

UofM CAESER Awarded Five-Year, \$ 9.75 Million Contract to Continue Studying Memphis Aquifer

July 12, 2023 – The Center for Applied Earth Sciences and Engineering Research (CAESER) at the University of Memphis has been awarded a five-year, \$9.75 million contract to continue research on water quality for the Memphis Aquifer from the City of Memphis and Memphis Light, Gas, and Water (MLGW).

In 2018, MLGW had grown concerned about impacts to water quality for the Memphis aquifer and the condition of the clay confining layer, or aquitard, protecting it. Through a rate increase, MLGW awarded CAESER a five-year, \$5 million contract to conduct extensive research addressing these concerns. The results of this study, being released later this month, show their concern to be valid. “In the past, we probably thought of this clay layer as protective of our groundwater supply. It was a continuous layer of clay with a few holes in it,” CAESER’s director, Dr. Brian Waldron, told MLGW during the April 12th board meeting. “Well, we’re starting to believe that it’s looking more like Swiss cheese.” The study increased our knowledge of known and suspected breaches from two to six and from six to 36, respectively.

Though research is showing that the clay layer is not as continuous as previously thought, Dr. Waldron says that the water is safe for now. He urged the need to continue to be proactive than reactive when it comes to the Memphis Aquifer. To this end, the City of Memphis, through the Tennessee Department of Environment and Conservation, and MLGW have awarded a five-year, \$9.75 million contract to continue the research.

This new contract will advance research in many key areas. Some of the focus for the next five years will be developing innovative technology for remote sensing breaches in urban areas, developing more advanced computer models to better understand the movement of water and contaminants in the shallow, Memphis, and Fort Pillow aquifers, to better understand the interconnection between the shallow and Memphis aquifers, and to provide MLGW, City of Memphis, and the Shelby County Health Department with information and resources for proposed planning and development decisions (public and private) and potential impacts our groundwater resources.

CAESER is a multi-disciplinary research center committed to providing water expertise to MLGW, City of Memphis, the Shelby County Health Department, and the Shelby County Groundwater Quality Control Board. Their research provides quality hydrogeologic and engineering science to multiple supporting agencies. For more information on this or other projects happening at CAESER, contact caeser@memphis.edu or their website at caeser.memphis.edu.