

ET Cover Modeling Session

Introduction



Outline

- Monitoring vs Modeling ET Covers for Performance Evaluation, Bridget Scanlon
- Fact or Fiction: Comparing Model Predictions and Field Data from ACAP, Craig Benson
- Overland Flow Implications on Surface Cover Designs, Earl Matson
- Prediction of Water and Energy Balance in Surface Covers and Protective Side-slopes using the STOMP Simulator, Andy Ward
- Panel Discussion

Models

- STORAGE ROUTING (all public domain)
 - EPIC
 - HELP
- RICHARDS' EQUATION (all public domain, except SWIM, VADOSE/W, HYDRUS, STOMP)
 - LEACHM (new version released in 2003)
 - SHAW
 - UNSAT
 - SWIM
 - VS2DT
 - VADOSE/W (SOILCOVER)
 - HYDRUS (1D, now public domain)
 - STOMP

Modeling Issues

- Number of complicated interrelated processes. Based on monitoring results, it is difficult to simulate some of these processes (e.g., runoff)
- A number of codes don't incorporate important processes (snow accumulation and melt, plant growth)
- Codes are continually being updated
 - Difficult to know which code/codes to use
 - Updated codes need to be revalidated
- Limited database for certain input parameters, and certain parameters are difficult to measure
- Parameter values may change over time
- Preferential flow?