

Orlando Utilities Commission - Orange and Southeast Test Wells

Orlando Utilities Commission is planning to expand their water supply system to serve the projected growth in its southern service area near the Orlando International Airport. The South Florida Water Management District required OUC to implement a test drilling program as part of the well field siting and permitting process. The overall goals of this project were to collect water quality data to evaluate water treatment processes and the position of the 250 mg/l chloride concentration and secondarily to evaluate the production capacity of both the Upper and Lower Floridan aquifers.

Barnes, Ferland and Associates, Inc. (BFA) was selected by CH2M HILL to provide well construction management and field observation and testing services during the construction of the Orange and Southeast Test Wells. These wells were both drilled to depths of 2,000 feet. BFA collected and evaluated hydrogeologic data including water quality, formation lithology, geophysical logs and aquifer testing within the Upper and Lower Floridan aquifers.

BFA prepared a summary report that compiles all data collected and details of the drilling and testing program. The water quality and hydraulic characteristics were found to be the best within the Upper Floridan aquifer at the Southeast Test Well Site, however, they were good within both aquifers at both sites. The St. Johns River Water Management District continued drilling and packer testing at the Southeast Test Well Site and found the chloride concentration to rise (61 to 372 mg/l) between depths of 2,050 and 2,060 feet.

Recommendations were made to construct the future supply wells above the depth of 1,500 feet which will depend on the selected treatment process and other permitting issues. Both wells were grouted to depths of about 1,450 feet and are used for monitoring the Lower Floridan aquifer water levels and quality.

Reference:

Mr. Keith Browning, P.E.

Orlando Utilities Commission

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Orlando, Florida 32802

Well Costs: \$316,856

Completion Date: June, 1996