

MINUTES OF WAKULLA WATER CLARITY MEETING

April 16, 1992

Attendees: Hal Davis (Water Resources section USGS); Jay Johnson (NFWMD), Dana Bryan (DNR Biologist), Alan Whitehouse (Wakulla Biologist), Phil Leeser (District 2 Manager), Jon Dodrill (District 2 Biologist), Wes Skiles (Karst Environmental Services), Steve Irving (Woodville Karst Plain Project), Greg Knecht (Woodville Karst Plain Project), Sherwood Sheily (FSU Academic Diving Underwater Speleology), Dr. Ken Osmond (FSU Geology), Frank Rupert (DNR Geology), Tom Morris (Biologist, cave diver). *Jim Stevenson*

This was the second of a series of meetings to discuss water clarity and quality issues as they may affect Wakulla Springs State Park. Initial discussion centered around what exactly may be causing the color shift from clear to tannic water at Wakulla Springs. FSU Geologist Dr. Ken Osmond briefly summarized the work of his grad student Melana Maceish. She utilized uranium isotopes as a tracer, hypothesizing that there were differences between waters in the wakulla area and waters to the north which could be determined by differences in isotopic ratios. Most isotopic signatures taken from Wakulla 1987 project water samples collected in various Wakulla cave tunnels suggested a deep water source. The exception was "A" tunnel which at times goes tannic. Supposedly the isotopic signature from this tunnel was similar to those in the Leon Sinks area. Some rough estimates Melana made suggested that based on the isotope analysis, A tunnel contributed about 75% of the water and the various other tunnels about 25%. Those present who had dived the tunnels at Wakulla agreed that tunnels B, C, and F were generally clear and were a deep groundwater source. "A" tunnel varied in visibility, suggesting a surface water source. Although D tunnel was observed clear, it was not known if this tunnel varied in visibility. None of the tunnels have been evaluated for comparative visibility during periods of poor visibility in the spring itself.

Jon Dodrill and Hal Davis felt that periodic pulses of tannic water in delayed response to heavy rainfall were events that may have always occurred at Wakulla. Alan Whitehouse said he would attempt to locate the financial records which the Ball Operation must have kept on glass bottom boat revenue generation and try to decipher information on down boat days from before 1987. 1987-1991 rainfall/boat down days data graphed by Alan Whitehouse shows an increase in consecutive down boat days due to poor visibility apparently in delayed response to peak rainfall periods especially during months exceeding 14 inches of rain. This occurred both summer and winter but high rainfall events during winter when evapotranspiration is reduced may have a stronger effect.

There was some discussion about tannic water pulses. A