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Parker Springs Water Company (PSWC) experienced a jump in water loss beginning in June of 2009. Suspected causes include a possible leak, a malfunctioning check valve and/or meter at the wellhead, or, a combination of all three. The actual cause, however, remains unknown. This report addresses the Commission's order and the measures the PSWC has taken in its continuing pursuit of solving this problem.

When the discrepancy came to light, efforts to find the source of the water losses were initiated. All system water line routes were inspected for wet spots, shut-off valves were inspected; meter boxes and the ground around them were searched for wet spots. The geology or composition of the ground within the community may be contributing to the difficulty in find a leak from a buried waterline.

September, 2009, PSWC enlisted the help of Mr. Tim Walls and Mr. Vonn Jones of Rural Water Association of Arizona. With their assistance all the customer meters on the system were checked. The amount of unrecorded water was not significant. Under-reading meters were replaced with new meters. RWAA also assisted in excavating a wet spot where the main line crosses a wash close to the well site. The galvanized pipe there was intact and the wet spot was not related to a leak.

Using a rented water line detector, the original half-mile long mainline between the well and storage tank was located. Its location was marked and its entire length was checked for obvious signs of a leak. This main line traverses federal land along a ridge. Hillsides and canyons on both side of this ridge were checked for wet spots. Although no evidence of a leak was found during either dry or wet seasons, the entire length of the line and adjacent hillside and canyons are still being monitored.

Late last summer an obvious wet spot was found near the end of the 4" Montezuma Pl. mainline. Eighty feet of the line were exposed only to determine that the water flowing was normal ground water following the mainline trench.

The engineering assessment conducted by WestLand Resources under the auspices of WIFA addressed the excessive water loss, but did not pinpoint a cause. An evaluation by Applied EnviroSolutions, Inc. under the auspices of ADEQ also addressed but did not isolate the cause of the water loss.

PSWC continues its search for water surfacing along the path of our water lines, shut-off valves and meters. During monthly meter readings, meter readers look for leaks, but, to date, none that cause inordinate loss have been found. When leaks are located immediate repairs are initiated.

The addition of blow-off locations at the ends of mainlines and the fact that we flush the system from time to time by expelling water at these points serves only to exacerbate the water loss problems. These clean out points are not metered (like fire hydrants), thus adding to the difficulty of determining maintenance/repair losses versus unexplained losses.

It has been a theory that the meter at the wellhead may have been too small or malfunctioning, which could account for all or some of the lost water discrepancy. In March 2011, all the plumbing at the well

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head was replaced. In addition to a new check valve and pipe, the old meter (5/8x3/4") was removed and replaced with a new higher capacity (1") meter. The plumbers indicated that there was significant mineral build up and constriction in these lines. These repairs were critically important at this time because of damages caused by the extreme freezing temperatures this past February. In order to determine whether these changes affect the water loss we will continue to monitor the pump/sold ratios. Unfortunately, additional repairs resulting from the February freeze caused another unmetered water loss in early April.

There were freeze losses from multiple breaks in the company's delivery system and multiple breaks within customer's homes. The system was stabilized within hours following the damage, but there were significant water losses on the company side of meters that were not measured.

Although the water company currently has a comfortable sum in the bank, finances are a limiting factor on this issue. Due to its remote location no electric company serves Parker Lakeview Estates. PSWC uses two electrical generators to power its well pump. One generator serves as a backup for the other. One of these generators is no longer serviceable and is in need of rebuilding or replacement.

Regarding the leak, PSWC has been in contact with a service that does pressure checks on water lines to find leaks. The cost ranges between \$2000-3000. While this action is under serious consideration, the related cost, plus the cost to repair the back-up generator will wipe out our cash before any line repairs are done. We are exploring other pressure check alternatives and will make that decision if the system monitoring does not show significant improvement in pump/sold ratios. We cannot jeopardize day-to-day customer service even if the water loss is significant.

PSWC is an aging water system. It is the considered opinion of the Corporation's board of directors and its constituents that the system requires significant upgrading, restoration, and refurbishment. PSWC is in the process of seeking approval from the ACC for a WIFA loan to build a "green," energy efficient, cost effective system that is free of surface water influences, and, that system will serve the community for several decades into the future. The elimination of a "phantom leak" is, and has been a major consideration in this pursuit.

Victor Chacon
President

Parker Lakeview Estates HOA, Inc.

Gail Spain
Secretary/Treasurer

April 1, 2011