



Stoneridge

Joint Use Water Storage Facility

“When you drink the water, remember the spring.” – Chinese Proverb

The City of Roseville (City) and San Juan Water District (SJWD) began the planning and analysis for a joint use water supply project with West Yost Associates (WYA) in 2006. The project included the planning and design of two separately operated potable water storage tanks on a single parcel within the Stoneridge Subdivision. The combined regional project will provide stored water for peak day and fire flows at buildout in the City’s Pressure Zone 2 and SJWD’s Sierra Pressure Zone. In addition, an emergency intertie will allow the tanks to provide emergency supply to either system.

Planning and Hydraulic Evaluation

Initially a number of operational questions had to be addressed, including the ability of each agency to fill the proposed Joint Use Water Storage Facility under summertime operating conditions, the ability to meet pressure requirements for both systems. To address these concerns, WYA selected a rigorous modeling program to update and calibrate both the City’s and SJWD’s distribution system models. The updated models were used to verify performance goals for the new facilities. Alternative storage facilities and configurations at the proposed Joint Use Water Storage Facility site were evaluated and a recommended project was identified.

Design

West Yost then provided predesign and final design services for the Stoneridge Water Storage Facility. Predesign services encompassed both the evaluation of 2.9 MG and 2.6 MG reservoirs, and WYA completed final design of the City of Roseville’s 2.9-MG prestressed concrete tank. The design included evaluation of storage volumes with different configurations of inlet

2009 Project of Year

American Public Works Association (APWA)
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Large Agency, Environmental Project Category



and outlet piping, control valves, and drains. SCADA connections and control valves were evaluated in order to provide reservoir water level information and to control reservoir filling and discharge.



Related site improvements included grading, paving, landscaping, fencing, site drainage and tank overflow.

Consideration of the surrounding community began during design with careful planning and integration of good neighbor design features, and continued throughout the construction period.

The project’s presence on a residential street in a built-out neighborhood, adjacent to a protected open space preserve with endangered species habitat, required extensive public outreach efforts and focused attention during construction to avoid neighborhood and environmental impacts. All of these challenges were met.

Construction Management

West Yost provided full construction inspection services for the project. The CM team utilized an approach that concentrated on planning and proactive involvement in the construction process. The team focused on quality and schedule, and minimizing impacts on the residential neighborhood and the adjacent open space preserve.

