendment are based on source material that has already been peer reviewed in accordance with Health and Safety Code section 57004. The proposed amendment is itself just a new application of earlier adequately peer reviewed work products. The proposed amendment does not depart from the scientific approach of the other Basin Plan amendments from which it is derived (R5-2005-0138 and R5-2006-0061).
19. The Central Valley Water Board finds that the scientific portions of the Basin Plan Amendment are based on sound scientific knowledge, methods, and practices in accordance with Health and Safety Code section 57004.
20. The Central Valley Water Board finds that the proposed amendment is consistent with the State Water Resources Control Board (State Water Board) Resolution No. 68-16, in that the changes to water quality objectives (i) consider maximum benefit to the people of the state, (ii) will not unreasonably affect present and anticipated beneficial use of waters, and (iii) will not result in water quality less than that prescribed in policies, and the proposed amendment is consistent with the federal Antidegradation Policy (40 CFR part 131.12). The proposed amendment requires actions to be taken to implement management practices to ensure compliance with water quality objectives. Such actions are of maximum benefit to the people of the state. Control of discharges of diazinon and chlorpyrifos to the Sacramento and Feather Rivers is necessary to protect beneficial uses of the Sacramento and Feather Rivers. The proposed amendment will not unreasonably affect present and anticipated beneficial uses nor result in water quality less than described in applicable policies because the amendment is intended to result in compliance with water quality objectives. The actions to be taken are not expected to cause other impacts on water quality.

21. The regulatory action proposed meets the "Necessity" standard of the Administrative Procedures Act, Government Code, section 11353, subdivision (b).
22. The basin planning process has been certified by the Resources Agency as an exempt regulatory program because its process adequately fulfills the purposes of the California Environmental Quality Act (CEQA). ~~as specified in Title 23 California Code of Regulations (23 CCR) section 3782 and The Central Valley Water Board is therefore exempt from the California Environmental Quality Act CEQA's requirements for preparing environmental documents to prepare an environmental impact report, negative declaration, or initial study (Public Resources Code, section 21000 et seq.) for the proposed amendment. Central Valley Water Board staff has prepared the required documentation for adoption of a Basin Plan Amendment, including a completed environmental checklist and written report (staff report) prepared for the Board (23 CCR section 3777).~~
23. The Central Valley Water Board staff held CEQA scoping meetings on 23 May 2006 and 15 February 2007 and a public workshop on 2 April 2006 to receive comments on the draft amendment and to identify any significant issues that must be considered.
24. Central Valley Water Board staff has prepared a draft amendment and a staff report dated April 2007. The staff report included a description of the proposed amendment and analysis of reasonable alternatives to the proposed amendment. The staff report included an analysis of the reasonably foreseeable environmental impacts of the methods of compliance and an analysis of the reasonably foreseeable alternative methods of compliance with the proposed amendment. No environmental impacts were identified based on the analysis of the reasonably foreseeable methods of compliance.
25. Central Valley Water Board staff completed an environmental checklist that concluded that the proposed amendment results in no potential for adverse effect, either individually or cumulatively, on fish, wildlife, or the environment.
26. Central Valley Water Board staff has circulated a Notice of Public Hearing, Notice of Filing, a written staff report, response to public comments documents, and environmental checklist, and a draft proposed amendment to interested individuals and public agencies, including persons having special expertise with regard to the environmental effects involved with the proposed amendment, for review and comment in accordance with state and federal environmental regulations (23 CCR section 3775, 40 CFR 25, and 40 CFR 131).

27. The Central Valley Water Board held a public hearing on [3 or 4] May 2007, for the purpose of receiving testimony on the draft Basin Plan amendment. Notice of the public hearing was sent to all interested persons and published in accordance with Water Code section 13244.
28. Based on the record as a whole, including draft Basin Plan amendments, the environmental document, accompanying written documentation, and public comments received, the Central Valley Water Board concurs with staff's conclusion that the amendments will not result in adverse effects on fish, wildlife, or the environment, and therefore no mitigation measures are proposed. The Central Valley Water Board finds that the record as a whole and the procedures followed by staff comply with applicable CEQA requirements (23 CCR section 3775 et seq, Public Resources Code sections 21080.5, 21083.9, and 21159, 14 CCR section 15187).
29. A Basin Plan amendment must be approved by the State Water Board, Office of Administrative Law (OAL), and the United States Environmental Protection Agency (USEPA) ~~before becoming effective.~~ The proposed amendment becomes effective under State law after OAL approval and becomes effective under the federal Clean Water Act after USEPA approval.
30. The Central Valley Water Board finds that the amendment to the Basin Plan was developed in accordance with Water Code section 13240, et seq.

THEREFORE BE IT RESOLVED:

1. Pursuant to section 13240, et seq. of the Water Code, the Central Valley Water Board, after considering the entire record, including oral testimony at the hearing, hereby approves the staff report and adopts the amendment to the Basin Plan as set forth in Attachment 1.
2. The Executive Officer is directed to forward copies of the Basin Plan amendment to the State Water Board in accordance with the requirements of section 13245 of the Water Code.
3. The Central Valley Water Board requests that the State Water Board approve the Basin Plan amendment in accordance with the requirements of sections 13245 and 13246 of the Water Code and forward it to OAL and the USEPA for approval. The Central Valley Water Board specifically requests USEPA approval of all Basin Plan amendment provisions that require US EPA approval.

4. If during its approval process the Central Valley Water Board staff, State Water Board or OAL determines that minor, non-substantive corrections to the language of the amendment are needed for clarity or consistency, the Executive Officer may make such changes, and shall inform the Central Valley Water Board of any such changes.
5. ~~The environmental documents prepared by Central Valley Water Board staff pursuant to Public Resources Code section 21080.5 are hereby certified and,~~ Following approval of the Basin Plan amendment by the OAL, the Executive Officer shall file a Notice of Decision with the State Clearinghouse.

I, PAMELA CREEDON, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of a Resolution adopted by the California Regional Water Quality Control Board, Central Valley Region, on **[3 or 4]** May 2007.

PAMELA CREEDON, Executive Officer

Attachments: Attachment 1: Amendment to Basin Plan for the Control of Diazinon and Chlorpyrifos Runoff into the Sacramento and Feather Rivers

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ATTACHMENT 1
CONTROL OF DIAZINON AND CHLORPYRIFOS RUNOFF
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RESOLUTION NO. R5-2007-XXXX
ATTACHMENT 1

AMENDMENTS 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 SACRAMENTO AND FEATHER RIVERS

Additions to the Basin Plan are shown as underlined text, and text removals are shown in
strikeout below. Revisions to the previous version of Attachment 1 are shown as double-
underline or double-strikeout.

CHANGES TO CHAPTER III, WATER QUALITY OBJECTIVES

Modify Table III-2A as follows:

TABLE III-2A

SPECIFIC PESTICIDE OBJECTIVES

<u>PESTICIDE</u>	<u>MAXIMUM CONCENTRATION AND AVERAGING PERIOD</u>	<u>APPLICABLE WATER BODIES</u>
Chlorpyrifos	0.025 µg/L ; 1-hour average (acute) 0.015 µg/L ; 4-day average (chronic) Not to be exceeded more than once in a three year period.	San Joaquin River from Mendota Dam to Vernalis (Reaches include Mendota Dam to Sack Dam (70), Sack Dam to Mouth of Merced River (71), Mouth of Merced River to Vernalis (83)). <u>Sacramento River from Shasta Dam to Colusa Basin Drain (13) and the Sacramento River from the Colusa Basin Drain to I Street Bridge (30). Feather River from Fish Barrier Dam to Sacramento River (40).</u>

Diazinon	0.16 µ g/L ; 1-hour average (acute) 0.10 µ g/L ; 4-day average (chronic) Not to be exceeded more than once in a three year period.	San Joaquin River from Mendota Dam to Vernalis (Reaches include Mendota Dam to Sack Dam (70), Sack Dam to Mouth of Merced River (71), Mouth of Merced River to Vernalis (83)), <u>Sacramento River from Shasta Dam to Colusa Basin Drain (13) and the Sacramento River from the Colusa Basin Drain to I Street Bridge (30). Feather River from Fish Barrier Dam to Sacramento River (40).</u>
Diazinon	0.080 µg/L ; 1-hour average 0.050 µg/L ; 4-day average Not to be exceeded more than once every three years on average.	Sacramento River from Shasta Dam to Colusa Basin Drain (13) and the Sacramento River from the Colusa Basin Drain to I Street Bridge (30). Feather River from Fish Barrier Dam to Sacramento River (40).

CHANGES TO CHAPTER IV, IMPLEMENTATION

Changes to the “Regional Water Board Prohibitions” Section

To the “Regional Water Board Prohibitions” Section, modify section 7. Diazinon Discharges into the Sacramento and Feather Rivers as follows:

7. Diazinon and Chlorpyrifos Discharges into the Sacramento and Feather Rivers

Beginning July 1, 2008 [U.S. EPA Approval Date], (i) the direct or indirect discharge of diazinon or chlorpyrifos into the Sacramento and Feather Rivers is prohibited if, in the previous year (July-June), any exceedance of the diazinon or chlorpyrifos water quality objectives, or diazinon and chlorpyrifos loading capacity occurred, and (ii) the direct or indirect discharge of diazinon into any sub watershed (identified in Table IV 7) is prohibited if, in the previous year (July-June), the load allocation was not met in that subwatershed. Prohibition (i) applies only to diazinon discharges that are tributary to or upstream from the location where the water quality objective was exceeded.

These prohibitions do not apply if the discharge of diazinon or chlorpyrifos is subject to a waiver of waste discharge requirements implementing the diazinon and chlorpyrifos

water quality objectives and load allocations for diazinon and chlorpyrifos for the Sacramento and Feather Rivers, or governed by individual or general waste discharge requirements.

These prohibitions apply only to dischargers causing or contributing to the exceedance of the water quality objective or loading capacity.

Changes to the “Pesticide Discharges from Nonpoint Sources” Section

Modify the Pesticide Discharges from Nonpoint Sources, as follows:

~~Orchard Pesticide Runoff and Diazinon Runoff into the Sacramento and Feather Rivers~~ Diazinon and Chlorpyrifos Runoff into the Sacramento and Feather Rivers

1. The ~~orchard~~ Sacramento and Feather River pesticide runoff ~~and diazinon runoff~~ control program shall:
 - a. ensure compliance with water quality objectives applicable to the diazinon and chlorpyrifos ~~water quality objectives~~ in the Sacramento and Feather Rivers through the implementation of ~~necessary~~ management practices;
 - b. ensure that measures that are implemented to reduce discharges of diazinon and chlorpyrifos ~~discharges~~ do not lead to an increase in the discharge of other pesticides to levels that ~~violate~~ cause or contribute to violations of applicable water quality objectives and Regional and State Water Board policies; and
 - c. ensure that ~~pesticide discharges from orchards~~ of pesticides to surface waters are controlled so that the pesticide ~~discharges~~ concentrations are at the lowest levels ~~that is~~ are technically and economically achievable.
2. ~~Orchard dischargers~~ Dischargers must consider whether a proposed alternative to diazinon or chlorpyrifos has the potential to degrade ground or surface water. If the alternative to diazinon or chlorpyrifos has the potential to degrade ground water, alternative pest control methods must be considered. If the alternative to diazinon or chlorpyrifos has the potential to degrade surface water, control measures must be implemented to ensure that applicable water quality objectives and Regional and State Water Board policies are not violated, including State Water Resources Control Board Resolution 68-16.
3. Compliance with water quality objectives, waste load allocations, and load allocations for diazinon and chlorpyrifos in the Sacramento and Feather Rivers is required by ~~June 30, 2008~~ [U.S. EPA Approval Date].

The water quality objectives and allocations will be implemented through ~~one or a~~

~~combination of the following: the adoption or modification of one or more waivers of waste discharge requirements, and general or individual waste discharge requirements where provisions necessary for implementation are not already in place. To the extent not already in place, the Regional Water Board expects to adopt or revise the appropriate waiver(s) or waste discharge requirements by December 31, 2007.~~

~~4. The waste load allocations for all NPDES permitted discharges are the diazinon water quality objectives.~~

~~5.4. The Regional Water Board will intends to review the diazinon and chlorpyrifos allocations and the implementation provisions in the Basin Plan at least once every five years, beginning no later than June 30, 2007 30 June 2013.~~

~~6.5. Regional Water Board staff will meet at least annually with staff from the Department of Pesticide Regulation and representatives from the California Agricultural Commissioners and Sealers Association to review pesticide use and instream pesticide concentrations during the dormant spray and irrigation application seasons and to consider the effectiveness of management measures in meeting water quality objectives and load allocations.~~

~~7. The Loading Capacity (LC) for diazinon is determined by:~~

~~LC=C x Q x a Unit Conversion Factor; where C= the maximum concentration established by the diazinon water quality objectives and Q= the flow (the daily average flow is used in conjunction with the 0.080 µg/L diazinon objective and the four day average flow is used in conjunction with the 0.050 µg/L diazinon objective). The LC will be calculated for the Sacramento River at I Street; the Sacramento River at Verona; the Sacramento River at Colusa; and the Feather River near its mouth. The value for Q (flow) in the Loading Capacity calculations for the Sacramento River sites will be increased to account for any flood control diversions into the Yolo Bypass or Butte Sink. The best available estimates of such diversions will be used.~~

~~8. The Load Allocation for discharges into the Sacramento River between Verona and I Street is determined by the following: [LC(Sacramento River at I Street) minus LC(Sacramento River at Verona)] multiplied by 0.70.~~

~~The Load Allocations required to meet the Loading Capacity in the Sacramento River at Verona are determined by multiplying the LC calculated for the Sacramento River at Verona by the Load Allocation factors in Table IV-7. If the calculated Load Allocation for the Feather River or Sacramento River at Colusa is greater than the Loading Capacity for that site, then the Loading Capacity for that site applies.~~

~~The Load Allocations establish the allowable diazinon load from nonpoint source dischargers.~~

~~Note: If the Sacramento River at Verona mean daily flow were 15,000 cubic feet per second or cfs, the loading capacity would equal approximately 2,900 grams/day for the 0.080 µg/L diazinon water quality objective. The Unit Conversion Factor would be 2.446.~~

~~The load allocations would be approximately 493 grams/day for the Colusa Basin Drain; 348 grams/day for the Feather River; 783 grams/day for the Sacramento River at Colusa; and 957 grams/day for Sutter/Butte.~~

~~If the mean daily flow in the Feather River were 5,000 cubic feet per second or cfs, the loading capacity would be approximately 978 grams/day for the 0.080 µg/L diazinon water quality objective. The Unit Conversion Factor would be 2.446.~~

~~If the load allocation for the Feather River for that day were 348 grams/day, the load allocation would apply.~~

6. The Waste Load Allocations (WLA) for all NPDES-permitted dischargers, Load Allocations (LA) for nonpoint source discharges, and the Loading Capacity of the Sacramento and Feather Rivers shall not exceed the sum (S) of one (1) as defined below.

$$S = \frac{C_D}{WQO_D} + \frac{C_C}{WQO_C} \leq 1.0$$

where

C_D = diazinon concentration in µg/L of point source discharge for the WLA; nonpoint source discharge for the LA; or the Sacramento or Feather Rivers for the LC.

C_C = chlorpyrifos concentration in µg/L of point source discharge for the WLA; nonpoint source discharge for the LA; or the Sacramento or Feather Rivers for the LC.

WQO_D = acute or chronic diazinon water quality objective in µg/L.

WQO_C = acute or chronic chlorpyrifos water quality objective in µg/L.

Available samples collected within the applicable averaging period for the water quality objective will be used to determine compliance with the allocations and loading capacity. Prior to performing any averaging calculations, only chlorpyrifos and diazinon results from the same sample will be used in calculating the sum (S). For purposes of calculating the sum (S) above, analytical results that are reported as "nondetectable" concentrations are considered to be zero.

Compliance with the load allocations will be determined where the nonpoint source discharges into the Sacramento or Feather Rivers.

- 9.7. The established waste load and load allocations for diazinon and chlorpyrifos, and the water quality objectives for diazinon and chlorpyrifos water quality objectives

in the Sacramento and Feather Rivers represent a maximum allowable level. The Regional Water Board shall require any additional reductions in diazinon or chlorpyrifos levels necessary to account for additive or synergistic toxicity effects or to protect beneficial uses in tributary waters.

~~40.8.~~ Pursuant to CWC §13267, the Executive Officer will require dischargers of ~~diazinon must to~~ submit a management plan that describes the actions that the discharger will take to reduce diazinon and chlorpyrifos discharges and meet the applicable allocations ~~by the required compliance date.~~

The management plan may include actions required by State and federal pesticide regulations. The Executive Officer will require the discharger must to document the relationship between the actions to be taken and the expected reductions in diazinon and chlorpyrifos discharge(s). The Executive Officer will allow individual individual dischargers or a discharger group or coalition ~~may to~~ submit management plans.

The management plan must comply with the provisions of any applicable waiver of waste discharge requirements or waste discharge requirements ~~and must be submitted no later than June 30, 2005.~~ The Regional Water Board Executive Officer may require revisions to the management plan if compliance with applicable allocations is not attained or the management plan is not reasonably likely to attain compliance. When requiring any revisions to the management plan, the Executive Officer may consider the relative contributions of diazinon and chlorpyrifos to the lack of compliance with the allocations.

~~41.9.~~ Any waiver of waste discharge requirements or waste discharge requirements that govern the control of ~~orchard pesticide runoff or diazinon runoff~~ that is discharged directly or indirectly into the Sacramento or Feather Rivers must be consistent with the policies and actions described in paragraphs 1-~~40~~ 8.

~~42.10.~~ In determining compliance with the waste load allocations, the Regional Water Board will consider any data or information submitted by the discharger regarding diazinon and chlorpyrifos inputs from sources outside of the jurisdiction of the permitted discharge, including any diazinon and chlorpyrifos present in precipitation; and any applicable provisions in the discharger's NPDES permit requiring the discharger to reduce the discharge of pollutants to the maximum extent practicable.

11. The above provisions for control of diazinon and chlorpyrifos discharges apply to the Sacramento and Feather Rivers as described in Table III-2A.

Table IV-7

**Load Allocation Factors for
Diazinon in the Sacramento
River Watershed**

Sub- Watershed	Load Allocation Factor
Colusa Basin Drain	17%
Feather River	12%
Sacramento River at Colusa	27%
Sutter/Butte	33%

Location Descriptions

~~Colusa Basin Drain is the Colusa Basin Drain at the confluence with the Sacramento River. The Colusa Basin Drain sub-watershed includes all land that drains into the Colusa Basin Drain.~~

~~Feather River is the Feather River near the confluence with the Sacramento River. The Feather River sub-watershed includes all land that drains into the Feather River below the Oroville Dam, but does not include flow from the Sutter Bypass.~~

~~Sacramento River at Colusa is the Sacramento River at the River Road bridge in the town of Colusa. (United States Geological Survey gauging Station 11389500) The Sacramento River at Colusa subwatershed includes all land below Shasta Dam that drains to the Sacramento River at Colusa.~~

~~Sutter/Butte is Sacramento Slough near the confluence with the Sacramento River or the sum of the Sutter Bypass near the confluence with the Feather River and Reclamation Slough near the confluence with the Sutter Bypass depending on flow conditions (minus diazinon loading resulting from Sacramento River water being bypassed into tributaries of Sacramento Slough or the Sutter Bypass). The Sutter/Butte sub-watershed includes all land that drains to Sacramento Slough, the Sutter Bypass, and Reclamation Slough.~~

~~Sacramento River at I Street is the Sacramento River at the I Street Bridge in the city of Sacramento.~~

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ATTACHMENT 1
CONTROL OF DIAZINON AND CHLORPYRIFOS RUNOFF
INTO THE SACRAMENTO AND FEATHER RIVERS

-8-

~~Sacramento River at Verona — is the Sacramento River at the United States Geological Survey gauging station at Verona (Station Number 11425500).~~

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

Sacramento and Feather Rivers ~~Orchard~~ Diazinon and Chlorpyrifos-Runoff Control Program

The total estimated costs for management practices to meet the diazinon and chlorpyrifos objectives for the Sacramento and Feather Rivers ~~are range~~ from a ~~\$0.3 million/ year cost savings to a \$3.8~~ \$0 to \$6.2 million/year cost (2004 2007 dollars). The estimated costs for discharger monitoring, planning, and evaluation ~~are range~~ from ~~\$0.5 to \$9.3~~ \$0.3 to \$1.5 million/year (2003 2007 dollars).

Potential funding sources include:

1. Those identified in the San Joaquin River Subsurface Agricultural Drainage Control Program and the Pesticide Control Program.

CHANGES TO CHAPTER 5, SURVEILLANCE AND MONITORING

~~Orchard Pesticide Runoff and~~ Diazinon and Chlorpyrifos Runoff into the Sacramento and Feather Rivers

The Regional Water Board requires a focused monitoring effort of agricultural pesticide runoff from orchards in the Sacramento Valley into the Sacramento and Feather Rivers.

The monitoring and reporting program for any waste discharge requirements or waiver of waste discharge requirements that addresses agricultural pesticide runoff from orchards in the Sacramento Valley into the Sacramento or Feather Rivers must be designed to collect the information necessary to:

1. determine compliance with established water quality objectives and the loading capacity applicable to ~~for~~ diazinon and chlorpyrifos in the Sacramento and Feather Rivers;
2. determine compliance with ~~established waste load allocations and~~ load allocations for diazinon and chlorpyrifos;
3. determine the degree of implementation of management practices to reduce off-site migration of diazinon and chlorpyrifos;
4. determine the effectiveness of management practices and strategies to reduce off-site migration of diazinon and chlorpyrifos;
5. determine whether alternatives to diazinon or chlorpyrifos are causing surface water quality impacts;

6. determine whether the discharge causes or contributes to a toxicity impairment due to additive or synergistic effects of multiple pollutants; and
7. demonstrate that management practices are achieving the lowest pesticide levels technically and economically achievable.

Dischargers are responsible for providing the necessary information. The 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.

**Item 9. Revisions to the Staff Report on Amendments for the Control of Diazinon and Chlorpyrifos Runoff into the Sacramento and Feather Rivers
27 April 2007 Version**

This document shows changes made to the March 27 Public Review Draft Staff Report.

Page 13 - in the Executive Summary add the following text after Consideration of Economics and CEQA:

Peer Review - Staff has determined that the scientific portions and scientific basis of the proposed Amendment to control discharges of diazinon and chlorpyrifos into the Sacramento and Feather Rivers are based on source material that has already been peer reviewed. The proposed Amendment is itself just a new application of earlier, adequately peer reviewed work products, specifically, the 2005 San Joaquin River (Resolution No. R5-2005-0138) and 2006 Delta (Resolution No. R5-2006-0061) Basin Plan Amendments to Control Diazinon and Chlorpyrifos. The proposed amendment does not depart from the scientific approach of the other Basin Plan Amendments from which it is derived. Therefore, the proposed amendment has already satisfied the peer review requirement of HSC 57004 and does not require additional peer review. The State Board's peer review coordinator has been consulted on this decision and has concurred with staff's assessment. A summary of previous peer review comments and a copy of the evaluation letter and the State Board Coordinator's response are included as Appendix E.

Appendix E – Peer Review Evaluation – a summary of the scientific peer review has been added to Appendix E. A revised Appendix E has been provided as a separate attachment.

Other Changes

When finalizing the Staff Report, staff may make other minor, non-substantive changes to clarify or enhance the readability of the Staff Report (e.g. formatting, grammar or spelling corrections). Staff may also change Section 3.0 (Proposed Amendments) to conform to the Basin Plan Amendment adopted by the Central Valley Water Board and any subsequent Executive Officer corrections.

CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY

REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

AMENDMENTS TO THE WATER QUALITY CONTROL PLAN FOR
THE SACRAMENTO RIVER AND
SAN JOAQUIN RIVER BASINS

FOR

THE CONTROL OF DIAZINON AND CHLORPYRIFOS RUNOFF
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APPENDIX E

PEER REVIEW EVALUATION

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PEER REVIEW SUMMARY

Staff has determined that the scientific portions and scientific basis of the proposed Amendment to control discharges of diazinon and chlorpyrifos into the Sacramento and Feather Rivers are based on source material that has already been peer reviewed. The proposed Amendment is itself just a new application of earlier, adequately peer reviewed work products, specifically, the 2005 San Joaquin River (Resolution No. R5-2005-0138) and 2006 Delta (Resolution No. R5-2006-0061) Basin Plan Amendments to Control Diazinon and Chlorpyrifos. The proposed amendment does not depart from the scientific approach of the other Basin Plan Amendments from which it is derived. Therefore, the proposed amendment has already satisfied the peer review requirement of HSC 57004 and, therefore, does not require additional peer review. The State Board's peer review coordinator has been consulted on this decision and has concurred with staff's assessment. A copy of the evaluation letter and the State Board Coordinator's response are attached following this summary.

The remainder of this section is a summary of the peer review comments received on previous Basin Plan amendments. Only the main thrust of the comment is summarized and the reader is referred to the source reports for additional background information about the comment. Also, only comments which are applicable to the proposed amendment and which require staff response will be summarized.

The peer reviewers were generally supportive of the scientific basis of the previous San Joaquin River and Delta Basin Plan Amendments, upon which this proposed Amendment is based. Those comments supportive of the scientific basis of the proposed Amendment do not require a response and will not be summarized. In addition, some comments are not applicable to the proposed amendment. For example, comments on how to assess compliance within a tidal delta are not relevant to the Sacramento and Feather Rivers, which are not tidally influenced in the project area. Finally, comments that are very similar or were discussed in multiple peer reviews (i.e. additivity), will only be discussed once below.

Where appropriate, comments from the peer review of the previous Basin Plan amendments have been reviewed and incorporated into this staff report as

described below. Where staff disagrees with a peer review comment, an explanation of staff's position is provided below.

Thomas M. Holsen PhD., Director Environmental Manufacturing Management Program, Department of Civil and Environmental Engineering, Clarkson University.

COMMENT 1: Monitoring for Toxicity is critical given the likelihood that other pollutants will be present

RESPONSE 1: Monitoring Goal 6 of the existing Basin Plan language includes language identifying toxicity monitoring goals.

COMMENT 2: The potential additive and synergistic effect on diazinon and chlorpyrifos of other pollutants (esp. atrazine, cyanazine and hexazinone) should be addressed in the amendment.

RESPONSE 2: Additivity with other compounds is discussed in Section 5.1.5. In regards to the specific pesticides referenced, McClure et al. 2006 found that the level at which additive and synergistic affects was seen was at levels significantly higher than what is observed in the environment. A similar assertion was provided in the Peer Review Comments of Dr. Felsot (See Comment 6 below).

COMMENT 3: The role of atmospheric deposition of diazinon and chlorpyrifos should be considered in the staff report.

RESPONSE 3: The staff report includes a discussion of the role of atmospheric deposition in Section 2.0.

***Allan Felsot, PhD., Professor and Extension Specialist,
Department of Entomology, Washington State University &
College of Agriculture Food and Environmental Quality Lab.***

Dr. Felsot was involved in the peer review for both the Delta and the San Joaquin River Amendments. Relevant comments from both peer reviews are included below.

COMMENT 4: The monitoring plan should not preclude providing a strong incentive for agricultural dischargers to show progress in implementing management practices recommended for meeting the TMDL requirements. One such incentive could be tying the sampling frequency to implementation of best management practices.

RESPONSE 4: This comment was made in the context of a complex Delta Hydrology where numerous sampling sites would be required to demonstrate compliance with the objectives. However, the principles do apply to the Sacramento and Feather River, though to a lesser extent. The hydrology of the Sacramento and Feather Rivers is less complex and does not require the same level of monitoring burden required for the Delta. Section 3.0 of this staff report provides the proposed Basin Plan monitoring language and Section 8.0 discusses the rationale for the proposed language. One of the monitoring goals is to provide sufficient information to determine the effectiveness of management practices and strategies to reduce off-site migration of diazinon and chlorpyrifos. This goal would not preclude reduced monitoring if growers are successful in controlling pesticide concentrations through the use of management practices.

COMMENT 5: In regards to monitoring goal 5, alternative pesticides and water quality, it is reasonable to first monitor changes in pesticide use pattern prior rather than recommend monitoring for alternative pesticides. Specifically, IPM guidance suggests that pyrethroids are not necessarily a substitute for dormant OP Pesticides. And other pesticides are unlikely to be as problematic due to the high toxicity of Chlorpyrifos.

RESPONSE 5: As discussed in Section 8, fulfilling monitoring goal 5 would certainly include reviewing use data. However additional monitoring is appropriate. DPR use data indicates that pyrethroids are used in the dormant season, therefore pyrethroid monitoring is recommended. Toxicity testing is needed to verify the presence or absence of any potential toxic effects of alternative products used in the Sacramento and Feather River Watersheds. Monitoring goal 5 provides broad direction on the purpose and goal of the monitoring. The goal does not preclude adjusting the timing and amount of monitoring based on changes in pesticide use data and monitoring results.

COMMENT 6: Dr. Felsot commented on staff's approach to additivity and interactions with other compounds in both the San Joaquin River and the Delta Amendments. In the San Joaquin River Amendment, Dr. Felsot suggested that the additivity formula was inappropriate to use and

recommended an alternative formula. As part of the response to that comment, staff demonstrated how the recommended replacement method was mathematically equivalent to the Basin Plan additivity formula. This comparison is discussed in Section 5.1.5 of this staff report, and the mathematical demonstration is reproduced in Appendix D.

In the Delta Amendment, Dr. Felsot agreed that from a risk management perspective the Basin Plan additivity formula is reasonable. However, he remarked that the water quality objectives are quite protective of nearly every aquatic invertebrate in the toxicity databases. Therefore, concerns about additivity with other contaminants seemed inappropriate at the prevalent residue levels of the subject OPs.

Dr. Felsot suggested that if synergism is a concern, then antagonism should also be considered as a likely hypothesis. He went on to summarize several studies on synergism between OPs and other pesticides, and noted that the concentration of the secondary compound is typically unrealistically high. Dr. Felsot asserted that if appropriate BMPs are implemented to prevent OP insecticide translocation to surface waters, then the issue of additivity and synergism is moot and no additional testing or monitoring for synergistic interactions should be required.

RESPONSE 6: The Peer Reviewer was supportive of the application of the additivity formula. Additivity between diazinon and chlorpyrifos is discussed in Section 5.1.5. Central Valley Waterways including the Sacramento and Feather Rivers often have multiple co-occurring pesticides and other pollutants. The potential toxic effects of these pollutant combinations are not fully understood at this time. In order to ensure that diazinon and/or chlorpyrifos are not contributing to a toxic effect in exceedance of our Basin Plan's narrative toxicity objective, the goal of monitoring for these toxic effects was kept in the proposed Basin Plan Amendment. Toxicity testing would be sensitive to antagonistic effects as well as synergistic effects. Mention of antagonistic effects is included Section 8 of the staff report in the discussion of Monitoring goal 6 in the monitoring section of the staff report.¹



California Regional Water Quality Control Board Central Valley Region

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TO: Gerald W. Bowes, Ph.D.,
Staff Toxicologist (Sup.)
Manager, Toxicology and Peer
Review Section
Division of Water Quality
State Water Resources Control
Board

FROM: Ken Landau
Assistant Executive Officer
Regional Water Quality Control
Board, Central Valley Region

SIGNATURE: 

DATE: 9 November 2006

SUBJECT: EVALUATION OF NEED FOR SCIENTIFIC PEER REVIEW OF THE
SACRAMENTO AND FEATHER RIVERS DIAZINON AND CHLORPYRIFOS
BASIN PLAN AMENDMENT

This memo serves to document Regional Water Quality Control Board, Central Valley Region (Central Valley Water Board) staff's understanding of the applicability of, and compliance with, Health and Safety Code Section 57004 (HSC 57004) peer review requirements as it pertains to the proposed Basin Plan Amendment to Control Discharges of Diazinon and Chlorpyrifos into the Sacramento and Feather Rivers (the Proposed Amendment). This memo replaces the memo dated 27 October 2006, which we previously sent to you. We had mistakenly indicated that the USEPA guidance was "generally" followed in the proposed and the previous Amendments. In fact, the US EPA Guidance for calculating aquatic life criteria was strictly followed.

Background:

In 2003, the Central Valley Water Board issued resolution R5-2003-0148, which approved a Basin Plan Amendment establishing diazinon water quality objectives, total maximum daily loads (TMDLs) and implementation plans for diazinon in the Sacramento and Feather Rivers (Original Amendment). The Original Amendment was peer reviewed and staff responded to peer review comments in accordance with HSC 57004 requirements. The Original Amendment has been approved by the State Water Resources Control Board (State Water Board), the Office of Administrative Law (OAL) and the US EPA, and serves as the baseline language for the Proposed Amendment.

The Original Amendment included the requirement to review the diazinon allocations and the implementation provisions in the Basin Plan at least once every 5 years, beginning no later than June 30, 2007. The Proposed Amendment is being prepared to meet this review requirement and respond to a Superior Court Order. The Proposed Amendment also has the goal to establish programmatic consistency between watersheds by establishing water quality objectives and implementation plans for chlorpyrifos in addition to diazinon.

Since approval and adoption of the Original Amendment, new information has been provided to Central Valley Water Board staff that calls into question some of the data used to establish the diazinon water quality objectives. The Original Amendment adopted the California Department of Fish and Game (CDFG) diazinon criteria as the water quality objective. The new information showed that the dataset used by CDFG included a toxicity value that was incorrectly reported in the literature. Central Valley Water Board staff recalculated the diazinon objectives using a corrected dataset that excluded the questionable data point. After correction, the new water quality objectives are approximately twice the original objectives.

In 2005 and 2006, the Central Valley Water Board adopted two other Basin Plan amendments that are relevant to the current project. In 2005, the Central Valley Water Board issued resolution R5-2005-0138 to control diazinon and chlorpyrifos in the San Joaquin River (the San Joaquin River Amendment). In 2006, the Central Valley Water Board issued resolution R5-2006-0061 to control diazinon and chlorpyrifos in the Sacramento-San Joaquin Delta (the Delta Amendment). Both Amendments adopted the new diazinon water quality objectives, calculated using the corrected data set.

The San Joaquin River Amendment has been approved by the State Water Board and OAL and is currently awaiting approval by the US EPA. The Delta Amendment is awaiting approval by the State Water Board, OAL and the US EPA. Both amendments were peer reviewed, and included staff response to peer review comments, in accordance with HSC 57004. Work performed and peer reviewed under these amendments, as well as work performed as part of the Original Amendment, has been applied to the Sacramento and Feather Rivers as part of the Proposed Amendment.

Legal Basis for Peer Review

According to the Health and Safety Code, section 57004(d):

“No board, department, or office within the agency shall take any action to adopt the final version of a rule unless [the Board] submits the scientific portions of the proposed rule, along with a statement of the scientific findings, conclusions, and assumptions on which the scientific portions of the proposed rule are based and the supporting scientific data, studies, and other appropriate materials, to the external scientific peer review entity for its evaluation.”

The State Water Board Administrative Procedures Manual (APM) Section 8, III.D. clarifies that

“Peer review is not needed for source documents that have been previously peer reviewed by a recognized expert or body of experts.

In addition the Peer Review Guidance (Bowes 2004) clarifies that:

“There are several circumstances where work products do not require review peer review under [HSC 57004], including:

A particular work product that has been peer reviewed with a known record by a recognized expert or expert body. Additional peer review is not required if a new application of an adequately peer reviewed work product does not depart significantly from its scientific approach."

Evaluation of Need for Peer Review

Table 1 provides a list of the scientific elements of the Proposed Amendment and identifies the previous amendments that were used as sources in developing the Proposed Amendment. All of the previous Basin Plan amendments qualify as source documents that have been previously peer reviewed by a recognized expert or body of experts. As such, scientific portions of the Proposed Amendment and aspects of its scientific basis have been through a complete peer review process in accordance with HSC 57004.

TABLE 1
SUMMARY OF PEER REVIEW OF SCIENTIFIC BASIS OF BASIN PLAN
AMENDMENT ELEMENTS

Proposed Amendment Element	Proposed Approach	Prior Scientific Peer Review
Diazinon and Chlorpyrifos Water Quality Objectives	Adopt diazinon and chlorpyrifos water quality objectives derived by staff using the US EPA methodology and the revised CDFG dataset	<ul style="list-style-type: none"> • San Joaquin River Amendment • Delta Amendment
Loading Capacity	Additivity formula sums the ratios of the concentration of each pesticide to their respective water quality objectives. Sums greater than one exceed the narrative toxicity objective.	<ul style="list-style-type: none"> • San Joaquin River Amendment • Delta Amendment
Allocation methodology	Allocations are set equal to the loading capacity	<ul style="list-style-type: none"> • San Joaquin River Amendment • Delta Amendment
Monitoring	Add chlorpyrifos as a pesticide that must be included in a monitoring program	<ul style="list-style-type: none"> • San Joaquin River Amendment • Delta Amendment • Original Amendment

In addition to relying on the previously peer reviewed Basin Plan amendments as source documents, the Proposed Amendment also utilized the same scientific approach. The following is a list of elements of the Proposed Amendment and how the scientific approach is equivalent to the previously peer reviewed Basin Plan amendments.

1. Diazinon and chlorpyrifos water quality objectives.

The US EPA methodology for deriving criteria, used in the Original Amendment and also in the San Joaquin River and Delta Amendments, has been applied to the Proposed Amendment. The recommended diazinon and chlorpyrifos water quality objectives for the Proposed Amendment are based on a recalculation of the California Department of Fish and Game's (CDFG) diazinon and chlorpyrifos water quality criteria (Siepmann and Finlayson, 2000). Central Valley Water Board staff followed the US EPA guidance on the derivation of criteria for the protection of aquatic life (USEPA, 1985). The water quality objectives for the Proposed Amendment are identical to the

Delta and San Joaquin River objectives. As with the San Joaquin River and Delta Amendments, the CDFG criteria were recalculated to utilize a revised dataset and to express the criteria to two significant figures, consistent with the USEPA guidance. As with the San Joaquin River and Delta Amendments, the frequency with which the criteria can be exceeded has been changed from the USEPA guidance recommendation of once every three years on the average to once every three-year period to simplify evaluation of compliance.

2. Loading capacity

The approach to setting the loading capacity used in the San Joaquin River and Delta Amendments is also proposed for the Sacramento and Feather Rivers. Specifically, the Proposed Amendment sets the loading capacity equal to the existing additive formula, which accounts for the additive effects of chemicals with the same mode of action. The formula sums the ratios of the concentration of each pesticide in the water body to the applicable objective for that pesticide. A sum of greater than one (1) indicates that applicable narrative objectives are not met. The additive formula is applied to both the loading capacity and allocations (i.e. the sum of the ratio of the concentrations). This is the identical approach that was taken with the San Joaquin and Delta Amendments.

3. Allocation methodology

Allocations are proposed to be set equal to the loading capacity. This approach is identical to the peer reviewed approach used in the San Joaquin River and Delta Amendments.

4. Monitoring

The current Basin Plan as amended by the Original Amendment defines goals for required monitoring to determine whether the water quality objectives and load allocations are being met. The only proposed change in the Proposed Amendment compared to the Original Amendment is the policy decision to explicitly include chlorpyrifos as one of the pesticides to monitor. The recommended approach has been peer reviewed in the Original Amendment and in the San Joaquin and Delta Amendments.

Conclusion

Based on Staff's understanding of HSC 57004 and APM Section 8, III. D., staff has determined that the scientific portions and scientific basis of the Proposed Amendment to control discharges of diazinon and chlorpyrifos into the Sacramento and Feather Rivers are based on source material that has already been peer reviewed. The Proposed Amendment is itself just a new application of earlier, adequately peer reviewed work products. As shown above, it does not depart from the scientific approach of the other Basin Plan Amendments from which it is derived. Therefore, the Proposed Amendment has already satisfied the peer review requirement of HSC 57004 and, therefore, does not require additional peer review.

Should you have any comments or questions about this assessment, please contact either Paul Hann at (916) 464-4628 or phann@waterboards.ca.gov or Joe Karkoski at (916) 464-4668 or jkarkoski@waterboards.ca.gov.

References:

- Beaulaurier, D., G. Davis, J. Karkoski, M. McCarthy, D. McClure, M. Menconi. 2005. Amendments 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. California Regional Water Quality Control Board, Central Valley Region. Sacramento, CA.
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Arnold Schwarzenegger
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TO: Ken Landau
Assistant Executive Officer
Central Valley Regional Water Board

Gerald W. Bowes

FROM: Gerald W. Bowes, Ph.D., Manager
Toxicology and Peer Review Section
Division of Water Quality

DATE: November 20, 2006

SUBJECT: EVALUATION OF NEED FOR SCIENTIFIC PEER REVIEW OF THE
PROPOSED SACRAMENTO AND FEATHER RIVERS DIAZINON AND
CHLORPYRIFOS BASIN PLAN AMENDMENT

This memorandum responds to your November 9, 2006 communication on the subject above. Your staff has concluded that the proposed Basin Plan Amendment does not have to be submitted for external scientific peer review, which normally is a requirement of Health and Safety Code Section 57004 for proposed rules. According to staff, the scientific approach is identical to that employed in two other peer reviewed Basin Plan Amendments adopted in the last two years by your Board for the same two organophosphorous pesticides. These are referred to as the "San Joaquin River Amendment" and the "Delta Amendment."

As noted in your memorandum, one of the circumstances where work products may not be subject to external peer review is when it has been "peer reviewed previously with a known record by a recognized expert or expert body" . . . and "does not depart significantly from its scientific approach." This clarification appears in the peer review guidelines for the State and Regional Water Boards, as you noted. It is based on text that appears in the following document: Unified California Environmental Protection Agency. Policy and Guiding Principles for External Scientific Peer Review. March 13, 1998.

I also talked with your staff. Based on these discussions and the information provided in your letter, I conclude that the proposed Basin Plan Amendment does not have to be submitted for external peer review. The basis for my conclusion follows. If any of this is not accurate, please let me know and we will discuss the matter further.

California Environmental Protection Agency

Water Quality Objectives

1. The "original" 2003 Basin Plan Amendment (for which the proposed amendment is an update) established water quality objectives, TMDLs, and an implementation plan for diazinon in the Sacramento and Feather Rivers. Chlorpyrifos was not included in the original Amendment.
2. Subsequent to adoption of the original Basin Plan Amendment, new information about the dataset that was used to establish criteria (and, subsequently objectives) for diazinon showed that it contained some incorrect information. The corrected criteria were approximately twice the original values, as noted in your letter.
3. In 2005 and 2006, the Central Valley Water Board adopted two additional Basin Plan Amendments that included water quality objectives for diazinon. These are the "San Joaquin River Amendment," and the "Delta Amendment," referred to above. The corrected, higher values for diazinon were used in these amendments. Before adoption, each of the two amendments was submitted for external peer review, following the requirements of Health and Safety Code Section 57004. The rationale for establishing the diazinon objectives based on the higher criteria was reviewed and accepted by the reviewers.
4. The San Joaquin River Amendment and the Delta Amendment also included objectives for chlorpyrifos. The proposed chlorpyrifos objectives were reviewed and accepted by the external reviewers.

Implementation of Water Quality Objectives

1. Loading Capacity. The approach for determining loading capacity for diazinon and chlorpyrifos for the proposed Sacramento and Feather Rivers Basin Plan Amendment is the same as that used for the San Joaquin River Amendment and the Delta Amendment. This is based on a formula which "sums the ratios of the concentration of each pesticide in the water body to the applicable objective for that pesticide. A sum of greater than one (1) indicates that the applicable narrative objectives are not met."
2. Allocation Methodology. "Allocations are proposed to be set equal to the loading capacity." Again, this methodology is stated to be identical to the one employed in the San Joaquin River and Delta Amendments.
3. Monitoring. The original Amendment did not include chlorpyrifos, but the proposed Amendment includes both diazinon and chlorpyrifos. The monitoring strategy is identical to that in the San Joaquin River and Delta Amendments.

With respect to (1) Loading Capacity, (2) Allocation Methodology, and (3) Monitoring, I assume that the external peer reviewers have concurred with the approaches taken for all the Amendments referred to. However, as you are aware, Health and Safety Code

Section 57004 allows flexibility in responding to a reviewer's comment which may be critical of a certain part of the proposed rule's scientific basis. The organization requesting review of its proposed rule may change the proposal to conform to a reviewer's recommendation, or it may choose not to. In the latter circumstance, the organization requesting peer review must demonstrate why its approach is based on sound scientific principles. If the latter course of action was taken for any scientific component in the San Joaquin River Amendment and the Delta Amendment, or for the proposed Amendment, Health and Safety Code Section 57004 states the following: [the Cal/EPA organization] "shall explain, and include as part of the rulemaking record, its basis for arriving at such a determination in the adoption of the final rule, including the reasons why it has determined that the scientific portions of the proposed rule are based on sound scientific knowledge, methods, and practices." This determination and supporting rationale also would have to be brought to the attention of the Board at the time the proposed Amendment is adopted. In adopting the proposed Amendment, the Board would be concurring with staff's rationale.

The proposed Amendment does not appear to contain any new scientific components compared to the San Joaquin River and Delta Amendments.

If you have any questions concerning the above, please contact me at (916) 341-5567 (gbowes@waterboards.ca.gov).

cc: Frances McChesney, OCC