What can be done?

More research is needed to fully understand the causes and sources of more frequent and prolonged dark water conditions at Wakulla Spring.

You can help reduce the chlorophyll load to the spring from algae blooms in sinking lakes within the springshed by minimizing or eliminating use of lawn fertilizers and mulching, composting, or bagging yard clippings.

This brochure, and much of the research that informs it, was funded by Protect Florida Springs tag grants to the Wakulla Springs Alliance from the Florida Fish and Wildlife Foundation (PFS #1516-05, 1617-08, and 1819-09). Layout by VancoreJones. Map by the Northwest Florida Water Management District.

Why is the Water Dark?

Wakulla Springs State Park

Historically, Wakulla Spring was a clear aqua blue except after periods of high rainfall when it turned brown from tannins flowing into the aquifer from sinking streams. The water cleared when the rains ceased, but in recent years the spring has remained dark much of the time, taking on a green color.

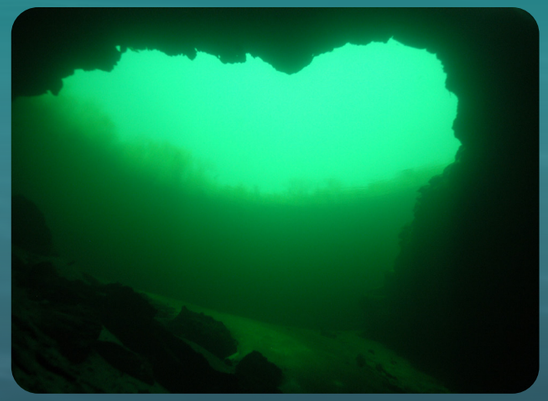
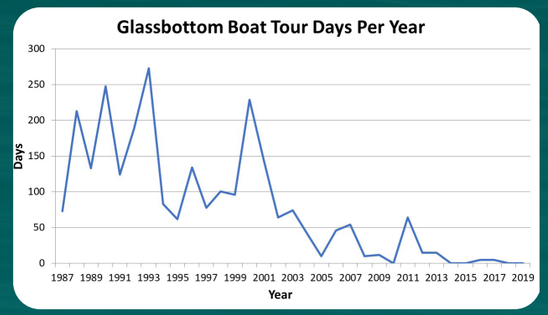


Photo: WKPP



Dark water limits glass bottom boat tours: visibility must be at least 75 feet. It also can inhibit growth of the aquatic plants essential to the spring and river ecosystems.

Glass bottom boat tour frequency dropped off drastically after 2000. Since 2014, annual tour days have ranged from five to zero.

Photo: Bob Thompson

Historically, tannin pigments leached from leaves have come primarily from the watersheds of three sinking streams to the north: Black, Fisher, and Jump Creeks. Tannins from Lost Creek are now adding to that inflow more often. Discharges to its sinkhole formerly flowed mostly south to the Spring Creek springs at the coast. Now they flow north to Wakulla Spring during periods of low rainfall when the Spring Creek springs' flows reverse or cease altogether. Sea level rise and changes in rainfall patterns have contributed to this situation.

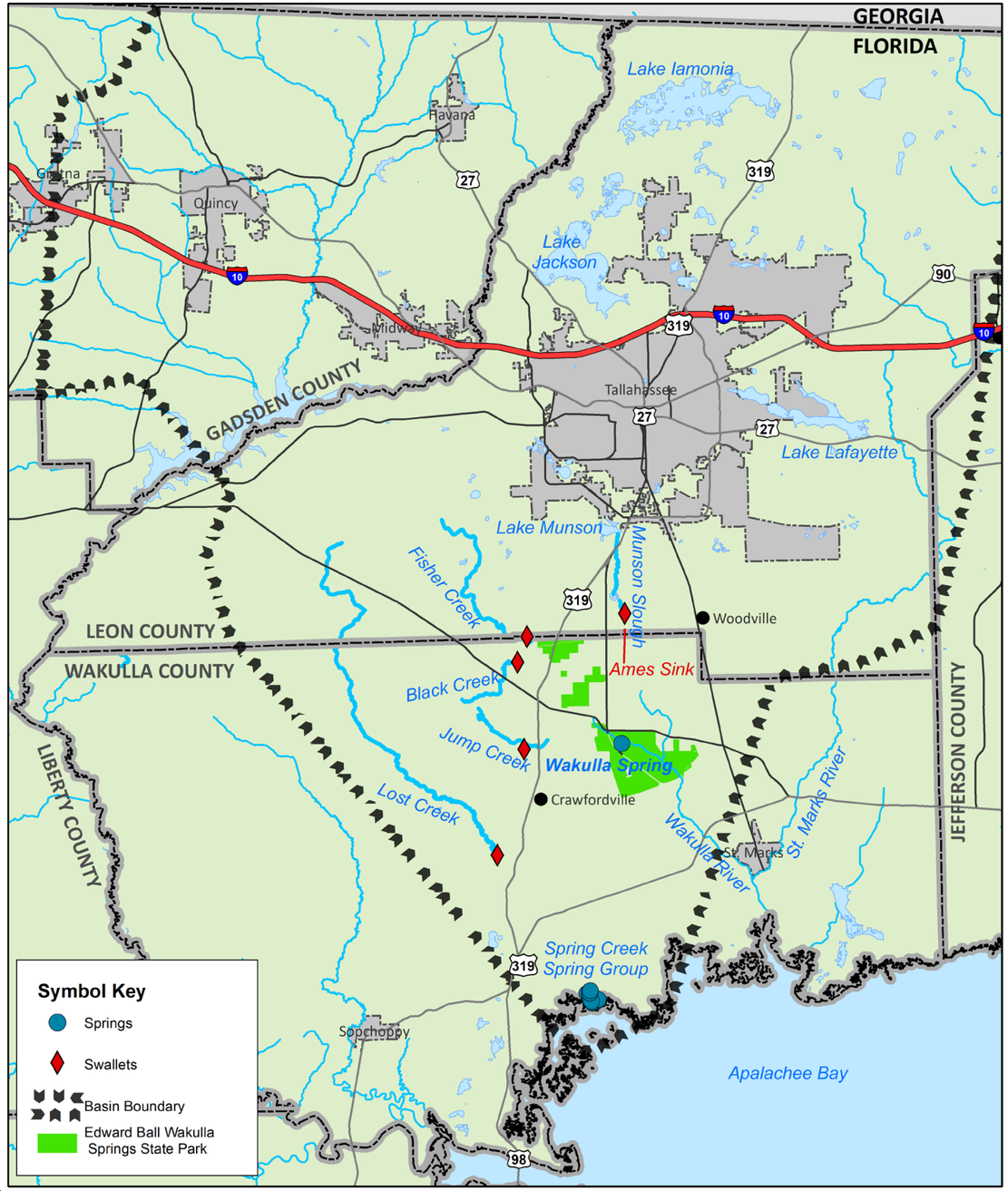


Photo: Sean McGlynn

Recent research has shown that the green color that can predominate at times when the spring was formerly clear is probably caused by low levels of tannins plus chlorophyll from algae in the ground water entering the spring.

Dye tests confirm that four large lakes to the north that discharge to the aquifer through sinkholes (lamonia, Jackson, Lafayette, and Munson) are connected to the spring.

Analyses of algae samples and environmental DNA reveal that each of those lakes may be contributing chlorophyll to the spring.