

Del Oro Water Company  
Johnson Park District  
Capital Improvement Projects  
Years 2005 through 2009

**Background** –The water system for Johnson Park derives its supply from two existing ground water wells and currently serves a population of approximately 1,000 through 330 service connections.

In 2004, Del Oro WaterC engaged the services of consultants specializing in the evaluation of water systems. The consultants identified many components of the water system requiring replacement due to age, condition or non compliance with current water industry standards, California Public Utility Commission, and Department of Health Service regulations.

Based on that evaluation, our consultants developed a five-year and 25 year and twenty-year (or a long-term preliminary plan) Capital Improvement Plan to provide a basis for systematic replacement plan of water system components, including pipelines, tanks, electrical switchgear and pumping equipment. The initial five year plan is estimated to cost \$500,000 and focuses on the production and storage needs with the long term plan focusing on distributing the water supply throughout the service area by ensuring provisions are made to meet fire flow requirements and ensuring adequate pressure during periods of high demand.

**Capital Improvement Plan** - The system components for modification of system production and storage facilities are set forth in the five-year Capital Improvement Plan for Johnson Park, described as follows:

1. **Storage Tank** – The proposed 350,000 gallon storage tank is to be located at the top of the ridge line on Rocky Ridge Road. The tank has been sized to hold at least two hours of fire flow in residency plus at least 8 hours of emergency storage during the maximum day usage. The tank will also be equipped with state-of-the-art telemetry equipment to permit communications between the well pumps and the storage tank for filling operations. The project has been designed and is currently awaiting environmental approval from Shasta County, Cal Trans and the State of California. Once approvals have been obtained, bidding and construction will commence with construction planned for 2006/2007.
2. **Pipeline** – To connect the new storage tank to the existing Johnson Park Distribution System, a new pipeline has to be constructed and consists of 1,200 foot, 12-inch diameter PVC pipeline. This project has been designed and is also awaiting environmental approval from Shasta County, Cal Trans and the State of California. Bidding and construction are also planned for 2006/2007.

3. **Well Pump Replacement** – With the installation of the storage tank, the hydraulics of the system will be altered, requiring replacement of both well pumps. Design for this project is complete with the construction to be concurrent with the tank and pipeline projects (2006/2007). Once the pumps have been replaced, the existing tanks and booster pump system will be removed from service.
  
4. **Electrical Switchgear Modifications** – The existing electrical switchgear for the existing well and booster pumps is old with some of the equipment obsolete. With the installation of the new well pumps, some of the electrical switchgear will be upgraded or replaced. A new portable generator has already been placed in service with a new automatic transfer switch planned with the electrical upgrades. The transfer switch will monitor the utility power grid and will automatically connect the generator to the pumps in the event of an electrical outage.
  
5. **SCADA (or Supervisory Control and Data Acquisition)** – To properly fill the storage tanks when the water levels reach a pre-determined level, a communication means has to be installed to allow the tank to “talk” to the well pumps. This is accomplished by means of a SCADA system that consists of radios, antennas, and controls that direct the starting and stopping of the well pumps, even in time of power outages.

Other projects not listed under the Capital Improvement Plan consist of the replacement of the pipeline in Third Street between Highway 299 and the new Rocky Ridge Mountain Estate development. The existing water main will be replaced with an 8-inch PVC mainline and will include new service connections, meter boxes, valves and fire hydrants. This project is also scheduled for 2006/2007.