

Southern California College Water Reuse Feasibility Study

Abstract

A Southern California college was interested in exploring the feasibility of reducing or eliminating stormwater runoff and reducing the use of potable water. A feasibility study was performed by RBF to explore stormwater capture reuse possibilities and onsite wastewater treatment alternatives for an integrated approach to water reuse at the college campus. The goals of the study included 1) reducing or eliminate stormwater runoff to help accomplish the college sustainable development approach; 2) help meet the upcoming Phase II stormwater regulations for the State of California; 3) reduce the use of potable water on the college campus; 4) provide cost savings; 5) provide an education and outreach resource at the college. How each of the goals of the study was met will be presented. The primary focus of the presentation is to discuss the approach that was used to evaluate the feasibility of reducing or eliminating stormwater runoff from the college campus and the evaluation of reducing the use of potable water through onsite wastewater treatment. The approach of the study will be explored including characterization of the college stormwater and irrigation needs and other water uses on the college campus, evaluation of the regulatory requirements including the anticipated requirements of the new California Phase II Stormwater Permit and review of the California Plumbing Code and other regulations related to the reuse of stormwater, and the development of alternatives for stormwater capture and reuse and reduction of potable water. The details of the methodology used for each phase of the study will be explored and challenges and siting and reuse constraints will be presented. The advantages including costs of the different alternatives will also be explored. The conclusions of the study will be presented and the recommended cost-effective alternative will be explored.