

State of California  
Regional Water Quality Control Board  
San Diego Region

EXECUTIVE OFFICER SUMMARY REPORT  
December 14, 2016

- ITEM: 9
- SUBJECT: Information Item: Update on Progress toward Remedy for Lake San Marcos and 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, and plans for remediation pilot studies.
- RECOMMENDATION: This is an information item only. The Board will not take an action.
- KEY ISSUES:
1. A Remedial Investigation/Feasibility Study Report, submitted to the San Diego Water Board on September 30, 2016, recommends several remedial measures to address nutrient impairment and low dissolved oxygen in the lake and watershed.
  2. The responsible parties currently are developing pilot test work plans for stream restoration and alum application in the lake and creek.
- PRACTICAL VISION: This item is consistent with the mission of the Recovery of Stream, Wetlands, and Riparian Areas Chapter of the Practical Vision, which is dedicated to provide 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: Lake San Marcos is a seasonally stratified lake impaired by elevated phosphorus and nitrogen, excess algal growth, and low dissolved oxygen. Both the lake and Upper San Marcos Creek, which flows into the lake at its north end, are included on the California 303(d) list of impaired water bodies. The San Diego Water Board issued an Investigative Order to the lake owner, Citizens Development Corporation (CDC), and entered into a Participation Agreement with six entities who agreed to perform investigative work related to the presence of excess nutrients in the lake and watershed. Two of the six entities have withdrawn

from the Participation Agreement (Caltrans and San Marcos Unified School District). The remaining four entities (City of San Marcos, City of Escondido, County of San Diego, and Vallecitos Water District), along with CDC, have been working cooperatively to investigate the causes of nutrient impairment in the lake and watershed, and to evaluate and recommend cleanup alternatives in compliance with the existing Investigative Order and Participation Agreement.

The Report recommends combining diffused aeration, water treatment with alum, and periodic lake water removal to restore the habitat and recreational beneficial uses of the lake. Stream restoration, water treatment with alum, and enhanced runoff controls are recommended to reduce nitrogen and phosphorus loading from the watershed. According to the Report, these alternatives are expected to reduce overall nutrient loading to the lake by 40 to 50 percent, sufficient to restore and maintain beneficial uses.

Consultants for the lake owner and the Participation Agreement parties will discuss the causes of nutrient impairment in the lake, and will describe the preferred alternative for remediating the impairment recommended in the Feasibility Study. Staff will discuss the path forward once the directives in the Investigative Order have been completed.

**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 of the email list for Board meetings. In addition, subscribers of the email list for "Lake San Marcos" were notified of the information item in an email sent on November 14, 2016.