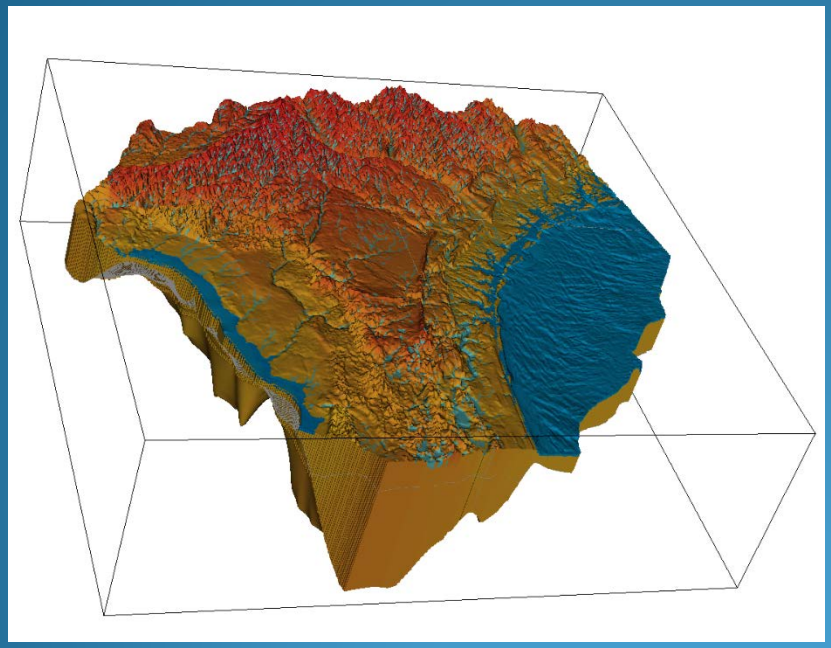
NFSEGv1.1 Model Evaluation



Hal Davis

April 18, 2018

Figures Showing a Direct Comparison of Measured Baseflows and Model Derived Baseflows are Needed (Similar to Figures 4-47 to 4-52)

These additional figures are needed to evaluate how well the calibrated model is simulating river baseflows.

Figures 4-47 through 4-52 are good because they show baseflow gain relative to the simulated gain (so it gives insight to the calibration) but it does give a feel for how well the model is matching the river baseflows.

Do these values on Figures 4-47 through 4-52 include river and spring flows?
(Rivers are simulated in layer 1 and springs in layer 3).

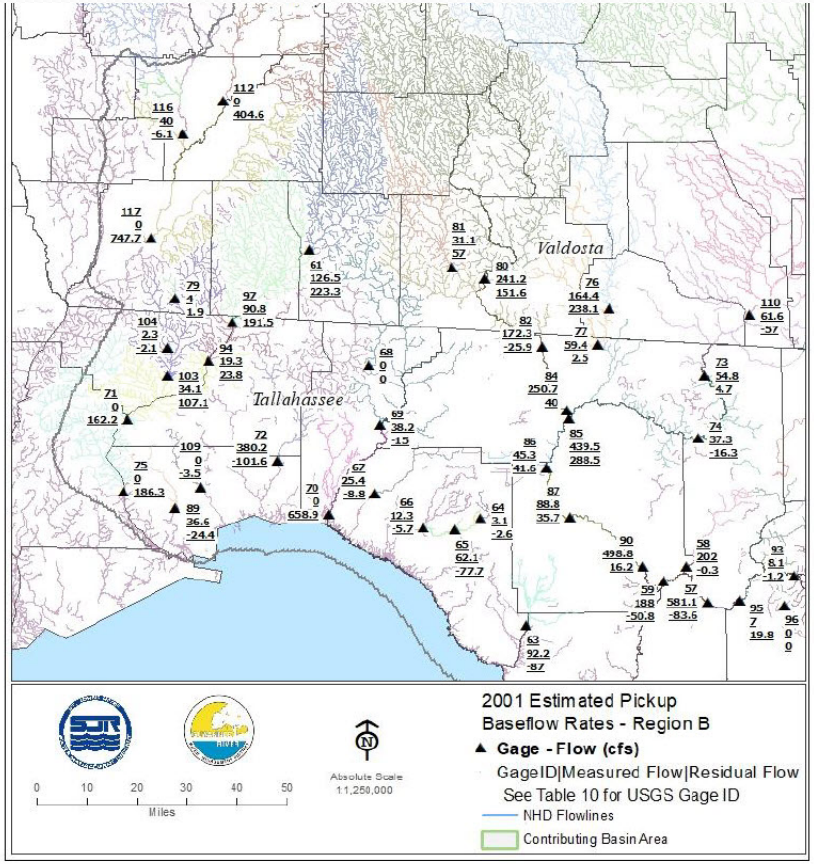


Figure 4-48. Estimated Baseflow Pickup Residuals (cfs), Region B, 2001

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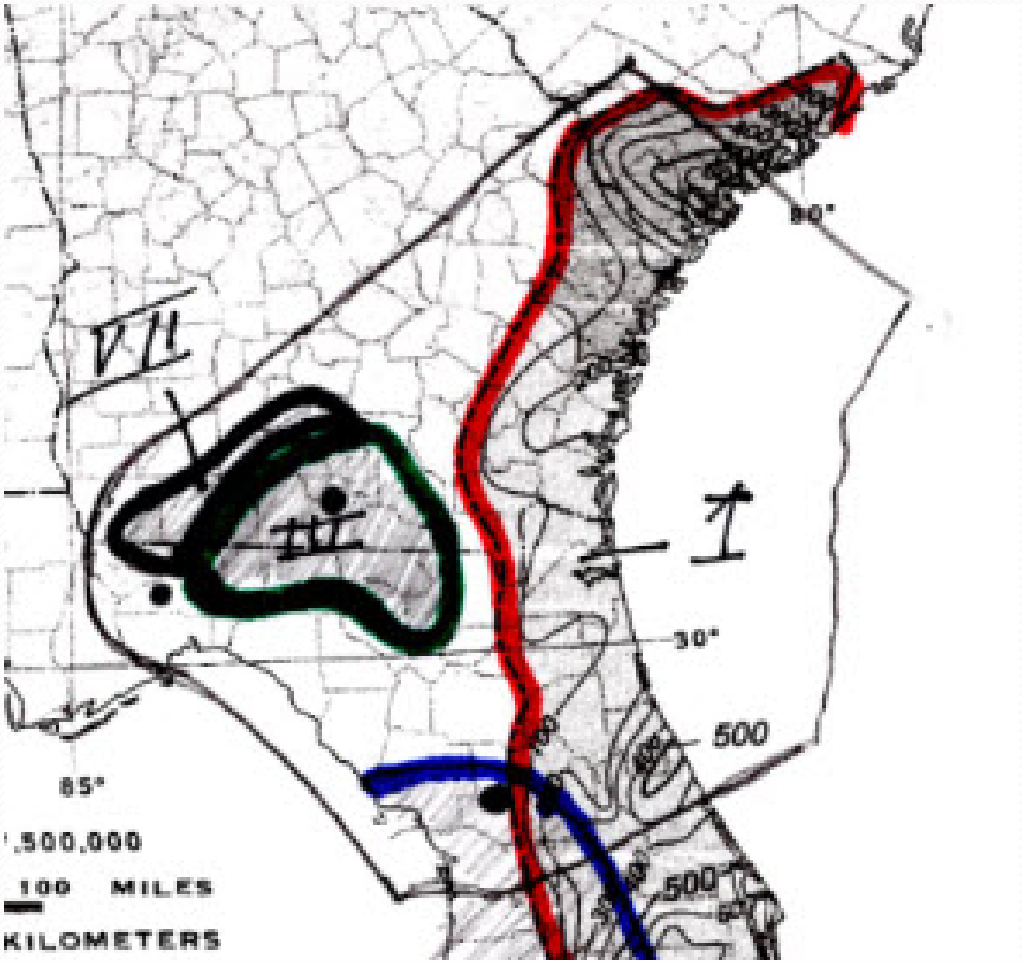
Sim = Ob-Res

A Map Showing the Location of the Middle Confining Units I, II, III, and VII (from Miller) Would be Helpful



A Cross Section Showing the Location of Zones 1, 2, and 3, in Relation to the Model Layers, Would be Helpful

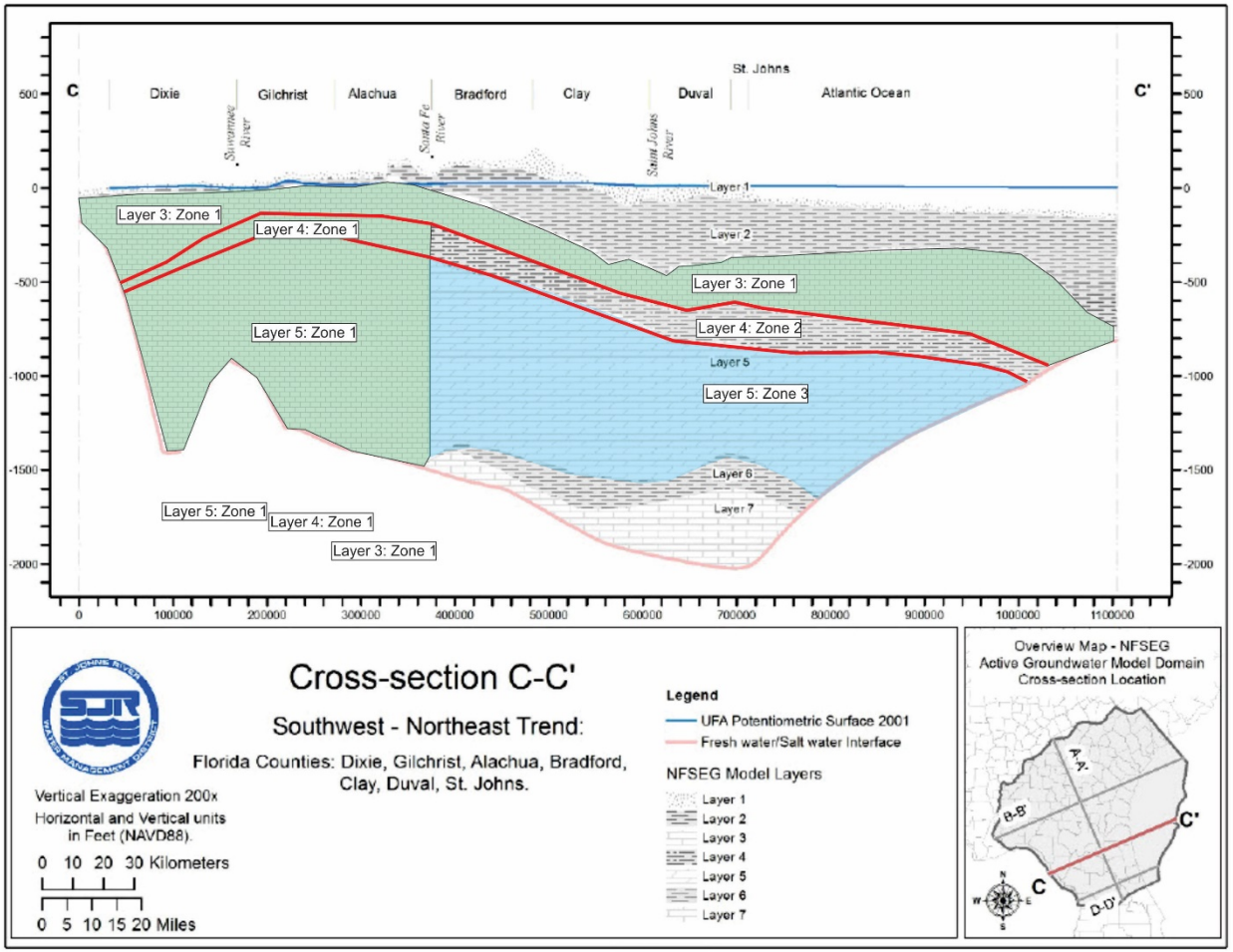


Figure 3-5. Hydrogeologic Cross Section C-C'

The Measured Ks and Ts Should be Added to the Conductivity and Transmissivity Figures

The Ks and Ts look reasonable but the actual values should be added where available.

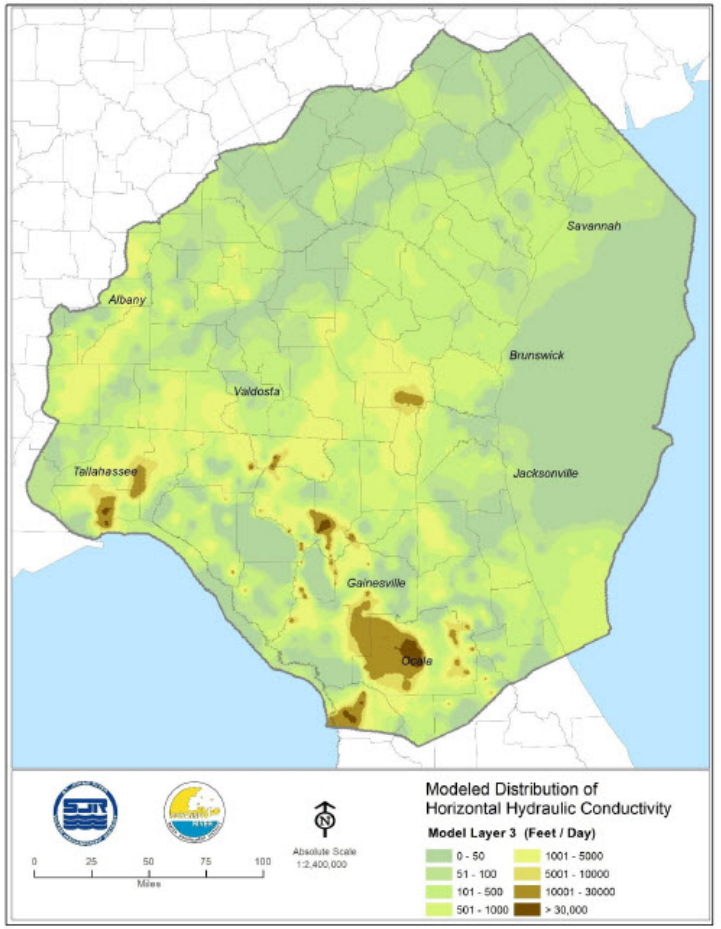


Figure 4-70. Modeled Distribution of Horizontal Hydraulic Conductivity (Feet/Day), Model Layer 3

Mass Balance Figures Should Show the Flow Into and Out of Layers

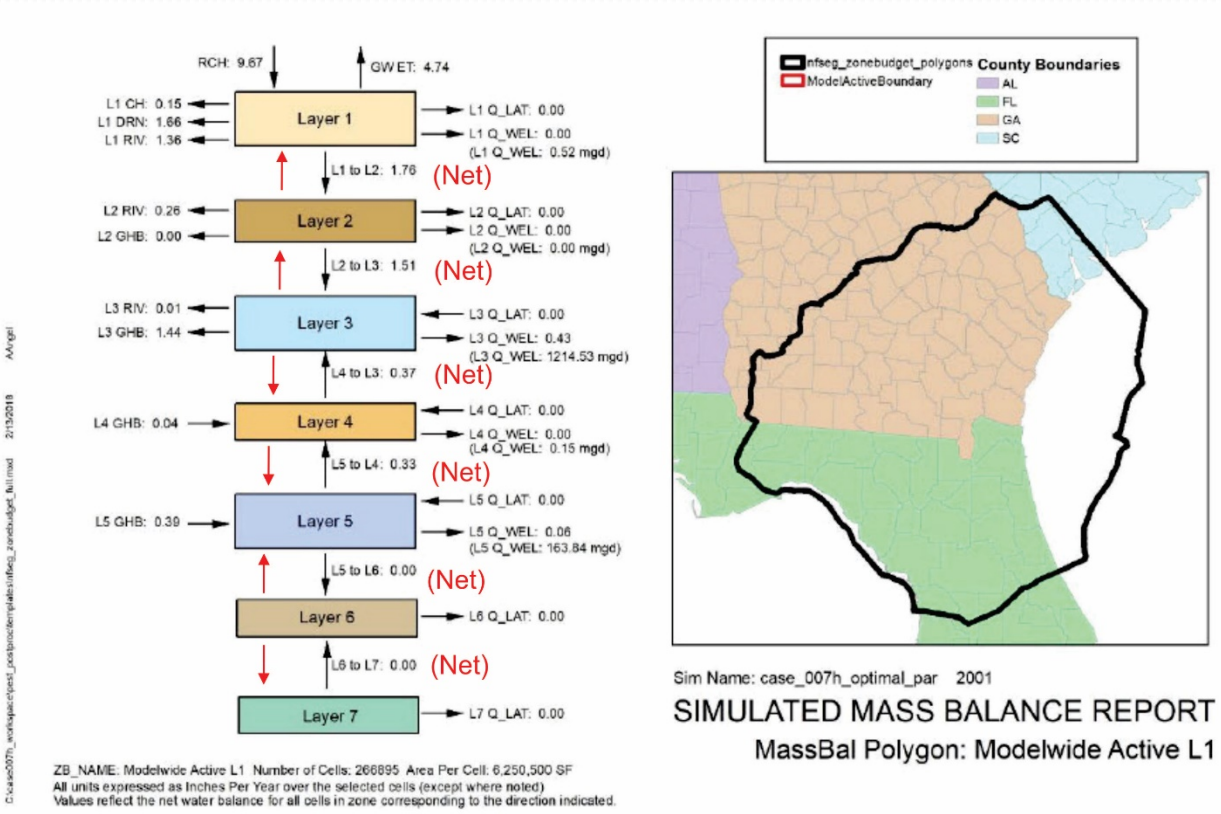


Figure 6-2 Simulated model wide mass balance for 2001

2010 Verification Run

- For the 2010 verification run, were only the parameters recharge, maximum saturated evapotranspiration (MSET), stream and lake stages, well pumping rates, general head boundaries, and spring pool elevations allowed to be estimated by PEST?

- Did PEST vary the hydraulic conductivities?

Miscellaneous

- Contours labels on figure 2-24 seemed reversed.
- Measured flows are positive on most figures (except 4-55 and 4-56) and simulated flows are negative on most figures (except 4-55 and 4-56). Best to make all river flow gains positive and losses negative.