



**MAY 2012**

# FACT SHEET HUDSON RIVER BALD EAGLE UPDATE

## *HUDSON RIVER NATURAL RESOURCE DAMAGE ASSESSMENT*

Past and continuing discharges of polychlorinated biphenyls (PCBs) have contaminated the natural resources of the Hudson River. The Hudson River Natural Resource Trustees – New York State, the U.S. Department of Commerce, and the U.S. Department of the Interior – are conducting a natural resource damage assessment (NRDA) to assess and restore those natural resources injured by PCBs.

The Hudson River supports a rich array of ecological resources that interact in complex ways, and provides habitat for hundreds of species of fish, birds and other wildlife. One of the species for which the Hudson River provides habitat, and which has been exposed to PCBs, is the bald eagle (*Haliaeetus leucocephalus*). Bald eagles are at risk of accumulating PCBs because they are at the

top of the food web. Eagles prey on fish and scavenge carcasses of birds, mink, otter, and other organisms that may contain PCBs. Because much of the eagles' diet on the Hudson River may contain PCBs, they are at risk of accumulating concentrations that are associated with adverse health impacts.

In the 1990s, the New York State Department of Environmental Conservation (NYSDEC) began monitoring Hudson River bald eagle nests for reproductive success. As part of those studies, the NYSDEC collected samples from bald eagles and the eagles' prey, which the Trustees analyzed for contaminants, including PCBs.

The Trustees are now releasing five reports (please see over) that contain contaminants data on bald eagle egg samples, bald eagle fat and plasma samples, and bald eagle prey samples collected from the Hudson River, and other locations in New York State, beginning in 1998 and continuing through 2004. The bald eagle eggs collected and analyzed were eggs that did not hatch in the nest; they were collected for analysis after nesting activity was complete so as to not

interfere with other reproductive activity by the parents in that nest. Accordingly, the PCB concentrations in eggs noted in the reports are wet weight, not fresh wet weight; that is, the data have not been corrected for moisture loss that would occur as an unhatched egg sits in a nest over a period of time before collection.

PCBs have been shown to cause a range of adverse impacts in birds, including disease, behavioral abnormalities, genetic mutations, physical deformities, changes in brain chemistry, reduced hatching rates, embryo mortality, and death. PCB contamination on the Hudson River has the potential to negatively affect the reproduction of bald eagles, and their success hatching and raising young birds on the Hudson River. PCBs can cause physiological and behavioral changes that hinder successful reproduction, such as being unable to find a mate or form a pair bond, or successfully lay eggs, hatch those eggs, or rear their young.

The Trustees are continuing to investigate the effect of PCBs on bald eagles.



Photo: USFWS

### FOR MORE INFORMATION

Hudson River NRDA Trustee web sites:

- <http://www.fws.gov/contaminants/restorationplans/HudsonRiver/index.html>
- <http://www.dec.ny.gov/lands/25609.html>
- <http://www.darrp.noaa.gov/northeast/hudson/index.html>

To add yourself to the Hudson-NRDA listserv

1. Send a message to: [requests@willamette.nos.noaa.gov](mailto:requests@willamette.nos.noaa.gov)
2. Write in subject: Subscribe hudsonnrda

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## AVAILABLE REPORTS

Hudson River Natural Resource Trustees. 2011. U.S. Geological Survey (USGS). September 1999. Laboratory Report. FY-99-31-01. FWS No: 14-48-0005-50181-97-J-008; CERC No: 82070-1491CL62. FWS Project Title "Organochlorine Contaminants in biota from the Hudson River, New York." August 1, 2011. Final. U.S. Department of Commerce, Silver Spring, MD.

Hudson River Natural Resource Trustees. 2011. U.S. Geological Survey, October 2000, Report #4: Organochlorine contaminants in bald eagle eggs. FY-00-31-04. FWS NO: 1448-50181-99-H-007. CERC NO: 3307-70L1D. FWS Project Title: "Chemical Contamination of Nesting Tree Swallows, Great Blue Herons, and Resident/Nesting Bald Eagles Along the Hudson River, New York." Final. August 1, 2011. U.S. Department of Commerce, Silver Spring, MD.

Hudson River Natural Resource Trustees. 2011. U.S. Geological Survey, July 2003, Polychlorinated biphenyls and organochlorine pesticides in bald eagle blood and egg samples from the Hudson River, NY. USGS Report # CERC-8335-FY03-31-04, FWS No. 50181-1-H014, DNC No. 50181-1-H014A. FWS Project Title: "Chemical Contamination of Resident/Nesting Bald Eagles Along the Hudson River, New York – Samples from 1999-2001." Includes Correction. Final. August 1, 2011. U.S. Department of Commerce, Silver Spring, MD.

Hudson River Natural Resource Trustees. 2011. U.S. Geological Survey, February 2003, Polychlorinated biphenyls and organochlorine pesticides in bald eagles and fish from the Hudson River, NY, Sampled 1999-2001. USGS Report # CERC-8335-FY03-31-02, FWS No. 50181-1-H014, DNC No. 50181-1-H014A. FWS Project Title: "Chemical Contamination of Resident/Nesting Bald Eagles Along the Hudson River, New York – Samples from 1999-2001." Final. August 1, 2011. U.S. Department of Commerce, Silver Spring, MD.

Hudson River Natural Resource Trustees. 2011. U.S. Geological Survey (USGS), September 2005, Polychlorinated biphenyls, organochlorine pesticides, dioxins and furans in bald eagle egg and blood samples from the Hudson River, New York. USGS Report # CERC-8335-FY05-31-03. Final. August 1, 2011. U.S. Department of Commerce, Silver Spring, MD.

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**If you have questions** about natural resource damages, please contact one of the individuals listed below:

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*The Hudson River Trustees—assessing and restoring your natural resources*