CHANNEL CHANGE OF THE WITHLACOOCHEE RIVER FROM 2009 TO PRESENT DAY

Brian George Deye, Department of Physics, Astronomy, Geosciences, and Engineering Studies

Faculty Sponsor: Dr. Paul C. Vincent, Department of Physics, Astronomy, Geosciences, and Engineering Studies

The purpose of this research is to analyze the morphological change in river depth, crosssectional area, and discharge at three locations on the Withlacoochee River. All research was based on vertical aerial photos of the Withlacoochee River before and after the 2009 flood, hydrodynamic numerical models, and cross-sectional measurements of the Withlacoochee River. Average width ratios (width before/after the flood) were calculated and correlated with the hydraulic parameters of specific stream power, shear stress, flow area, and specific discharge. This research concluded that the flood of 2009 carried an immense amount of debris with the floodwater which cut into the banks of the Withlacoochee River changing the channel slope.