

LEE PICKENS WELL 3B

Years Drilled:	Well 3A: 1975 (Sealed and officially abandoned in 1989) Well 3B: Redrilled in 1989
Depth:	600 feet
Gallons Per Minute:	2,300
Area of Well Site:	9,500 square feet
Type of Engine:	Well powered by a 250 hp. electric motor



History of Well 3

Well 3 is named in honor of Marion "Lee" Pickens, Mesa Consolidated Water District's (Mesa) first General Manager. Mr. Pickens served in the same capacity for the Fairview County Water District from 1958 to 1960.

In 1960, the Fairview County Water District, Costa Mesa City Water Department, Newport Mesa County Water District and Newport Heights Irrigation District merged to create Mesa, a unified entity committed to providing water service to its customers.

In 1989, when well 3B was constructed, an observation well (MW-3B) was also installed. MW-3B provides water level data. This data helps in developing an understanding of the differing hydraulic pressures between the deep and shallow aquifers.

Long-range Planning

In 1986, the District introduced its new Master Plan to meet the long-term growing needs of its customers. The plan defined ways to improve water delivery systems, create additional local storage facilities, and develop new sources of water. In 1990, the Master Plan was updated with a primary focus to "drought-proof" the service area. This is accomplished by developing additional supplies of local groundwater thereby reducing reliance on imported water.

Increasing the use of well water provides operational flexibility and local control that enables Mesa to minimize the use of imported water. Well water is higher in quality, and lower in cost than imported water. Mesa is fortunate to have access to such a reliable low-cost source of water.

Source of Water

Mesa's primary source of water is groundwater. Mesa strives to provide its customers with as much groundwater as possible, which is pumped from Orange County's natural groundwater basin or aquifer via nine wells. The groundwater basin stretches 350 square miles from the Orange County line at Seal Beach and Long Beach, along the coast, down to the 55 freeway and east to Yorba Linda.

Backup for Mesa's well water is imported water, which comes from the Colorado River. It flows through aqueducts to the Robert B. Diemer Filtration Plant in Yorba Linda. Imported water is more costly than groundwater because of transportation and treatment costs.

Currently Mesa owns and operates two reservoirs, which have the combined capacity to store more than 28 million-gallons of water.

Groundwater Basin

Groundwater in Orange County occurs in horizontal layers of water-bearing sand, gravel or broken rock and not in underground lakes or streams. These formations, called aquifers, are separated by layers of non-water bearing materials, and make up the groundwater basin.

The Orange County Water District manages the local area groundwater basin and utilizes advanced techniques for helping nature recharge the groundwater basin.

The Santa Ana River is the main contributor to the groundwater supply. Water from the Santa Ana River reaches the aquifers through a number of routes. It

infiltrates the soil on the earth's surface as rainfall, or percolates through the gravel of streambeds or unlined ditches. Water is also placed in the ground artificially, through man-made percolation ponds or injection wells.

Service Area

Mesa provides water service to more than 100,000 customers in an 18-square mile area including the City of Costa Mesa, parts of Newport Beach and unincorporated Orange County, including the John Wayne Airport.