Antelope Valley is located in the western part of the Mojave Desert in California, about 20 miles south of Los Angeles. The area is characterized by the scarcity of surface water. Water in the region is obtained primarily from groundwater sources. This region is a part of the Antelope Valley Ground-Water Basin, a large ground-water basin that covers about 2,500 square miles.

### Geology

The Antelope Valley is underlain by sediments of the Cenozoic era, primarily sandstone, siltstone, and conglomerate. These sediments are part of the Mojave Desert Formation and the Garden Valley Formation. The rocks are interbedded with evaporites, such as salt and gypsum.

### Water-Level Changes

Historical water-level data were compared with data collected during this study to determine changes in water levels in the Antelope Valley. The water levels in the basin were measured at various locations, including wells and monitoring stations. The data were analyzed to identify trends and changes in water levels over time.

### Water-Ground Movement

Ground-water flows from areas of higher to areas of lower elevation. The movement of water is driven by the hydraulic gradient, which is the difference in water pressure between two points. The movement of water is also influenced by the permeability of the soil and rock layers.

### Water-Table Changes

The water-table changes in the Antelope Valley were analyzed to understand how water levels have changed over time. The data were compared with historical records to identify trends and changes in water-table levels.

### Conclusion

The study of the Antelope Valley Ground-Water Basin has provided valuable insights into the region's water resources. The data collected and analyzed during this study will help in making informed decisions about water management and conservation efforts in the region.