

US EPA ARCHIVE DOCUMENT

Mississippi Department of Environmental Quality's Non-wadeable Stream Bioassessment Methods Development Project

Mike C. Beiser, Mississippi Department of Environmental Quality Laboratory.
Charles M. Thompson, Mississippi Department of Environmental Quality Laboratory.

The Mississippi Department of Environmental Quality's (MDEQ) Surface Water Division obtained funding to develop a sampling method and an IBI-type assessment tool for use in the state's non-wadeable streams. A Large River Technical Advisory Group (LRTAG) was also formed to assist in determination of an appropriate sampling strategy. After review of the output from the LRTAG, and after much consultation with EPA scientist, Dr. Joe Flotemersch, it was decided that some modification of the methods developed by Dr. Flotemersch would be used. Since this method is quite rigorous and many state agencies lack resources to carry out all components of the methodology, considerations were given to items such as the length of the sampling reach, the number of samples collected, the location of specific sampling areas, and the number of organisms processed and identified. Our sampling project began in August, 2005, with the MDEQ Laboratory Biological Services Section assuming project lead, and focused upon three of the state's major river basins: the Big Black, Tennessee-Tombigbee, and Pascagoula Rivers. The Tennessee-Tombigbee is a highly modified system, the Big Black is a system largely influenced by non-point source pollution and is experiencing head-cutting, and the Pascagoula is known to have some areas with high water quality (potential reference). Collections were made on the Big Black and Tennessee-Tombigbee rivers, but Hurricane Katrina caused major fish kills on the Pascagoula, so sampling on that river, and possibly others, will be undertaken in August 2006. Results are pending. Several other questions have been raised since the onset of sampling. Among these are: Can we expand the length of the sampling zone in order to capture more woody debris?

Mike Beiser is a native of Florence, Kentucky. He attended Northern Kentucky University from 1977-1982, earning a B.A. Degree in Philosophy and a B.S. Degree in General Biology. From 1982-1984, he attended Western Kentucky University receiving a M.S. Degree in Aquatic Biology. After a year in the doctoral program at the University of Louisville, he received a Doctoral Honors Fellowship to the University of Mississippi (Ole Miss) in Oxford. He attended the University of Mississippi from 1985-1988. All of his Master's and Ph. D. research focused on Trichoptera and their relationship to water quality. He joined the MDEQ in 1988 as a staff biologist. In 1991 he was promoted to Chief of the Biological Services Section, an administrative position. In 2004, he assumed duties of a new section, the Compliance and Enforcement Monitoring Section, which utilizes biological assessment to document water quality impacts due to non-compliance of regulated entities. He also functions as the state's authority on Natural Resource Damage Assessment and Restoration (NRDA). He has served as President of the Southeastern Water Pollution Biologists Association in 1997 and 2005, and is a co-author of the "Ecoregions of Mississippi".