

**Evaluation of reference conditions for contaminants and fish health indicators in Great Rivers of the U.S.**

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The Large River Monitoring Network (LRMN) of the Biomonitoring of Environmental Status and Trends (BEST) Program was designed to identify, monitor, and assess environmental contaminants and their effects in predatory and benthivorous fish throughout the U.S. In addition to organochlorine pesticide residues and elemental contaminants analyzed in whole body composite samples, multiple biological endpoints (reproductive biomarkers, fish health indicators, histopathology) are measured to assess fish health in individual fish. The LRMN dataset for many of these endpoints is extensive which allows for determination of background or reference conditions for certain fish species. Certain factors including cost, historical data, collection method, analytical method, and data interpretation must be considered before incorporating these endpoints in monitoring studies.

Jo Ellen Hinck has been the lead coordinator of BEST-LRMN activities at CERC since 2002. She is responsible for interpreting chemical contaminant and biological endpoint data from the BEST-LRMN for multiple large river basins and provides training to other agencies and organizations interested in incorporating BEST-LRMN methods into their studies. In addition, carp are her least favorite fish to dissect.