

Lake Michigan Mass Balance Study Post Audit: Integrated, Multi-media PCB Modeling and Forecasting for Lake Trout

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The Lake Michigan (LM) Mass Balance Study was conducted to measure and model polychlorinated biphenyls (PCBs) and other anthropogenic substances to gain a better understanding of the transport, fate, and effects of these substances within the system and to aid managers in the environmental decision-making process. A series of scenario forecasts were conducted using the linked LM2-Toxics and LM Food Chain models, supported by a suite of LM models. Forecasts of 5 to 6-year old lake trout for the Saugatuck region indicated that total PCB concentrations will continue to decrease and the Sports Fish Advisory Task Force's goal for unrestricted consumption could be achieved as early as the year 2033. Compared to PCB data for lake trout from the Great Lakes Fish Monitoring Program for a 10-year period, since the final year of the project in 1995, the model forecasts and data exhibit good agreement and suggest that the model forecasts are reasonable. Results are consistent with long-term decreases in all media and are subject to assumptions considering future loads, vapor phase concentrations, PCB decline rates in various media, food chain composition, and the pace of projected remedial actions. This abstract does not necessarily reflect EPA policy.

ORAL PRESENTATION; Lake Michigan Fisheries, Fish Passage, and VHS Session