

State of California
Regional Water Quality Control Board
San Diego Region

EXECUTIVE OFFICER SUMMARY REPORT
October 11, 2017

- ITEM: 10
- SUBJECT: Informational Item: Update on Progress of Pilot Testing at Lake San Marcos and in the Upper San Marcos Creek Watershed (*Sarah Mearon*)
- PURPOSE: To provide the Board and the public with information on recent progress toward lake and watershed restoration including an update on the results of ongoing pilot studies focused on testing remedy effectiveness.
- RECOMMENDATION: This is an informational item only. The Board will not take an action.
- KEY ISSUES:
1. The responsible parties are pilot testing and collecting data on the stream restoration and phosphorus inactivation remedies recommended in the Feasibility Study, and are also investigating impacts to water quality downstream of the lake.
 2. The responsible parties are conducting work in general accordance with the list of remedial activities and the corrective action schedule submitted to the Board and as described in Resolution No. R9-2017-0038, which was adopted in March 2017.
- PRACTICAL VISION: This item is consistent with the goals of the Recovery of Stream, Wetlands, and Riparian Areas Chapter of the Practical Vision. This chapter is dedicated to providing measureable improvements in the extent and health of stream, wetlands, and riparian systems, in this case improvements and restoration of Lake San Marcos and the Upper San Marcos Creek watershed.
- DISCUSSION: 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), are cooperatively working on restoration of Lake San Marcos and Upper San Marcos Creek on a voluntary basis with San Diego Water Board oversight and in accordance with Resolution No. R9-2017-0038 (Resolution). The Resolution affirms the San Diego

Water Board's expectations that project activities be effective and proceed as expeditiously as possible.

Pilot testing is ongoing in the lake and watershed to evaluate the effectiveness of remedies selected in the Feasibility Study to restore water quality and beneficial uses. The Parties treated the lake with alum in May and August 2017. Stream restoration pilot testing is in the permitting phase and plans for adjustments to the existing selective withdrawal system are in process. The updated selective withdrawal system will pump poorer quality water from the downstream portion of the lake to irrigate the golf courses, rather than the current practice of pumping higher quality water from the upstream portion. The Parties will use the pilot testing results to develop Corrective Action Plans, which will provide details on the processes and procedures for full-scale remedy implementation.

To investigate the impact of lake water quality on Lower San Marcos Creek, the Parties collected samples of the creek water a mile downstream of the dam, and of lake water overtopping the dam. Before the first alum treatment of the lake in May, dry weather and wet weather baseline samples were collected at the dam and in Lower San Marcos Creek. Following the treatment, the Parties collected downstream dry weather samples at the dam and at the downstream location on two other occasions. The Parties are planning to collect additional downstream samples in the coming months. Data will be reported in the Lake Phosphorus Inactivation Pilot Test Report to be submitted to the Board by January 2018.

A key monitoring question is: what impacts, if any, do releases of lake water through the dam valve have on Lower San Marcos Creek? Because the dam valve releases water from lower depths in the lake, the water quality of these releases is likely poorer than that of water overtopping the dam. The Parties have not yet provided a work plan to address this question.

Lake San Marcos is a seasonally stratified reservoir impaired by elevated phosphorus and nitrogen, excess algal growth, and low dissolved oxygen. The lake and San Marcos Creek, both upstream and downstream of the lake, are on the California 303(d) list of impaired water bodies for a number of different pollutants. These impairments interfere with the recreational and habitat beneficial uses of the lake.

Consultants for the cooperating parties will discuss the activities completed since adoption of the Resolution in March 2017 to address impairment of the lake and creek, as well as the status of downstream water quality monitoring and development of a Lake Management Plan for long-term maintenance.

LEGAL CONCERNS: None.

SUPPORTING DOCUMENTS: 1. Figure 1: Upper San Marcos Creek Watershed
2. Figure 2: Lake San Marcos

PUBLIC NOTICE: The agenda notice for today's meeting was posted on the San Diego Water Board's website and sent to subscribers to the email list for Board meetings. In addition, subscribers to the email list for "Lake San Marcos" were notified of the information item in an email sent on September 13, 2017.