

CHAPTER 7

Water Conservation Recommendations and Implementation Schedule

During the months of March and April 2003, a series of eight (8) workshops were conducted with Kyle Canyon residents and property owners to solicit feedback and/or additional recommendations on the Kyle Canyon Water Management Plan.

The following represents the recommendations received during the workshops. Where appropriate and noted, recommendations have been incorporated into the Water Management Plan. The remaining recommendations have been organized in three categories: immediate, short-term and long-term implementation.

Most recommendations can easily be implemented in the immediate and short term. However, due to funding constraints and/or timing issues, some recommendations may take longer to implement as noted.

Immediate Implementation

Recommendation 1: *Revise Landscape Watering Schedule*

Several modifications landscape watering schedule were recommended, including:

- A. Allow fewer days for sprinkler irrigation
- B. Limit outdoor irrigation to hand-watering only
- C. Provide information on how much water is appropriate to use
- D. During “critical,” limit summer watering to 1 day/week
- E. Revise proposed watering schedule to have more days between watering
- F. Reduce the maximum watering duration from 30 to 15 minutes
- G. Water for irrigation is not necessary in March and May due to snow and freezing conditions

Implementation:

- š Suggestions A, D, E, F and G have been incorporated into the Landscape Watering Schedule (Page 14).
 - š Suggestion “B” may be implemented at a later date if conditions worsen or emergency conditions persist.
 - š Suggestion “C” has been addressed in Recommendation 4.
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Immediate Implementation (cont.)

Recommendation 2: *Re-evaluate the bandwidth between “concerned” and “critical”*

It was recommended that “concerned” measures become effective earlier. Residents suggested that implementing concerned measures sooner might reduce the potential for reaching the “critical” stage.

Implementation:

The Water Management Plan (pages 11 and 12) has been updated to reflect this recommendation. The revised well depths call for the implementation of “concerned” water management measures when water levels in any one of Kyle Canyon’s three groundwater wells reach the following depths:

Echo Well No. 3	90 ft. below land surface
Echo Well No. 4	170 ft. below land surface
Rainbow Well	145 ft. below land surface

Recommendation 3: *Notify residents of new/changing operating conditions*

It was recommended that the LVVWD establish a process for notifying residents of changing/heightened operating conditions.

Implementation:

The Water Management Plan (page 13) has been updated to reflect this recommendation.

The LVVWD will make efforts to notify residents of any changes to water supply conditions and operating stages by way of phone calls, mailers, fliers, signs, email, or any combination thereof. The LVVWD will also provide information to the Mt. Charleston Library for posting on the local bulletin board.

Recommendation 4: *Inform residents on ways to conserve water/reduce water waste*

It was recommended that the LVVWD provide community residents with additional information on the Kyle Canyon water system, including:

- ⌘ Water system conditions
- ⌘ Leak detection
- ⌘ Appropriate fire prevention methods
- ⌘ Appropriate measure of water for landscape use
- ⌘ Deep root watering
- ⌘ Water conservation/water waste
- ⌘ Home winterization methods

Immediate Implementation (cont.)

Implementation:

The LVVWD has several forums for disseminating information to the Kyle Canyon community, including quarterly bill inserts, staff updates to the local Mt. Charleston Town Advisory Board, and on-line information at www.lvvwd.com (a link to information on the Kyle Canyon water system is available under “other service areas”).

The LVVWD will work to enhance public information specific to Kyle Canyon residents and their unique concerns and/or interests. Where appropriate, the LVVWD will partner with other agencies/specialists to ensure that the most appropriate source provides the requested information (for example, plumbing industry, fire/forest agencies, etc.).

Recommendation 5: *Provide water conservation incentives*

It was recommended that the LVVWD provide water conservation incentives, including low-flow toilet flappers and low-flush toilets.

Implementation:

Homes built before 1989 were not required to have low-flow water fixtures. Kyle Canyon residents, whose homes were built prior to 1989, are eligible to receive a free indoor retrofit kit, which includes:

- ☞ Water saving showerhead(s)
- ☞ Bathroom fixture aerator(s)
- ☞ Kitchen faucet aerator(s)
- ☞ Toilet diverters/flappers
- ☞ Leak detection tablets for the toilet

Kyle Canyon Water District customers are encouraged to call 258-SAVE to request an indoor retrofit kit. In addition, workshop attendees were provided the opportunity to sign up for such kits.

Limited funding prohibits the implementation of a low-flush toilet incentive program at this time.

Short Term – Implementation

Recommendation 6: *Notify high water users*

It was recommended that the LVVWD notify metered accounts if/when high water use is recorded.

Implementation:

Based on Southern Nevada Water Authority (SNWA) residential indoor consumption data, an average residential account should not exceed 10,000 gallons of water per month during winter months. This figure assumes that no water is being used outdoors for irrigation during winter months, when freezing or snow conditions exist.

Likewise, based on the 2003 projected safe yield for the Kyle Canyon water system (page 7), residential water usage should not exceed 40,000 gallons of water per month during all other months.

The LVVWD will issue notices to residential metered water customers if/when consumption exceeds 10,000 gallons of water per month during the months of November through April each year; and 40,000 gallons of water per month during all other months.

Additionally, in May/June 2003, the LVVWD will install radio remote meter reading technology (Firefly) to existing water meters in Kyle Canyon. Following the installation of Firefly, individual water meters will transmit a signal to a data collection device that will store residential water use data for each metered account. Firefly technology electronically stores water use data on an hourly, daily, weekly and monthly basis, which allows for a more comprehensive analysis of water use trends. The new technology will help to identify leaks or running pipelines within a property; consumption that registers a continuous flow for a 24-hour period indicates a leak may be present.

The LVVWD will monitor meter readings. If a meter registers a continuous flow over a 24-hour period, the resident will be notified that a leak may be present.

Recommendation 7: *Provide consumption data to metered customers*

It was recommended that the monthly consumption of metered accounts be printed on the corresponding account's water bill as a tool to help residents monitor water use.

Implementation:

There are currently 111 residential metered accounts in Kyle Canyon, which are charged the standard flat water rate of \$51.00 per month.

The LVVWD will reformat the monthly water bills of metered accounts to reflect actual water usage. This recommendation can be implemented in Summer 2003.

Short Term – Implementation (cont.)

Recommendation 8: *Kyle Canyon’s water supplies should not be used for dust control*

It was recommended that LVVWD prohibit Kyle Canyon’s water supplies from being used for dust control.

Implementation:

As part of the LVVWD’s education and outreach efforts, residents will be discouraged from using water to control dust outside their property. Per Kyle Canyon Water District Service Rules, water should not be used outside the property to which the water commitment was made; this includes watering roads or other areas outside the parcel.

Depending on system operating conditions, the LVVWD may also require that other agencies/contractors locate another water source for use in dust suppression.

Recommendation 9: *Establish a policy for water waste enforcement*

It was recommended that the LVVWD pursue an enforcement policy for water waste, including:

- ⌘ Establish a phone number to report water waste
- ⌘ Enforce water waste with monetary penalties
- ⌘ Balance water waste fines with the cost of service (for example, labor/travel time, etc.)
- ⌘ Shut off water abusers

Implementation:

The LVVWD will work to develop a water waste enforcement policy and associated penalties.

It is anticipated that any enforcement policy would be considered for adoption by the Kyle Canyon Board of Trustees, and, if approved, be incorporated into the Kyle Canyon Water Service Rules.

Recommendation 10: *Establish a water waste/leak monitoring committee*

It was recommended that Kyle Canyon residents form a “neighborhood watch” that would monitor water waste and/or report leaks.

Implementation:

LVVWD recognizes the importance of sustained community involvement and encourages residents to take an active role in protecting their local water supply. The proximity of a local watch group, comprised of Kyle Canyon residents, would help to promote greater conservation awareness.

The LVVWD supports this recommendation, which would be coordinated and implemented by local residents.

Long-Term Implementation

Recommendation 11: *Install/expedite the installation of individual water meters*

It was recommended that water meters be installed as a long-term solution for water conservation efforts.

Residents made additional recommendations regarding the installation of water meters, including:

- €# Require that water meters be installed when a property is sold as a condition of water service.
- €# Expedite and/or find alternative financing for the installation of individual water meters.

Implementation:

The installation of individual water meters in Kyle Canyon is a condition of future grant funding by the State of Nevada, Board for Financing Water Projects – a financing source that has provided over \$2.6 million in funds to make system improvements since 1996.

It is anticipated that additional critical improvements (distribution line replacements) will be necessary following the completion of current capital improvement activities in 2004/2005 (see Appendix). If the State requires that meters be installed as a condition of funding for the distribution line replacement project, meters would likely be installed within the next three to four years. If the Kyle Canyon Water District were to abstain from making additional funding requests from the State on the basis that meters should not be installed, Kyle Canyon residents would become responsible for all debt associated with future critical improvements.

The LVVWD will continue to research potential funding sources to expedite water system improvements, including the installation of individual water meters.

Recommendation 12: *Locate and repair leaking pipelines*

It was recommended that the LVVWD look for leaking pipelines and make timely repairs in an effort to reduce water lost to the system.

Implementation:

Several factors are considered in determining the appropriate response time to address water leaks. Response time to leaks varies depending on the severity of the leak (or amount of water lost), potential for pavement/property damage, availability of work crews, and funding for repairs. Leaks that pose a potential threat to health or safety will receive immediate attention; however, smaller leaks may be addressed less quickly depending on the factors discussed above.

Long-Term Implementation (cont.)

The LVVWD recognizes that there is a high potential for leaks within the Kyle Canyon Water distribution system, but limited funding is a key determination for how quickly major repairs can be made. The Kyle Canyon Water District, as a 318 District, is essentially self-funded – meaning it is responsible for funding all system costs. The LVVWD cannot provide this funding. The LVVWD is working to address water leaks through a capital improvement plan for Kyle Canyon, which identifies the replacement of leaking pipelines as a major initiative. To fund this work, the LVVWD has pursued grant funding on behalf of Kyle Canyon through the state. The implementation timeline for major repairs/replacements to the water distribution system are contingent on the availability of this grant funding.

It is anticipated that, if grant funding is received, major distribution repairs/replacements will begin following the completion of current capital improvement activities in 2004/2005. The project will include the replacement of approximately 20,600 liner feet of older 2 and 4-inch pipeline with new 6 and 8-inch pipeline. Pipeline replacements will reduce leaks within the distribution system, and significantly improve the availability of water for fire flow.

In the meantime, the LVVWD will conduct a leak assessment for Kyle Canyon in summer 2003, using advanced leak detection technology. The results of the leak assessment should provide a clearer understanding of the system water loss rate, as well as help to locate where leaks may be occurring in specific neighborhoods/residences. The LVVWD will provide additional information to the community on the results of the leak assessment as it becomes available.

Recommendation 13: Revisit policy/reduce fees for water turn-on/off

It was recommended that the Kyle Canyon Service Rules be revised to eliminate or reduce water turn-on/off fees. Residents suggested that reducing/eliminating fees might provide an incentive for customers to shut-off their water service when a property is not in use during winter months.

Implementation:

The Kyle Canyon Water District depends on monthly water bills to maintain the system, and/or repay debt. Virtually all of the existing flat rate reflects these ongoing costs – not the price of water. The existing turn-on/off policy is an essential component of this overall financial policy for the system, in the absence of a metered rate structure. The LVVWD will consider this recommendation as part of potential future revisions to the existing water rate structure, but discontinuing the existing turn-on/off policy would likely require an adjustment to current Kyle Canyon water rates.

In the meantime, the LVVWD encourages residents to insulate their pipes or properly drain their water lines as an alternative to letting faucets run during winter months. Letting faucets run to prevent pipes from freezing contributes significantly to water waste – thousands of gallons of water can be lost in a single month.