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Title: Organochlorine Compounds and Mercury in Bald Eagle Eggs, Penobscot River, Maine.

Steven E. Mierzykowski, U.S. Fish and Wildlife Service, 17 Godfrey Drive, Suite 2, Orono, ME 04473
(207) 866-3344 x 112, steve_mierzykowski@fws.gov

Charles S. Todd, Maine Department of Inland Fisheries and Wildlife, Bangor, ME
Kim Tripp, U.S. Fish and Wildlife Service, Old Town, ME
Kenneth C. Carr, U.S. Fish and Wildlife Service, Concord, NH

Abstract: Four bald eagle (*Haliaeetus leucocephalus*) eggs from three nests on the Penobscot River, Maine, were analyzed for organochlorine contaminants and mercury. Eggs were collected in June 2000 within two weeks of nest abandonment. Tetrachlorodibenzo-*p*-dioxin toxic equivalents (TEQs) based on World Health Organization toxic equivalency factors for birds were determined for each egg. TEQs determined solely from polychlorinated dibenzo-p-dioxins and dibenzofurans (TEQ PCDD/Fs) in the four eggs ranged from 15 to 59 pg/g, fresh wet weight (fww), while Total TEQs (PCDD/Fs + planar PCBs) ranged from 223 to 570 pg/g, fww (mean 385 pg/g, fww). The percent of total TEQs derived from PCDD/Fs averaged approximately 8%. PCB# 126 was the greatest contributor to the Total TEQ. The mean concentrations of total PCBs and p,p'-DDE in eggs were 9.05 µg/g, fww, and 1.53 µg/g, fww, respectively. Compared to previous Maine eagle egg studies, DDE levels were not markedly elevated in these four eggs. TEQ and total PCB levels in Maine eggs, however, continue to exceed No Effect Levels suggested for bald eagles. Mercury concentrations in eggs ranged from 0.12 µg/g to 0.25 µg/g, fww (mean 0.17 µg/g, fww). Mercury in these four eggs occurred at lower concentrations than previous Maine eagle egg studies and below suggested effects thresholds.