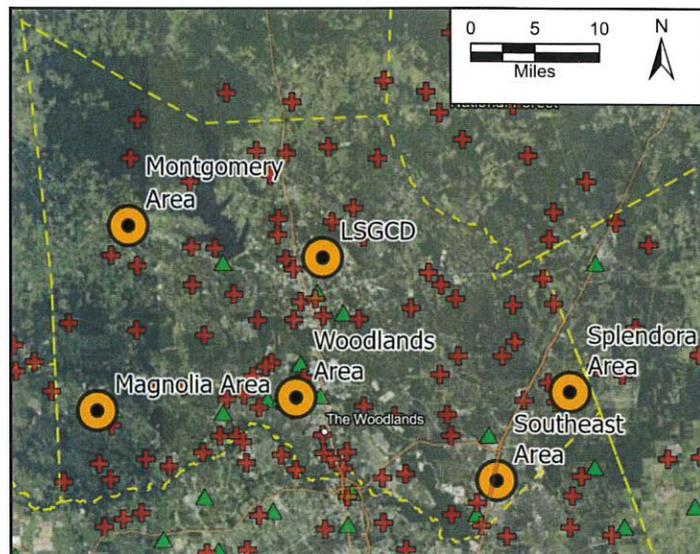




Subsidence Study Phase 3

- ⇒ **First of its kind study**
 - ⇒ In Montgomery County
 - ⇒ By a GCD
 - ⇒ In past 50 years
- ⇒ **Specific Purpose**
 - ⇒ Management: LSGCD's mandate
 - ⇒ Monitoring: Assess aquifer conditions
 - ⇒ Modeling: Defines Modeled Available Groundwater
- ⇒ **Data Collection**
 - ⇒ Drilling
 - ⇒ Logging
 - ⇒ Coring



Drilling: Involves bringing in a rig capable of drilling a pilot hole up to 3,000 feet below ground level. The total depth of the hole will be site specific with the target depth being the base of the Jasper Aquifer. During drilling, a professional geoscientist will examine and log the formation cuttings and evaluate lithology changes. After drilling, geophysical logging of the borehole will be conducted

Advanced Geophysical Logging: Triple combo, micro-resistivity, spectral gamma, and magnetic resonance geophysical logging. Data from the logging will provide essentially continuous data from the bottom to top of the borehole regarding the lithology, porosity, permeability, clay mineralogy, movable water, and water quality of the formations comprising the Gulf Coast Aquifer System.

Coring: Geophysical logging data will determine the depths where coring of clay materials will occur. The drilling rig will move about 200 feet from the pilot hole to drill and obtain core samples. Core samples will be preserved on site by a professional geoscientist and delivered to a lab for analysis. The lab will analyze the core to assess the change in porosity and compressibility with increased pressure along with the vertical direction permeability. *These data are vital for assessment of potential subsidence due to groundwater pumping within and near Montgomery County and for effective management of groundwater resources by LSGCD Directors.*