

LCRA Glenlake/Westminster Glen Water System Update

Problem Statement:

The Glenlake Water System has experienced pressure problems caused by several factors. Fluctuating pressure or drastic swings in pressure were associated with the opening and closing of the control valve located at the intersection of High Gate and Westminster Glen. Low pressures and high pressure areas are a result of the existing topography of the subdivision.

Ground elevations in the system range from about 675 to 890 feet mean sea level (ft-msl). Figures 1 and 2, located on this website, are resources that will help customers understand the nature of the problem and how the proposed solution will impact them.

- [Figure 1](#) illustrates the range in elevations and the resulting pressures along some of the lowest and highest areas around the system.
- [Figure 2](#) is a contour map of the system, which illustrates the existing 80 psi contour elevation (purple line) and the 80 psi elevation (red line) that will result from the completion of the improvements explained below. Customers can refer to Figure 2 to determine which contour elevation their property falls within.

Solution:

LCRA has completed the first step in resolving the problems in the system by installing the new control valves at the interconnection with RiverPlace MUD. The next step is to replace or install individual pressure reducing valves (PRVs) at residences that are either currently or projected to be above the future 80 psi contour elevation of 840 ft-msl. Once these PRVs have been installed, LCRA will raise the pressure plane of the customers currently served by the ground storage tanks to a range of 1015 – 1025 ft-msl which will eliminate the low pressure problems. More detail is provided below.

- **Fluctuating Pressure:**

Fluctuating pressure has been eliminated with the installation of a new control valve located on High Gate Blvd. The new valve is currently adjusted to maintain a pressure plane elevation of approximately the same level as the ground storage tanks, or 967 to 973 ft-msl, as shown on Figure 1. Prior to replacing this control valve the pressure would spike as high as 60 psi, or to approximately 1111 ft-msl.

- **Low Pressure**

Low pressure areas will be addressed by raising the existing pressure plane by about 22 psi from 973 ft-msl to about 1015 – 1025 ft-msl. The goal of the raised pressure plane is to meet LCRA and state minimum pressure requirements.

- **High Pressure**

High pressure areas will be addressed by installing or replacing PRVs at individual residences. LCRA's design criteria, which reflect common practice among water utilities,

require an individual PRV for pressures greater than 80 psi. The new pressure plane will result in an 80 psi contour elevation of 840 ft-msl (red contour on Figure 2). This means that all residences below 840 will need an individual PRV to meet the pressure reduction criteria.

High pressure areas fall into two categories:

1. Residences that currently have pressures that exceed 80 psi.

These residences are located in the pressure plane elevation 967 – 973 ft-msl as shown on Figure 1. This pressure plane, which includes the central portion of the Glenlake system, is shown in white on Figure 2. Customers in these areas may already have PRVs installed due to the existing pressure plane elevation and the pressures created with the existing ground storage tanks. Customers that have existing PRVs may request that LCRA replace the PRV prior to raising the pressure plane by completing and returning the LCRA Retail Water Services Provider Agreement for Pressure Reducing Valves also available on this website.

2. Residences that are expected to have pressures that exceed 80 psi.

After LCRA increases the pressure, the pressure plane elevation will be 1015 to 1025 ft-msl, as shown on Figure 1. Areas that fall within this pressure plane are shown on Figure 2 in brown shading. Residences in this area may experience pressure higher than that recommended for plumbing and appliances after the pressure on the system has been raised. LCRA will install PRVs for customers in this area that complete and return the **LCRA Retail Water Services Provider Agreement for Pressure Reducing Valves** also available on this website.

- **Schedule for Remaining Improvements**

LCRA is asking that customers, who are either currently or projected to be below the new 80 psi contour elevation of 840 ft-msl and wish to have LCRA install or replace a PRV at their residence, complete and return the **LCRA Retail Water Services Provider Agreement for Pressure Reducing Valves no later than July 10th**. LCRA will **NOT** install or replace a PRV on any residence without an executed agreement.

Once the executed agreements are received LCRA will take up to 90 days to ensure that everyone that needs and wants a PRV has one installed. At the end of that time LCRA will send notification to every customer that the pressure will be raised on a certain date.