Syllabus, 3-Day AQUATOX Workshop
Originally presented in Dallas TX, December 1-3, 2010

Day 1

- Introduction
- CD setup: files, installation
- Potential applications for AQUATOX
- Overview: What is AQUATOX? (acceptance, shortcomings, structure, ecosystem primer, capabilities)
    - *Lab 1: A tour through AQUATOX screens, farm pond with pesticide*
- Physical characteristics of a site
- Plants (equations, parameters; phytoplankton, periphyton, macrophytes, moss)
    - *Lab 2: Setup of a new study, Lower Boise River ID (Wizard, site characteristics, importing loadings, Manuals)*
- Animals (equations, parameters; zooplankton, zoobenthos, fish)
    - *Lab 3: Choice of biota, calibration of Lower Boise River ID model*
- Model performance, sources of parameter values; calibration strategy for MN rivers

Day 2

- *Lab 4: Application to Minnesota Rivers*
- Remineralization   - Sediment Diagenesis model demo
- AQUATOX as a part of BASINS
- Use of AQUATOX in water quality management support
- Demo of linked segments in Tenkiller Reservoir OK
- Modeling nutrients for criteria support in Tenkiller Reservoir
- Lake Onondaga NY validation and application
    - *Lab 5: Analysis of management alternatives for DeGray Reservoir AR*
- Miscellaneous nutrient-related topics -- diel simulations, low DO effects, ammonia toxicity
- Sediment effects in streams
    - *Lab 6: Analysis of plant control in "Clear Lake CA"*
- Uncertainty and nominal range sensitivity analysis: Demonstration and Optional Lab
- Fate of organic chemicals: in tank and pond
- Bioaccumulation of organic chemicals

Day 3

- Modeling estuaries: bioaccumulation of organic chemicals in Galveston Bay TX
- Modeling toxicity of organic chemicals (including ICE)
    - *Lab 7: Risk assessment of insecticide in Ohio Stream*
    - *Lab 8: PCBs in Lake Hartwell SC*
- Modeling inorganic sediments (sand, silt, and clay), layered sediments,stoichiometry and mass balance of nutrients
- Summary, wrap-up

INSTRUCTORS
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