

HOW DOES IT WORK?

For our first installment of “how does it work” we will discuss the three elements of what a potable (drinkable) water purveyor (agent to supply) is concerned with namely ***Production, Storage and Delivery.***

Production: Devine providence has seen to it that there is an abundance of “fresh” water available; however, it is mostly underground and not always where you live or work. Therefore, most of the world’s water comes from underground wells, about 80% in all. In ancient times, large holes (wells) were dug with steps where they needed to walk down in and carry out water with whatever means were available at that time. Today with the availability of electricity we can easily *pump* out clean safe water wherever and whenever we need it. California has some of the world’s greatest canals and pumping systems making ‘rivers’ where there were none before. Once the water is pumped out of the underground source it needs to be stored, why?

Storage: Your water *pressure, availability* and *volume* are not based on the water system pumps as much as it is on what elevation (height in relation to sea level) your impounds and/or storage (open or enclosed reservoirs) are. For example Castaic Lake is actually an impounding reservoir for the California Department of Water Resources. We have strategically located Water Storage Tanks in our system designed to provide adequate pressure throughout a *pressure zone* of which we at LCWD have three. The water pressure and flow (gallons per minute *GPM*) to your home is determined largely by the size and location of our water tanks.

Delivery: Most modern water delivery systems are grids (as is ours) of underground pipes of various types and sizes depending on water volume needed as well as reduction in pressure due to what is called *friction loss*. However, the most important ingredient in the sizing of pipe is for *fire protection flows*. These flows and pressure requirements far exceed just what is needed to run all the plumbing fixtures in your home; you can truly say the fire flow requirements “super-size” a water system. Clean safe drinking water is our highest priority at LCWD; all required measures are taken from the pump station to where your water is stored as well as throughout the entire delivery system.

More to come in future issues from,

The old water operator

**Italicized words will be discussed in future issues of how does it work?*