

Executive Summary

The Cambria Community Services District is phasing the completion of its water master plan through a series of reports. Kennedy/Jenks Consultants is under contract to complete Tasks 3 and 4 of the water master plan. This Task 3 report completes an engineering analysis for a proposed recycled water system. It is also a companion report to a separate Task 3 report on proposed improvements to the District's potable water distribution system. The primary objective of this Report is to provide a Master Planned level layout and associated probable capital costing for a future recycled water system.

The use of recycled water diversifies the water supply options for the CCSD, and also provides a level of "drought-proofing" towards the community's investments in landscaping. Approximately 184 acre-feet per year in irrigation demands were identified for possible service with highly treated wastewater effluent. These demands would be limited primarily to the larger landscaped areas such as the proposed community park, the Santa Lucia Middle School, the Cambria Pines Lodge, the Cambria Nursery, and the new grammar school. Of these potential uses, approximately 99 acre-feet appear to be likely candidates for recycled water due to their proximity to a proposed distribution pipeline.

A key issue with the use of recycled water is whether enough water is available from the WWTP during the peak summer demand period. In some communities, the establishment of an artificial habitat for listed species limits the amount of recycled water that may be diverted for irrigation. Of the 99 acre-feet of likely irrigation sites identified, approximately 49 acre-feet would offset existing potable use. This leaves about 50 acre-feet in new demands out of the District's existing hydraulic mound area. To determine whether any impact to sensitive species would occur from the 50 acre-feet of diversion, additional geo-hydrological and biological study would be needed. Sub-surface seasonal storage of recycled water, the use of existing CCSD surface basins, and the use of more efficient irrigation technologies could also offset potential diversion concerns. A subterranean storage site was considered near the District's effluent percolation ponds area for this purpose.

The proposed recycled water system consists of advanced treatment facilities at the WWTP, a backbone distribution pipeline, and two pressure zones. A pump station at the WWTP along with gravity storage tanks behind the Santa Lucia Middle School would serve the lower pressure zone. The upper pressure zone would be served by a hydro-pneumatic pumping system next to the gravity storage tanks. The reuse of existing tanks was considered as a means to further reduce construction costs. For example, the old Pine Knolls water tanks are being considered for use at the Santa Lucia Middle School site.

The total \$5,540,000 cost estimate for the proposed recycled water system is summarized as follows:

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| • Treatment facilities | \$1,500,000 |
| • Distribution System | \$3,440,000 |
| • Seasonal storage | \$ 600,000 |