



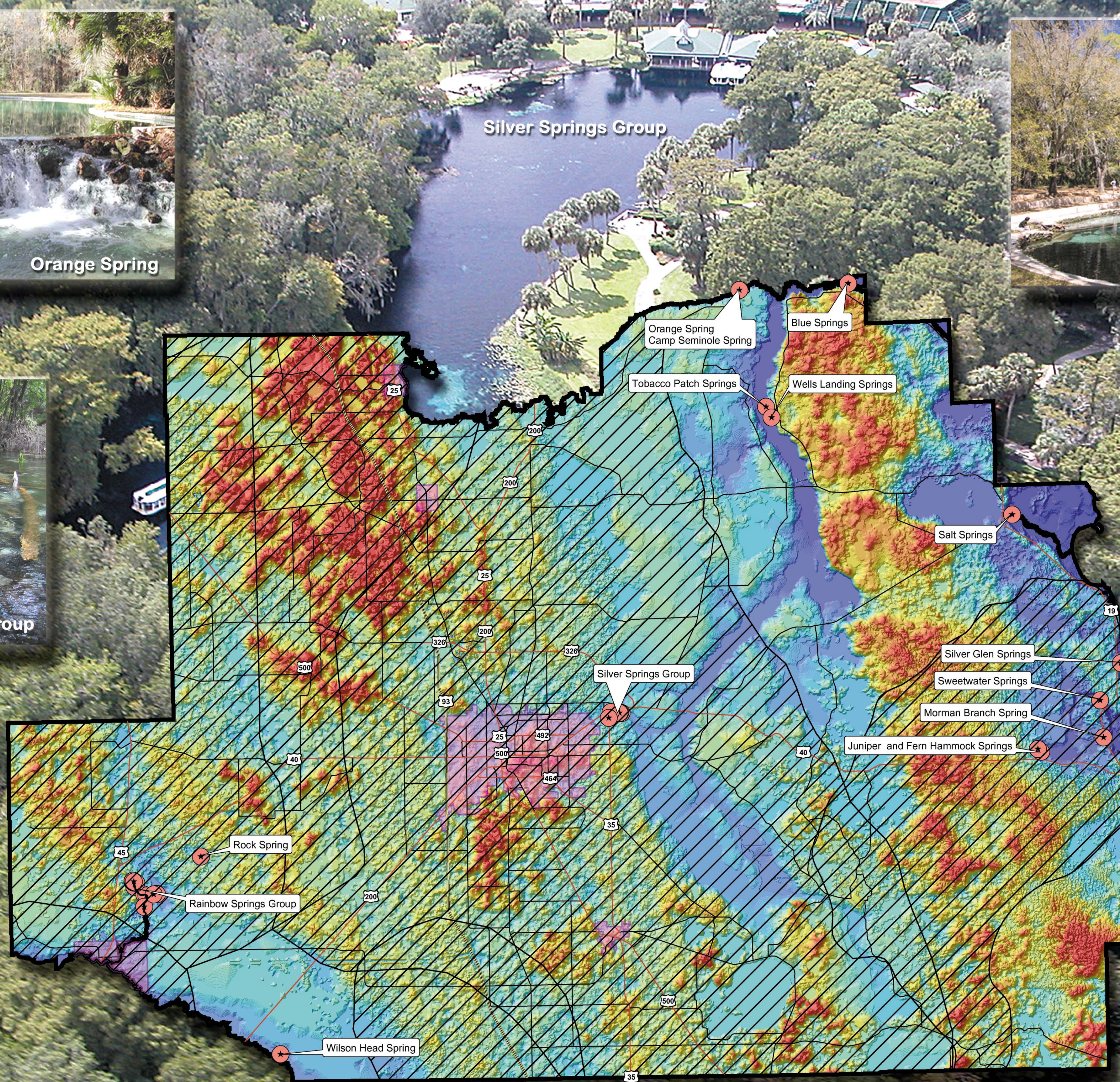
Orange Spring



Juniper Springs



Bubbling Spring - Rainbow Group



Silver Glen Springs

General Information on Springs

Florida has more than 700 documented springs of which 33 are first magnitude, meaning they each discharge 65 million gallons of water per day or more. Florida's springs have provided refuge and resources to Florida's inhabitants for over 11,000 years. Today Florida's springs attract millions of visitors per year contributing significantly to the state's local economies. Spring water pouring forth from underground is the same water that over 90 percent of Floridians drink. Springs are windows into the vast underground storage area we call the Floridan Aquifer System.

Where does the water come from that flows from these mysterious cavities in the Earth? In Florida, we are blessed with an abundance of precipitation (over 60 inches in some areas) in the form of rain. As rain falls, some of it is taken up by Florida's lush plant communities, some runs off and contributes to the flow of streams and rivers, and the remainder seeps into the ground. The amount of rain water that seeps into the ground is called recharge. It is recharge water that accumulates in Florida's aquifers that provides flow to springs. During periods of drought, spring discharge declines and conversely when there is an abundance of precipitation spring flow increases.

Florida is underlain by thick sequences of limestone and dolostone. Rain water is slightly acidic and over millions of years it dissolves the limestone creating a karst topography. Karst topography includes features like sinkholes, caves, disappearing streams and springs. Florida's karst terrain provides direct connections to the aquifer systems, via sinkholes and disappearing streams, for contaminants to enter. Once in the aquifer systems, contaminants can flow rapidly through the swiss cheese-like network of conduits and pore spaces to springs.

Florida's spring water quality has seen a decline in the past 30 years due to a number of factors. Florida's burgeoning population places a great demand on water resources which in turn affects springs. Increased urbanization produces more storm water runoff which can make its way to springs. Agricultural practices can contribute nitrate, phosphate and pesticides to groundwater which can make their way to springs. Septic tanks and waste water sprayfields contribute nutrients to groundwater which negatively affects springs. Ultimately, human activity on the Earth's surface impacts the groundwater that discharges from springs.

Photos are courtesy Harley Means, Ryan Means, and Jeff Soward.

Map and poster compiled by David Anderson.

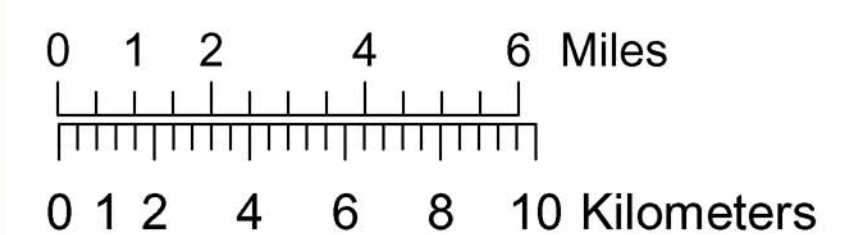
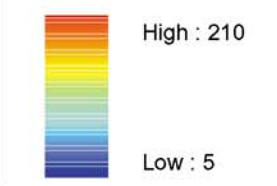
Florida Geological Poster Series 14



LEGEND

- Spring Locations
- Interstates
- State Routes
- Local Roads
- Springshed areas
- City Limits
- County Boundary

Elevations Value



SPRINGS OF MARION COUNTY, FLORIDA