Hi,

A quick message on something of interest between teaching and student meetings…

Leslie asked a good question about our use of Suwannee River discharge as a proxy of salinity for the various reefs we compared in the paper draft (Horseshoe, Lone Cabbage, Cedar Key, Corrigans). She suggested Waccasassa might be a better proxy for Corrigans. The Waccasassa data have been difficult to work with in the past because of the tidal flux. However, USGS is now making about a 10 year period of data available where the tide has been “detrended” so you can look at the river discharge. Jennifer Moore was able to scrape these data with some difficulty (not part of the standard waterData retrievals) and made the graphs below. The top 4 panels (A-D) are the Suwannee at Wilcox and bottom 4 (A-D) are Waccasassa.

Note the y axis are on different scales because the discharge volumes are very different between the rivers.

The blue line represents the average value from the period of record, which for the Suwannee goes back to the 1940’s and Waccasassa only about 10 years of available detrended data.

The point is to ask whether the Waccasassa “behaves” differently than the Suwannee from a discharge perspective given the Waccasassa watershed is very small and closer to the coast.

What is most interesting to me is that 2018 would be considered a “wet” year for the Waccasassa in terms of discharge volume, but not for the Suwannee.

Overall the discharge is relatively small from Waccasassa so I’m not sure how much this drives salinity. But this starts to get at Leslie’s question a little bit in terms of could there be different inputs between the Suwannee and Waccasassa or do these two systems generally behave the same.

How to read graph

Mean daily discharge by year (panel A) and associated variance (panel B) and CV (panel C) of daily discharge and total annual discharge (panel D). Red LOWESS smoothing line provided to show general trends in discharge. Blue dashed line is the average mean daily discharge, variance, CV, or total annual discharge.

