

Lake Elsinore & San Jacinto Watersheds Authority



City of Lake Elsinore • City of Canyon Lake • County of Riverside
Elsinore Valley Municipal Water District • Santa Ana Watershed Project Authority

June 18, 2015

Kurt V. Berchtold, Executive Officer
Santa Ana Regional Water Quality Control Board
3737 Main Street, Suite 500
Riverside, CA 92501-3348

RE: Petition to Reopen and Revise the Lake Elsinore and Canyon Lake Nutrient TMDL

Dear Mr. Berchtold:

In 2004, the Santa Ana Regional Water Quality Control Board ("Regional Board") adopted a Total Maximum Daily Load (TMDL) for Nutrients in Lake Elsinore and Canyon Lake (LECL).¹ Shortly thereafter, the Lake Elsinore San Jacinto Watershed Authority formed a Task Force to develop a coordinated compliance strategy for the numerous stakeholders named in the TMDL. In the years since, these stakeholders have:

- 1) Established a comprehensive water quality monitoring program.²
- 2) Prepared and submitted a Sediment Nutrient Reduction Plan for Lake Elsinore.³
- 3) Installed a large-scale aeration and mixing system in Lake Elsinore.
- 4) Initiated a fishery management program to reduce carp & shad in Lake Elsinore.
- 5) Applied more than 340 tons (330,000 gallons) of alum in Canyon Lake.
- 6) Dredged nearly 20,000 cubic yards of nutrient-rich sediment from Canon Lake.
- 7) Constructed or rehabilitated 200 acres of wetlands adjacent to Lake Elsinore.
- 8) Provided nearly 50,000 acre-feet of reclaimed water to stabilize Lake Elsinore.
- 9) Installed numerous BMP projects throughout the watershed.
- 10) Updated and recalibrated the watershed runoff models.⁴
- 11) Developed dynamic models to simulate and predict water quality in both lakes.
- 12) Prepared and submitted a Comprehensive Nutrient Reduction Plan (CNRP).⁵
- 13) Sponsored more than a dozen public workshops and conferences to promote greater understanding and support for TMDL projects in the watershed.

¹ Res. No. R8-2004-0037 (Dec. 20, 2004); subsequently approved by the State Water Resources Control Board on May 19, 2005 and by the Office of Administrative Law on July 26, 2005. U.S. EPA provided final approval for the TMDL on September 30, 2005.

² Approved by the Regional Board on March 3, 2006 (Res. No. R8-2006-0031)

³ Approved by the Regional Board on November 30, 2007 (Res. No. R8-2007-0083)

⁴ TetraTech, Inc. San Jacinto Watershed Model Update - Final (2010). October 7, 2010.

⁵ Approved by the Regional Board on July 19, 2013 (Res. No. R8-2013-0044). A similar NMP was prepared and submitted by the agricultural stakeholders in April, 2013 and is pending Regional Board approval.

Collectively, these efforts have significantly reduced the total phosphorus concentrations in both lakes. And, we are beginning to observe measurable improvements in the average chlorophyll-a (algae) levels as well. All of the projects originally proposed in the Sediment Nutrient Reduction Plan have been or are being implemented. While there is no question that the prior projects were successful, the lakes have not yet fully attained the applicable water quality standards and more effort may be required. But, first, the TMDL must be updated.

In the decade since the LECL-TMDL was first enacted, a great deal of new data has been developed. This information has fundamentally transformed our understanding of how nutrient loading affects the lakes under both natural, undeveloped and current land use conditions. The scientific studies commissioned by the Task Force have shown conclusively that many of the modeling assumptions used to develop the original TMDL were not accurate; specifically:

- 1) Subsidence and storage in Mystic Lake was significantly underestimated.
- 2) Agricultural land use was significantly overestimated.
- 3) Nutrient decay cycles were significantly underestimated.
- 4) Discharges from CAFOs were significantly overestimated.
- 5) Natural variations in precipitation were not adequately characterized.
- 6) Natural salinity restrictions on algae-feeding zooplankton were not considered.
- 7) Nitrogen reduction effectiveness of aeration and mixing was not yet known.
- 8) TMDL calculations improperly assumed a static level (1240') for Lake Elsinore.
- 9) Mixing between the main body and East Bay of Canyon Lake was overestimated.

In addition to the numerous technical revisions needed, the TMDL must also be updated to account for several new regulatory policies and permits enacted in the last ten years:

- 1) On-site retention requirements for new urban development or redevelopment.
- 2) Comprehensive new statewide requirements for septic systems.⁶
- 3) Exemption of parcels <20 acres from the Conditional Waiver for Ag Discharges.
- 4) Recent reauthorization of the Deminimus Discharge permit.⁷
- 5) The Comprehensive Nutrient Reduction Plan (CNRP) and AgNMP.
- 6) U.S. EPA's revised 304(a) criteria for ammonia.⁸
- 7) State Board's Policy for Compliance Schedules in NPDES Permits.⁹
- 8) AB1881; Model Water Efficient landscape ordinance (Statewide).

⁶ Water Quality Control Policy for Siting, Design, Operation and Maintenance of On-site Wastewater Treatment Systems (OWTS). Res. No. 2012-0032 adopted June 19, 2012.

⁷ NPDES Permit No. CAG 998001.

⁸ 78 Fed. Reg. 163, 52192 (August 22, 2013)

⁹ Res. No. 2008-0025 (April 15, 2008)

Finally, some of the TMDL targets and implementation requirements should be re-stated to provide the clarity needed to assess compliance:

- 1) More precise temporal averaging periods and definitions are required.
- 2) More precise spatial averaging periods should be specified.
- 3) Exceptions based on the natural exceedance frequency expected for the pre-development land use condition should be defined.
- 4) The WLA and LA should not assume the existence of any particular mitigation project (e.g. aeration/mixing system) without imposing a corresponding obligation to implement such a project.

The long list of recommended improvements is not intended to suggest that the original TMDL was defective or deficient at the time it was adopted. Rather, this list demonstrates just how much more we know today than we knew 11 years ago. This is not unusual or surprising and is the principle reason that federal and state regulations require that all TMDLs be periodically reviewed and updated.

Therefore, by this petition, the members of the LECL-TMDL Task Force respectfully request that the Regional Board formally initiate the process to reopen and revise the Nutrient TMDL for Canyon Lake and Lake Elsinore. The Task Force will continue to work closely with Regional Board staff, and is prepared to provide substantial technical and financial support, to undertake this effort.

The Task Force is ready to begin updating the TMDL immediately and requests that the Regional Board designate this effort as a "High Priority" during the forthcoming Triennial Review process. A suggested timetable is presented below:

Task	Description	Deadline
1	Contract with consultants to develop revised TMDL	Oct., 2015
2	Annotated outline for the revised TMDL	Dec., 2015
3	Revised causal and response targets	Apr., 2016
4	Revised source loading analysis	June, 2016
5	Revised TMDL, WLA & LA	Aug., 2016
6	Phase 2 Implementation Plan	Oct., 2016
7	Draft TMDL	Dec., 2016
8	Final TMDL (w/ CEQA documentation)	Mar., 2017
9	Regional Board hearing	June, 2017
10	State Board hearing	Dec., 2017
11	OAL Review	June, 2018
12	EPA Review	June, 2019

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This is an aggressive schedule but the Task Force believes it is achievable because most of the technical studies are or will be done by the end of this calendar year. Because the Basin Plan must be revised in order to update the TMDL, the State Board and U.S. EPA must also approve any such amendments. Based on recent experience with the bacteria Basin Plan amendments, the regulatory review process will require a minimum of two years to complete after the draft documents are submitted to the Regional Board for consideration. Therefore, this project must commence immediately in order to conclude before the final compliance deadlines specified in the current TMDL take effect at the end of 2020.

Thank you for your consideration. The Task Force looks forward to continuing our productive partnership with the Regional Board to achieve our mutual goal of improving water quality and protecting beneficial uses in Canyon Lake and Lake Elsinore.

Respectfully,



Mark Norton PE, LEED AP, ENV SP
LESJWA Administrator
Lake Elsinore and Canyon Lake TMDL Task Force Administrator