

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN DIEGO REGION**

**TENTATIVE RESOLUTION NO. R9-2017-0038**

**TENTATIVE RESOLUTION SUPPORTING  
THE PATH FORWARD FOR NUTRIENT LOAD REDUCTIONS IN  
LAKE SAN MARCOS AND THE SAN MARCOS CREEK WATERSHED**

**WHEREAS**, the California Regional Water Quality Control Board, San Diego Region (San Diego Water Board), finds that:

1. Citizens Development Corporation (CDC), along with the County of San Diego, the City of San Marcos, the City of Escondido, and Vallecitos Water District (collectively, the Parties), have submitted to the San Diego Water Board a proposed list of activities for cleaning up Lake San Marcos and controlling nutrient loading to the lake from upstream areas. The Parties also submitted a proposed corrective action schedule identifying major milestones for restoring and maintaining water quality and beneficial uses in the lake and the upstream watershed. The activities list is based on remedial measures recommended in a Remedial Investigation/Feasibility Study (RI/FS) Report submitted to the San Diego Water Board in September 2016. The list of activities and corrective action schedule are attached to this resolution (Supporting Document No. 2).
2. Lake San Marcos is a seasonally stratified reservoir impaired by elevated phosphorus and nitrogen, excess algal growth, and low dissolved oxygen. The lake is formed by a dam on San Marcos Creek, which flows into the lake at its north end. The beneficial uses of San Marcos Creek are agricultural supply, contact water recreation, non-contact water recreation, warm freshwater habitat, and wildlife habitat. The lake impounds creek waters and therefore has the same beneficial uses as designated for the creek.
3. The lake is on the California 303(d) list of impaired water bodies for ammonia as nitrogen, nutrients, and phosphorus, and the creek, both upstream and downstream of the dam, is listed for sediment toxicity, selenium, dichlorodiphenyldichloroethylene (DDE), and phosphorus. These water quality impairments interfere with recreational and habitat beneficial uses of the lake.
4. CDC holds the right to use the water stored behind the dam that creates Lake San Marcos. This right is held by CDC under Water Right License No. 7224. The dam traps nutrient-rich sediments behind it. The highest concentrations of nutrients in the water column and sediments are found closest to the dam. The excess nutrients result in abundant biomass generation, including algal blooms, which in turn cause low dissolved oxygen conditions in the lake, unpleasant odors, and an unaesthetic appearance to the lake. The upstream public agencies are responsible

for controlling nutrient loading to the lake from the areas within their respective jurisdictions.

5. The list of activities and corrective action schedule call for the development and implementation of pilot studies and Corrective Action Plans for the following remedies: (1) lake phosphorus inactivation with full-scale implementation initiated by May 2018, (2) lake selective withdrawal with full-scale implementation initiated by August 2019, and (3) stream restoration within Upper San Marcos Creek with full-scale implementation initiated by February 2020.
6. The upstream public agencies are voluntarily working together under a Participation Agreement to address nutrient loading from the watershed. The San Diego Water Board has agreed not to issue enforcement orders to the parties if they comply with the Participation Agreement. Compliance with the Participation Agreement includes prompt payment of invoices issued by the State Water Resources Control Board to reimburse the State for reasonable costs incurred by San Diego Water Board staff to oversee the project.
7. The Parties have informed the San Diego Water Board that they prefer to work cooperatively and voluntarily to address nutrient load reductions in Lake San Marcos and the surrounding upstream watershed in lieu of receiving enforcement orders from the Board.
8. According to CDC, lake water is released through the valve in the bottom of the dam for a short time once a year by the Department of Water Resources when it conducts a safety inspection of the dam. The valve is also opened in anticipation of, and during high-precipitation events that cause the lake to spill over the dam. In this case, CDC opens the valve to prevent it from being clogged with sediment while the reservoir is spilling.

Water released from the lake enters Lower San Marcos Creek, which flows west to Batiquitos Lagoon. Water released from the bottom of reservoirs is typically anoxic and may contain elevated concentrations of nutrients and suspended solids. The Batiquitos Lagoon Foundation raised concerns in comments on the Draft RI/FS Report that releases of lake water through the valve may degrade water quality in the creek downstream of the dam and in Batiquitos Lagoon. The Carlsbad Watershed Network raised similar concerns to the Board. The San Diego Water Board has proposed the lagoon be added to the California 303(d) list of impaired water bodies for sediment toxicity. Insufficient data are available to assess the lagoon for listing for nutrients.<sup>1</sup>

The effects of water releases from Lake San Marcos on the quality and beneficial uses of downstream water bodies must be better understood to ensure that the Corrective Action Plans put forward by the Parties address water quality impacts, if

---

<sup>1</sup> The Batiquitos Lagoon listing has been approved by the San Diego Water Board but has not yet been approved by the State Water Resources Control Board or the U.S. Environmental Protection Agency.

any, of water releases from the lake. The list of activities recommended by the Parties, however, does not include an investigation of these potential effects.

9. The Water Boards' 2010 Strategic Plan Update recognizes the connection between water supply and water quality. The Plan includes the goal of comprehensively addressing water quality protection and restoration, and understanding the relationship between water supply and water quality. In keeping with this goal, the terms and conditions in Water Right License No. 7224 must be adequate to ensure that the dam and its operation do not contribute to the impairment of beneficial uses of Lake San Marcos and downstream water bodies.

**NOW, THEREFORE, BE IT RESOLVED THAT:**

1. The San Diego Water Board thanks the Parties for their cooperation on this project and for submitting the list of activities and corrective action schedule to restore the beneficial uses of Lake San Marcos and portions of San Marcos Creek upstream of the lake.
2. The San Diego Water Board will review progress on this project not less than annually to ensure that activities to investigate potential impacts to downstream water bodies from lake releases and to restore the beneficial uses of the lake and San Marcos Creek upstream of the lake are effective and proceeding as expeditiously as possible.
3. Should voluntary efforts fall behind the corrective action schedule, fail to be effective, or fail to make meaningful progress, the San Diego Water Board will use its regulatory authority to ensure that remedial activities are carried out in a timely manner.
4. The San Diego Water Board will use its regulatory authority to require additional persons to participate in corrective actions for Lake San Marcos and the upstream watershed if substantial evidence is produced demonstrating that a person has discharged waste into Lake San Marcos, or caused or permitted waste to be discharged into Lake San Marcos, creating a condition of pollution or nuisance in the lake.
5. The San Diego Water Board will investigate the downstream effects of lake water releases on the condition of Lower San Marcos Creek and Batiquitos Lagoon. Furthermore, the Board will request that the State Water Board Division of Water Rights consider that information and determine if conditions in Water Right License No. 7224 protect water quality downstream of the dam.
6. The San Diego Water Board will request that the State Water Board Division of Water Rights review the terms and conditions of Water Right License No. 7224 in light of the proposed remedies to restore beneficial uses. Furthermore, the Board will request that the Division of Water Rights condition Water Right License No.

7224 to require permanent lake management measures, if needed, to meet water quality standards in the lake.

I, David W. Gibson, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of a Resolution adopted by the California Regional Water Quality Control Board, San Diego Region, on [DATE].

TENTATIVE

---

DAVID W. GIBSON  
Executive Officer