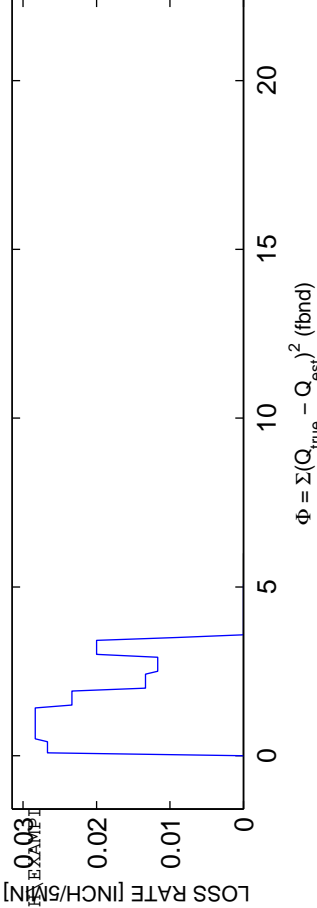


RUN #4

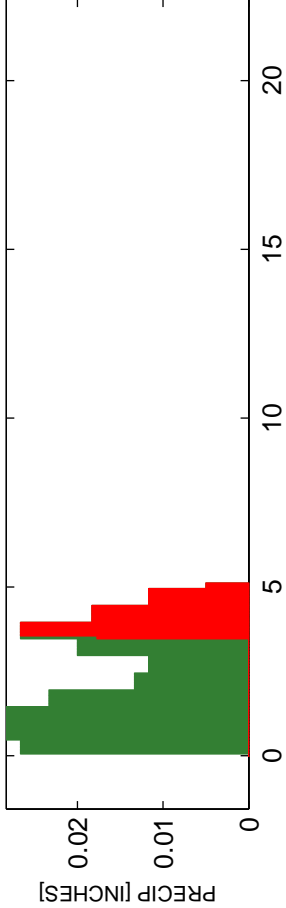
STAD-DATE: sta22222222\_1969\_0214  
DATA DIR: d:\jvlabel\SWAP\UNIT\precip\_loss\_optimization\towEB\BOTHEXAMPLE  
AREA [mi^2] ..... PRECIPITATION ..... 1.94  
-----  
TOTAL RAIN VOLUME [inches] ..... 1.2333  
EXCESS RAIN VOLUME [inches] ..... 0.34105  
PERCENT RAIN VOLUME LOSS ..... 72.3472  
-----  
DISCHARGE  
-----  
MEAN OBS Q [CFS] ..... 37.3791  
MEAN SIM Q [CFS] ..... 17.6817  
RMS Q RESIDUALS [CFS] ..... 30.3276  
Q RELATIVE BIAS ..... -0.52696  
Q NASH-SUTCLIFFE EFFICIENCY ..... 0.38384  
Q SIM vs OBS R<sup>2</sup> ..... 0.68957  
Q SIM vs OBS SLOPE ..... 0.79507  
Q SIM vs OBS INTERCEPT ..... 23.3209  
-----  
VOLUME  
-----  
MEAN OBS V [CFS] ..... 0.42808  
MEAN SIM V [CFS] ..... 0.2275  
RMS V RESIDUALS [CFS] ..... 0.24443  
V RELATIVE BIAS ..... -0.46856  
V NASH-SUTCLIFFE EFFICIENCY ..... 0.23953  
V SIM vs OBS R<sup>2</sup> ..... 0.93934  
V SIM vs OBS SLOPE ..... 1.8085  
V SIM vs OBS INTERCEPT ..... 0.016658  
-----  
OPTIMIZATION RESULTS -----  
SIM/OBS TOTAL VOLUME RATIO ..... 0.47406  
MINIMIZED OBJECTIVE FUNCTION VALUE ..... 265811.2182  
C<sub>opt</sub> : 0.89228

PRECIP LOSS FUNCTION:  $P_{xs}(t) = P_{tot} - \text{init.abs}(c_1 P_{tot}) [0 < c_1 \leq 1]$

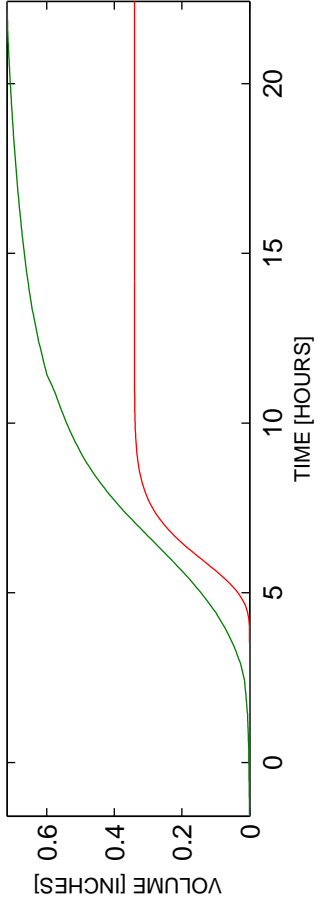


$$\Phi = \Sigma(Q_{true} - Q_{est})^2 \text{ (fbnd)}$$

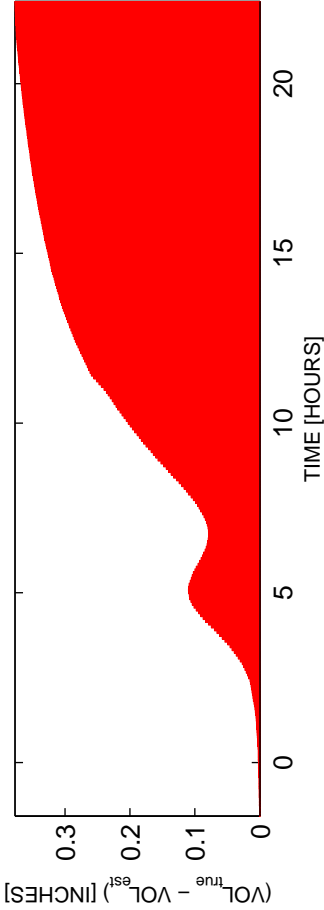
OBS AND MODELED RAINFALL: RAW DATA USED



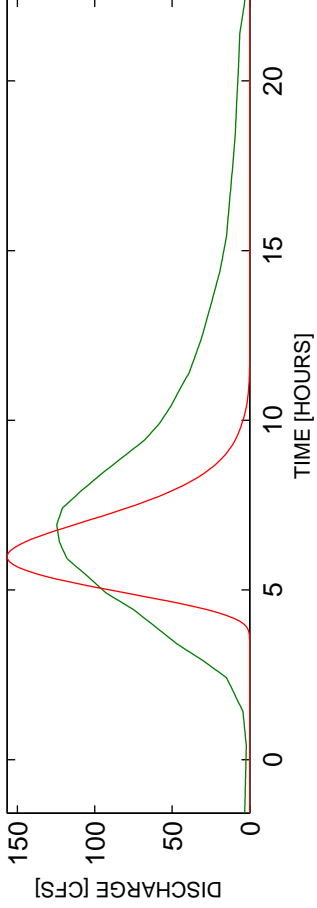
OBS AND ESTIMATED ACCUMULATED VOLUME



ACCUMULATED VOLUME RESIDUALS



OBS AND ESTIMATED DISCHARGES



DISCHARGE RESIDUALS

