

Draft Study Plan

Waterfowl Injury Assessment Plan
PCBs in Hudson River Resident Waterfowl

Hudson River Natural Resource Trustees

State of New York

U. S. Department of Commerce

U. S. Department of the Interior

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New York State Department of Environmental Conservation
Division of Fish, Wildlife and Marine Resources
625 Broadway
Albany, NY 12233-4756

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Natural Resource Damage Assessment:

The Hudson River Natural Resource Trustees, represented by the State of New York, the U. S. Department of Commerce and the U. S. Department of the Interior, are conducting a natural resource damage assessment (NRDA) of the Hudson River. As part of that process, the Trustees propose to investigate PCB contaminant levels in Hudson River resident waterfowl in order to determine whether certain Hudson River waterfowl have been injured by the presence of PCBs found in the riverine environment. Injuries to waterfowl result from PCBs when the presence of PCB concentrations in edible portions of the waterfowl exceed tolerance levels established by the U. S. Food and Drug Administration (USFDA). (43 CFR 11.62(f)(1)(ii)).

Study Background:

PCBs can be rapidly accumulated in the tissues of waterfowl. Evidence for such accumulation was found by Foley and Batcheller (1988) in common goldeneye overwintering on the Niagara River, and in hatch year mallard, gadwall and common merganser taken in the vicinity of aluminum industries along the St. Lawrence River (Skinner 1992). Elevated PCB levels found in the Hudson River environment present the same opportunity for rapid uptake by waterfowl that reside on or along the river.

A number of studies have examined PCB levels in waterfowl that have been taken from the along the Hudson River (Baker *et al.* 1976; Kim *et al.* 1984; Kim *et al.* 1985; Foley 1992; O'Keefe *et al.* 2006). In each study, the waterfowl analyzed were taken during the hunting season, which is coincident with fall migrations of waterfowl. Thus, there is no ability to determine whether the birds taken were either resident or migratory birds. As a consequence, the source of the PCBs can not be identified with any certainty. In order to avoid this uncertainty with the proposed study, sample collection will be conducted prior to fall migration.

Study objectives:

Two objectives for the study are:

- to determine the concentrations of PCBs in waterfowl resident to the Hudson River, and
- to determine whether PCB concentrations exceed the existing USFDA tolerance for those residues in poultry.

Study design outline:

The sampling focus is on collection of a representative number of samples of resident mallards, both juveniles and adults, from on or along the Hudson River prior to fall migration. Mallards are the most abundant waterfowl species present on the river, thus, they are a surrogate for other waterfowl species. However, a smaller number of other selected resident waterfowl species (“targets of opportunity”) in their hatch year will also be taken. Specimens will be taken from five areas of the river (an upstream reference area plus four PCB exposure areas - two areas each in the upper and lower river) representing the entire length of the river. Breast muscle and dissectable fats will be excised and all samples will be analyzed for PCBs (Aroclor basis), lipids and moisture. A selected subset of mallard fats will be analyzed for PCB congeners plus chlorinated dioxins and furans.

The findings of PCB analyses will be compared to the USFDA tolerance for PCB in poultry. The USFDA tolerance for PCBs in poultry is 3.0 parts per million on a fat basis (21 CFR 109.30(a)(3)). An injury to waterfowl exists if PCB concentrations in edible tissues exceed the USFDA tolerance.

Public Review:

The public and the party or parties responsible for the contamination are requested to review the Draft Study Plan and provide feedback on the proposed approach. A 30-day public review period is being provided. Written comments should be submitted by June 16, 2007 to:

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or via e-mail to: sxsanfor@gw.dec.state.ny.us.

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