Information content of observations:
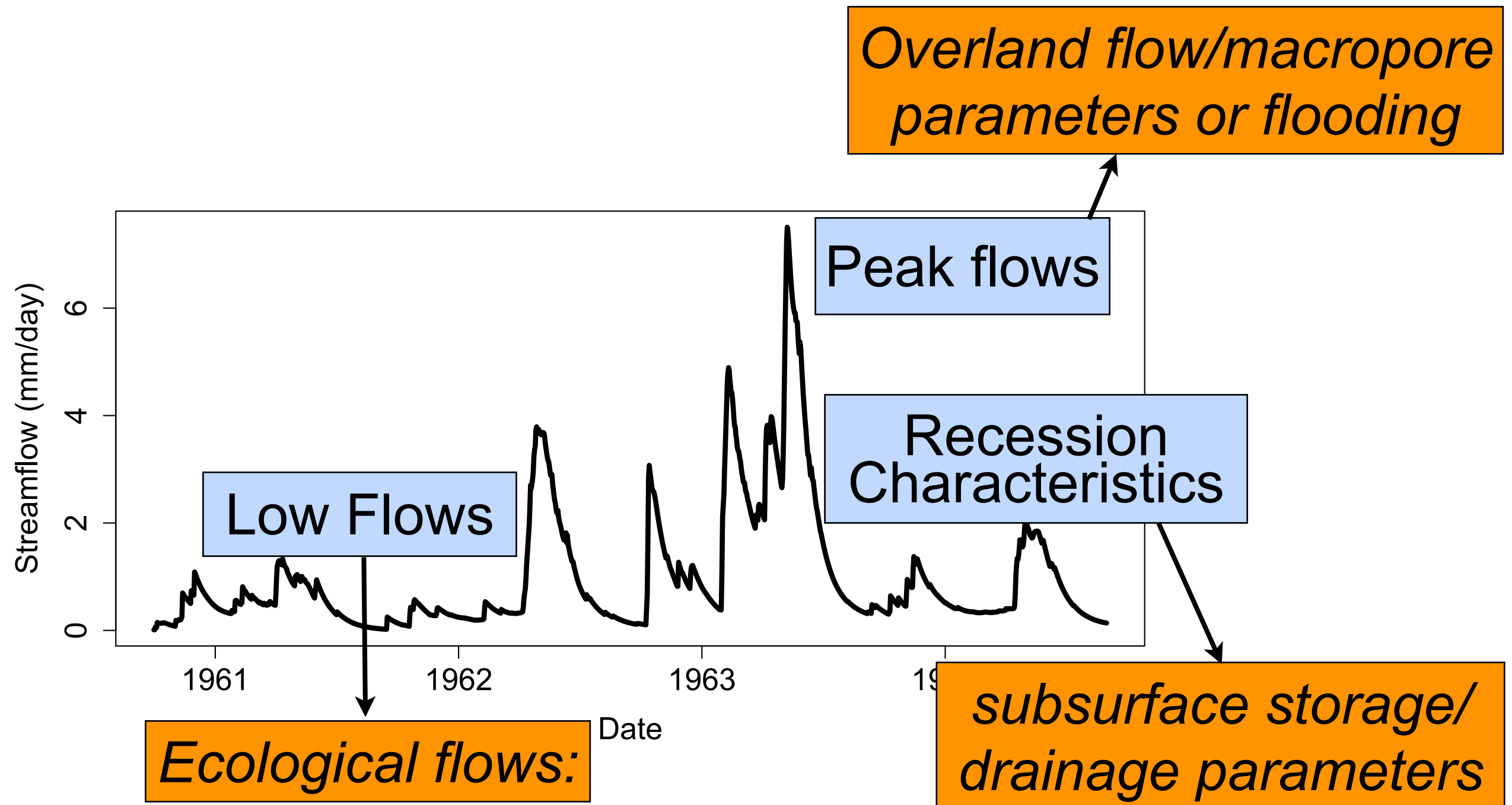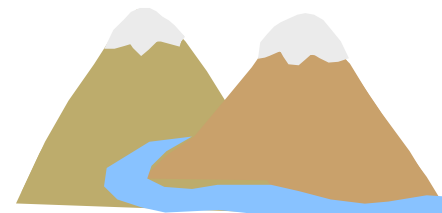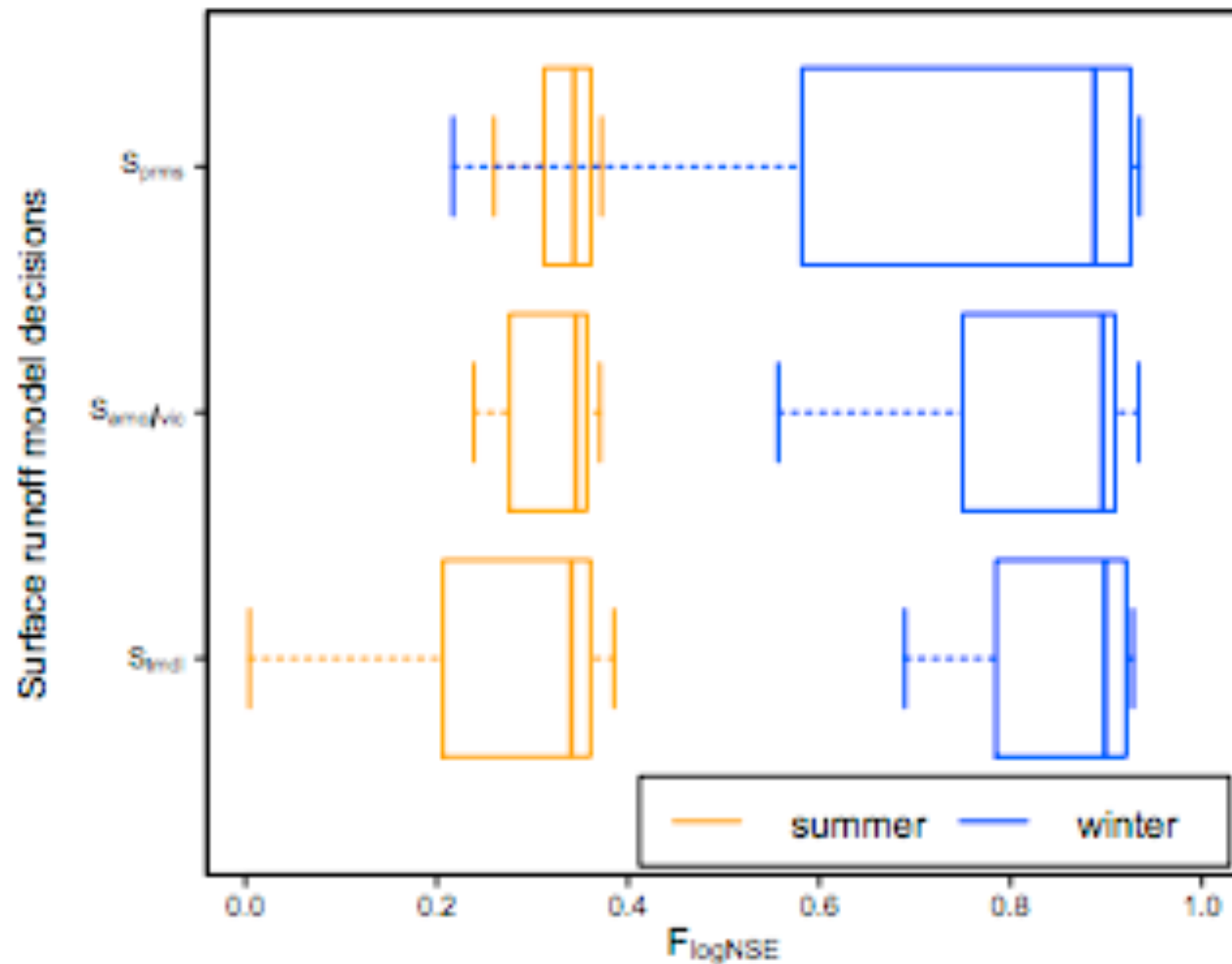
What you try to get "right" depends on the processes that the parameters influence and your use of the model

Overland flow/macropore parameters or flooding

Peak flows

Recession Characteristics

Low Flows

Ecological flows:

subsurface storage/ drainage parameters

2b. Demonstration of improved performance

Plot demonstrates the effect of different model structures (surface runoff assumptions adapted from VIC, PRMS, TOPMODEL) on performance

Fig. 8. Boxplots of model performance for summer and winter streamflow simulations for the three surface runoff decision options.