



LOWER RIO GRANDE

Public Water Works Authority

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Project Description – East Mesa Service Area Preliminary Engineering Report & Environmental Information Document

The Lower Rio Grande Public Water Works Authority (LRGPWWA) East Mesa Service Area consists of the combined service areas of the former Butterfield Park, Organ (including Mountain View which previously merged and interconnected with Organ) mutual domestic associations. The Organ and Butterfield Park water systems are interconnected through a transmission line which crosses underneath Hwy. 70. However, due to the current piping configuration, water can only flow from from Organ to Butterfield Park, and even if that were not the case, the Butterfield Park booster pumps would be unable to meet the demand from Organ water customers.

The LRGPWWA assumed a USDA-Rural Development funded water & wastewater system improvements project for Organ in 2012 just prior to the construction phase when Organ and Butterfield Park merged into the LRGPWWA. This project, completed in 2014, took care of replacing water lines in the Organ area to address frequent line-breaks and high water loss in that system. The 2016 water audit of the Organ system showed non-revenue water at 5.1% by volume of water supplied with apparent losses of 2.196 MG/yr. and real losses of .012 MG/yr. The 2012 Organ project also included equipping the East Mesa systems with a SCADA system. The Mountain View area of the Organ system is still in need of rehabilitation and some pipeline replacement to address aging infrastructure and pressure problems.

The last water system improvements project in Butterfield Park was in 1996. That system currently experiences high water loss (>15%) and a large number of line-breaks which often require that the whole system be shut down for repairs due to an inadequate number of isolation valves. All residential water service connections are metered with fairly new radio-read meters. Apparent water loss reflected in the 2016 water audit for Butterfield Park was 1.651 MG/yr. versus 3.949 MG/yr. real loss. The distribution system is not looped, experiences poor pressure, and is in need of additional fire hydrants. It is mostly glued-joint pvc pipe, but includes about 1,000 feet of asbestos pipe. Existing mains are largely located in alleys where many people have fenced them in and difficult access complicates meter reading, and some lines are installed in arroyos where erosion is a problem.

There are nine water storage tanks in the LRGPWWA East Mesa Service Area, seven of which are in need of rehabilitation and/or replacement. One of the four wells is out of service because the water table has dropped below the level of the pump, and the pump cannot be lowered due to a bend in the casing which occurred during construction of the well. There are four booster stations, all of which are currently in service, all of which are twenty years old or more. Chlorination is the only treatment employed in the East Mesa Service Area except at the Arroyo Well where an iron & manganese sequestering agent is utilized. The LRGPWWA has been standardizing its chlorination equipment to a chlorine gas system, but the East Mesa Service Area wells currently still employ liquid chlorination systems.

The LRGPWWA East Mesa Service Area is currently operated as two separate water distribution systems with an interconnect for emergency backup. The LRGPWWA would like for these planning documents to evaluate ways to optimize the operational efficiency of these systems, including the potential and feasibility of configuring these two systems to operate as one and eliminating a number of smaller water tanks and booster pumps in favor of one or more larger tanks at the higher elevation end of the Organ system.