



USDA-CSREES 2006 National Water Quality Conference

[Analysis of Precipitation and Streamflow Based on ENSO Phases in the Suwannee River Basin, FL](#)

With increasing population and natural climate variability, water resources in Florida are constantly under stress. As water shortages increase in South Florida, developers are increasingly looking towards North Florida for future expansion. If development were to move northwards, it would put severe stress on the water resources of North Florida.

In our research at the University of Florida we have used a spatial water balance modeling approach to compute monthly water balances in the Suwannee River Basin (SRB) in order to understand the water availability under varying climatic conditions. The methodology uses distributed data on streamflow, precipitation, evapotranspiration and consumptive water use in a geographic information system (GIS) in order to model monthly water balance at a watershed scale. Water balance is being computed for a period of 29 climatic years starting in 1975. In the process maps of precipitation and streamflow are produced. The advantage of this approach is that it captures the precise spatial nature of the hydrologic components allowing for seasonal analyses of these components in light of ENSO phases (climate variability). Through this poster, results and analysis of streamflow and precipitation are presented based on ENSO phases for the SRB.

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