

Silver Springs Basin Working Group

Fact Sheet

The Working Group was established in 1999 as a public/private, multiple stakeholder work group whose mission is to restore and protect water quality and quantity in the Silver Springs groundwater basin. The group consists of representatives from federal, state, regional and local agencies, local governments, the business community, agriculture, environmental groups, and concerned citizens.

Working Group meetings are held at least four times per year, and are open to the public. At each meeting, the participants report on activities that are underway relevant to Silver Springs. Action teams are formed to accomplish short-term projects. For more information, contact the coordinator Peter Colverson at 352-327-3270 or pcolverson@pandionsystems.com

What's Happening to Silver Springs?

Both water quality and quantity have significantly declined in recent years.

Water Quality: Nitrates are more than 20 times higher. Increased concentration of nutrients, especially nitrates, contribute to unwanted algal growth that causes decreased water clarity that is reducing the beauty and visitor enjoyment of Silver Springs and the Silver River. **Nitrates have risen from 0.04 mg/l in the early part of the 20th century to more than 1.2 mg/l today; more than a 20 fold increase.** Nitrates originate as a by-product of biological waste from both humans and animals and as a result of excessive use of fertilizers on farms and in residential areas.

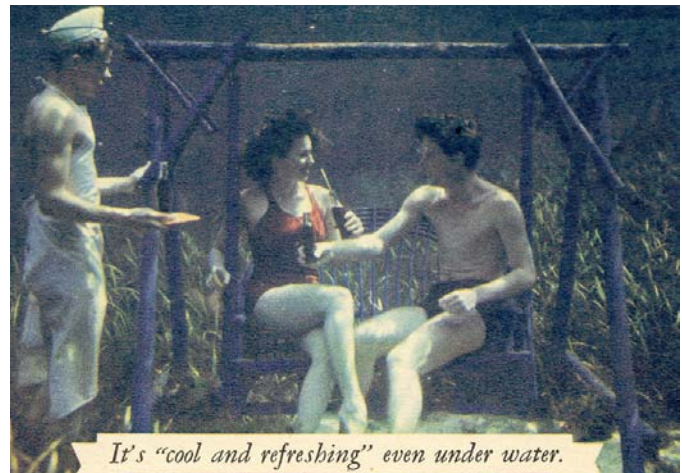
Increased nutrients create an overabundance of aquatic plants and algae which threaten the remarkable clarity of water at Silver Springs, and create severe stress for both plants and animals within the springs and the river.

Water Quantity: Flow rate is substantially down. The Silver Springs group is one of the largest of Florida's 33 first magnitude springs. Mammoth Spring, one of the vents, is the largest single artesian spring vent in the world. Flow records dating back to 1933 show the **average flow** from the springs group to be **about 550 million gallons per day (mg/d).**

**From 1933-1990, flow was over 400 mg/d for 54 of 57 years.
Flow has been below 400 mg/d for 10 of the last 20 years, since 1990.**

Part of this decline in flow may be due to long-term rainfall changes. Increased water use by humans as the Marion County population has grown also seems a likely cause.

Combined Effects Reduced flow enhances the negative impacts of increased nitrates. Less water means higher concentrations which will increase algal growth and cause further declines in the health and beauty of this important attraction which contributes significantly to the economic well-being of Marion County.



This 1960's soft drink advertisement took advantage of Silver Springs famously clear water to attract consumer's attention.

Selected Working Group Accomplishments

Since 1999, the Silver Springs Working Group has:

Become a well-known and stable presence in Marion County that allows regular information exchange and collaboration between the many stakeholder groups concerned with the long-term welfare of Silver Springs and the Silver River.

Sponsored two land acquisition applications to Florida Forever (the state land acquisition program). The Avatar tract, still in progress as of 2006 is a vested subdivision of more than 10,000 lots on approximately 4,500 acres located on important recharge lands north of Silver Springs. It includes Indian Lake, a sinkhole lake. The Seldin tract was purchased by the State in June 2005 and is being managed by the Marion County Parks and Recreation Department. It comprises 350 acres adjacent to Silver River State Park in close proximity to the headspring.

Supported Marion County's adoption of changes to its comprehensive plan that provide better protection of springs and regional groundwater when land is developed in the future.

Collaborated with a project of the University of Florida Levin Law School's Conservation Clinic to write and introduce springs protection legislation to the State Legislature in the 2005 session.

Developed a map and display concerning the location of vulnerable areas within the groundwater basin.

Advocated funding for an update of an important ecological study of Silver Springs that was originally done in 1957 through funding by the Florida Springs Initiative and the St. Johns River Water Management District. This project will be complete and in publication form in the fall of 2006.

Convened an action team that reviewed future stormwater management plans for State Roads 35 and 40 with the Florida Department of Transportation. As a result, stormwater treatment methods were changed to provide better protection for Silver Springs, particularly by reducing the depth of treatment ponds and using percolation swales.

Coordinated public response to numerous county hearings regarding land use actions near the springs.

Advocated funding for a long-term USGS study of nitrate in groundwater in the Silver Springs Basin to clarify the sources of high nitrate concentrations in groundwater.

Started an "Old Timers Day" event that brings long-term residents to the spring to share stories about the past at Silver Springs, and relate valuable information about changes that have occurred.

Identified a hidden major stormwater outfall that affects the Silver River. Local agencies and FDOT are cooperating to design and build a major stormwater retrofit project to correct this direct discharge into the Silver River, an Outstanding Florida Water. The area contributing to this discharge extends west along SR 40 as far

Established an information library for the spring and its basin within the Silver River Museum.

Created an action team to support numerous water lettuce removal events at the headspring and in the Silver River, in cooperation with the Friends of Silver River and other civic groups.

Held a business outreach event in the spring of 2001 entitled "Taking Care of Business", emphasizing the link between the health of Silver Springs and tourism in the local economy.

Held an Earth Science Day event at Silver Springs Attraction in 1999 that included information for residents about what they can do to reduce pollution to groundwater.

Numerous boat trips on the Silver River sponsored by the Working Group have brought state legislators, their aides, and other elected officials out on the water to focus their attention on the Silver River and Silver Springs.

Contributed to the Marion Springs Festival and annual Earth Day events at the Silver River Museum and the Silver Springs attraction with exhibits about Silver Springs and its groundwater basin.

Developed and distributed a brochure for the public regarding basin groundwater quality issues entitled "Let's Protect Silver Springs".