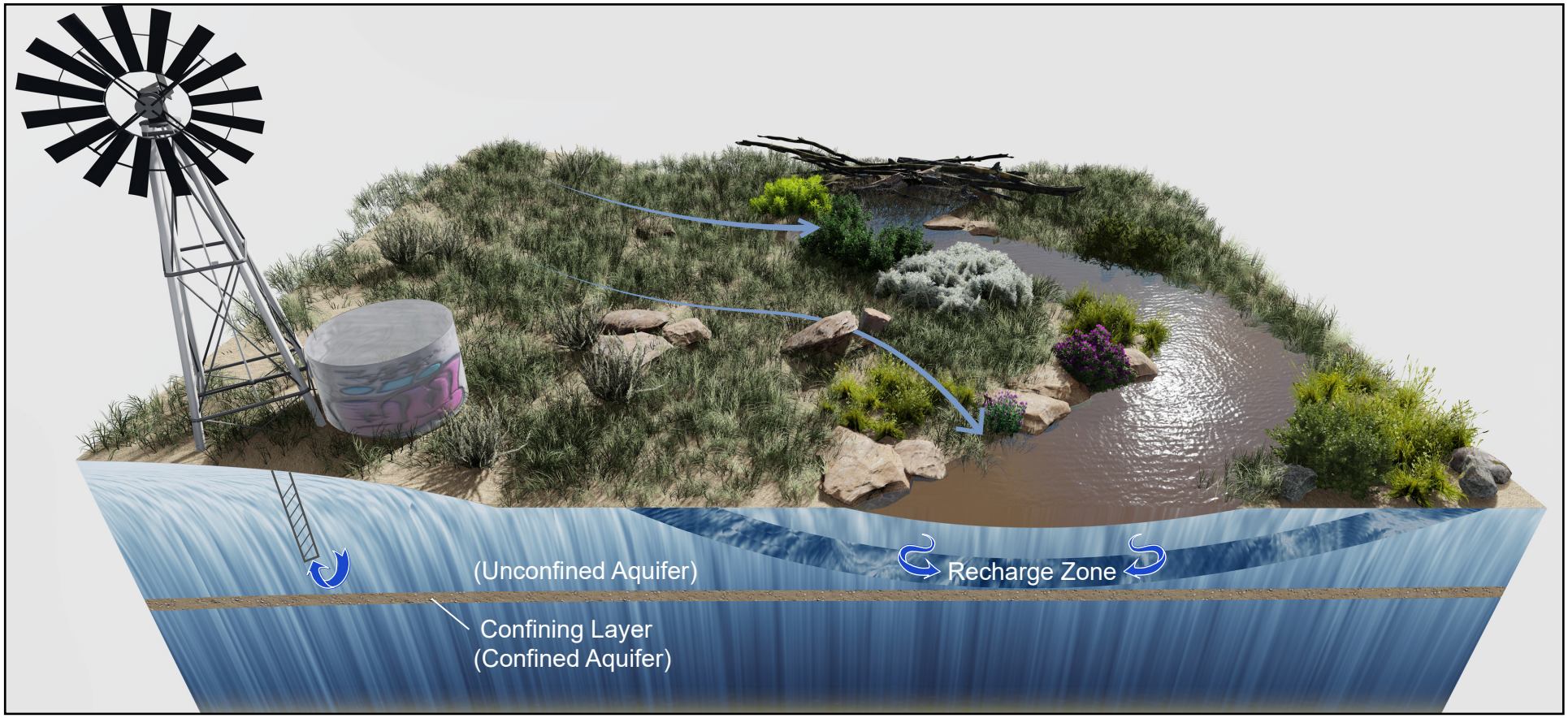


Thesis research explored how indigenous traditional soil conservation measures of the Southwest might mitigate the climate change fueled heat and drought now present in the region. During storm events, fertile soil and sediment in the form of runoff flows through ephemeral streams of the Southwest. One technique used brush dams in these washes to capture the fertile soil runoff and water running through the wash.

With a network of brush dams, water pools behind the dams and infiltrates into the soil to replenish the groundwater reserve. Water percolates through soil to recharge unconfined aquifers. A brush dam system, which allows for stalling and infiltration of water into the stream bed, helps to restore the water table or unconfined aquifers on which many wells depend. The Navajo Nation uses nearly 3,000 wells over its territory.