Aquifer Footprint Analysis

Analysis Objectives

The ***Aquifer Footprint Analysis (AFA)*** prepared by the Howard T. Odom Florida Springs Institute for The Nature Conservancy estimated groundwater use and nitrogen (N) loading in the springs region through a GIS analysis using publicly sourced data.

The objectives of the *Aquifer Footprint Analysis* were to: (1) estimate nitrogen loading to the aquifer from fertilizers and wastewater; (2) estimate groundwater withdrawals from the aquifer; (3) combine groundwater use and N-loading estimates to form a 'footprint' of the impact of areas on the aquifer; and (4) perform a hotspot analysis. Due to the project's limitations, the AFA results are most suitable for high level planning and analysis and should not be used for planning or decisions at the municipal or parcel level. Localized and site-specific data would be needed to assess an area of interest at a more detailed resolution.

Aquifer Impacts

The Floridan aquifer is the major source of drinking water for millions of Florida residents and is the water source for over 1,000 freshwater springs. A growing population and intensive land development practices have resulted in declining aquifer levels, reduced spring flows and excessive nitrogen loads. The karst landscape forming Florida's springs region allows it to be recharged by rainwater draining through carbonate rocks and surface features. This geology also provides a more direct path for substances like nitrogen to enter the groundwater.

Aquifers Application

The Aquifers application presents the results of the *Aquifer Footprint Analysis*, which spatially represent the impacts in the springs region. The data for the impact estimates can be examined in context with other relevant data layers and base maps.

Read the Aquifer Footprint Analysis Final Report