East Victoria Reservoir
Alpine, California

The East Victoria Reservoir was one of five reservoirs in Padre Dam Municipal Water District’s Five Reservoirs Retrofit Program. Originally constructed in 1962, it was a partially buried hopper bottom concrete reservoir that required continual maintenance to stay in good operating condition and comply with California Department of Public Health regulations. Hydraulic modeling indicated that the East Victoria site would need an additional 1 MG capacity to improve system reliability and increase fire flow availability.

The District decided a new 2.5 MG prestressed concrete tank was the best solution to replace the older tank. The use of prestressing technology provided the District with a cost effective structure while enhancing concrete strength, watertightness and durability. The new 2.5 MG reservoir was designed as an AWWA D110 Type 1 tank with a 125 foot inside diameter and 28 foot wall height. Ninety-six vertical threadbars are embedded in the center of the wall to provide the vertical compression component of the prestressing. In addition, a total of 145 wraps of seven wire strand was applied to the corewall exterior and automatically applied shotcrete was used to completely encapsulate the prestressing.

The East Victoria Reservoir won three awards which include the APWA, ASCE San Diego Award of Excellence, and the SEAOSD Excellence in Structural Engineering. The District takes pride in and is committed to delivering safe and reliable high-quality drinking water to the communities it serves.