

COMMENT LETTERS

By the close of the 45-day public review and comment period that ended September 19, 2005, we received comments from the following ten organizations. To streamline the package, we removed attachments that contain previously submitted comments and other supporting documents. We will include these attachments in the administrative record and respond to them as appropriate when we respond to all written comments.

- U.S. Environmental Protection Agency
- California Department of Pesticide Regulation
- Baykeeper
- Bay Area Stormwater Management Agencies Association
Attachment—General and Specific Comments
- Alameda Countywide Clean Water Program
- Santa Clara Valley Urban Runoff Pollution Prevention Program
- City of San Jose
- California Department of Transportation
- Big Valley Termite
Attachment—September 16, 2005 Letter
- Caltest Analytical Laboratory

September 19, 2005

Bill Johnson
San Francisco Bay Regional Water Quality Control Board
1515 Clay St. Suite 1400
Oakland, CA 94612

Dear Mr. Johnson

Thank you for the opportunity to review and comment on the Amendments to The Water Quality Control Plan for the Diazinon and Pesticide-Related Toxicity in Bay Area Urban Creeks Diazinon TMDL Report dated August 5, 2005. We reviewed the proposed actions to determine whether they are consistent with applicable federal regulations concerning TMDLs. We appreciate the Regional Board's very hard work and careful analyses to develop this report. We commend your work on both the dual numeric targets for both pesticide-related toxicity and diazinon, and on the implementation plan which centers on pollution prevention. This letter provides our comments.

- We support the expression of numeric targets in terms of both as pesticide-related toxicity and diazinon concentration. This is particularly important with the recent phase out of diazinon and the concurrent increase in alternative pesticides trend. In addition, as your report states, "the toxicity target address potential interactions among whatever pesticides and other chemicals may be present in Bay Area urban creeks". This approach is supported by a recent paper addressing pesticide mixtures and their interactions (Lydy et al., 2004).
- We suggest some additional clarification on the paragraph on pesticide-related toxicity that discusses expression of toxicity units (TUs). We support the target being expressed as both an acute and chronic TU based on multi-concentration testing approach to derive the either the no observed effect concentration (NOEC) (for chronic) or a no observed adverse effect concentration (NOAEC) (for acute). We recognize that ambient testing may be employed using a single concentration of 100% water compared to a control. This approach has been utilized in a watershed regime to capture more events and samples for a fraction of the cost of the multi-concentration tests. However, we suggest the following word change, "In cases where an ambient water (100%) is compared to control then the sample should not exhibit an acute or chronic toxic effect (the ambient sample may not be significantly different from the control based on a statistical approach such as using a (t-test)". If this single concentration (100% ambient) sample is statistically significant, then it would be necessary to employ multi-concentration testing to elicit the NOEC. If this single concentration (100% ambient) sample is not statistically significant, then the sample would be achieving the pesticide-

related toxicity target. In addition, we suggest striking the language, “at least 20% greater than observed in control sample should be assumed to have a NOAEC or NOEC 100%.” First, the single concentration testing approach cannot generate NOAEC or NOEC values. A single concentration compared to a control only informs you of the statistical difference between the two treatments. Secondly, we do not support the additional requirement that it must also be 20% greater than observed in the controls because a site that is frequently statistically significant may elicit toxic responses less than 20% of the time and therefore would not be addressed. This would not achieve aquatic life protection.

- We support expression of the TMDL in concentration units equal to the targets. Expression in concentration units versus mass loading is consistent with the recent TMDLs adopted for the Sacramento, Newport Bay, and San Diego areas.
- We support the implementation strategy that focuses on three areas: regulatory programs, education and outreach, and research and monitoring. We encourage the voluntary actions by the Water Board, USEPA, California, Department of Pesticide Regulation and other entities. We applaud you for your ongoing efforts in these areas such as supporting and funding research efforts to enhance pyrethroid analytical methods, evaluate urban trends, education and communication efforts through the Urban Pesticide Committee. All of these efforts lead to implementing effective strategies. This information will not only be useful for the Bay area, but also for other watersheds in California.
- We recognize the need for more pesticide water quality criteria and, therefore applaud your approach in developing monitoring benchmarks based on appropriate safety factors tiered based on number of data requirements satisfied. This is a reasonable approach and supported by the peer review comments by Dr. Felsot. Please correct one minor error in footnote a, “USEPA water quality criteria guidelines required data for at least eight families (instead of genera) to generate water quality criteria”.

In closing, we commend you for your hard work on the diazinon TMDL. We are committed to working with the State to identify approaches that address our shared goals of accomplishing reductions of pesticide levels in the water bodies while ensuring that legal requirements are met. We would be happy to meet with you to discuss these issues further. If you have any questions or further discussions, please call me at 916-341-5520 or denton.debra@epa.gov.

Sincerely,

Debra Denton, PhD
Environmental Scientist

Reference:

Lydy MJ, Belden JB, Wheelock CE, Hammock BD, Denton, DL. 2004. Challenges in regulating pesticide mixtures. *Ecology and Society*. 9(6):1.



Department of Pesticide Regulation



Mary-Ann Warmerdam
Director

MEMORANDUM

Arnold Schwarzenegger
Governor

TO: Bill Johnson, Environmental Scientist
California Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, California 94612

FROM: Douglas Y. Okumura, Assistant Director
Division of Pest Management, Environmental
Monitoring, Enforcement, and Licensing
(916) 445-3984

DATE: September 19, 2005

SUBJECT: COMMENTS ON PROPOSED BASIN PLAN AMENDMENT AND STAFF
REPORT

Thank you for the opportunity to comment on the document titled *Diazinon and Pesticide-Related Toxicity in Bay Area Urban Creeks*, which includes a proposed amendment to the San Francisco Bay Regional Water Quality Control Board's (Regional Board's) Basin Plan. The Department of Pesticide Regulation's (DPR's) comments are offered below.

Page 29, "Water Boards" section: This section does not appropriately orient the reader for descriptions of Regional Board activities that follow. Given the breadth of authorities and programs that the Regional Board can bring to bear on addressing water quality issues, the selection of the two sections of the California Water Code is puzzling. California Water Code section 13247 was not mentioned again in the report; California Water Code section 13225 is later described (in the report's section 4, *Environmental Impacts and Alternatives Analysis*). Unless the Regional Board is proposing to invoke these statutes, there is no purpose in singling them out. Additionally, this section of the report is too selective and too brief to provide appropriate background for the Implementation Plan and proposed Basin Plan amendment. DPR recommends amending this section so that it provides a concise, objective overview of the Regional Board's mandates and authorities so that subsequent sections of the report and the proposed amendment can be explained in the proper context.

Page 31, paragraph 2, sentence 2: To more correctly paraphrase in Title 3, California Code of Regulations (3CCR) section 6220, DPR recommends you replace "could adversely affect the environment" with "may have caused, or is likely to cause, a significant adverse impact."

Page 30, paragraph 1, sentence 1: DPR regulates the sales and use of pesticides in California, but not the manufacture.



Page 31, second paragraph: Contrary to the implication in the text of the report, 3CCR section 6158, does not help interpret “environmental harm,” nor does it describe DPR’s latitude in defining the term. Title 3CCR section 6158 simply instructs DPR to give special attention during the registration process to specific factors, such as interference with the attainment of applicable environmental standards, and DPR’s requirements and authorities to prevent environmental harm from pesticides. Title 3CCR section 6158 does not specifically link these requirements and authorities with attainment of environmental standards. According to this regulation, DPR is to act if after considering these factors, it anticipates significant adverse effects. DPR recommends amending this section to clarify this point.

Page 39, second paragraph, sentence 3: The statement “. . . all urban creeks are likely impaired . . .” is supported by an underlying assumption that urban watersheds in the San Francisco Bay area have similar land use patterns, hydrology, and pesticide use patterns, resulting in similar pesticide runoff scenarios. It would be useful to specifically state this assumption since some stakeholders are apprehensive about making conclusions about water quality in specific creeks for which no data exist.

Page 40, last paragraph, sentence 1: The author of the San Francisco Estuary Project (2005a) noted several assumptions when she estimated the fraction of pesticide use in California that occurs in urban areas. A more correct representation of the San Francisco Estuary Project (2005a) would be “. . . at least 50% and up to 75% of the pesticide use by weight occurs in urban areas”

Page 42, third bullet: Perhaps this bullet is too declarative given the lack of data. It would be more correct to state, “All urban creeks probably receive pesticide discharges”

Page 45, paragraph 2: Is it customary in total maximum daily loads source assessments to trace the origin of a pollutant all the way back to its manufacture? For trash total maximum daily loads, for example, would trash be considered the result of paper manufacture? In the case of pesticides, such an approach detracts from the importance of the most valid causes of pesticide pollution: uses of specific pesticides in situations where pesticides are most prone to be deposited directly in water and where irrigation or rain runoff transports pesticides to surface waters. We recommend modifying text and Figure 6.2 so that you do not suggest that runoff is the result of manufacturing, formulating, and selling pesticides.

Page 62, paragraph 3: In order to comment on the nature of the proposed diazinon concentration targets, the staff report should more completely describe how the proposed numeric targets were derived. The report should include the no adverse effect concentrations from Moore and Waring (1996) and Scholz et al. (2000). Presumably, these values will support the Regional Board’s selection of water quality criteria for diazinon. If they are higher than the Department

of Fish and Game's (DFG's) recommended acute criterion of 160 ng/l and chronic criterion of 100 ng/l, then the Regional Board should adopt DFG's values.

Page 75, second bullet, sentence 5: The proposed numeric targets would more accurately be described as a departure of the usual application of the U.S. Environmental Protection Agency's (U.S. EPA's) guidance for deriving water quality criteria. The usual application of the guidance—the application used by DFG—uses toxicity data from eight taxonomic categories of aquatic organisms to generate acute and chronic values that are translated into acute and chronic criteria. Instead, the Regional Board proposed values based on diazinon concentrations that elicit behavioral responses in a single taxonomic group. U.S. EPA's guidance specifically supports criteria developed under these circumstances, but it is incorrect to state that the diazinon target is largely based on criteria developed by DFG using U.S. EPA guidelines.

Page 80, Table 10.1: Please provide references for information presented in this table.

Page 81, paragraph 3: DPR recommends that the Regional Board state that the proposed actions are the result of consultations with many stakeholders, including DPR. A cooperative and collaborative approach among stakeholders enables agencies to leverage limited resources in order to improve water quality.

Page 81, paragraph 3, sentence 2: To be consistent with other references in the report and the proposed Basin Plan amendment that relate to recommended actions, “will need to” should be changed to “should.” In addition, this sentence references section 4. As commented on earlier, the incomplete description of Regional Board (and other agencies’) mandates and authorities in section 4 does not appropriately prepare the reader to comprehend these proposed implementation actions.

Page 81, paragraph 4, sentence 2: It is not obvious in the implementation plan or proposed Basin Plan amendment how the Regional Board would require those responsible for pesticide use and oversight (e.g., DPR?) to take actions that will reduce pesticide-related water quality threats. More information in the report would be helpful.

Page 82, last paragraph (resumes on page 84), sentence 5: DPR looks forward to cooperating with the Regional Board in researching topics of common interest to the extent our resources allow. However, DPR has not allocated resources to respond to Regional Board requirements or directives to investigate technical factors involving water quality control and hopes there will not be an occasion to invoke California Water Code section 13225(c) with DPR.

Page 90, paragraph 2, sentence 2: The report should avoid the suggestion that DPR is being directed to use its authorities in a particular way. Please change “is to ensure” to “should.”

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Page 91, third bullet: Presumably, “must share responsibility” is not meant to be considered in a regulatory context. It would helpful if the text is made more specific.

Page 97, paragraph 1: This is an appropriate proposed use of monitoring benchmarks.

Page 102, paragraph 3: DPR is also responsible for implementing the Healthy Schools Act of 2000, which requires DPR to promote and facilitate adoption of the integrated pesticide management practices on California school sites.

Page 111, paragraph 3, sentence 4: California Water Code section 13267 apparently limits the Regional Board’s authority to obtain technical and monitoring reports from only dischargers. We recommend that the report should provide more rationale on how reporting requirements may be placed on pesticide registrants or this reference to California Water Code section 13267 should be deleted.

Page 111, paragraph 3, sentence 5: As stated above, DPR hopes that a cooperative relationship between DPR and the Regional Board would obviate the need for the Regional Board to invoke California Water Code section 13225 to obtain information from DPR.

Page 115, paragraph 1: While DPR cannot currently allocate \$675,000 per year as suggested, it is committed to cooperate and collaborate with the Regional Board in implementing the elements of Table 10.4. to the extent that its current resources and authorities allow.

Page S-1, paragraph 4, sentence 3: Pesticide regulatory programs are implemented in conformity with legislative mandates and authorities. It would be more correct to state that incongruities among controlling statutes may result in pesticide regulatory programs that do not always protect water quality standards adopted by the Regional Water Regional Water Quality Control Board (Regional Board).

Page S-2, paragraph 1, sentence 3: See comments on text on Page 45, paragraph 2 in the main body of the report.

Page S-2, paragraph 3, sentence 3: Degradation is usually considered a fate process, not a transport mechanism.

Page S-3, paragraph 2, last sentence: See comments on text on Page 81, paragraph 4, sentence 2 in the main body of the report.

Page A-3, paragraph 4: As comments on page 62, paragraph 3 stated earlier, in order to comment on the nature of the proposed diazinon concentration targets, the staff report should more completely describe how the proposed numeric targets were derived.

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Page A-6, last paragraph (resumes on page A-7), last sentence: DPR's interpretation of the Food and Agricultural Code (FAC) is that it is DPR's responsibility to determine when conditions related to pesticide sales and use are environmentally harmful. It is therefore unnecessary for the Regional Board to make such determinations. DPR strongly encourages the Regional Board to delete this sentence.

Page A-7, paragraph 1, sentence 1: This sentence is in reference to DPR's mandate, stated in FAC section 12824, to endeavor to eliminate from use any pesticide that endangers the environment. DPR does not necessarily equate unsubstantiated violations of water quality standards with environmental endangerment. We recommend that you delete from this sentence the phrase that begins with "such as"

Page A-7, paragraph 1, sentence 3: The meaning and context of this sentence is unclear. Did you mean uncontrollable adverse effects? ("Uncontrollable" is a term used in FAC section 12825, which gives DPR the authority to cancel registrations of products that has demonstrated significant uncontrollable adverse effects.)

Page A-8, paragraph 1: DPR supports the implementation strategy's concepts of how the Regional Board and DPR can cooperate during investigations of pesticides that cause violations, or that have a reasonable likelihood of causing future violations, of water quality standards. Please recognize that DPR's ability to fully participate in these investigations will depend on the number and complexity of Regional Board notifications, as well as DPR's available resources.

Thank you for your consideration of our comments. We appreciate the several opportunities you afforded DPR to consult during the development of the staff report and implementation plan. We look forward to continuing our cooperative relationship as we proceed into the implementation phase of this effort. If you have any questions on our comments, please contact Marshall Lee, of my staff, at (916) 324-4269 or <mlee@cdpr.ca.gov> or Nan Singhasemanon, of my staff, at (916) 324-4122 or <nsinghasemanon@cdpr.ca.gov>.

cc: Marshall Lee, DPR Senior Environmental Research Scientist
Nan Singhasemanon, DPR Management Agency Agreement (MAA) Coordinator
Syed Ali, State Water Resources Control Board MAA Coordinator



September 19, 2005

Bill Johnson
Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, CA 94612

RE: Proposed Basin Plan Amendment for Diazinon and Pesticide-Related Toxicity in Bay Area Urban Creeks

Dear Bill:

These comments are respectfully submitted into the record on behalf of Baykeeper, Pesticide Action Network, and Clean Water Action and our thousands of Bay Area members (hereinafter “Baykeeper”) as part of the public comment period for the Diazinon and Pesticide-Related Toxicity TMDL and Basin Plan Amendment for Bay Area Urban Creeks (“BPA”).

I would like to begin by thanking staff for the efforts you have undertaken to develop this BPA. The public process has been a significant improvement over our experience with some of the Regional Board’s past processes. Staff provided draft documents and input opportunities early in the development process, prior to peer review, and Baykeeper participated to the full extent feasible. Staff listened to Baykeeper’s comments, and in some instances, Baykeeper’s recommended suggestions were incorporated. I urge the Regional Board to continue to develop future TMDLs and regulations in a similar manner and suggest that in the future, the development of these regulations also include opportunities for meaningful exchange of ideas and consensus building between the interested parties prior to issuance of a public review draft.

While Baykeeper applauds some parts of this Basin Plan Amendment, the BPA lacks a few critical components that are essential to meaningful implementation and attainment of the no pesticide toxicity targets. Baykeeper urges staff to make at least the following changes before adopting this TMDL and Basin Plan Amendment (these revisions are described in more detail in the following pages and specific language is suggested where possible):

- Explicitly address new evidence of pesticide toxicity in creek sediments
- Require meaningful actions for Urban Runoff Agencies
- Remove shield for Urban Runoff Agencies
- Require compliance with non-stormwater discharge prohibition
- Require specific actions using Water Board authority
- Revise adaptive implementation to be a continuous and interactive process

I. Explicitly address new evidence of pesticide-related toxicity in creek sediments

Diazinon poses a serious threat to water quality, non-target organisms, and human health. In recognition of this threat, US EPA began a gradual phase out, which terminated in a ban on the sale of diazinon-containing products for residential use. The Basin Plan Amendment, if it had focused simply on diazinon impairment of Bay Area urban creeks, would have failed to provide any meaningful control on the next generation of pesticides. Instead, the BPA commendably recognizes the need to stop the pesticide replacement cycle by focusing on pesticide-related toxicity. Baykeeper endorses this approach, as well as the application of the BPA to all Bay Area creeks that have the potential for pesticide-related impairment. Because TMDLs are the very last line of defense to protect our waterways, they must be especially protective. More important, though, is the need for improved control measures so that our waterways do not require state-of-emergency TMDL assistance for every pesticide that replaces diazinon in the future.

Unfortunately, the BPA does not go far enough to end the pesticide replacement cycle. We are already beginning to find diazinon-replacement products, such as pyrethroids, in our Bay Area waters. Researchers at the University of California, Berkeley recently found widespread toxicity in the sediments of East Bay urban creeks. According to the researchers, five of seven creeks sampled were toxic to the amphipod *Hyaella azteca* on at least one occasion. Of the total samples taken, eight of the fifteen were toxic, and in seven of the eight toxic samples, the toxicity could be explained by the presence of pyrethroids. For example, sediments in Kirker Creek in Contra Costa County were toxic and contained pyrethroids on all three occasions sampled. (Amweg, Erin, and Don Weston. "Monitoring for Pyrethroid Pesticides and Sediment Toxicity in Urban Creeks," presentation to the Urban Pesticide Committee, July 19, 2005.)

If we use diazinon as an indicative model for what to expect for pyrethroids, it will take years for U.S. EPA or the California Department of Pesticide Regulation to review the water quality data and additional years for either of these agencies to break through bureaucratic inertia and confront the pesticide manufacturing lobby to adequately implement restrictions. Thus the local agencies and the Water Board will have evidence of toxicity for years, yet under the old model – codified in the Basin Plan Amendment – they will sit by for other agencies to take action while creeks become more toxic and the beneficial uses of the waters are further harmed.

The Basin Plan Amendment only includes an expression of intent to study the problem further, but it fails to include a credible plan to eliminate actual and potential sources of pyrethroids to urban creeks.

Suggested Revision

The language in the BPA should explain how actions in the Basin Plan will eliminate these new sources of toxicity in creeks.

At a minimum, the Basin Plan should specifically require educational materials regarding pyrethroids and water toxicity to be made available in prominent locations at all retail outlets that sell home and garden chemicals. Urban Runoff agencies might also be asked to send residential consumers fliers to make them aware that chemical methods for outdoor pest control are poisoning our waterways and suggesting non-chemical alternatives. Pyrethroid-containing products should be mentioned specifically and new products known to be problematic could be added to the list as they come into use. Retail stores and Urban Runoff agencies can use existing educational materials with alternative pest control strategies, which have already been created by a number of entities, including the Water Boards, Marin County Storm Water Pollution Prevention Project, and DPR.

Additionally, Baykeeper has suggested other revisions that better support Integrated Pest Management (“IPM”) in the sections below, and these revisions could also be used to address our concern regarding the disconnect between the actions in the proposed Basin Plan Amendment and new evidence of toxicity.

II. Require meaningful actions for Urban Runoff Agencies

a. Remove shield

The law requires water quality standards to be met: A stated goal of the Clean Water Act permitting program is to achieve water quality standards by restoring and maintaining the “chemical, physical, and biological integrity” of the nation’s waters. CWA 33 U.S.C. § 1251(a). Congress even went so far as to state “it is the national policy that the discharge of toxic pollutants in toxic amounts be prohibited.” *Id.* With regard to the TMDL program, this intent is delineated through 40 CFR § 122.44(d)(1): “Achieve water quality standards established under section 303 of the CWA, including State narrative criteria for water quality.” Section 122.44(d)(1)(i) describes this requirement in further detail: “Limitations must control all pollutants or pollutant parameters...which...are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality.”

Baykeeper also believes that the law requires numeric effluent limits: “When the permitting authority determines...that a discharge causes, has the reasonable potential to cause, or contributes to an in-stream excursion above the allowable ambient concentration of a State numeric criteria within a state water quality standard for an individual pollutant, the permit must contain effluent limits for that pollutant.” 40 CFR § 122.44(d)(1)(iii).

But the Basin Plan Amendment does not require compliance with water quality standards, nor does it contain numeric effluent limits. Instead, the BPA provides a shield for Urban Runoff agencies, allowing one of the largest sources of pesticide toxicity in urban creeks to continue without additional control efforts. Baykeeper opposes such bad policy.

In an earlier draft of this plan, staff included a shield for Urban Runoff which stated “an urban runoff management agency that complies with these permit requirements shall be deemed to be in compliance with receiving water limitations relative to pesticides...” Discussion draft at page A-11. Baykeeper strenuously opposed this language. It is factually untrue to say that dischargers are “in compliance” with water quality standards if water quality limits are in fact not met, no matter what actions the agencies have taken. If water quality limits are not met, then the standards have not been attained and the water body is still impaired. This sentence was modified in the new version of the BPA, but it is no better. The new sentence advances exactly the same illogical policy: “Urban runoff management agencies’ and similar entities’ respective responsibilities for addressing [i.e., meeting] these allocations and targets will be satisfied by complying with the requirements set forth below.” BPA at A-10.

Baykeeper believes the shield is inappropriate in a permit, and it is especially inappropriate in the Basin Plan because it undermines the Regional Board’s ability to adaptively manage. If water quality has not been improved, then Urban Runoff agencies should be required to take additional measures to try to solve the problem. Instead the BPA claims that many of the requirements that are “set forth” are “already in some [NPDES] permits.” BPA at A-5. So the BPA does not require many of the agencies to do anything more than what they are already doing, yet they will be in compliance with the TMDL requirements even though water quality is still impaired.

Best Management Practices, standards, and control measures will change and improve over time. At the very least, the BPA should allow for permits to require an iterative approach to implement new measures until standards are met.

Suggested Revision

The above-mentioned sentence and all similar shields should be removed from the proposed BPA language. Instead Urban Runoff agencies should be required to devise and implement additional new measures until water quality standards are achieved. This TMDL cannot serve as the TMDL for all future pesticide toxicity unless and until it contains real requirements for Urban runoff agencies to take meaningful measures to eliminate pesticide toxicity (see section II (d)(ii) below for examples of what more can be done).

If the Water Board insists on keeping this type of sentence in the BPA, it should be revised to read:

“It is believed that Urban Runoff management agencies and similar entities will be able to address these allocations and targets by complying with the requirements set forth below and as further incorporated in their permits. If these allocations and targets are not met, the Regional Board shall require additional control measures through adaptive implementation until water quality standards are attained.”

b. Require at least status quo, if not more

Baykeeper's main criticism of this proposed Basin Plan Amendment is that it requires *less* than what is already required of the dischargers. For example, Santa Clara developed a pesticide control program in response to Provision C.9(d) of their stormwater permit. The program requires educational outreach, training programs, and IPM use on public property. These are all actions required generally in the BPA. However, the Santa Clara program goes farther by contemplating the inclusion of school districts, the discouragement of pesticide use on new developments, and the recognition of least toxic pest control operators, among other actions. *See* Santa Clara Valley Urban Runoff Pollution Prevention Program, Final Pest Management Performance Standard and Guidance Documents approved February 2002.

The requirements laid out in the BPA do not seem to allow the Urban Runoff agencies to go this far. It may also be noteworthy to point out here that in spite of existing programs, like that of Santa Clara, pesticide toxicity is still occurring. Therefore, what is being done by the most active programs now may turn out to be inadequate to protect water quality, hence the need to remove the shield as described in greater detail above.

If pesticide toxicity is to be curbed, the BPA should at least identify the full range of pesticide control activities currently required of the most active Urban Runoff agencies. Rather than do that, the BPA only identifies municipal maintenance activities, outreach and education, monitoring, and coordination with other entities, completely ignoring other actions many of the agencies are already required and willing to take.

Suggested Revision

One example of requirements that the BPA is missing includes existing requirements in urban runoff permits. An example of these missing requirements would be some of the actions being taken by the Santa Clara program described above. The BPA should at least be revised to include existing pesticide control requirements from the most active stormwater programs. The BPA should also contemplate changing future permits to require written records for why an Urban Runoff agency chose not implement least toxic alternatives in spite of established IPM programs.

Existing permits also require pollutant source control actions for new development and redevelopment projects. The source control measures "shall, as part of their continuous improvement process...summarize source control requirements for projects to limit pollutant generation, discharge, and runoff..." Contra Costa Countywide NPDES Permit Amendment, Order No. R2-2003-0022 (k). The permit specifically includes measures such as "landscaping that minimizes irrigation and runoff, promotes surface infiltration where appropriate, *minimizes the use of pesticides and fertilizers*, and where feasible removes pollutants from stormwater runoff." *Id* (k)(vii) (emphasis added). This requirement and such pesticide toxicity control measures should be codified in this BPA so that future permits uniformly require these types of source control activities on these sites.

The BPA also fails to fully codify activities required in U.S. EPA regulations. The BPA should incorporate at least the minimum pesticide control activities that the U.S. EPA stormwater regulations specifically require urban runoff agencies to include in their management plans. According to the regulations, for example, municipal stormwater permits must include a program to reduce pollutant discharges in storm sewers “associated with the application of pesticides, herbicides, and fertilizer which will include, as appropriate, controls such as educational activities, *permits, certifications and other measures for commercial applicators and distributors*, and controls for application in public right-of-ways and at municipal facilities.” 40 CFR § 122.26(d)(2)(iv)(A)(6) (emphasis added). Under this language, Urban Runoff agencies could require local agencies such as school districts, to implement Integrated Pest Management (“IPM”) ordinances. Additionally, County Agricultural Commissioners and Pest Control Operators could be required to institute permit or certification programs that would promote IPM for residential use.

These types of revisions would help improve the BPA strategy from the less-than-status-quo approach it is currently taking to an approach that incorporates at least the status quo with regard to urban runoff management.

c. Require enforcement of non-stormwater discharges

The Clean Water Act requires U.S. EPA through the states to set standards to regulate discharges into the nation’s surface waters. Under the Clean Water Act, municipal stormwater permits must effectively prohibit non-stormwater discharges to storm sewers. CWA § 402(p)(3)(B)(ii). Illicit discharges are defined as “any discharge to a municipal separate storm sewer that is not composed entirely of storm water...” 40 CFR § 122.26(b)(2). Permitting regulations for stormwater contain detailed provisions requiring, as part of the application procedure, municipalities to characterize illicit discharges into the storm drain system. 40 CFR 122.26(d)(1)(iv)(D) requires a “field screening analysis” for illicit connections and illegal dumping, including field sampling at least 500 major outfalls. Section 122.26(d)(1)(v)(B) requires permit applications to contain a description of the existing program to identify illicit connections to the municipal system. And the regulations require permit programs to include “inspection procedures and methods for detecting and preventing illicit discharges, and describe areas where this program has been implemented.” Moreover, section 122.26(d)(2)(iv)(B) requires a description of a program involving a schedule to detect and remove illicit discharges and improper disposal into the storm drain.

Urban Runoff agencies should enforce the Clean Water Act’s strict prohibition on non-stormwater discharges to storm drain systems. This CWA prohibition includes the placement of pesticides or other toxic materials on building exteriors, walkways, and other impervious surfaces such that they could be washed or carried by runoff into the storm drain system. Enhanced enforcement of this prohibition has to be part of the BPA implementation strategy, if the BPA is to comply with federal requirements.

Suggested Revision

The BPA should codify the prohibition of non-stormwater discharges, including the application of pesticides to exterior impervious surfaces connected to storm drains, and should require Urban Runoff agencies to develop robust programs to detect and remove illicit discharges and improper disposal into the storm drains.

Educational and outreach programs should be required to include warnings regarding the non-stormwater discharge prohibition, including its applicability to pesticide applications.

Additionally, agencies should be required to develop a plan to enforce the discharge prohibition, with specific attention to pesticide applications.

II. Require specific actions using Water Board authority: Water Board has the authority to regulate pesticides and should do so through NPDES permits and by other means

a. Water Board has authority

Section 11501.1 of the California Food and Agricultural Code has been cited as a barrier to local control and regulation of pesticides. This legislative barrier has prevented local cities from regulating the sale and use of pesticides, even when the applications are resulting in localized effects, such as aquatic toxicity in neighborhood creeks and ponds. While this restriction may have been the result of the California legislature's determination that pesticide use and regulation is an area of state-wide concern, the regulation does not reasonably intend for local agencies to be entirely unable to protect public health or local waterways. Thus the regulation expressly provides that "[n]either this division nor Division 7...is a limitation on the authority of a state agency or department to enforce or administer any law that the agency or department is authorized or required to enforce or administer." Cal. Food & Ag. Code § 11501.1(c).

The State Board "shares authority for implementation of the federal Clean Water Act and the state Porter-Cologne Act with the Regional Boards." Water Quality Control Plan for the San Francisco Bay Basin at 10. The Regional Board is a state agency authorized by federal law and Congress to enforce the Clean Water Act, and therefore the Board is not limited by § 11501.1. Rather the delegation of authority to implement the Clean Water Act requires the Board to fully adopt and implement regulations under the Clean Water Act in order to protect the region's water quality.

The Porter-Cologne Water Quality Control Act of 1969 expressly states the intent that State and Regional Water Boards "shall be the principle state agencies with primary responsibility for the coordination and control of water quality." 7 Cal. Water Code § 13001. Therefore, while the California Food & Ag Code may also vest the Department of Pesticide Regulation ("DPR") with authority to protect water quality, the Water Boards have the primary authority and responsibility to protect water quality under both Federal and California law.

Suggested Revision

A few clear findings in the Basin Plan Amendment would help provide the context for the Water Board's authority, and Baykeeper suggests staff consider incorporating the following findings:

“This TMDL is being promulgated by a state agency pursuant to the federal TMDL program, and the resulting restrictions on stormwater agencies are issued under the federal NPDES program.”

“As is evidenced from impairment in Bay Area urban creeks and San Francisco Bay, FIFRA labeling requirements do not protect water quality.”

“Based on the findings above, the Water Board has the authority to take specific actions to ensure reversal of toxic impairment due to pesticides in urban creeks.”

b. Water Board should not cede this authority

Baykeeper strongly agrees with the BPA language stating that the Water Board “could consider the need to use its own regulatory authorities to control pesticides discharges,” if DPR does not act. BPA at A-9. This strategy to restrict the use of potentially harmful pesticides is promising. However, the TMDL is unclear as to the Water Board's plan if DPR is not doing its job.

Failure by the Water Board to fulfill the responsibility to implement and enforce the Clean Water Act would be considered a breach of the federal delegation of authority and, in this case, the NPDES program under section 402. By leaving the primary decision making regarding pesticide toxicity in the watershed up to the California Department of Pesticide Regulation, the BPA inappropriately cedes this federal authority to another state agency. Therefore the bigger question may be whether or not the Water Board has shirked a federally authorized obligation, thereby requiring federal EPA to step in.

Suggested Revision

The BPA should contain an additional paragraph on page A-9 that elaborates on the Water Board's authority and action plan if DPR does not act. This paragraph should answer the following questions: How long is too long to wait for DPR to act? What triggers a decision that DPR is not doing its job? What does the Water Board plan to do upon a determination that DPR is not acting in a sufficient manner to protect and improve water quality in urban creeks?

Additionally, the Water Board should clearly identify interim actions that will be taken after it notifies DPR that water quality is being or has the potential to be impaired by a pesticide. These actions can include raising a warning flag for local agencies, requiring additional control measures specific to the pesticide of concern, researching and suggesting alternatives or categorical controls (e.g., ant control measures), and restricting use of certain pesticides with potential to cause toxicity on local agency and public properties. These types of immediate

interim actions should be delineated in the BPA, and the Water Board should commit to taking these types of steps if toxicity is suspected.

c. Water Board can take concrete actions to use its authority

Staff has generated a list of potential regulatory actions that it can take. Staff Report at 111. As staff recognizes, it may be necessary to implement many or all of these options in order to decrease and prevent pesticide toxicity in Bay Area creeks: “Without regulatory action, however, water quality impairment would likely be a recurring problem for Bay Area urban creeks.” *Id.* But staff stops short by dismissing the Water Board’s ability to fully use its authority by saying that these actions are inefficient, expensive, and unenforceable. *Id.* This policy decision serves to dismiss the Water Board’s ability to fully use its authority, and creates unnecessary and unsubstantiated barriers on protecting water quality.

Baykeeper does not share staff’s belief that employing these options would pose substantial enforcement challenges. If communication between the Water Board and DPR is prioritized, many or all obstacles can be avoided. Additionally, the regulatory actions do not have to be all or nothing, as implied in the Staff Report. The adoption of a few of the programs when necessary, rather than all of them at the same time, could go a long way towards water quality protection, and these actions would undoubtedly pose few obstacles if taken one at a time.

Only aggressive regulation of pesticides and pesticide application will enable water quality objectives to be achieved, therefore the Water Board should be prepared to take action as well as work collaboratively with DPR and all other agencies in addressing pesticide toxicity in creeks.

Suggested Revision

Baykeeper believes it is critical that the Board do as much as possible to gather information about pesticide use and its affects on water quality by initiating water quality evaluations of pesticides and by filling information gaps by requesting such information from all potential sources, including pesticide manufacturers, applicators, and DPR.

In addition to information gathering, however, the Board should be prepared to exercise its regulatory powers at the same time as, or in conjunction with DPR. This would include restricting the use of pesticides that do or may threaten water quality until they are no longer a threat to water quality, placing regulatory/contractual controls on pest control professionals, banning sales or applications of pesticides within the San Francisco Bay area, incorporating best management practices into permits and Waste Discharge Requirements, and requiring local agencies, school districts, County agricultural commissioners and Pest Control Operators to adopt and implement robust IPM ordinances and certification programs.

The Water Board can and should also set aggressive guidelines as to what constitutes IPM. There are too many agencies and applicators who claim to be doing IPM, but because they follow more lax models or automatically claim that pesticide-use is necessary, they do not actually result in meaningful and holistic pest control assessment and least toxic controls. By

setting forth strict guidelines in the Basin Plan Amendment, every local agency, pest control operator, and certification program will be on the same level playing field. This revision could easily be made by modifying Table 10.1 on page 80 of the Staff Report and including this type of table in the BPA with language about how the IPM program should be adaptively managed to ensure up to date control measures and considerations. The Water Board should also include requirements to review and enforce these IPM programs as necessary.

- d. Water Board can and should require NPDES permittees to restrict pesticides where they impact local water quality
 - i. Section 11501.1 does not limit the Water Board, and federal law preempts any limitation on local agencies implementing Water Board requirements pursuant to federal law

In response to a 1984 state Supreme Court decision that upheld a local government's right to regulate pesticides, the California legislature amended the state code to limit local regulation of pesticides. Cal. Food & Ag. Code § 11501.1. A prohibition on local regulation of pesticides that are harming water quality, however, conflicts with the federal Clean Water Act. Therefore, when regulation of pesticides is required by the Water Board to carry out the purposes of the federal Clean Water Act, the Food and Ag. Code allows for the Water Board to do so: "[n]either this division nor Division 7...is a limitation on the authority of a state agency or department to enforce or administer any law that the agency or department is authorized or required to enforce or administer." Cal. Food & Ag. Code § 11501.1(c).

The law of preemption requires the federal Clean Water Act to be prioritized ahead of a California Code provision. Pursuant to the Supremacy Clause of the United States Constitution, art. VI, cl. 2, all state or local laws that interfere with or are contrary to federal law are preempted. *Hillsborough Co. v. Automated Medical Labs, Inc.*, 471 U.S. 707, 713 (1985), *Wisconsin Pub. Intervenor v. Mortier*, 501 U.S. 597, 604 (1991). Preemption of state law can be either express or implied. State laws are impliedly preempted when the federal regulatory scheme is so "pervasive" that it demonstrates Congress' intent to completely occupy a field. *Id.* In the absence of express or implied preemption, a state law will still be invalid to the extent that it "actually conflicts with a . . . federal statute." *Ray v. Atlantic Richfield Co.*, 435 U.S. 151, 158 (1978). Such a conflict will be found when "compliance with both federal and state regulations is a physical impossibility," *Florida Lime & Avocado Growers, Inc. v. Paul*, 373 U.S. 132, 142-143 (1963), or when a state law "stands as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress." *Hines v. Davidowitz*, 312 U.S. 52 (1941). See also *Hillsborough* 471 U.S. at 713; *Pharm. Research & Mfrs. of Am. v. Walsh*, 538 U.S. 644, 679 (2003) (obstacle preemption turns on whether the goals of the federal statute are frustrated by the effect of the state law).

According to the U.S. Supreme Court, the savings clause of the Clean Water Act demonstrates that Congress did not intend to expressly preempt all state laws affecting water pollution. *Int'l Paper Co. v. Ouellette*, 479 U.S. 481, 492 (1987). Thus, on its face, section 11501.1 is not invalidated simply on the grounds that the Clean Water Act preempts state laws respecting water

pollution. In the absence of express preemption, however, section 11501.1 is invalid if it prevents compliance with the Clean Water Act or if it stands as an obstacle to the execution of the Act's purposes and objectives. *See supra, Hines et al.*

The Clean Water Act gives the Water Board power to condition permits and certifications on conditions necessary to achieve the goals of the Act. *See* § 1342(a)(1), § 1341(a)(2). Thus, if necessary, the Water Boards may condition the issuance of a permit on the permit holder's agreement to regulate uses of a pollutant that are impairing a local water body. If the impairing pollutant is a pesticide, then section 11501.1 would prevent the permit holder from complying with the terms of the permit, thereby creating conflict with compliance of both section 11501 and the Clean Water Act. Prohibiting local regulation of pesticides when those pesticides are impairing local waters, however, frustrates the most fundamental purpose of the Clean Water Act because, in many cases, regulation may be the only way to clean up those waters. Therefore a reading of section 11501.1 to prevent local regulation of pesticides when that regulation is either required by the Water Board or necessary to achieve water quality objectives clearly conflicts with the Clean Water Act and is thus preempted by federal law.

- ii. Federal regulations require Urban Runoff agencies to have authority to pass ordinances to reduce illicit discharges

The Basin Plan Amendment should require NPDES permit language to provide proper authority to local agencies to fulfill federal obligations. "All state programs under this part must have legal authority to implement each of the following provisions and must be administered in conformance with each except that states are not precluded from omitting or modifying any provisions to impose more stringent requirements." 40 CFR § 123.25(9) (storm water discharges). Permittees are required to have legal authority to "prohibit through ordinance, order, or similar means, illicit discharges to the municipal storm sewer system" and permittees must be required to comply with and enforce these conditions. 40 CFR § 122.26(d)(2)(1)(B).

If legal authority is "not sufficient to meet the criteria...the [permittee] shall list additional authorities" that will be needed to meet the criteria and shall include a "schedule and commitment to retain such additional authority." 40 CFR § 122.26(d)(1)(ii).

Suggested Revision

Baykeeper agrees that residential use of pesticides presents a real challenge to the achievement of water quality standards for urban creeks. We also acknowledge the Urban Runoff agencies' fear at challenging the state limitation on local control of pesticides. These challenges and fears, however, should not prevent Water Board and Urban Runoff agencies from taking additional aggressive measures to regulate pesticides.

Under the Food and Ag Code § 11501.1, local agencies' power to regulate pesticide use extends to public property. Urban Runoff agencies can and should be required to regulate the application of pesticides to public land by banning those pesticides that have the potential to threaten water quality and by requiring all of their contracted pesticide applicators to employ IPM. And if it has

not yet done so, all local agencies should adopt strict IPM ordinances for their own public properties.

Additionally, local governments should undertake studies of pesticide use and effects in their jurisdiction and use that information to craft more complete IPM ordinances for the city and to educate citizens. Once residents learn that their City Council is refusing to use a certain toxic chemical on public property, they may think twice about using these chemicals on their own property.

In addition to regulating pesticide use on public land, the Water Board can also require Urban Runoff agencies to take steps to address pesticide use on private land. For example, all commercial landowners who require commercial applications of pesticides on their property could be required under zoning and land use ordinances to implement IPM plans. And both commercial and residential applicators could be required to provide advance notice to the city and to persons who might be affected by the pesticide applications. These types of requirements, which do not prevent the sale or use of pesticides, do not rise to the level of state-wide pesticide regulation and therefore are permissible under California code.

III. Revise adaptive implementation to be a continuous and interactive process

Adaptive Implementation should be revised to allow for continuous improvements, the need for which can be triggered by information gathered or provided by interested parties. Review by the Water Board every five years does not allow for rapid and continuous response to evolving data. The Water Board and local agencies should be able to address and adapt their implementation programs and management plans within a fluid timeframe, and as quickly as necessary to prevent aquatic toxicity.

The Urban Runoff agencies are already committed to continuous improvement of their control actions. This continuous improvement process should be incorporated into the adaptive management strategy of the BPA. If other agencies do not appropriately respond to monitoring data and other evidence provided, NPDES permits should include time sensitive triggers, which require local agencies to take further actions, including implementing additional BMPs and/or source control measures to address harms caused to local water bodies.

Suggested Revision

The language in adaptive implementation should be revised to allow review and revision at the request of an interested party or local agency based on substantial new information.

Additionally, the language should be improved to trigger and require Urban Runoff and other responsible agencies to take interim actions when new information is collected.

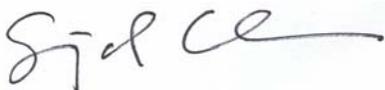
IV. Conclusion

Baykeeper believes the changes we have requested herein are reasonable and necessary in light of the spirit and letter of the Clean Water Act. Moreover, we have attempted to provide specific suggestions for revisions where possible, in order to demonstrate that the changes we are requesting are completely feasible and warranted.

If Staff should have questions or be inclined not to incorporate the revisions we have suggested, Baykeeper would appreciate an open dialogue that may include other interested parties to determine how these concerns will be addressed otherwise.

Thank you for this opportunity and for your consideration of Baykeeper's comments.

Sincerely,

A handwritten signature in black ink, appearing to read "Sejal Choksi", is written over a light blue rectangular background.

Sejal Choksi
Baykeeper
Director, SF Bay Chapter

Susan Kegley, Ph.D.
Senior Scientist/Program Coordinator
Pesticide Action Network

Andria Ventura
Environmental Health Organizer
Clean Water Action



B A S M A A

Alameda Countywide
Clean Water Program

Contra Costa
Clean Water Program

Fairfield-Suisun
Urban Runoff
Management Program

Marin County
Stormwater Pollution
Prevention Program

San Mateo Countywide
Stormwater Pollution
Prevention Program

Santa Clara Valley
Urban Runoff Pollution
Prevention Program

Vallejo
Sanitation and Flood
Control District

September 19, 2005

Bill Johnson
California Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, CA 94612

Dear Bill:

Subject: Comments on the Diazinon and Pesticide-related Toxicity in Bay Area Urban Creeks Water Quality Attainment Strategy and TMDL Staff Report and Proposed Basin Plan Amendment

This letter and the attached comments are submitted by the Bay Area Stormwater Management Agencies Association (BASMAA) on behalf of member Bay Area stormwater management agencies in response to the invitation to submit comments on the subject report ("Report" for ease of reference) dated August 5, 2005. As you know, BASMAA and its member agencies have been intimately involved in the effort to identify and characterize the sources of and develop solutions to the problem of pesticide-related toxicity in Bay Area urban creeks for over ten years. We request that this letter, the attached comments, and all previous documents and communications submitted with respect to this matter be included in this hearing record.

We commend the effort that you and other Regional Water Board staff have invested over many years to deal with this difficult issue. We especially appreciate the recognition that although pesticides may be discharged from municipal storm drain systems, municipalities are by and large not the source of these pesticides. In addition, you have acknowledged that municipalities are expressly prohibited by the Food and Agriculture Code (Section 11505.1) from regulating the registration, sale, transportation, or use of pesticides. The Report also correctly points out that the source of the previously identified pesticide-related toxicity was the application of pesticides in accordance with label directions as authorized by the California Department of Pesticide Regulation.

It is clear from the Report and from our experience that the existing Federal and State pesticide registration processes do not prevent water quality problems from occurring and are very slow to correct problems after they have occurred. While we strongly support the actions proposed in the Report for the U.S. Environmental Protection Agency, Department of Pesticide Regulation, the Structural Pest Control Board, private entities, and others we are concerned that these actions may not be fully implemented and as a consequence municipalities will be required, through NPDES permits, to expend significant resources attempting to mitigate an impact over which they have very little control.

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BASMAA Comments on the Diazinon and Pesticide-related Toxicity in Bay Area Urban Creeks
Water Quality Attainment Strategy and TMDL Staff Report and Proposed Basin Plan Amendment

For this reason and those concerns described in the attachments to this letter, BASMAA requests that the Regional Water Board postpone the adoption of these policies (TMDL and WQAS) and revise the proposed Staff Report and Basin Plan Amendment to adequately address stakeholder concerns.

Thank you again for this opportunity to comment on the Report. We look forward to continuing to work with you on this issue. Please contact me at (925) 313-2373, Jim Scanlin (510) 670-6548, or Geoff Brosseau (510) 622-2326 if you have any questions regarding the comments or suggested changes.

Sincerely,

A handwritten signature in black ink, appearing to read "Donald P. Freitas". The signature is fluid and cursive, with a large, sweeping flourish at the end.

Donald P. Freitas
BASMAA Executive Board Chair

Attachments: Additional BASMAA comments

cc: Jim Scanlin, ACCWP / CEP Diazinon Work Group
Geoff Brosseau, BASMAA
Arleen Feng, BASMAA Monitoring Committee / CEP Technical Committee
BASMAA Executive Board

General Comments:

1) Clearly separate the TMDL from the Water Quality Attainment Strategy

BASMAA has commented on this issue in its letter of April 12, 2004 (attached) and submitted a markup of a previous draft of the proposed Basin Plan amendment (dated 3/16/2005, attached) that addressed this issue. The Report combines the TMDL and the pesticide-related toxicity water quality attainment strategy (WQAS). In addition, the TMDL is for both diazinon and pesticide-related activity. In the Bay Area, 37 urban creeks appear on the Clean Water Act §303(d) list due to pesticide-related toxicity attributed to diazinon. This listing does not apply to all pesticide-related activity, but specifically to pesticide-related activity attributed to diazinon. Insufficient data has been presented to apply the TMDL to all pesticide-related toxicity. Intermingling of the TMDL and WQAS leads to unnecessary ambiguity, particularly in the implementation section where it is not clear which activities relate to the TMDL versus the WQAS. It also leads to inappropriate assumptions. Some of the implementation actions, for example, only assigning an allocation to stormwater dischargers, appear to be based on the assumption that the sources and pathways of future pesticide-related toxicity in urban streams will be similar to the sources and pathways of diazinon related toxicity. This assumption is not supported by evidence in the Board record and is therefore improper. As you know, new pesticides are constantly being brought to market and gaining market share while others are losing market share. We cannot predict what the pesticide market will look like in ten or twenty years, what the physical properties of those pesticides will be, or which applications may be causing water quality impacts. We therefore recommend and request that the TMDL apply only to diazinon and that the TMDL and the WQAS be developed as two separate policies.

2) Separate the Implementation Plan from the TMDL

Neither the Clean Water Act nor the U.S. Environmental Protection Agency's (USEPA) regulations require the State Water Board or the Regional Water Boards to seek USEPA approval of TMDL implementation plans. TMDL implementation is instead largely a function of state law. By combining the TMDL and the Implementation Plan, the Report blurs this distinction, and thereby will likely undermine the State's authority and flexibility with regard to TMDL implementation. The Regional Water Board should instead, separate the establishment of the "technical" TMDL (*i.e.*, the calculation of acceptable loading and allocations) from the development of TMDL implementation policies, actions, and schedules.

Stormwater agencies have generally been supportive of linking implementation planning with TMDL development, however by formally mixing the process of establishing (developing and approving) TMDLs with the process of developing TMDL implementation plans in one Basin Plan amendment process, the Regional Water Board effectively risks ceding substantial State authority and discretion to the federal government. Therefore, in order to maintain the flexibility and independence for the Regional Water Board to implement the TMDL in accordance with the considerations required by the Porter Cologne Act, the Regional Water Board should separate the process into two parallel stages and

documents, developing the “technical” TMDL and submitting it to USEPA for approval, and developing the TMDL implementation plan in a separate step of the process in which USEPA approval is not required. Separating the “technical” TMDL from the implementation plan would also help to eliminate some of the ambiguity discussed above in comment number one.

Specific Comments on Proposed Basin Plan Amendment

3) Page A-1, paragraph 3: Replace “Compliance with the objective” with “Achievement of” or “Maintenance of” the objective.

As the objectives govern the concentration of pollutants “in the main water mass,” “achievement” or “maintenance” of the objective is more appropriate. Further, we believe that it is inappropriate to discuss compliance determinations in Chapter 3 of the Basin Plan as that chapter addresses standards and water quality objectives. Chapter 4 of the Basin Plan addresses implementation, which is more directly relevant to compliance determinations. All compliance related language should be included in Chapter 4.

4) Page A-2, paragraph 1, last sentence: After “to all San Francisco Bay Region urban creeks,” add “listed in the Basin Plan.”

The Regional Water Board is planning to update the list of creeks in the Basin Plan. Once updated, the Basin Plan list should be the appropriate list of creeks for the WQAS. This will avoid confusion regarding the application of the WQAS.

5) Page A-3, Diazinon section: Diazinon target should be consistent with the State’s 303(d) Listing Policy.

That is, the determination of impairment should consider the number of samples analyzed. The previous draft of the Basin Plan amendment contained the language that the concentration shall not exceed the target “more that once every three years.” This “once ever three year” flexibility should be included as it allows for possible sampling errors or non-representative occurrences.

6) Page A-4, Allocations:

Allocations should be to all potential sources including non-point sources. Also, the first sentence should be revised to read “urban storm runoff” rather than “urban storm drains.” It is possible that there will be a non-point source discharger (for example, a nursery) within an urban area, and this allocation should apply to that source as well. The State Water Board in its adoption of Resolution No. 2005-0060 with respect to the mercury TMDL has clearly indicated that the Regional Water Board should be addressing 303(d) listed pollutants in an integrated and comprehensive manner. Thus, addressing all sources is essential in order to address all discharges and be consistent with State Water Board policy.

7) Page A-4, Implementation, 1st paragraph:

Insert “Diazinon TMDL implementation will occur automatically as a function of the 2004 USEPA phase-out of urban diazinon applications. Since diazinon will no longer be available for purchase in urban areas, existing stocks will be depleted within a relatively short period of time and further use will be terminated.”

8) Page A-5, Implementation, 2nd full paragraph:

- a) We support the recognition that many entities share responsibility for pesticide related toxicity.
- b) 2nd sentence: Again, replace “urban storm drain” with “urban runoff.”
- c) 2nd to last sentence: Insert “and by other regulatory actions as necessary” after “incorporated into all applicable NPDES permits when the permits are reissued.”

9) Page A-5, Water Board Actions:

We appreciate and support the proposed actions of the Regional Water Board.

10) Page A-6 & 7, California Department of Regulation Actions:

We appreciate and support the requirements for the California Department of Pesticide Regulation. As we mentioned in our cover letter, the success of this WQAS depends upon the cooperation of the California DPR.

11) Page A-8, 1st set of bulleted items:

Insert 5th bullet “Select pesticides for further evaluation based on their chemical and physical properties, toxicological properties, and sites of use, and convey this information to the California Department of Pesticide Regulation.” This would further encourage an integrated and well-coordinated effort among the State agencies.

12) Page A-10, University of California Actions:

We support the inclusion of these actions.

13) Page A-10 to 12: Insert a “Mosquito Abatement Districts / Vector Control Districts” section

Mosquito abatement and vector control districts do not come under the authority of municipalities. These districts routinely apply pesticides throughout the urban environment, often directly into storm drains. Due to the threat of West Nile Virus, mosquito abatement and vector control districts are conducting widespread applications of pyrethroids in some parts of the Bay Area. In spite of the politically sensitive nature of regulating mosquito

abatement and vector control districts, they should be included in the WQAS. Therefore, we recommend inserting the following section:

“Mosquito Abatement Districts / Vector Control Districts Actions

Mosquito Abatement Districts / Vector Control Districts are public health agencies that protect the public health by preventing the transmission of diseases. To fulfill this mission, these agencies may need to apply pesticides, either directly to surface waters or indirectly to areas adjacent to or that discharge to surface waters. Mosquito Abatement Districts / Vector Control Districts should implement the following actions:

- Continue to apply aquatic pesticides for vector control in accordance with applicable NPDES permit(s);
- Continue to use integrated pest management and less-toxic pest control – consistent with protecting public health;
- Continue to report pesticide uses as required by the California Department of Pesticide Regulation’s pesticide use reporting (PUR) process; and
- For pesticide(s) determined by the Water Board to be of water quality concern, work with the California Department of Pesticide Regulation to provide on a regular basis to the Water Board, compiled reports of use of the pesticide(s) of water quality concern, including: agency, date(s), location(s), amounts, pesticide(s), and active ingredient(s).”

14) Page A-10 & 11, Urban Runoff Management Agencies and Similar Entities Actions:

- a) 1st paragraph should include a definition of “similar entities.” Table 10-9 in the Staff Report indicates that this includes, but is not limited to, industrial facilities, construction related activities, California Department of Transportation and large institutions such as universities and military installations. This language from the table should be included in the Basin Plan amendment.
- b) 1st paragraph, 3rd sentence: the MEP standard should only apply to municipal dischargers (see Defenders of Wildlife case) as different standards apply to other dischargers such as industrial facilities.
- c) Insert at end of first paragraph: “These actions and those of the other entities included in this strategy will ensure the attainment of the allocations and targets.” This was in the previous version and should be included. The concept of other regulatory actions (i.e., section 13267 requests) should be added as such direction may be necessary for dischargers without NPDES permits.
- d) Page A-11, Monitoring Requirement, 1st bullet: Add “discharged in urban stormwater runoff” after “Monitor diazinon and other pesticides...”
- e) Page A-11, Monitoring Requirement, 3rd bullet: Conducting basic research studies to address critical data needs should be the responsibility of the pesticide industry, USEPA,

and California DPR, not the urban runoff management agencies. Add “directly related to pesticides in urban stormwater runoff discharges” after “...critical data needs...”

- f) Page A-12, 2nd full paragraph: Insert at end of sentence “and will include pesticide monitoring requirements as appropriate.” Caltrans and many industrial sites apply pesticides. These sites should include analysis of pesticides in their NPDES permits.

15) Page A-13, Monitoring Requirements:

- a) 1st set of bullets, 3rd bullet: Delete “any” and “or something else.”
- b) 1st set of bullets, 5th bullet: Delete “any.”

16) Page A-14, Monitoring Benchmarks:

This section and the concepts embodied therein were characterized in previous drafts as “provisional pesticide values”. In this draft, the values are being called “monitoring benchmarks”. Under either name, the Regional Water Board is attempting to develop and define water quality objectives, in every way but in name, when as the draft states “water quality criteria do not exist for most pesticides.” Setting aside the legal issues and regulatory standing of the Regional Water Board’s proposal, BASMAA is very concerned that this section includes measures that may be used in compliance determinations. This concept is premature and needs more time for discussion before it is included in a BPA. The monitoring benchmarks are not supported by sufficient facts in the record and are not legally appropriate. This approach is currently and will continue to receive considerable examination in other State Water Board proceedings relating to standards setting and quantifiable measures of compliance. If this section remains in the BPA, BASMAA strongly requests that the following language be added to the last paragraph in the section: “Nothing in the design, definition, development, or implementation of this section shall result in the determination that monitoring benchmarks are appropriate for use in determinations of compliance with NPDES permits for urban runoff management agencies.

17) Page A-15, Adaptive Implementation

As noted in the September 19, 2005 cover letter transmitting these comments, it is clear from the Report and from our experience that the Federal and State existing pesticide registration processes do not prevent water quality problems from occurring and are very slow to correct problems after they have occurred. While we strongly support the actions proposed in the Report for those Federal and State agencies responsible for pesticide regulation and enforcement, BASMAA remains very concerned that these actions may not be fully implemented and as a consequence municipalities will be required, through NPDES permits, to expend significant resources attempting to mitigate an impact over which they have very little control. Therefore, we request that the following paragraph be added at the bottom of section “Periodic Review”, just before Additional Sources”:

“Although the implementation plan is intended to achieve the water quality standards, conceivably, after exhausting all practicable measures, discharges may not meet the

BASMAA comments on Diazinon and Pesticide-related Toxicity in Bay Area Urban Creeks Water Quality Attainment Strategy and TMDL Staff Report and Proposed Basin Plan Amendment

allocations. After sufficient time has passed to develop and implement all practicable control measures and to assess their effects, a discharger could prepare a thorough account of actions taken for Water Board consideration and provide an explicit rationale for why additional measures to control pesticide discharges would be either impracticable or ineffective. The discharger could also identify potential actions that others must take to meet the water quality standards.”

18) Peer review Comments:

We did not receive the peer review comments on the Report and staff response until September 13. This material may be relevant to our comments and definitely is an important part of the hearing record. We have not had sufficient time to review this document and therefore request further time to submit comments on the peer review comments and staff response.



Alameda Countywide Clean Water Program

A Consortium of Local Agencies

951 Turner Court, Hayward CA 94545-2698
(510) 670-5543 FAX (510) 670-5262

September 19, 2005

Member
Agencies:

Alameda

Albany

Berkeley

Dublin

Emeryville

Fremont

Hayward

Livermore

Newark

Oakland

Piedmont

Pleasanton

San Leandro

Union City

Alameda
County

Alameda
County
Flood Control
and Water
Conservation
District

Zone 7 of
the Alameda
County
Flood Control
District

Bill Johnson
California Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, CA 94612

Dear Bill:

SUBJECT: COMMENTS ON THE DIAZINON AND PESTICIDE-RELATED TOXICITY
IN BAY AREA URBAN CREEKS WATER QUALITY ATTAINMENT
STRATEGY AND TMDL STAFF REPORT AND PROPOSED BASIN PLAN
AMENDMENT

This letter is submitted by the Alameda Countywide Clean Water Program on behalf of its seventeen member agencies in response to the invitation to submit comments on the subject report (Report) dated August 5, 2005. ACCWP supports the comments on the Report submitted by BASMAA (letter dated September 19, 2005) on behalf of its member agencies and incorporates those comments by reference.

We strongly support the Report's emphasis on pollution prevention and believe that, if we are to be successful, consideration of water quality impacts must be more fully integrated into the federal and State pesticide registration process. As the Report points out, the source of the previously identified diazinon-related toxicity was the application of diazinon in accordance with label directions as authorized by the U.S. Environmental Protection Agency and the California Department of Pesticide Regulation. If we are to avoid an endless cycle of responding to new pesticide-related water quality impacts, the potential impacts of urban pesticide use must be addressed before pesticides are registered for urban use.

We appreciate the effort that you and other Water Board staff have invested over many years to address pesticide-related toxicity in urban creeks. Thank you for your consideration of our comments.

Sincerely,

James Scanlin
Program Manager



**Santa Clara Valley
Urban Runoff
Pollution Prevention Program**

Campbell • Cupertino • Los Altos • Los Altos Hills • Los Gatos • Milpitas • Monte Sereno • Mountain View • Palo Alto
San Jose • Santa Clara • Saratoga • Sunnyvale • Santa Clara County • Santa Clara Valley Water District

Via Email and Hand Delivered

September 19, 2005

Mr. Bill Johnson
California Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, CA 94612

Re: Diazinon and Pesticide-Related Toxicity in Bay Area Urban Creeks - Water Quality Attainment Strategy and Total Maximum Daily Load TMDL Proposed Basin Plan Amendment and Staff Report

Dear Mr. Johnson:

This letter is submitted on behalf of the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP) regarding the *Proposed Basin Plan Amendment (BPA) and Staff Report (Staff Report) for the Water Quality Attainment Strategy and TMDL for Diazinon and Pesticide-Related Toxicity in Bay Area Urban Creeks*, dated August 5, 2005.¹ The SCVURPPP would like to thank you for this opportunity to comment on the Report and commend you for your hard work.

Over the past three years, staff persons on behalf of the SCVURPPP and/or the Bay Area Stormwater Management Agencies Association (BASMAA) have attended meetings and met directly with Water Board staff to discuss the implications of the proposed BPA on San Francisco Bay Area municipal urban runoff management agencies and suggest practical improvements to the BPA². The issues raised below, accompanied by constructive suggestions have previously been submitted by SCVURPPP and the Bay Area Stormwater Management Agencies Association (BASMAA) to the Water Board staff in comments submitted concerning each of the following documents related to the BPA (see Exhibit A for copies of previously submitted comments):

- **TMDL Preliminary Project Report** for Diazinon and Pesticide-Related Toxicity in San Francisco Bay Area Urban Creeks (dated September 2002);
- **Diazinon and Pesticide Related Toxicity in Bay Area Urban Creeks: Water quality Attainment Strategy and TMDL – Final Project Report** (dated March 2004);

¹ We request that this letter, the attached comments, and all previous documents and communications submitted with respect to this matter be included in this hearing record.

² During this process we have stressed the importance of providing safe harbor for Santa Clara municipalities, which are not the true sources of pesticides in that they do not regulate, manufacture, purchase and/or apply pesticides in significant amounts.

- **Draft Basin Plan Amendment Language** for Diazinon/Pesticide-Related Toxicity Urban Runoff (dated September 2, 2004).

Unfortunately, most of our previously-submitted recommendations appear to have been cast aside. On the major issues raised by SCVURPPP and BASMAA, a clear and meaningful response also has not been given, either directly or by means of revisions to the Staff Report or BPA. These issues include, but are not limited to:

Establishing a Clear Separation of the Diazinon TMDL and Pesticide-Related WQAS, and Developing Allocations for all Sources of Diazinon and Pesticide-Related Toxicity

The Staff Report and BPA continue to treat the diazinon TMDL and the pesticide-related toxicity water quality attainment strategy (WQAS) as if they were one in the same. While it is understandable to want to address both diazinon and the potential for other pesticide-related toxicity in one regulatory action, it is important that the action taken recognize and address the differences involved. The Clean Water Act section 303(d) listing of diazinon is based on existing facts and provides a federal mandate for the establishment of a TMDL to address it. No such federal mandate exists to justify a TMDL to address the *potential* for toxicity related to other pesticides, even if they may replace diazinon use in the future. Instead, concerns about toxicity related to the potential future use of pesticides other than diazinon is a State-led concern that needs to be addressed through the adoption of a non-TMDL provision (i.e., a WQAS) to the Basin Plan in accordance with the Water Code. The current intermingling between the diazinon TMDL and pesticide toxicity WQAS is a concern that has repeatedly been raised by SCVURPPP and BASMAA but which remains insufficiently addressed. In addition to being legally improper, this intermingling leads to unnecessary ambiguity and confusion, particularly in following four sections of the Staff Report and BPA. (Specific recommendations on how to address our concerns and increase the clarity of the TMDL and WQAS in the process have previously been submitted and are also provided below).

1) Problem Statement

Before establishing a WQAS, the Water Board should first identify what pesticides (if any, beyond diazinon) are currently impairing beneficial uses in urban creeks, and then identify the specific "upstream" sources of those pollutants. Without such an analysis, it will be impossible to effectively regulate the "true" sources (i.e., applicators of pesticides) of future pesticide-related toxicity in urban creeks, much less determine how municipal stormwater dischargers can help reduce pesticide-related toxicity. These impact and source assessments are especially important in this case, given the complex regulatory framework governing pesticides.

2) Numeric Targets

San Francisco Bay Area urban creeks have been listed on the 303(d) list for toxicity *attributable to diazinon*, which (in this case) necessitated the development of a TMDL for diazinon in urban creeks. As part of the TMDL process, numeric targets for diazinon (concentrations) have been developed and proposed in the Staff Report and BPA. Additionally, the Water Board staff has proposed generic toxicity targets that are not specific to diazinon. According to previous Water Board staff comments³, these generic toxicity targets are proposed for two reasons:

- a) The Water Board staff believes the proposed diazinon concentration targets alone do not address potential interactions between diazinon and other chemicals that may contribute to toxicity; and,

³ Water Board staff response to comments regarding *Diazinon and Pesticide-Related Toxicity in Bay Area Urban Creeks - Water Quality Attainment Strategy and Total Maximum Daily Load TMDL Final Project Report*, dated December 16, 2004.

- b) The proposed diazinon concentration targets alone do not address the potential for the pesticides replacing diazinon to threaten water quality.

Relative to (a) above, the proposed diazinon concentration targets (chronic and acute) are the most sensitive criterion currently developed (see Staff Report, page 61) and therefore take into account an implicit margin of safety that will be protective of water quality even if interactions occur with other chemicals.

Relative to (b) above, the potential for future, non-diazinon pesticide-related toxicity is a legitimate Regional Board concern that SCVURPPP and BASMAA understand should be addressed. However, the TMDL for diazinon in San Francisco Bay Area Urban Creeks is not the appropriate vehicle to address this concern. While toxicity related to diazinon replacement pesticides that may be registered in the future exists in other areas, because addressing this via a TMDL is not part of the federal statute's mandate, U.S. EPA did not, for example, go beyond the section 303(d) listings of chlorpyrifos, diazinon, and delineated organochlorine pesticides when it developed *and approved* a TMDL in Newport Bay.⁴ Rather than continue its current objectionable approach that goes beyond the Clean Water Act's authorization for TMDLs, the Water Board staff should look towards the existing Basin Plan narrative water quality objective for toxicity and development of a water quality attainment strategy for non-diazinon-related pesticide toxicity consistent with the California Water Code.⁵

3) Allocations

Allocations for diazinon and pesticide-related toxicity in urban creeks are assigned to "storm drains," which are mostly owned and operated by Bay Area municipalities in the urbanized areas. Not only are "allocations" for non-diazinon pesticide related toxicity beyond the scope of the Clean Water Act and, hence, inappropriate,, even as applied to diazinon alone, the allocation disregards the "true" sources of diazinon - the applicators themselves. Consistent with EPA TMDL Guidance⁶ allocations for diazinon should be expressed by pollutant discharge process (i.e., urban storm runoff), rather than discharge location (i.e., storm drains) because of the diffuse nature of stormwater runoff and lack of regulatory oversight municipalities have in prohibiting the use of pesticides⁷. Once the allocation is assigned to "urban storm runoff", all "true" sources of diazinon (e.g., pest control operators) should be identified and assigned allocations.

4) Implementation Plan

Intermingling between the WQAS and TMDL results in confusion in the implementation plan language and impedes our ability to fully analyze its potential consequences. It is currently not clear which activities relate to the TMDL versus the WQAS. Additionally, the mixing of the WQAS for pesticide-related toxicity and the diazinon TMDL has lead to inappropriate assumptions regarding future pesticide sources. Some of the implementation actions appear to be based on the assumption that the sources and pathways of future pesticide-related toxicity in urban streams will be similar to the sources and pathways of diazinon related toxicity. That assumption is not necessarily realistic and should not be made absent evidence. As you know, new pesticides are constantly being brought to market and gaining market share while others are losing market share. We cannot predict what the pesticide market will look like in ten or twenty

⁴ <http://www.epa.gov/Region9/water/tmdl/nbay/summary0602.pdf>; <http://www.epa.gov/Region9/water/tmdl/nbay/tsdc0602.pdf>; <http://www.epa.gov/Region9/water/tmdl/nbay/tsdi0602.pdf>

⁵ Among other things, the WQAS must comply with California Water Code, Section 13241.

⁶ *Guidance for developing TMDLs in California*, EPA Region 9, January 7, 2000.

⁷ Food and Agriculture Code (Section 11505.1) prohibits local municipalities from regulating the registration, sale or use of pesticides.

years, what the physical properties of those pesticides will be, or which applications may be causing water quality impacts.

Recommendations – Again, we request that the Report and BPA language be revised so the diazinon TMDL, including recommended targets, allocations, and implementation actions, can be clearly separated from the WQAS for pesticide-related toxicity. This can be done by revising the Report to include separate sections for the diazinon TMDL and the WQAS for pesticide-related toxicity, or by developing two separate reports. The TMDL is for 37 Bay Area creeks listed on the 303(d) list due to toxicity attributable to diazinon. This listing does not apply to all pesticide-related toxicity, which, if present, should be covered under a separate WQAS for this broader potential issue.

These unresolved issues are further discussed in our previously submitted comments, which are attached as Exhibit A. Additionally, recommended revisions to the proposed BPA language are also included in a previously submitted “redline strikethrough” version of the BPA attached as Exhibit B.

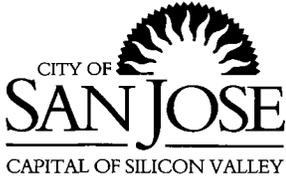
SCVURPPP believes that not revising the Staff Report and BPA to incorporate these recommended improvements will most definitely place an undue burden on public agencies in the Bay Area by requiring resource consuming implementation actions that are misdirected. If our recommendations are not presented to the Board and adopted, we recommend that the Executive Officer postpone consideration of the BPA at this time and instead work with Bay Area stakeholders to substantially revise the Staff Report and BPA.

The SCVURPPP is in support and incorporates by reference the comments submitted by the BASMAA and the City of San Jose. Please contact me at (510) 832-2852 if you have any questions regarding the comments or suggested changes.

Sincerely,

Adam W. Olivieri, Dr.PH, P.E.
SCVURPPP Program Manager

CC: Bruce Wolfe
Tom Mumley
Dorothy Dickie
SCVURPPP Management Committee
SCVURPPP Legal Steering Group
BASMAA Executive Board



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September 19, 2005

Bill Johnson
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SUBJECT: Comments on the Diazinon and Pesticide-Related Toxicity in Bay Area Urban Creeks Water Quality Attainment Strategy (WQAS) and Total Maximum Daily Load (TMDL) Proposed Basin Plan Amendment and Staff Report.

Dear Mr. Johnson:

The City of San José (City) appreciates the opportunity to submit comments on the August 2005 Proposed Basin Plan Amendment and Staff Report, *Diazinon and Pesticide-Related Toxicity in Bay Area Urban Creeks Water Quality Attainment Strategy and Total Maximum Daily Load*.

The City recognizes the role of municipal storm sewer systems in addressing the issue of pesticides. The City has developed or contributed to a variety of activities over the past ten years aimed at characterizing and eliminating pesticide related toxicity in stormwater. The City of San Jose is clearly committed to reducing water quality impacts related to pesticides and, in particular, diazinon. The City's efforts include outreach to residents, businesses, and municipal staff to change pesticide use behaviors; monitoring studies; and participation in regional organizations aimed at characterizing and eliminating pesticide related toxicity in stormwater.

In order to have a defensible Total Maximum Daily Load (TMDL), the Regional Water Board should first identify the pesticides (if any, beyond diazinon) impairing beneficial uses in local creeks, and then identify the specific "upstream" controllable sources of those pollutants. Without such an analysis, it will be impossible to effectively regulate the sources of toxicity in urban creeks, much less determine how municipal stormwater dischargers can help reduce pesticide-related toxicity.

A scientifically sound, defensible TMDL is especially important in this case, given the complex regulatory framework governing pesticides. The report acknowledges this complexity by identifying the discrepancy that exists between regulations under the Clean Water Act versus those of the U.S. EPA Office of Pesticide Programs. The City does not regulate the use of pesticides. Therefore, attainability of any limitation of pesticides in urban runoff, where the same pesticides continue to be sold and used, is unrealistic.

The City would first like to reiterate some significant concerns made on behalf of the City, the Bay Area Stormwater Management Agencies Association (BASMAA), and/or the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP) as public comment on the Final Project Report for Diazinon and Pesticide-Related Toxicity in San Francisco Bay Area Urban Creeks, dated March 2004.

- **Pesticide Registration** – U.S EPA Office of Water and Office of Pesticide Programs need to organize the pesticide registration process so that water quality criteria development is integrated into pesticide approval.
- **Separating the TMDL, the Implementation Plan, and the Water Quality Attainment Strategy (WQAS)**– combining the TMDL and the Implementation Plan will likely undermine the State’s authority and flexibility with regard to TMDL implementation. Furthermore, the WQAS and TMDL should be developed and adopted as separate policies. The TMDL, which is a federal requirement, should be specific to toxicity attributed to the pesticide diazinon. The WQAS is a broader policy governing toxicity attributed to pesticides in general.
- **Proposed/Future Allocations** – the Regional Water Board should not assume that future pesticide-related toxicity may result from sources and pathways similar to those of diazinon. The WQAS should include methods to identify new sources and procedures for assigning allocations to these sources.
- **Numeric Targets** – using toxicity targets in addition to the two diazinon concentration targets is inconsistent with guidance from the U.S. EPA (U.S. EPA 2000) which states “...targets should identify the specific instream goals or endpoints for the TMDL, which equate to attainment of the water quality standard” (i.e. the water quality objective for diazinon itself).

The following comments address the City’s specific policy and technical concerns with the August 2005 Proposed Basin Plan Amendment and Staff Report, with particular concern on the topic of monitoring benchmarks.

- **Page 8, Table 2.2 – Footnotes c & d Concerning Diazinon Concentrations < or > 100 ng/L.**

Comment: 100 ng/L is the draft EPA acute and chronic criteria for diazinon. This endpoint is twice as sensitive as the most sensitive species (*Gammarus fasciatus*) in EPA and/or CDFG databases and represents the theoretical 5th percentile most sensitive species. The acute sensitivity of *Ceriodaphnia dubia* is 377 ng/L (EPA) or 440 ng/L (CDFG). In the draft EPA diazinon criteria document (2000e), the Species Mean Acute Value of 377 ng/L was derived from 14 acute tests whose results ranged from 250 to 590 ng/L.

Recommendation: The Report should avoid inference or direct statement that the diazinon TMDL target of 100 ng/L and toxicity to *Ceriodaphnia dubia* are equivalent and

should report the correct, published sensitivity of *Ceriodaphnia dubia* (377 ng/L) to diazinon, along with the TMDL target of 100 ng/L in the Table 2.2 footnotes.

- **Page 11, Table 2.3 –**

Comment: The legends for range of means and medians are missing.

Recommendation: Include the legends for range of means and medians to Table 2.3. It may improve clarity to represent each of the means with a symbol and/or report the total number of sample means (n) for each sampling period.

- **Page 22, last paragraph –** “The California Department of Fish and Game has developed acute (one-hour exposure) water quality criteria for two pyrethroids, cypermethrin (2 ng/l) and permethrin (30 ng/l) (CDFG 2000a). These concentrations are lower than the equivalent diazinon criterion, 160 ng/l (CDFG 2000b; CDFG 2004).”

Comment: The references cite two different acute values.

Recommendation: Delete the reference to CDFG 2000b since it shows the acute value at 80 ng/L.

- **Page 22; last paragraph –** “These concentrations are comparable to the diazinon concentrations toxic to *Ceriodaphnia dubia* (SFBRWQCB 2003a).”

Comment: It is unclear which diazinon concentrations are toxic (causing 50% mortality) to *Ceriodaphnia dubia*.

Recommendation: Please add the range of diazinon EC50 values for *Ceriodaphnia dubia* in order to compare it to the range of values given for pyrethroids tested (70-700 ng/L). The draft EPA diazinon criteria document (2000e) reports diazinon EC50 values for *Ceriodaphnia dubia* ranging from 250 to 590 ng/L.

- **Page 62, Paragraph 3 –** The staff report discusses studies done by Moore and Waring (1996) and Scholz et al. (2000). Concerning the Scholz et al. study, the staff report concludes the following. “These adverse effects were not observed at 100 ng/L. Therefore, to provide an added measure of protection beyond the California Department of Fish and Game criteria of 160 ng/L, the proposed target reflects this no observed effects level:

The one-hour average concentration of diazinon in freshwater shall not exceed 100 ng/L.”

Comment: Both studies cited in the staff report were apparently designed to show effects at the parts-per-billion ($\mu\text{g/L}$) level and included a 100 ng/L exposure by design. However, no concentration was tested between 100 and 1000 ng/L. For both studies, the NOEC and LOEC values were 100 and 1000 ng/L, respectively. The chronic value (geometric mean of NOEC and LOEC) for these two tests (not reported in the studies) is 316 ng/L. The diazinon exposures were for two hours.

It is not appropriate to report a NOEC and compare it to a point estimate derived from acute tests. Comparing the chronic value or the effect of diazinon on alarm response, to the acute criterion makes the appropriate evaluation of sensitivity. In this case, the acute criterion of 160 ng/L is lower (more protective) than the chronic value of 316 ng/L. The CDFG chronic criterion of 100 ng/L is the most sensitive criterion overall.

Recommendation: Please change the “one-hour average” diazinon target to 160 ng/L or change the target of 100 ng/L to a 4-day average. The discussion of a “one-hour average” of 100 ng/L in the staff report is not sound and the reference to the study NOEC rather than the Chronic Value is misleading.

- **Page 62, Paragraph 3** – “Though generally protective, the U.S. Environmental Protection Agency’s guidance for developing water quality criteria does not necessarily account for all types of toxicity. Research concerning sublethal effects of diazinon on salmon indicates that short-term exposures to diazinon concentrations of 300 ng/L can reduce levels of reproductive steroids in some fish (e.g., salmon) (Moore and Waring 1996).

Comment: The U.S. EPA (2000e) draft diazinon criteria document lists Moore and Waring (1996) under unused studies that “exposed plasma, enzymes, excised or homogenized tissue, tissue extracts, or cell cultures.”

Recommendation: If U.S. EPA “does not necessarily account for all types of toxicity,” the staff report should explain why U.S. EPA deliberately did not use the referenced data (e.g. were there data quality or type of exposure concerns?).

- **Page 63, first full paragraph** – “The diazinon concentration target is intended to protect all species and is derived from toxicity data for many different species. Therefore, it is lower than the LC50 for *Ceriodaphnia dubia*.”

Comment: The statement should clarify the magnitude of the difference between the diazinon target and toxicity to *Ceriodaphnia dubia*. The diazinon target of 100 ng/L is also lower than the chronic NOEC for *Ceriodaphnia dubia* of 220 ng/L reported by U.S. EPA (2000e).

Recommendation: Please revise the sentence to indicate that the target of 100 ng/L is lower than the acute values for *Ceriodaphnia dubia* of 377 and 440 ng/L respectively, reported by U.S. EPA (2000e) and CDFG (2000b), and the chronic value of 339 (or NOEC of 220) ng/L reported by U.S. EPA (2000e).

- **Page 63, first full paragraph, last sentence** – “Water containing only diazinon (not a mixture of toxic substances) can exceed the diazinon concentration target without exceeding the toxicity targets.”

Comment: This is an appropriate qualifier (for other sections as well).

Recommendation: Place this qualifier into Table 2.2 or its footnotes.

- **Page 95 - 97, Monitoring Benchmarks**

Comment: The discussion of Safety Factors for calculating Monitoring Benchmarks that are “analogous to an acute criterion” does not address cases (e.g. permethrin) where sufficient data exist but where the State has not established Water Quality Standards. This includes cases where U.S. EPA or perhaps the California Department of Fish & Game has not promulgated criteria due to budgetary constraints or other reasons. If all eight data requirements (test endpoints for specific families of animals) are available, will Monitoring Benchmarks be determined using the EPA (1985) criteria development guidelines (regression approach)?

Recommendation: Discuss the approach that will be used to determine Monitoring Benchmarks for pesticides for which sufficient EPA data requirements (test endpoints) exist but have not yet been officially established or promulgated as standards or criteria. Please discuss the approach that will be used to determine Monitoring Benchmarks for pesticides for which all 8 data requirements may become available in the future. For example, if a given pesticide has 7 data requirements available, a FAV is calculated using a Safety Factor of 4.3. If the 8th data requirement becomes available, will the EPA regression approach be used to determine the FAV and hence the Monitoring Benchmark by dividing the FAV by 2? Or, will the Monitoring Benchmark continue to be based on the Safety factor of 4.3 until such time as EPA or CDFG criteria are promulgated or state Water Quality Standards are established (which could involve a very long delay)?

Additional Comment: The approach used to determine Benchmark Factors does not prioritize EPA data requirements. Rather, it assumes that all eight data requirements are equal. This is not true for pesticides in general or insecticides in particular. Thus, for cases where most data requirements for sensitive families of organisms are met, but requirements for insensitive families are not (e.g. a non-salmonid bony fish or a mollusk), the Benchmark Factors may be unnecessarily conservative. For example, the CDFG calculated an interim freshwater FAV for cypermethrin (CDFG 2000a) using only 7 of

the 8 data requirements. "...as the remaining freshwater taxon will likely be either a rotifer or a snail, neither of which tend to be sensitive to insecticides [and]...it is unlikely to significantly change the FAV." The CDFG calculated an acute criterion (CMC) of 2 ng/L for Cypermethrin. Using the lowest GMAV in the CDFG (2000a) database of 5.3 ng/L for *Hyalella azteca*, and a Benchmark Factor of 8 (for 7 data requirements), a Monitoring Benchmark is calculated as 0.66 ng/L. This is three times lower than necessary to protect aquatic life using CDFG reasoning.

Recommendation: Consider a ranking system or alternative way to determine an appropriate Monitoring Benchmark in cases where the most important data requirements are available. Safety Factors were originally designed to be applied to all toxic pollutants. Monitoring Benchmarks are being applied only to pesticides.

- **Page 113, 114 and Table 14.1** – Discussion on the costs incurred by EPA to develop Water Quality Criteria (WQC) for a single pollutant (e.g. pesticide).

Comment: An estimated budget of 1 PY or \$150,000 for the EPA to develop WQC for a single pollutant (e.g. pesticide) may be very low. Earlier the Staff Report stated (p.95) that "available data are rarely sufficient" to develop water quality criteria. Budget may be just as important a constraint as data availability. The City obtained an estimate on 9/6/05 from Mary Reiley of EPA (through Charles Delos) for developing "relatively uncomplicated, non-controversial criteria" of \$485,000 - \$585,000. This is broken down into EPA staff time (\$285,000) and contract work (\$200,000), with potentially an additional \$100,000 needed to generate additional toxicity data. Also, for more complex or controversial criteria, it is believed that this cost could double.

Recommendation: Revise the estimated EPA budget for development of water quality criteria. Please discuss what approach will be used if sufficient data appears to be available but neither EPA nor CDFG have reviewed the data for quality or calculated a criterion due to budgetary or other constraints. If sufficient data are available but no WQC have been developed, the Regional Water Board should review the data for quality and calculate a Monitoring Benchmark using the EPA regression approach. The regression approach should be discussed as a preferred option since, by definition, Monitoring Benchmarks may be overly conservative ("at or below the water quality criteria that would likely be calculated if sufficient data were available"). To the extent that Monitoring Benchmarks are overly stringent and not reflective of actual toxicity, the true cause of creek toxicity may be misidentified or conclusions regarding chemical specific results and toxicity results may be misinterpreted.

- **Page A-14** – "In the absence of water quality criteria, a monitoring benchmark may be calculated as follows."

Bill Johnson

Diazinon and Pesticide - Related Toxicity in Bay Area Urban Creeks WQAS and TMDL Proposed Basin Plan
Amendment and Staff Report

September 19, 2005

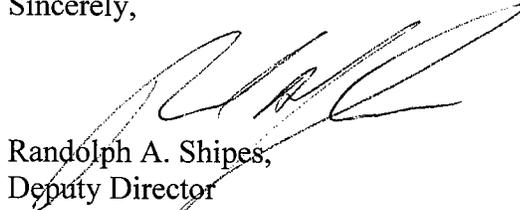
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Comment: It is not the absence of water quality criteria that should drive the use of the Benchmark Factors but whether the “Number of Data Requirements Satisfied” is less than eight. If all of the 8 required toxicity test results are available, but neither EPA nor CDFG has promulgated water quality criteria, the EPA regression approach should be used to determine a Monitoring Benchmark until such time as water quality criteria are developed and promulgated.

Recommendation: Replace the sentence in the BPA quoted above with the following. “In the absence of the eight data requirements needed to develop water quality criteria^a, a monitoring benchmark may be calculated as follows.” Prior to the sentence beginning “Other available information...”, add the following sentence. “If the eight data requirements are available for a pesticide (or become available in the future) and a water quality criterion does not exist for that pesticide, the EPA regression approach shall be used to calculate a Final Acute Value (FAV) and a Monitoring Benchmark (FAV/2), until such time as officially promulgated water quality criteria become available”

The City of San Jose incorporates by attachment earlier comments (dated April 12, 2004) submitted by the City of San Jose on the Final Project Report for Diazinon and Pesticide-Related Toxicity in San Francisco Bay Area Urban Creeks, dated March 2004. The City of San Jose also incorporates by reference comments submitted by the Bay Area Stormwater Management Agencies Association and the Santa Clara Valley Urban Runoff Pollution Prevention Program. Additionally, the City requests an additional 30 days to review the Water Board Staff Responses to Peer Review Comment as these were only received on September 13th and the City has not had sufficient time to review them. If you have any questions please contact Steven Osborn at (408) 382-8835.

Sincerely,



Randolph A. Shipen,
Deputy Director
Environmental Services Department
Watershed Protection

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*Flex your power!
Be energy efficient!*

September 19, 2005

Mr. Bill Johnson
California Regional Water Quality Control Board
San Francisco Bay Region
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by e-mail: wjohnson@waterboards.ca.gov
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Subject: San Francisco Urban Creeks Diazinon TMDL - Draft Basin Plan Amendment

Dear Mr. Johnson:

The California Department of Transportation (Department) strongly supports your effort to protect the environment and achieve the best possible water quality in the urban creeks. Regarding the subject Staff Report and Proposed Basin Plan Amendment, the Department appreciates the opportunity to provide comments. We are concerned with the waste load allocation assigned to the Department. The Department owns and maintains approximately 935 miles of roadway, 52 maintenance stations, 45 park and ride lots and two rest areas in the watershed. The total area of this right-of-way is approximately 27 square miles, which includes both paved roadway and unpaved vegetated areas. This total represents approximately 0.7% of the watershed. Diazinon has not been used within our right-of-way at any time. In our Statewide Monitoring Characterization Study¹, Diazinon was at non-detectable levels in storm water leaving the vast majority of the Department's facilities. The Staff Report states that the "storm drains convey essentially all pesticides found in the urban creeks." In addition, the Staff Report states, "The pesticide discharges result from normal use, random illicit activity or accidental spills" within the storm drain service area. Our system either conveys runoff from our roads and facilities, which are not sources, or it passes runoff from other dischargers. Given our small percentage of the watershed and the absence of Diazinon in our runoff, the Department should not be assigned a waste load allocation.

¹ Department of Transportation (Caltrans), 2003. *Discharge Characterization Study Report*. Report ID CTSW-RT-03-065. November 2003.

Mr. Bill Johnson
September 19, 2005
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We appreciate this opportunity to comment. If you have any questions please contact Ivan Karnezis at (916) 653-5417.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael Flake". The signature is written in a cursive style with a large initial "M".

MICHAEL FLAKE, Chief
Office of Storm Water Policy

From: "Jerry Farris" <farrisjerry@hotmail.com>
To: <wjohnson@waterboards.ca.gov>
Date: 9/16/05 9:46AM
Subject: Response to Proposed Basin Plan Amendment

Bill,

Please refer to the attached response. These are my views and do not as of yet have the input of the PCOC General Pest Committee. I will be sharing your proposal and my response with them today.

I, regardless of how you take my response am on the side of IPM. But as outlined in the response this proposal is too vague and (in my opinion) is focused on the wrong cause of ground water pollution.

Most PCOs already practice IPM in some form. It's in their best interest to do so. It protects the environment. They can generate additional income by selling and providing the consumer the biological corrections. They use less pesticides therefore making more profit.

But in my experience most of the consumers support IPM until it comes time for them to either spend the money and/or labor for repairs and sanitation. At that point they only want the pest problem to go away. If PCOs are mandated to perform IPM services, the consumer will purchase over-the-counter pesticides and do the work themselves. They, for the most part do not read or follow the label and will not practice and IPM approach to applications.

This will only cause an escalation in ground water pollution.

Your efforts, time and monies should be focused on educating the consumer. Perhaps strong advertisement to be responsible with pesticides and hire a trained professional (PCO) to address their pest problems.

Don't hesitate to call me if you have questions or concerns regarding my comments or the attachment. 925-462-9900.

Thanks,

Jerry Farris

CC: <harvey@pcoc.org>, <kelli_okuma@dca.ca.gov>, <eric@pcoc.org>, <americanpest@nethere.com>, <gedwards@terminix.com>, <rme4north@aol.com>, <bryan@teamtoo.com>, <sghunter4@cox.net>, <jkurtzberg@charter.net>, <buglady@ix.netcom.com>, <ondaflly@msn.com>, <bugboss@pacbell.net>, <totalexterm2811@sbcglobal.net>, <rsub444@aol.com>, <angelo@rodentpesttech.com>

To: Bill Johnson
Copy: Kellie Okuma, Harvey Logan, Eric Paulsen and PCOC General Pest Committee
From: Jerry Farris
Date: September 16, 2005
Subject: Response to Proposed Basin Plan Amendment

First and foremost, I am both an advocate and practitioner of Integrated Pest Management. I believe in IPM, I train and require my employees to utilize IPM in all of their services. I preach IPM to my customers, showing them how to adapt IPM in their homes and businesses. IPM is our first approach to all pest issues, but due to consumer needs, requirements and demands not our only response.

With that said, I was both disappointed and concerned when I read the proposal submitted by Bill Johnson of the California Regional Water Quality Control Board.

Disappointed because both Eric Paulsen from Pest Control Operators of California and I have attended meetings with Mr. Johnson and his group providing them with industry input regarding their project. Eric's and my purpose was to develop an IPM protocol that would protect the environment and ground water and be workable for the industry and consumer. Little of what we recommended has been included in this proposal.

Concerned due to the numerous items that follow.

1. This proposal is extremely vague, leaving a great deal to be interpreted at a later date without a clear understanding as to what is being proposed.
 - a. Examples of the lack of specifics are in the body of my examples listed below.
2. Changes in the SPCB Regulations in regards to advertisement.
 - a. Due to the vagueness of the proposal this could create a slippery slope, opening the door for unsubstantiated or misleading claims as to what is "SAFE" and/or "PROTECTS THE ENVIRONMENT".
 - b. If you allow either your committee or a Pest Control Company or pesticide manufacturer to state or indicate through advertisement that the only "SAFE" pesticide application is made through the IPM process you will be greatly misleading the consumer.
 - c. IPM, as you mentioned in your proposal does not mean not using pesticides. You are correct, but need to further clarify.

The method of application has as great or greater affect on the environment as using pesticides as the last resort.

1. For example; we have addressed all of the biological needs on the property. Now we are going to use a pesticide. Which of the

following methods introduces the least environmental impact”?
Using a lesser toxic pesticide according to the label that calls for a band spray treatment (1 foot up on the structure and 1 foot out on the ground.

2. A more toxic and effective pesticide is applied using a crack and crevice technique (a pin spray application applied to the crack formed by the wall of the structure and the ground) instead of the label recommend band treatment.

In the first example the lesser toxic pesticide was applied as per its label. The second example applies the pesticide in a manner that uses less than the label recommended amount but places the pesticide where it does the most good according to the pest’s behavior.

A person/applicator can practice IPM and apply pesticides as per the label maximum requirement and still be applying pesticides in a method that could cause a greater impact on the environment than a person using a more toxic pesticide in a more effective manor than is listed on the label.

Consumer education is what’s needed, not implications that only IPM will protect the environment.

If you want to change the regulations regarding advertisement, please provide us with specific examples.

3. Changes in licensing requirements that mandate IPM training/certification.
 - a. Referencing page 46 of your proposal, Over-the-counter applications of Diazinon represents 50% of the total applications with Structural Pest Control at 27%. This does not indicate the percentage of ground water contamination caused by each group. I believe that due to the extensive training Structural Pest Control Operators receive, the contamination percents would be far less than 27% for them and much higher for the individual who purchases and applies the over-the counter products. The contamination percent would also be much higher for agricultural use due to the method of application. But, for sake of example I’ll use these above numbers in the following example;
 - i. This indicates that consumer education in regards to “reading the label” before application, and effects improper or over application has on the environment and water table.

Through years of selling and practicing IPM, I’ve come to the conclusion that unless you have 100% consumer buy-in in the program it will not work.

You can promote IPM and sell it to the homeowner and/or business owner. It sounds good to them; they are doing their part in protecting the environment.

But, when they become infested with ants the last thing they want to hear is that “they need to change and improve the biological conditions of their home or business”. They are getting pressure from their family and/or employees to get rid of the ants. They demand that you (the pest control operator) spray the ants away.

- ii. If, as you have mentioned in many of your committee meetings it becomes mandatory that all Pest Control Companies and applicators become IPM Certified, when the consumer demands that we rid them of the ants and we cannot because they have not corrected the biological issues, they (the consumer) will be forced to purchase and apply pesticides themselves. As per your example, the consumer is responsible by far for the water table and environment contamination with pesticides.
 - iii. Where will the Pest Control Operator, PCO acquire his IPM certification? Having been a participant of your committee meetings, I already know that you are working on becoming the source for IPM Certification in California. This would mandate that any PCO (company or individual) that currently or wishes to work in the industry must go to you and pay the fees set by you, if they are to work in the state.
 - iv. Currently, the Pest Control Industry funds the SPCB. As is stated in your proposal they are to become the administrator of IPM Certification and Continuing Education mandated requirements, where does the additional funding come from? Page 115 of your proposal states that the initial cost for the SPCB would be \$150,000 with no significant cost after the first or second year.
 1. I find this hard to believe. History shows us that cost estimates are more often that not under stated.
 2. PCO licensing and continuing education is and always will be an on-going process. How do you justify the “no significant cost” statement?
4. Changes in Continuing Education requiring mandatory IPM training/certification.
- a. Who will provide the “IPM Continuing Education”? Your board? And at what cost to the industry?
 - b. Where does the funds come from to allow the SPCB to review the education content and verify the PCO attendance?

5. Your proposal mentions on several pages your concerns as to the increased usage of pesticides such as pyrethroid, fipronil and others but does not address a viable substitute. Fipronil is the active ingredient in Termidor, a recent addition to our arsenal for ant control in California. It's new! Yes, there is an increased usage.

Please refer back to point 3. Education of the public should be the requirement, not mandated IPM certification. If mandatory IPM certification is imposed on the PCO, without first making the effort to educate the consumer as to proper pesticide applications, you will be ironically further damaging the ground water and environment because of consumer application of pesticides without the training and education and understanding as to responsible use of pesticides. I've heard numerous people (outside of the pest control industry) state that "if a little (pesticides) works a lot will work even better. This is the mind set that must be changed, not the mandatory and revenue generating (for someone) IPM Certification of the PCO.

I believe your efforts and moneys would be better spent, and get higher results if you focused on education of the general public as to how they are causing the ground water contamination. This could be accomplished without using the phrases "Safe" or "Environmentally Friendly". You could even help the environment and the PCO industry by promoting the general public to hire a Professional Pest Control Company.

The industry is very much aware of IPM most of us practice it. We talk it up to our customers and employees. IPM is good for the environment and the PCO. If we do it right we can charge the consumer for doing repair work, sanitation work and we use less chemicals, which improve both our revenue and profit. Why would we not want to provide IPM service?

It's the consumer that fails to or does not want to do their part in an IPM program.

Thank you,

Jerry Farris
Branch 2 Operator

From: "Pete Halpin" <pete_halpin@caltestlabs.com>
To: "Bill Johnson" <WJohnson@waterboards.ca.gov>
Date: 9/14/05 4:02PM
Subject: Urban Creeks diazinon TMDL comment

Hello Bill,

Thanks for your work on the TMDL. I appreciate the broad approach to addressing any pesticide related toxicity.

I am sending this email as public comment on the Diazinon and Pesticide Related Toxicity in Bay Area Urban Creeks Water Quality Attainment Strategy and TMDL Proposed Basin Plan amendment and Staff Report

In the monitoring section, page 94 discussion of analytical tests there is the statement on the last bullet point related to other pesticides that pose a problem (including sediment quality threats) and the availability of commercially viable analytical methods for the suspected analytes of concern.

This may include pyrethroid pesticides as referenced elsewhere in the proposed amendment. Until very recently, there has not been a commercial laboratory capability with respect to the analyses of pyrethroid pesticides at low levels, as there was no commercial demand.

I want to make it known that Caltest has been working on pyrethroid analyses at levels that are environmentally relevant (with respect to toxicity) for two years now, and has been providing these analyses commercially to the public since October of 2004. I am attaching summaries of information regarding the analyses of pyrethroids that were submitted and distributed in an analytical laboratory workshop on the analyses of pyrethroid pesticides in sediment convened by the Central Valley Water Quality Control Board on August 31, 2005.

These attachments include a Word doc on method options; a Word doc on Analytical issues; and the NorCal SETAC (Northern California Regional Chapter Society of Environmental Toxicology and Chemistry) summer newsletter with two articles regarding the analysis of pyrethroids in environmental water and sediment samples.

The NorCal SETAC newsletter includes a table of reporting limits that are routinely achievable in real matrices (wastewater, sediment, soils). The reporting limits meet the currently understood need for sensitivity with regards to pyrethroids in sediment. In water the method reporting limits are very adequate for most pyrethroid analytes, but 3 ng/L higher than the goal for cypermethrin. We are working on lowering that reporting limit now.

I hope that this information is helpful. It is important to know what is available, and admittedly the commercial capability for the pyrethroid pesticide analyses is fairly new. We have purchased performance evaluation samples from a reputable vendor and have enquired into their capabilities to provide samples for investigation programs. They are willing and able, and with package pricing are able to get the price below \$150 per performance sample, which brings the quality control check sample capability of pyrethroid pesticide analyses into a very reasonable range.

In summary, with respect to pyrethroid pesticides in sediment and water the commercial capability currently exists. The detection limits are suitable for sediment and lower than target limits for 9 of 10 analytes in water. Quality control check sample capability exists. We would welcome technical review of the methodology employed. We are currently preparing to publish the version of analysis we use to make it more commonly available to others.

If you have any questions regarding the commercial analyses of pyrethroid pesticides in waters or sediments or soils please contact me at the laboratory.

Sincerely,
Peter Halpin
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