



August 21, 2012

To: Central Valley Regional Water Quality Control Board (Gayleen Perreira)  
From: The Essential Public Information Center, Upper Lake, CA (Betsy Cawn)  
Subject: NPDES permit for aquatic pesticide applications in Clear Lake, CA

Comments/questions on Water Quality Order No. 2012-XXXX-DWQ, General Permit No. CAG 90005, "National Pollutant Discharge Elimination System (NPDES) Permit for Residual Pesticide Discharges to Waters of the United States from Algae and Aquatic Weed Control Applications."

1. Page 3, 5th paragraph: "This General Permit does not cover agricultural storm water discharges or return flows from irrigated agriculture because these discharges are not defined as 'point sources' and do not require coverage under an NPDES permit. This General Permit also does not cover other indirect or non-point source discharges from applications of algacides and aquatic herbicides, including discharges of pesticides to land that may be conveyed in storm water or irrigation runoff."

*COMMENTS/QUESTIONS: The revised "Phase II Small Municipal Separate Storm Sewer System" permit (currently under review prior to approval by the SWRCB, scheduled for later this year) does call for monitoring of water quality impacts from non-point storm water runoff, as well as dry weather monitoring of point sources ("outfalls") for Illegal Discharge Detection and Elimination. However, the constituents required to be monitored do not include pesticide discharges. Also, the Sacramento River Basin Plan Amendment for Control of Nutrients in Clear Lake, requiring pollutant reduction (a.k.a. "nutrients") incorporates a Total Maximum Daily Load, the specification of which is questionable. For comments/questions on that issue, refer to Holly Grover at your offices.*

*Long-term, cumulative impacts to water supplies in Clear Lake from a multitude of watershed activities, including adjacent agricultural operations, are not studied in an integrated manner, since each subsection of the federal Clean Water Act seems to have its own separate program. In the case of this ecosystem and ecoregion, the lack of integration can be seen in current conditions where the lake's health is so obviously suffering. Clearly (no pun intended) water quality in Clear Lake is worsening, as increasing costs of drinking water treatment evidence. Please use the authority granted to you by law to address the ecosystem impacts of "nuisance weed" eradication in Clear Lake.*

2. Page 4, 2nd paragraph: "To obtain authorization under this General Permit, Dischargers must submit to the State Water Resources Control Board (State Water Board) a complete application that consists of the following:" and item 3: "An Aquatic Pesticide Application Plan (APAP)."

*COMMENTS/QUESTIONS: The County of Lake, Department of Public Works, which administers this NPDES permit for aquatic pesticide applications in Clear Lake, provided a document titled "Clear Lake Integrated Aquatic Pesticide Management Plan," in 2004. Does that document fulfill the requirements of the APAP (is it accepted/approved as such)? Since that document was also accompanied by a "Programmatic Environmental Impact*

*Report" (and appendices) but the documents have not been reviewed by the Central Valley Regional Water Quality Control Board staff responsible for the implementation of this federal CWA mandate, will staff undertake that review, and provide input opportunities to determine changes that might be required to ensure permit compliance?*

- a. Will the existing APAP be revised (or require revision) for this application?*
- b. Will the existing Programmatic Environmental Impact Report for the existing APAP require revision? Who makes that decision?*

3. Page 4, 3rd paragraph: "The NOA will specify the permitted algaecide and aquatic herbicide active ingredients that may be used, and any region-specific conditions and requirements not stated in this General Permit. Any such region-specific conditions and requirements shall be enforceable."

*COMMENTS/QUESTIONS: Who will determine "region-specific conditions and requirements not stated in this General Permit"? What are the criteria for such determinations? Note that Clear Lake waters are used for irrigation of food crops and habitat management in Yolo county.*

4. Page 8, 1st paragraph (A. Application Schedule): "The Discharger shall provide a phone number or other specific contact information to all persons who request the Discharger's schedule. The Discharger shall provide the requester with the most current application schedule and inform the requester if the schedule is subject to change. Information may be made available by electronic means, including posting prominently on a well-known web page."

*COMMENTS: See comments on this and next item together.*

5. Page 8, 2nd paragraph (B. Public Notice Requirements): "Every calendar year, prior to the first application of algaecide or aquatic herbicide, the Discharger shall notify potentially affected governmental agencies. The notification shall include the following information:

- "1. A statement of the discharger's intent to apply algaecide or aquatic herbicide(s);
- "2. Name of algaecide or aquatic herbicides;
- "3. Purpose of use;
- "4. General time period and locations of expected use;
- "5. Any water use restrictions or precautions during treatment; and
- "6. A phone number that interested persons may call to obtain additional information from the discharger."

*COMMENTS/QUESTIONS: Since this calls for notification of "potentially affected governmental agencies," the actual public is not necessarily notified. Since there are private properties on the Clear Lake shoreline that have private water systems that may be affected by*

*herbicide applications, the availability of discharge schedules and plans must be provided to the property owners for protection of their health and safety. The availability of contact and schedule info from the primary permit issuer's web site (Lake County Department of Water Resources), along with monitoring reports, should be a requirement for permit compliance.*

6. Page 8, 3rd paragraph (C. Aquatic Pesticides Application Plan (APAP)): "Dischargers shall submit an APAP at least 90 days before the expected day of permit coverage. This is to allow posting of the APAP for a 30-day comment period, staff to review APAP and respond to comments, and the Deputy Director to issue the NOA."

COMMENTS: *See comments at item 2, above. And note: the contents of the APAP do include a requirement for cumulative, long-term monitoring of combined effects of aquatic herbicides with other chemical constituents of the "receiving water body" on the biological life forms -- including bioaccumulation effects. This requirement should be specified in the permit and be implemented in the same way that the NPDES for stormwater management have been in the first cycle of the permit (iterative, self-determined, monitored by CVRWQCB, revised). To the best of my knowledge, there is no program addressing that requirement by the permit holder (County of Lake).*

7. Page 10, 1st paragraph (D. APAP Processing, Approval, and Modifications): "Upon receipt of an APAP, staff will post it on the State Water Board's website for a 30-day public comment period. . . . If comments are received, staff will work with the Discharger to address the comments to allow the Deputy Director to issue an NOA as expeditiously as possible. Permit coverage will begin when the Discharger receives the NOA."

COMMENTS/QUESTIONS:

- a. *See comments at item 6, above.*
  - b. *The existing plan requires substantial editing and review; inasmuch as Lake County Department of Water Resources is continuing to issue project permits under the previously approved permit, and has continued to do so past the official "expiration" of that permit, addressing the APAP and additional monitoring considerations should be allowed to afford the public an opportunity to participate in development of a locally effective and accepted approach to managing aquatic pesticide applications in Clear Lake.*
  - c. *The public would appreciate an opportunity to work on resolving the monitoring and other issues addressed in the APAP to provide permit enforcement options beyond the current level of enforcement (review of annual report by regional water quality control board).*
8. Page 10, 2nd paragraph: "Major changes to the APAP shall be submitted to the Deputy Director for approval. Examples of major changes include using a different product other than what is specified in the APAP. changing an application method

that may result in different amounts of pesticides being applied, or addition or deleting BMPs.”

COMMENTS/QUESTIONS: *See comments at item 6, above. What is the form or method of submitted requests to the Deputy Director for approval? What is the form or method for updating the APAP as a consequence of designing a “pilot” or “trial” project to use materials or methods not approved in the APAP?*

7. Page 11, 1st paragraph (E. Algaecide and Aquatic Herbicide Application Log): “The Discharger shall maintain a log for each algaecide and aquatic herbicide application.”

COMMENTS: *What are the record retention requirements for log data? The current Clear Lake APAP (equivalent?) states that there will be a GIS database maintained, but there is apparently no oversight to ensure that the data is retained or used for any purpose. Database requirements should include integration with a system that would allow comparison and analysis of long-term trends and impacts.*

8. Page 12, item 10(f): “Each Discharger shall file with the State Water Board and the appropriate Regional Water Board technical reports on self-monitoring performed according to the detailed specifications contained in the Monitoring and Reporting Program attached to this General Permit.”

QUESTIONS: *What are the criteria for selecting the monitoring events? Where are records maintained? What independent observations are provided and used, and by whom?*

9. Page 14, item 4(a): “Each Discharger must conduct additional investigations when the chemical monitoring shows exceedance of any receiving water limitation or monitoring trigger. The additional investigations shall identify corrective actions to eliminate exceedance of receiving water limitations or monitoring triggers caused by the algaecide or aquatic herbicide application. The investigation shall include, but not be limited to, revising and improving the existing BMPs, revising the mode of application, using less toxic algaecide and aquatic herbicide products, or selecting alternative methods for algae and aquatic weed control.”

QUESTIONS: *Are there records of any additional investigations performed in Lake County since the initial permit was issued in 2003? Results of these investigations? Changes in BMPs, selection of alternatives, et cetera?*

10. Page 14, item 4(b): “Upon completion of an algaecide and aquatic herbicide project, public entities and mutual water companies listed in Attachment G of this General Permit shall provide certification by a qualified biologist that beneficial uses of receiving waters have been restored.”

QUESTIONS: *What are the credentials required for a “qualified biologist”? In Lake County, who carries that title or authorization? What is the method of reporting restoration of beneficial uses of the receiving waters, who is notified?*

*Who oversees the implementation of the monitoring and implements the “revision of control measures” referred to in the following section (item 5)? Would these changes or corrections impact the approved APAP (or equivalent, “Clear Lake Integrated Aquatic Plant Management Plan,” if in fact the document is the APAP equivalent)? How do such changes become integrated into existing approved plans?*

11. Page B-3, Section III. Standard Provisions - Monitoring. (Also see item 8, above.)  
“Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity (40 CFR §122.41(j)(1)).”

QUESTIONS: *What are the criteria (and how are they selected) for choosing which events to monitor and how are they defined as “representative” in specific permit implementation oversight mandates of the “Clear Lake Integrated Aquatic Plant Management Plan”?*

12. The following comments address items contained in the Factsheet (Appendix D).

- a. Page D-4, paragraphs 4 & 5: “In August 2001, Waterkeepers Northern California (Waterkeepers) filed a lawsuit against the State Water Board challenging several aspects of Order No. 2001-12-DWQ. Major aspects of the challenge included the emergency adoption of the Order without compliance with CEQA and other exception requirements of the Policy; failure to address cumulative impacts; and failure to comply with the California Toxics Rule (CTR). [40 CFR §131.38]

“In a settlement of the Waterkeepers’ lawsuit, the State Water Board agreed to fund a comprehensive aquatic pesticide monitoring program that would assess receiving water toxicity caused by aquatic pesticides and alternatives for pesticide use. The State Water Board contracted with the San Francisco Estuary Institute (SFEI) to conduct the program. SFEI published the final report on February 5, 2004.”

[Excerpted from: ***“San Francisco Estuary Institute Aquatic Pesticide Monitoring Program Phase 2 (2003) Final Conclusions for Weed Control Aquatic Pesticides:***

*“Use of the limited data gathered during the two pesticide application seasons that the APMP has existed should be limited to screening purposes only to identify where further risk characterization or research may be needed. APMP is not yet of sufficient spatial or temporal extent to directly inform regulatory change. Due to the limited time and budget of the project, no definitive conclusions can be drawn from the data accumulated to date. APMP generated chemical characterization, toxicity, and bio-assessment data. The chemical characterization and toxicity data can be used for*

*screening purposes. In complex field situations, bioassessments require multiple years of data before even preliminary conclusions can be drawn from them.”] [Emphasis added.]*

COMMENTS/QUESTIONS: *What provisions are made for bioassessment studies, identification of sensitive “zones” for restricted applications and additional ecological monitoring of non-target species (such as Tules) in shoreline applications? See the “Clear Lake Integrated Aquatic Plant Management Plan” (2004) recommended -- but not necessarily implemented -- strategy and note that no reporting has been provided to identify concerns of local management involving public participation.*

- b. Page D-5, 4th paragraph, item a: *“The application of pesticides directly to waters of the United States in order to control pests. Examples of such applications include applications to control mosquito larvae, aquatic weeds, or other pests that are present in waters of the United States; and”*

COMMENTS/QUESTIONS: *(1) Some “pests” can be understood as disease-bearing “vectors” -- such as mosquitos; a few aquatic weeds can be understood as threatening to the entire water supply, such as Hydrilla. However, I would like to know what procedure is used to define the “threat” of non-hazardous plants such as pondweed, making that “threat” so significant that it warrants poisoning the surrounding waters and adding to the cumulative chemical mixture of the ecology. (2) What agency is given the authority for that definition?*

- c. Page D-6, 5th paragraph: *“As part of the registration process of pesticides for use in California, USEPA and the California Department of Pesticide Regulation (DPR) evaluate data submitted by registrants to ensure that a product used according to label instructions will cause no harm or adverse impact on non-target organisms that cannot be reduced or mitigated with protective measures or use restrictions. Registrants are required to submit data on the effects of pesticides on target pests (efficacy) as well as non-target effects. Data on non-target effects include plant effects (phytotoxicity), fish and wildlife hazards (ecotoxicity), impacts on endangered species, effects on the environment, environmental fate, degradation byproducts, leachability, and persistence. Requirements that are specific to use in California are included in many pesticide labels that are approved by USEPA.”*

COMMENTS/QUESTIONS: *The Clear Lake Advisory Committee was asked in May, 2012, to “consent” (in correspondence with the applicant, the term “approval” was requested) to allowing use of a FIFRA-approved but not DPR-approved formula of an aquatic pesticide that is already permitted in this jurisdiction in its liquid form. The FIFRA label indicated that the pesticide is “toxic to fish.” No provision for monitoring ecotoxicity before, during, and after the “experimental” application was provided by the applicant. The Clear Lake Advisory Committee was unable to*

*support the applicant, although in theory the proposed formulation would be more effective at eradicating the target species than the existing approved formulation, and would reduce impacts to drinking and recreation water outside the designated treatment area(s). What mechanisms are in place for incorporating local public participation in endorsing/approving/accepting new formulations in "experimental" or "pilot" programs, as overseen by the Central Valley Regional Water Quality Control Board's pesticide program? What bioassessment requirements are mandated for such usage? What monitoring and reporting plans are defined for this process?*

- d. Page D-29, 4th paragraph: "The State Water Board, pursuant to the Porter-Cologne Act and the federal Clean Water Act, customarily requires the Discharger to conduct toxicity monitoring. In fact, both Acts anticipate Discharger self-monitoring." [See first comment, below.] "However, this General Permit does not require toxicity testing based on the 2004 toxicity study funded by the State Water Board and data collected from 2004 to 2008." [See second comment, below.]

COMMENTS: *First, there is no independent monitoring of the self-monitoring, which is allegedly performed by County personnel, with no identified criteria for monitoring event selection or protocol documentation. Second, see comments at item 12(a), 12(b), and 12(c), above.*

- e. Page D-34, 1st paragraph: "The State Water Board encourages public participation in the WDR adoption process."

COMMENT: *As a dedicated member of the public, resident/voter/tax payer in Lake County, California, USA, I can attest to how difficult it is to participate in the process of developing the regulations and implementation processes for environmental protection of natural resources in the State of California and the County of Lake.*

*The State's "official" proclamation of intent -- to "encourage" public participation -- is undermined by the actuality of limited education and outreach to develop the capacity for that important component of program achievement. I encourage the State's water quality management teams and staff to take a serious look at the overall ecological asset that is sorely neglected in the Upper Cache Creek Watershed and Clear Lake Basin.*

*Seventy years of data gathering and scientific analysis of discrete components of the lake, such as mercury, and boron, and phosphorus -- never integrated, but infinitely studied -- have not resulted in changing the culture that owns and operates the watershed lands.*

*Increasing degradation of our natural resources demands more holistic and collaborative efforts. I sincerely hope you and the entire staff in our regional water quality control board will take these comments into consideration.*

Thank you for your consideration of these concerns.