Comments on Proposed Rule 40A-8.041 Minimum Flow for Wakulla Spring and Sally Ward Spring

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I am writing to submit comments on proposed rule 40A-8.041 FAC which was the subject of a rule development public workshop on February 16, 2021. While the 14-day comment period presumably ended on March 3, these comments are engendered from a reading of the Independent Technical Peer Review of the Recommended Minimum Flows for Wakulla and Sally Ward Springs which I did not receive until 6:06 pm on March 3. Therefore, I request that you include these in the comment record for the February 16 public meeting.

The Peer Review Panel states that "The change in Wakulla Springs flows and changes in hydraulics (stage-discharge) over time seems to be one of the largest, if not the largest, source of uncertainty in this minimum flow determination. The section posits five potential causes but does not sufficiently describe how additional research and monitoring would address this trend and how monitoring might be used to differentiate the possible reasons" (pp. 6-7).

The disconnect between upper river/spring pool stage and spring discharge documented in the draft Technical Assessment (section 2.6, p. 77) undermines the key assumption of the proposed rule that a promulgated minimum flow of 539 cfs will assure maintenance of the critical 3.8 ft depth required to sustain the single limiting Water Resource Value metric of safe manatee passage (section 5.1.2, pp. 122-123).

While the Technical Assessment demonstrates that Wakulla Spring discharge has been relatively stable since about 2012, after increasing between 2002 and 2012 (figure 34), my analysis shows that upper river stage measured at the boat tram has exhibited a statistically significant decreasing trend since 2002 (figure 4.5).

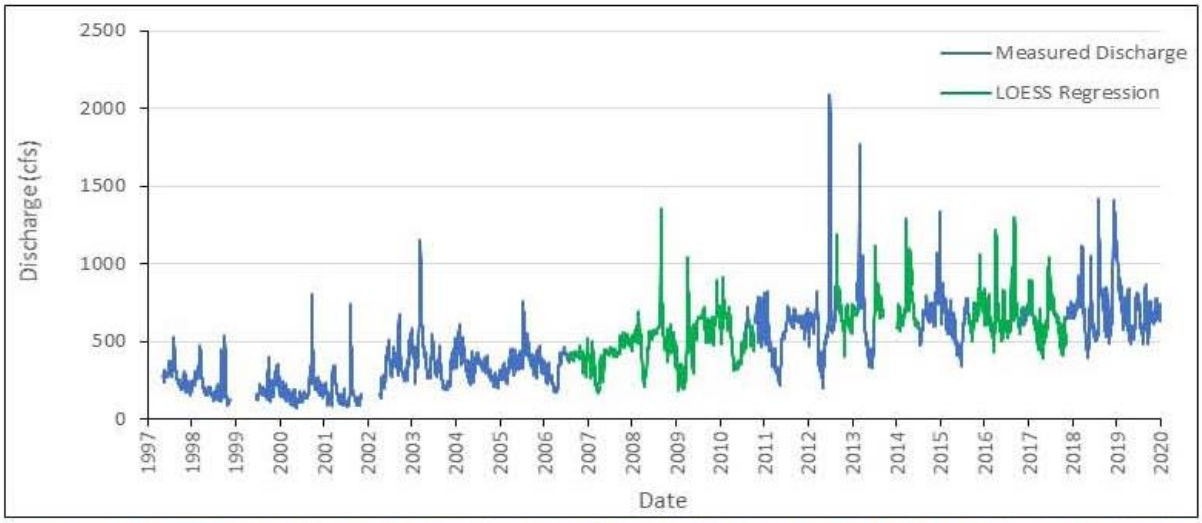
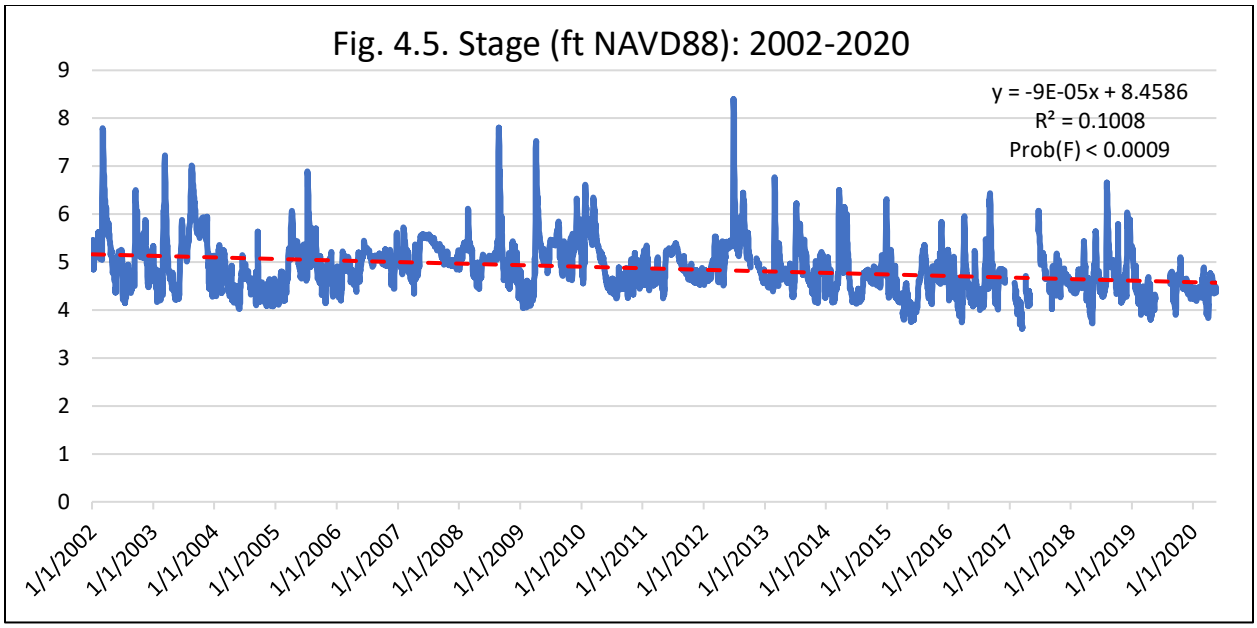


Figure 34: Full Composite Wakulla Spring Discharge Time Series from May 10, 1997, through December 31, 2019



The disconnect between stage and discharge means that a promulgated minimum flow rule also will not assure attainment of the critical minimum depth for a second WRV metric, safe boat passage. Revised analysis of the 3.0 ft metric for safe passage of park tour boats per the Peer Review Panel critique (section 4.3.1, p. 13) could very well result in a more stringent limiting minimum depth criterion than the 3.8 ft safe manatee passage WRV metric. Based on my observations as a river boat tour guide for over 500 tours, the fully loaded boat draft may be as much as a foot deeper than the hull algae line used to define the metric.

Stage is therefore more critical than flow to protecting the most sensitive WRVs. The Technical Assessment offers five hypotheses to explain the disconnect between stage and flow but little information to support any of them. I offered other possible explanations in my January 20, 2021, comments on the draft Technical Assessment including the possibility that decreasing ground water elevations north of Wakulla Spring might be a factor. As the Peer Review Panel observes (section 2.1, p. 6), there is not sufficient ground water data to understand the stage-discharge relationship. As I noted in my March 3, 2021, email to Carlos Herd and Kathleen Coates, in response to a question from me, hydrogeologist Hal Davis wrote “It is hard to dismiss this completely, but I am doubtful that the head decline north of the spring is the cause especially with the higher flow values. It seems more likely that scouring of the Wakulla River channel (especially near the spring) is more likely. I have to admit that it is perplexing, the higher flows currently occurring in Wakulla Springs would be expected to result in a higher spring stage.”

In the absence of a clear explanation of the underlying cause(s) of the continued declining stage trend, and insufficient data on ground water levels to completely rule out ground water withdrawals as a contributing forcing function, I urge the District to (a) withdraw the proposed rule, (b) set a minimum spring/river level/stage based on the safe manatee passage and/or a revised safe tour boat passage critical water depth metric rather than a minimum flow, and (c) not allow any additional ground water withdrawals until further research demonstrates that declining stage is unrelated to ground water consumption.

There is a precedent for setting a minimum stage to assure a manatee safe passage WRV: in 2006, the Suwannee River Water Management District adopted a minimum stage for Fanning Spring as the means to maintain safe manatee passage to and from the thermal refuge offered by the spring (40B-8.041 FAC). For details see section 6.4.2 Technical Report MFL Establishment for the Lower Suwannee River & Estuary, Little Fanning, Fanning & Manatee Springs.