CALIBRATING REGIONAL MODELS IN SOUTH FLORIDA

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Abstract: Regional hydrologic models developed for South Florida require a large number of areal parameters such as the ET crop coefficient, groundwater transmissivity, Manning's roughness and storage coefficient, sometimes defined at the same spatial location. The effect of these parameters however can be observed only at a small number of locations as water levels and discharges. Undetermined hydrologic systems such as this have to be calibrated carefully to make sure that the large numbers of model parameters are meaningful in representing the physics of the system. This paper will review methodology used to calibrate the South Florida Regional Simulation Model (SFRSM) a finite difference regional model applied to south Florida. Some specialized tools developed to accomplish this task such as a Singular Value Decomposition (SVD) program with an interface to a Linux computer cluster will also be discussed as will be the parameter groups and individual parameters used in the calibration.