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Poster Presentation – Fisheries

**Title:** Environmental contaminants in fish and mussels from Meddybemps Lake, the Dennys River, and East Machias River

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**Abstract:** Fish (*Micropterus dolomieu*, *Salvelinus fontinalis*, *Lepomis gibbosus*, *Catostomus commersoni*) and mussels (*Elliptio complanata*, *Anodonta imbecilis*) from Meddybemps Lake, the Dennys River, and the East Machias River were analyzed to determine if tissue concentrations of trace elements and organochlorine compounds were higher near the Eastern Surplus Site. The Eastern Surplus Site in Meddybemps, Maine, is a hazardous waste site located at the outlet of Meddybemps Lake and the beginning of the Dennys River. In September 1997, samples were collected from three lake locations, three reaches in the Dennys River, and two reaches in the East Machias River. The East Machias River was the study reference river. PCB concentrations were significantly higher ( $p < 0.05$ , Kruskal-Wallis) in bass collected from lake and river locations near the Eastern Surplus Site. Mean PCB levels in whole-body smallmouth bass (range: 0.019  $\mu\text{g/g}$  – 0.168  $\mu\text{g/g}$ ), however, were not highly elevated compared to regional data. Endosulfan II and p,p'-DDE, also at low concentrations, were the only other organochlorine compound detected in fish tissue. Mussel samples from all locations accumulated lower levels of organochlorines than fish. Comparisons of trace element results among locations were inconsistent, and indicate that the Eastern Surplus Site is not a major metals contaminant source to fish and mussels in the lake or river. The Dennys River and East Machias River are regionally important Atlantic salmon rivers. These study results suggest that early life stages of salmon using sections of the rivers near our collection sites may not be at significant risk from trace elements, PCBs, and organochlorine pesticides.