

Clark County Department of
Parks and Recreation
Camp Lee Canyon

Water Conservation Plan 2014
PWS # 0005009

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System Overview:

Camp Lee Canyon is a Historic Youth Camp built in 1938 by the WPA (Works Progress Administration). The United States Forest Service is the camp owner with a special use permit issued to Clark County to operate a youth camp year round.

Camp Lee is located at an elevation of 8,400' and found in a mixed Ponderosa Pine forest. Typical precipitation is 96-144 inches of snow and 14-20 inches of rain.

Camp Lee is used by numerous groups year round as a retreat center to enjoy the high alpine environment and as an escape from the hot desert summers of Clark County. Yearly attendance is 6-8000 visitors. Attendance at the camp has been very steady and staff does not see an increased or decrease from the current use.

Clark County and the USFS constructed a new water system in 2003 to supply water to the camp as well as four adjacent USFS campgrounds and day use picnic areas. Camp Lee Canyon is part of this 'mutual' water system.

The water system consists of two wells, a large capacity above ground steel water holding tank (185,000 gal) and distribution system to deliver water to all connected facilities.

Currently the USFS is in the construction phase of rebuilding its campgrounds and picnic areas. The construction will add new capacity to the distribution system by adding one 30,000 gal. storage tank and two 20,000 gal. storage tanks (40,000 gal. capacity). Construction is slated for completion by Dec. 2014.

The tables below give an overview of the wells (supply) and storage capacity of the system.

Wells	Depth	Output (gal/min)	State Permit #	Permitted limit
CC Well #1	460	14-18 gal/min.	34824	1,000,000
USFS Well #2	670	6-12 gal/min.	69193	8,000,000

Facility	Storage Capacity
Camp Lee Canyon	185,000 gal.
McWilliams / Dolomite campgrounds	40,000
Foxtail / Old Mill	30,000

Conservation Plan:

The Camp Lee Canyon Conservation Plan will apply to only the Clark County operated portion of the water system. Any conservation plans pertaining to the USFS portion of the system will have to be created and implemented by the USFS and or it's designee or concessionaire.

The Camp Lee Conservation Plan will contain the following topics:

- Public Education / Awareness
- Conservation measures
- Water management
- Contingency Plans
- Monitoring Schedule
- Evaluation Measurements
- Conservation Estimates

Public Education / Awareness

Every effort will be made to educate the public about the importance of conserving water and the importance that water plays in our everyday lives. Posters and flyers will be posted at all buildings that have water service. Posters will contain tips and recommendations on how to use less water while visiting the camp. Posters and signs have messages such as, "Save Water now for your future", "You can live without electricity, You can't live without WATER!" and "We are in a drought! Don't throw your water out!".

In addition, a sign will be posted outside and centrally stating the current state of water resources in the camp. This sign will be updated by camp staff seasonally based on the current precipitation levels received at the camp.

Conservation Measures

Conservation measures are used throughout camp at both indoor and outdoor locations. Outdoor measures include installation of water timers and water restrictors at any outdoor spigots. Measures also include self closing water spigots and water faucets to stop unused water flow.

Camp Lee contains little to no significant turf or landscaping so water restrictions are not applicable.

Indoor measures include the installation of low flow toilets in all bathrooms as well as replacement of all shower heads with low flow alternatives. Other measures include the installation of low flow aerators on all sink faucets. Recently self closing faucets were installed in the camp main bathrooms.

Camp Lee Canyon and it's water supply is used for the sole purpose of supplying water for public groups that use the camp and grounds for retreats and summer camps. Camp Lee does not charge for water used during these events. At this time there is no ability to encourage water conservation through variable water rates or water used during these rental periods.

Water Management

Current water management involves the monthly reading of all well meters and all distribution meters to track and determine what parts of the system are using the most water. These readings are recorded and compared against historical and seasonal readings to determine if use has increased or decreased.

Camp Lee does not currently monitor static water levels in the system wells.

Camp Lee does not currently have a formal leak detection program; all leaks are repaired immediately when discovered.

Camp Lee uses septic tanks for waste water. Currently no system exists to recapture or re-use effluent for landscaping or irrigation.

Contingency Plan

Camp Lee Canyon has a four stage drought plan in place.

Stage 1: Normal No restriction on use and no communication with system users are needed.

Stage 2: Concerned Water restrictions are voluntary and communication with system users is oral or by email.

Stage 3: Critical Water restrictions become mandatory and communication is posted at all camp buildings that are supplied with water. Outside watering is monitored and reduced and groups are asked to limit water use to cooking and sanitation uses only

Stage 4: Emergency Water restrictions are mandatory with the possibility of cancelation of any groups reserving the camp. All outside watering is restricted and water is only used for consumption and sanitation. Water supply may be turned off to different buildings and deliveries of water to camp grounds may be reduced significantly. Water may only be supplied for fire flow.

Schedule

All plans are currently in place and working effectively to achieve water conservation throughout the system.

Evaluation

The Camp Lee Water system has not had to implement any of the drought stage reductions to date. With the current lack of significant snow this winter the system may need to operate at a critical level if it is determined that the system wells are producing less water. Camp staff will evaluate the effectiveness if these water saving stages are implemented.

Conservation estimates

Current conservation estimates are difficult to measure because the USFS has not been using any water for 18 months. Pumping records for the system wells have shown a 40-50 percent reduction in water production because of the system closures used by the USFS. Camp Lee Water use has remained constant and yearly use of the camp is equal to historic use. Current Camp Lee water use is 750,000-800,000 gal. per year.

Summary:

For the years 2014-2019 Camp Lee Canyon will:

- Continue to monitor all water used throughout the water system, weekly, monthly and seasonal.
- Implement drought stage restrictions when drought conditions exist.
- Maintain a working relationship with the USFS and or concessionaire to address water conservation.
- Retrofit all indoor and outdoor plumbing fixtures as needed to the highest level of water reduction possible.
- Add signage to camp bathrooms informing the public of the importance of water conservation.
- Continue to operate the water system in accordance with all local, State and Federal laws.