August 20, 2012

To: Central Valley Regional Water Quality Control Board (Holly Grover)
From: The Essential Public Information Center, Upper Lake, CA (Betsy Cawn)
Subject: Clear Lake Nutrient TMDL 5-Year Program Review Report -- Public Comments

The Essential Public Information Center appreciates the opportunity to comment on the Central Valley Regional Water Quality Control Board's 5-Year Review of the local program to implement CVRWQCB's Sacramento River Basin Plan Amendment (Resolution 2006-0060) for the control of nutrients in Clear Lake.

Specific comments on your review report follow this list of primary concerns, which reflect my understanding of federal and State programs intended to protect the US EPA Hydrological Unit 180-20116 (Upper Cache Creek Watershed, including the Clear Lake basin and resident water resources).

1. *The Clear Lake Nutrient TMDL is focused solely on reduction of phosphorus, despite the known importance of nitrogen to the generation of nutrient-produced impairments.*

   Reference: (a) USEPA memo dated March 16, 2011, "Working in Partnership with States to Address Phosphorus and Nitrogen Pollution through Use of a Framework for State Nutrient Reductions," and (b) "Evaluation and Review, Amendment to the Water Quality Control Plan for the Sacramento River and San Joachin River Basins -- The Control of Nutrients in Clear Lake and Total Maximum Daily Load for Nutrients in Clear Lake, Lake County, California (Tetra Tech)," Vladimir Novotny, PhD, P.E., December 19, 2005.

2. *The ongoing nutrient TMDL program in Lake County does not articulate the appropriate implementation of California's Nonpoint Source Pollution Program tools (61 management measures, watershed management initiative goals, and the "three-tiered" approach to enforcement) available for pollution prevention planning by the Responsible Parties to reduce nutrient loading in Clear Lake.*

   Reference: (a) "Volume I -- Nonpoint Source Program Strategy and Implementation Plan, 1998-2013 (PROSIP)," (b) "Volume II -- California's Management Measures for Polluted Runoff (CAMMPR)," State Water Resources Control Board; (c) "Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters," USEPA January 1993; "Nonpoint Source Program and Grants Guide-line for States and Territories, October 23, 2003" (Federal Register Volume 68, Number 205, Page 60653-60674).

3. *The nutrient TMDL program focuses on monitoring of trophic, limnological characterization of lakebed "dynamics" rather than on implementing the recommendations of the Clean Lakes Program (Phase II) projects defined in the "Clear Lake Diagnostic/Feasibility Study" (Clean Lakes Program Phase I) -- also referred to as the "Causes and Control of Algal Blooms in Clear Lake" (Richerson et al. 1994) -- and which is updated by the "Clear Lake Report, Clear Lake Historical Data Analysis" (Winder et al., 2010). ["Phase II projects are initiated in a comprehensive, integrated manner based on the Phase I study. Funded activities include artificial aeration, phosphorus precipitation, dredging, and the installation of watershed best management practices," from the "Clean Lakes Program 1993-1994 Annual Report, Page 4.]*

Reference: (a) "Clean Lakes Program, 1990 Annual Report," USEPA Office of Wetlands, Oceans and Watersheds, Office of Water, 1991; (b) "Clean Lakes Program 1993-1994 Annual Report," USEPA
http://water.epa.gov/type/lakes/upload/2007_04_05_lakes_lakes-93-94report.pdf

4. *Significant impacts of agricultural operations and lakebed management services are not adequately measured to ensure that best management practices required for achievement of Nonpoint Source Pollution Program goals are implemented.*

   Reference: (a) your report; (b) "Clear Lake Integrated Aquatic Plant Management Plan," 2004 (and affiliated document components, reports to CVRWQCB, SLC, and other responsible agencies).

5. *Despite some seventy years of multiple agency data gathering and studies, integrated commitment to reduce environmental stresses on the "receiving water body" appears to be absent.*

   Reference: (a) Bulletin 143-2, California Department of Water Resources 1966; (b) "Clear Lake Integrated Watershed Management Plan," Lake County Department of Public Works 2010; (c) minutes of Clear Lake Advisory Committee 2011-2012.

6. *Economic conditions resulting from loss of lake-provided revenues have the effect of calling into question the adequacy of our multiple environmental protection programs (including, of course, the nutrient TMDL).*

   Reference: (a) "Causes and Control of Algal Blooms in Clear Lake," UC Davis and Lake County Department of Public Works, 1994; (b) personal statement of Sandi Shaul, Lake County Tax Collector, July 25, 2012*; (c) minutes of Clear Lake Advisory Committee 2011-2012.

My comments on the 5-year review report are as follows:

1. The overall impression given by the descriptions of "Numerous actions . . . implemented prior to adoption of the control program and in the 5 years since the program was adopted to reduce the input of sediment and nutrients into the Lake," as detailed in Appendix A of your report, is that the system in place is functioning "normally" if not "well," and that the state's expectations are met by current implementation processes. In general, I disagree with this finding.

   While all of the agencies and requirements you mention are present, their degree of functioning and integration is weak, at best. The last meeting of the Resource Management Committee was July 2010, and no one from the State or CVRWQCB was present. I have been attending and participating in Lake County Board of

*Room rental revenues in Lake County in FY 2006-2007 totalled $10,808,592; in FY 2010-2011, were $4,179,392. A significant drop was attributed to the loss of Lake County's "premier" resort in 2009, some decline can be attributed to the economic downturn of 2008, but the number of business losses since the first severe algal bloom in 2009 has not been calculated.

Supervisor public hearings on almost every water related issue in Lake County for the last 5 years, and have not seen anyone from CVRWQCB in attendance; not that my own attendance at BoS hearings is perfect, I'm just saying. Also, I am Secretary of the Clear Lake Advisory Committee, and in earlier years participated in both RMC and CLAC meetings, beginning occasionally in 2003 and increasingly beginning in 2007. I became Secretary of CLAC in 2010.

There have been a few local consortiums formed to address invasive species (for implementation of the Quagga Mussel Prevention Program, 2008 to present), and a special task force was created in 2010 to provide direction to the Board of Supervisors regarding funding for lakebed "management" programs to mitigate weeds and algae, but there has been no public meeting of the Clear Lake TMDL Stakeholders Committee since 2010 or earlier (perhaps since publication of the 2009 "Final Report").

2. The original Clear Lake TMDL Stakeholders Committee (CLTSC) never achieved the long-identified objective of merging data, and no further action was taken beyond conducting meetings (described in the "Monitoring and Implementation Plan, Clear Lake Mercury and Nutrient TMDLs," of 2008). In fact no shared data analysis occurs or is planned for -- according to the California Department of Water Resources, Northern Region IWRM Branch Chief, Scott McReynolds.

3. There is no discussion in your review report of the costs of actions taken so far, contracts awarded, project reporting outcomes, responsible party management reports, or management (CVRWQCB programs) costs to allow discussion of value received for dollars spent on the TMDL implementation process. Combined with an appropriate "Use Attainability Analysis" the results of such discussion might yield a significant indication of future program direction for the participating state and federal agencies to assist the local responsible parties.

4. Implementation of the NPDES Phase II Small Municipal Separate Storm Sewer System and Aquatic Pesticide permits require monitoring and enforcement of permitted actions, but these program actions are not integrated with the TMDL nutrient reduction program, nor are cumulative and combined impacts identified and monitored.

5. Health concerns regarding safe drinking water prompted inquiries into possible contamination of water supply (Clear Lake) by cyanobacterial "blue-green" algae, causing citizens and business owners to struggle and in too many cases fail. The Clear Lake TMDL 5-Year Review Report does not discuss this indication of worsening lake water quality.

The Lake County Department of Public Works and staff continue to proclaim that the lake is getting "clearer," regardless of the increasing negative impacts on Clear Lake water quality, as evidenced by the costs of water treatment for domestic use. As an example, the 648 hookups in the County Service Area #20 (Soda Bay) fund the cost of removal of solid wastes created in their drinking water treatment process to the tune of over $100,000 per year. Likewise, around the lake other purveyors have added more filtration processes and solid waste removal fees.

The mounting evidence of degrading water quality cannot be countermanded by marketing and academic studies, when tens of thousands of Clear Lake community water users are suffering from a variety of impairments to their health and well-being. Studies of these impacts, and internal capacities to serve need to be compiled in an integrated look at the whole process of treating and using Clear Lake.

6. According to the *"Nonpoint Source Program Strategy and Implementation Plan, 1998-2013,"* "In 1996, USEPA issued CWA [Clean Water Act] section 319 program guidance that identified 'nine key elements' that must be addressed to receive USEPA approval for upgraded NPS Plans."

   "Minimum Elements for Watershed-Based Plans per CWA Section 319(H)" include "Element 1: Identification of Causes and Sources." According to the text explaining the requirement ("Identification of caused impairment and pollutant sources or groups of similar sources that need to be controlled to achieve needed load reductions, and any other goals identified in the watershed plan."), "Your watershed plan should include a map of the watershed that locates the major causes and sources of impairment. To address these impairments, you will set goals that will include (at a minimum) meeting the appropriate water quality standards for pollutants that threaten or impair the physical, chemical, or biological integrity of the watershed covered in the plan."

   The "Clear Lake Integrated Watershed Management Plan" (2010) referred to in your report might be considered the repository for this information, but significant sources of pollution -- such as the watersheds surrounding the City of Clearlake, and impacts to the Lower Arm of Clear Lake -- are not included in that plan, and the 5-year report does not address the necessity for updating the plan and providing a map compliant with the CWA section 319 requirements.

7. Your "Staff Conclusions and Recommendations" include the following statement: ". . . there is inadequate information available to 1) determine current phosphorus loading to the Lake from the various sources, 2) evaluate the effectiveness of implemented phosphorus control practices, and 3) evaluate overall compliance with the TMDL."

   I suggest that the program should identify all of the sources of pollutant contributions, attempt to quantify their inputs to the receiving water body, and look for reasonable ways to reduce or prevent those contributions -- including watershed drainages now substantially laden with wine grape vineyards, urban environmental (legacy) damage in the City of Clearlake, rice growing practices in the Scotts and Middle Creek drainages, unremediated former landfills and municipal operation sites (county corporation yards, CalTrans corporation yards, et cetera), aquatic pesticide applications, and sediment sources from unremediated forest fire suppression damages. Each agency is described as having its own program plans, but since there are no meetings of the Resource Management Committee, the public has no opportunity to monitor the various agency programs, and plan local action plans accordingly.

Thank you for your consideration of these concerns.