

*Mateus et al., 2018: ScoRE—A Simple Approach to Select a Water Quality Model*

Researchers from the University of Lisbon and consultants from the Lisbon based civil engineering consulting firm, Aqualogus, collaborated on developing a quantitative ranking system (ScoRE) that improves the surface water quality model (SWQM) selection process. ScoRE utilizes a numerical rating system that accounts for the scope (e.g. simulated processes, modeled constituents), record (i.e. model dissemination within the scientific community), and user experience (e.g. interface, documentation) of any given SWQM. The authors apply the ScoRE system to several popular SWQMs on their ability to adequately simulate three reservoirs in Brazil. Ultimately, CE-QUAL-W2 is identified as the best model choice per the ScoRE rating system.

While this is an interesting paper from the standpoint of elucidating SWQM features and outlining a framework for water quality model selection, I do not find much merit in the ScoRE system, or any numerical (objective) model selection process. An experienced water quality modeler should be privy to a suite of water quality models that may span a range of applications. I doubt that results from the ScoRE ranking system would steer a modeling professional, presumably working under a strict deadline, away from their model of choice. I am also under the impression that there is an increasing desire, at least in the water resources engineering research community, to ‘automate away’ once subjective decision-making processes. I fear that formulating the model selection process as an equation would only result in diminishing returns for each new model introduced to the modeler’s repertoire.