

## APPENDIX

### Kyle Canyon System Improvements Project

In 2001, the LVVWD submitted a grant application to the State's small systems grant program requesting funding to make needed repairs to the system. The project included the following phases:

- š Phase I – Drill and equip Echo Well No. 5
- š Phase II – Construct a new 300,000 gallon water reservoir
- š Phase III – Install/replace pipeline
- š Phase IV – Install individual water meters

Due to numerous grant applicants and limited funds, the State initially agreed to fund only Phase IV improvements, considering the installation of water meters the highest priority. Once meter installations were complete, Kyle Canyon could reapply for additional funds for the remaining phases. While not formally documented, the State considers the installation of water meters a high priority and has since required grant applicants to perform meter installations as a condition of future funding awards.

However, due to critical system reliability concerns in 2000 and 2001 (discussed in chapter 2), the Kyle Canyon Water District requested that the State reconsider the funding priorities. The drilling and equipping of Echo Well No. 5, and construction of a new water reservoir (Phases I and II) were considered critical and necessary to ensure an adequate water supply in the Kyle Canyon community. The State agreed to reconsider the funding priorities and ultimately granted funding for Phase I and II improvements, awarding \$811,000 towards the \$2.2 million well and reservoir project.

### System Improvements Project Phase I & II:

*Phase I – Drill and Equip Echo Well No. 5:* A contract has been awarded for the drilling and equipping of Echo Well No. 5, with construction to begin in spring of 2003.

To ensure that high water quality and production is achieved, the well contract includes provisions to drill up to four smaller exploratory pilot holes prior to drilling and equipping the final production well site. If good water quality and production is achieved on the first pilot hole, the contractor will be instructed to drill a full diameter borehole. Another contractor will be obtained to equip the well; if this scenario occurs, the project will likely be completed by early to late fall of 2003.

However, if the desired water quality and production is not achieved on the first pilot hole, then the contractor will be instructed to drill subsequent holes (up to a total of four) until a suitable site is located. Under this scenario, the project is not likely to be complete until spring of 2004.

*Phase II – Construct a 300,000 Gallon Storage Reservoir:* As of April 2003, the storage reservoir project design is 60% complete. The project is slated for bid in fall 2003, with construction to begin in spring 2004. The reservoir is designed as an above grade tank.

### System Improvements Project Phases III & IV:

Phase III & IV project improvements includes the installation of approximately 20,600 linear feet of 6 and 8-inch diameter pipeline to provide system looping, increase fire flow to all fire hydrants, and improve system losses. These improvements will make a minimum of 1,000 gallon-per-minute (gpm) fire flow at a residual pressure of 20 pounds-per-square-inch (psi) available to all residence.

These improvements also include the installation of 252 three-quarter-inch water meters to promote water conservation and enhance leak detection

### Financial Summary

Consisting of less than 349 service connections, the Kyle Canyon Water District has a limited number of accounts to dilute the impacts from debt. Financial constraints have limited Kyle Canyon's ability to make necessary improvements, requiring the system to rely heavily on grants and other sources of financial aid.

Recognizing that future improvements to the system, taken at full financial impact, would severely stress the water rate structure, the Las Vegas Valley Water District has worked to pair need infrastructure improvements with outside funding sources.

As a result of these efforts, Kyle Canyon has received substantial support for infrastructure repair and improvements through the State of Nevada's small system grant program. This assistance allowed Kyle Canyon to make improvements to increase drinking water capacity, preserve water quality and improve system reliability. For example, in 1995, the Kyle Canyon Water District received a grant for capital improvements from the State of Nevada's small system grant program. The grant covered 85 percent of the \$2.2 million project. The balance of the project costs was recovered through an increase to the local water rates.

In the most recent grant award for the Kyle Canyon System Improvements Project (well and reservoir project), the State awarded \$811,000. The State grant requires KCWD to fund the remaining 38.1% of project costs, equivalent to \$499,274, and KCWD must demonstrate this financing has been secured before the State will release the grant funds to KCWD. KCWD is pursuing a long-term, low interest loan for this amount through the Nevada Drinking Water State Revolving Loan Program; however, the application process is expected to take approximately 8-10 months. In the interim the Kyle Canyon Board of Trustees accepted funds from the LVVWD in the amount of \$499,274 to satisfy the State's conditions. This will allow the necessary work to begin. When the State loan funds are issued, the LVVWD loan will be retired.

Water rates in Kyle Canyon are currently a \$51.00 flat monthly fee.