

## Executive Summary

The Woodville Recharge Basin Aquifer Protection Study was commissioned by the Leon County Board of County Commissioners and funded by a grant from the U.S. Environmental Protection Agency (USEPA). This study assessed the vulnerability of the Floridan Aquifer, which is unconfined in most of the watershed. This is an aquifer recharge area. Water flows through about 20 feet of sandy soil into the underlying lime rock where it mixes into the Floridan Aquifer. The world-class springs here require a healthy aquifer. This is vital for the preservation of Wakulla Springs, Spring Creek, the St. Marks Rise, French Spring, Chicken Branch Spring and Horn Spring. It is also a source of drinking water.

The Woodville Recharge Basin (WRB) is experiencing rapid growth. The endless forests that covered the WRB are being replaced by homes and businesses. The water quality of the aquifer is deteriorating. The Watershed Analysis and Management Model (WAM) shows that if current zoning regulations are followed, once the WRB is fully developed, the water quality of the aquifer will be severely impaired regarding human health and our springs will no longer be a tourist attraction. WAM identified the areas that are suited for development. This study investigated the sources and concentrations of groundwater contaminants and proposes options to remedy the degradation of the Floridan Aquifer and preserve our bountiful springs.

As people move into the WRB, associated sewage and management practices cause increasing degradation of the Floridan Aquifer. The thin veneer of sandy soils is not suited for cleansing the surface water that filters through it to the aquifer. The WRB should be designated an Aquifer Protection Zone. To protect and preserve the quality of our groundwater and preserve our springs the following actions are recommended:

- Aquifer friendly water quality standards are recommended;
- A state of the art sewer system on major roads is recommended;
- Adjusting the density of septic systems to aquifer vulnerability, cave systems and sinkholes is recommended;
- Performance based septic systems are recommended;
- Aquifer friendly fertilizers are recommended;
- Aquifer friendly stormwater regulations are recommended;
- Permit based trust funds are recommended;
- Aquifer friendly public education programs are recommended;
- Purchasing sensitive features and habitat restoration are recommended;
- The WAMview Model (run by Leon County staff) should be utilized as a planning tool for sustainable growth.