

system acts as a semiconfining to confining unit over the Floridan and can provide limited quantities of potable water.

The surficial aquifer system, a permeable aquifer at the land surface, is present in the northern part of Hillsborough County. It is usually no more than 25 feet thick and is generally used for irrigation. In the Tampa Bay area, the surficial aquifer system contains the water table. Because water in this system is unconfined, it is vulnerable to contamination.

Surface Water and Ground Water Interactions

Because contaminants can be exchanged between surface water and ground water, an understanding of these interactions is critical in protecting the region’s watersheds. Karst features allow the sinkholes that develop to fill with water, as evidenced by numerous circular lakes and ponds in the Tampa Bay Basin. Surface water elevations in these karst features often directly reflect ground water levels, indicating that surface water and ground water are interrelated (Fernald and Purdum, 1998). Generally, more rainfall percolates downward into the aquifer systems in the eastern regions of the basin than in the western regions (Figure 2.7). Once underground, the water either flows downward, recharging the aquifer systems, or flows west, where it eventually intersects and discharges to the land surface (Figure 2.8) through karst ponds and lakes, springs, and baseflow to streams.

Potentiometric Surface

The level in confined aquifers to which water will rise in a cased well.

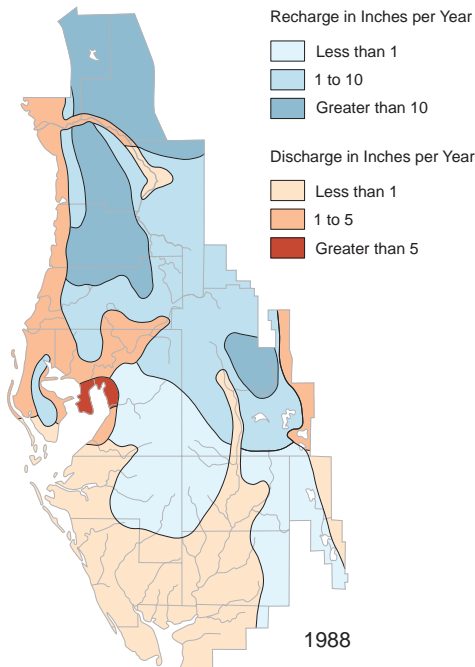


Figure 2.7: Recharge in the Tampa Bay Basin
Source: Water Resources Atlas of Florida, 1998.

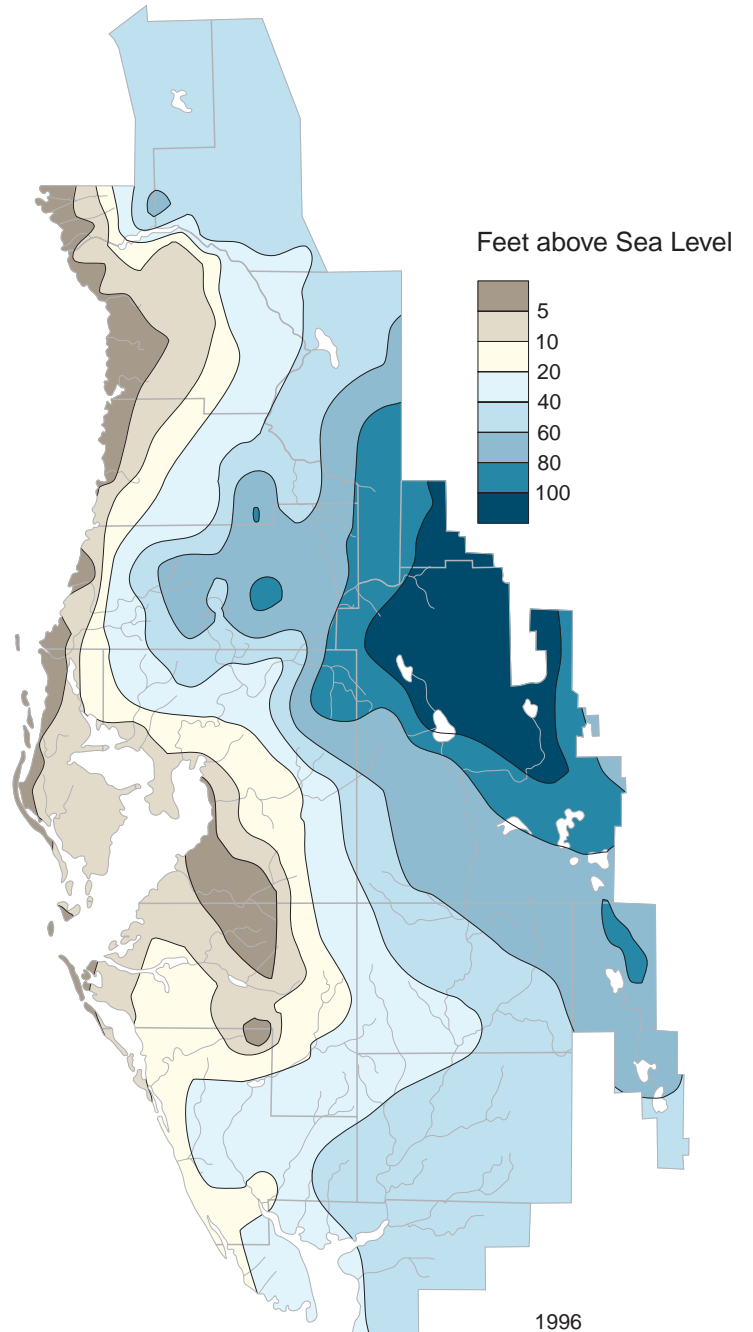


Figure 2.8: Potentiometric Surfaces in the Tampa Bay Basin
Source: Water Resources Atlas of Florida, 1998.