

Water Quality in URGWOM

1. Needs survey 2008 – Anderholm

- a. Many different needs

2. Salinity focus

- a. Priority
- b. Conservative
- c. Data availability

3. Conceptual model

- a. Primary Sources
 - i. Source Water – WWTP, tributaries
 - ii. Agriculture
 - iii. Deep saline GW
 - iv. Concentration – open water E and riparian ET
- b. Processes
 - i. Evaporation and consumptive use
 - ii. NOT concerned with aquifer material dissolution

4. Current URGWOM and RiverWare functionality

- a. Existing capability to model solutes in surface water
- b. No water quality in groundwater → need to add this functionality
- c. GW Objects in URGWOM have an average 80 ft depth – however, this is deeper than the “active” groundwater – most interaction happens in the top 15 ft.
Because the GW Objects are well mixed, we needed to split the GW Objects into an upper and lower layer to simulate the groundwater/surface water exchange area.

5. Modifications to RiverWare

- a. Talked to CADSWES about how to modify the GW Objects
- b. CADSWES drafted a design document
- c. Review design document
 - i. Learn about URGWOM (Gretchen and Scott)
 - ii. Test equations in design document in several spreadsheet models – gaining and losing reaches, final model uses cross-section of 3 GW Object from Bernardo to San Acacia and runs for 100 years
- d. Submit final comments on design document to CADSWES