



City of Sutherlin

City of Sutherlin
Public Utilities
126 E. Central
Sutherlin, OR 97479
(541) 459-5768
Fax (541) 459-0025
b.elliott@ci.sutherlin.or.us

Date: April 26, 2016
Re: Value Engineering Services – Request for Proposals
From: Brian Elliott, Public Works Utilities Superintendent

NOTICE:

The City of Sutherlin is seeking qualified consultants to submit a proposal to provide value engineering services for the City's Wastewater System Improvements.

Please provide your approach to this process, and three references. Refer to City's website www.cityofsutherlin.com to review the complete Value Engineering Packet, Wastewater Facilities Plan and Value Analysis Report.

BACKGROUND

The City of Sutherlin's wastewater system was originally constructed in 1956 for a design population of 3,500 people. Prior to this time, treatment consisted of individual septic tank and drain field systems. Percolation rates are poor in the Sutherlin area of the Umpqua Valley due to the preponderance of heavy clays, shale and rock. Due to population growth, it was necessary to construct a new wastewater treatment facility in 1977, which is located near the intersection of Highway 138 and Stearns Lane. It consists of an activated sludge process operated in contact stabilization mode. The wastewater treatment plant provides secondary level treatment. During the wet weather season plant effluent is discharged to Calapooia Creek. During the dry season plant effluent is recycled and land applied. Many basic components of the wastewater system have reached the end of their design life. The condition of the plant is such that it is not possible to meet current National Pollutant Discharge Elimination System (NPDES) limits, particularly with regard to total maximum daily load limitations (TMDL). In addition, during dry periods effluent is irrigated (recycled) on the Umpqua Golf Resort. At times the land application exceeds the capacity of the golf course greens and surface runoff occurs.

Although the design population for the plant was theoretically sized for 8,000 users, inflow and infiltration (I/I), more stringent regulatory requirements and age of the facility have led to treatment facility deficiencies. These deficiencies exist for each major element of the treatment process, including the headworks, secondary treatment units, bio solids treatment and disposal, and effluent reuse. The City entered into a Mutual Agreement and Order (MAO) with Oregon Department of Environmental Quality (DEQ) on June 13, 2004 to set a schedule and interim compliance standards while the City works to resolve the compliance issues. Specified compliance issues include failure of wastewater effluent to meet Class A reuse regulations and the discharge of recycled water from the golf course to Cook Creek.

Since the beginning of work on the Wastewater Facilities Plan (WWFP), the City has completed a series of significant collection system improvements and has reduced the infiltration and inflow into the collection system. Mid-way through the plan, which began in 2004, DEQ delayed the plan until it completed a study of the effluent outfall into Calapooia Creek. This study led to further restrictions for effluent discharge from May through October, which will require significant storage volume of treated effluent until stream flows reach minimum flow levels.

The City of Sutherlin has experienced relatively steady growth during the period of time that it has provided a wastewater utility to the community. Sutherlin's location in the I-5 corridor, available industrial and commercial land lends itself a steady population growth over the next 25 years.

The State or Oregon's 303(d) list for 2006 for water quality limited waters shows Calapooia Creek as Water Quality Limited (WQL). The Umpqua Basin TMDL was issued on October 31, 2006 and approved by the EPA on April 12, 2007. There is general consensus among stakeholders that TMDL requirements for Sutherlin's level of effluent phosphorus concentrations cannot be met with any practical method or technology other than storage or additional reuse areas. The effluent phosphorus level as required by the TMDL is zero between May through October, with conditional discharge in October based upon the minimum stream flow requirement.

This plan addresses the inability of the existing wastewater system to effectively treat wastewater in accordance with current NPDES and TMDL requirements, and the improvements which are necessary to meet the specified requirements. Wastewater planning is for a 20-year period from the expected project completion (start-up) date. The WWTP is beyond its design life hydraulically overloaded and the treatment capacity for bio solids is inadequate. This is partly due to rules that have changed during the 1990s and to recent changes in the regulatory environment. Continuing I/I rehabilitation projects are addressed in the study as well. Improvements will be completed in two phases. Phase 1 improvements will bring the Wastewater Treatment Plant in compliance with the NPDES permit and corrects deficiencies at the Everett Avenue Pump Station. Phase 2 will be collection improvements such as I/I repair projects and increasing conveyance capacity.

All responses must be received no later than Tuesday May 24, 2016 by 3:00 PM

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