

New Assessment and Enhancement Methods for Lakes and Reservoirs

This course has been substantially revised, with a new emphasis. The full-day short course will now provide an interactive, hands-on introduction to lake and reservoir trophic assessment in a watershed context. The course will introduce concepts of watershed delivery, stream transport, and calculations of nutrient loading using the venerable, widely used, and now completely remodelled, FLUX mass transport program. Fully translated and expanded this year from its original DOS version, FLUX is now a Windows® application, significantly easier to use, and has some nice enhancements. If you are a new or experienced FLUX user, you will want to see this version. From FLUX and mass transport, we will proceed to a discussion of in-lake physical-chemical processes, reservoir phenomena, and trophic responses. We'll illustrate these in concert with an introduction to the new Windows version of the Bathtub model (upgraded three years ago from its DOS ancestor). Finally, we will present an entirely new software package called TASTR (Trophic Assessment Screening Tool for Reservoirs), that has been developed under the System Wide Water Resources Program (SWWRP) and uses the Bathtub model, basic GIS capabilities, and publically available data to put the reservoir (or lake) into a watershed context. TASTR lets the user quickly (but with low resolution) and easily explore a lake's potential trophic response to changing conditions or operations.

A CD will be distributed that includes all course notes and copies of the software as SETUP.EXE files. Participants should bring a laptop to the workshop if possible (but not absolutely required). Software will be provided to registrants prior to the conference (via email, FTP, or CD) to allow pre-session installation.

The instructors (Dave Soballe, Ph.D. and Steve Ashby, Ph.D.) are senior researchers with the U.S. Army Engineer Research and Development Center (ERDC) Environmental Laboratory and each has over 25 years of experience with reservoir and watershed processes and assessments.