

Utah Lake Water Quality  
Study  
Science Panel Meeting  
April 25, 2019  
The ether

# Model Applications

Utah Lake Nutrient Criteria  
Development Technical  
Support



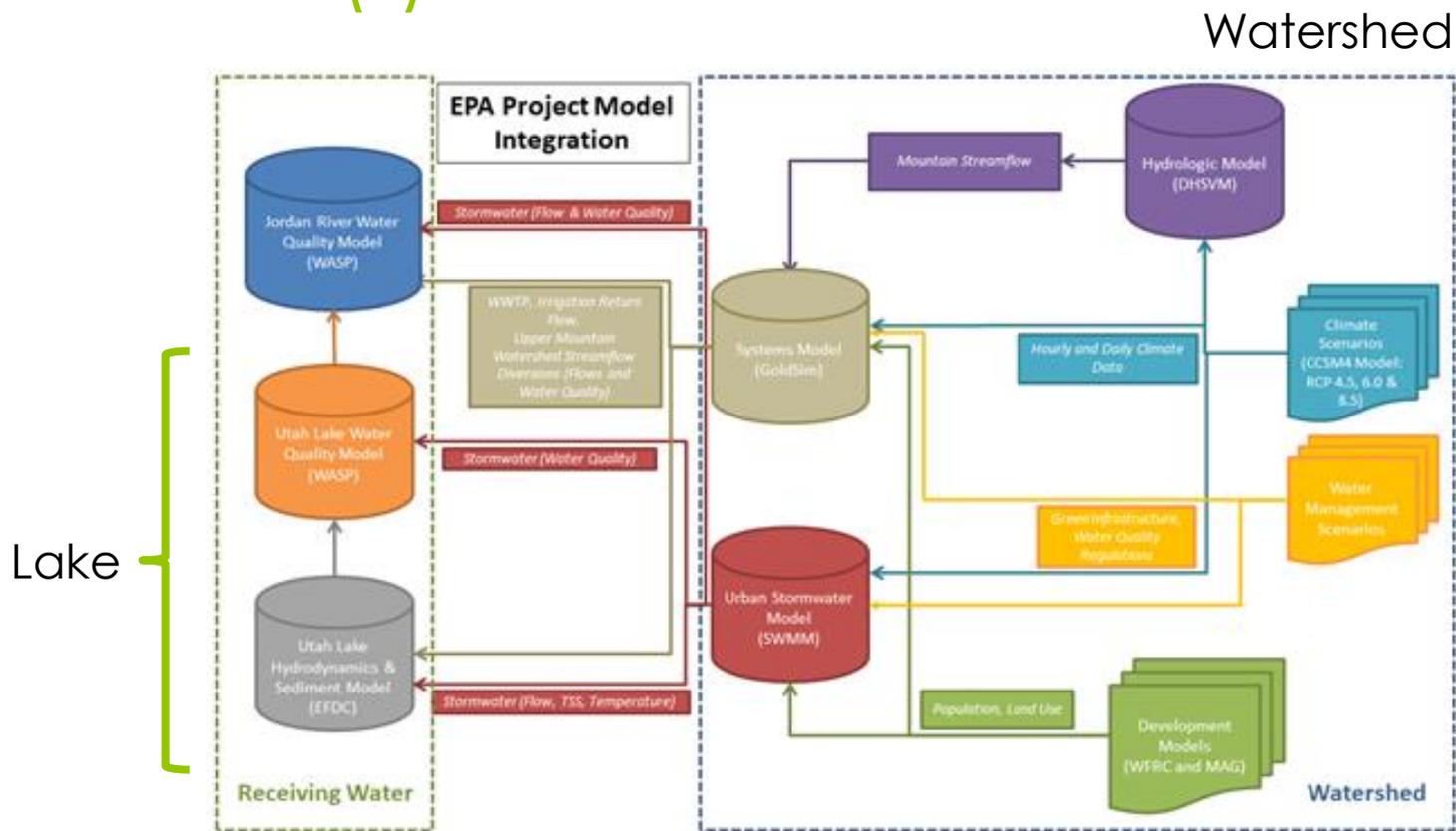
“Essentially, all models are wrong,  
but some are useful”

- How are we to use these models?



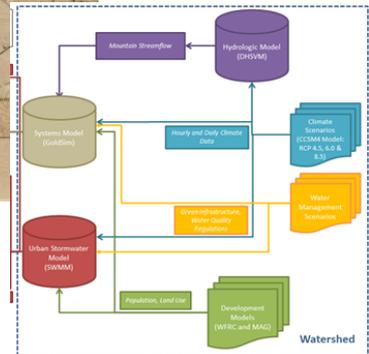
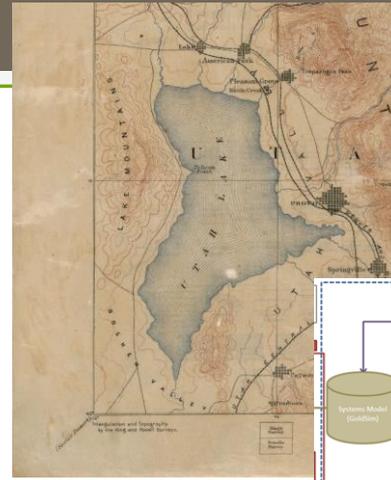
George E. P. Box

# Model(s) structure



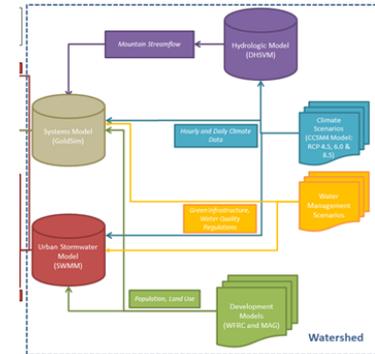
# Reference mode

- Use models to recreate minimally disturbed condition
- Dial the landscape to natural source loads only
- Observe model response
- Florida lakes, Saint Louis Bay, Weeks Bay, etc.



## “Stressor-response” mode

- Use models to create load scenarios (e.g., half current load, current load, 2X current load)
- Examine response



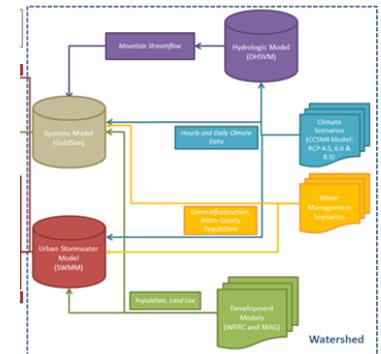
# Post-criteria applications

- Models can be used for testing scenarios



Let's do things here

That lead to a response here



## Some important questions for today:

- Which models do you plan to need?
- Are the watershed models sufficient/appropriate?
- If the models are applied as above, then what is needed for those to succeed?
- Will you have what you need at hand off?

