

Texas A&M University Hydrologic Modeling Inventory
Model Description Form
June 2007

Name of Model: CALSIM (Continuous Annual Load Simulation Model)

Model Type: Continuous, spreadsheet

Model Objective(s) : Estimate annual pollutant loads from non-point sources

Agency and Office: Department Of Civil Engineering, Florida Institute of Technology

Technical Contact and Address: Dr. Ashok Pandit, Department of Civil Engineering, 150 W. University Blvd. Melbourne, FL 32901

Model Structure or Mathematical Basis: Spreadsheet Model

Model Parameters: ASRC (Annual Storm Runoff Coefficient)

Spatial Scale Employed in the Model: Watershed

Temporal Scale Employed in the Model: One year

Input Data Requirements: DCIA, CN (pervious), NOAA station (usually close to the site) from which rainfall input is required, Average Annual Event Mean Concentration (AAEMC) values

Computer Requirements: Standard PC

Model Output: Annual Pollutant Loads

Parameter Estimation / Model Calibration: Possible to calibrate DCIA if sufficient field data is available

Model Testing and Verification: Published (see the following publications):

Pandit, A., and Gopalakrishnan, G., 1996. "Estimation of Annual Storm Runoff Coefficients by Continuous Simulation." ASCE Journal of Drainage and Irrigation Engineering, Vol. 122, No. 4, pp 211-220.

Pandit, A., and Gopalakrishnan, G., 1997. "Estimation of Annual Pollutant Loads Under Wet Weather Conditions." ASCE Journal of Hydrologic Engineering, Vol. 2, No. 4, pp 211-218.

Model Sensitivity: sensitive to all input parameters

Model Reliability: See above publications

Model Application / Case Studies: (see the following publication):

Pandit, A., and C. Youn, 2002. "Water Quality Modeling Study for Malabar, Florida; Estimation of Historical, Present, and Future Annual Pollutant Loads During an Average Water Year" Final Report, Prepared for the St. Johns River Water Management District, Florida, 24 pages plus appendices.

Documentation: See above publications

Other Comments: