

# Water Quality Standards for Mercury, DDT and PCBs

## Fact Sheet

### 1. USFWS Issues Biological Opinion requiring wildlife standards to protect bald eagle and peregrine falcon from bio-accumulative toxics PCB, mercury, & DDT June 1996 (available upon request)

In a June 26, 1996 Biological Opinion, the U.S. Fish and Wildlife Service found that New Jersey's surface water quality standards would not protect bald eagle and peregrine falcon populations from bioaccumulation of mercury, PCBs and the pesticide DDT. As a result, the U.S. Environmental Protection Agency directed DEP to develop new wildlife criteria to minimize adverse effects on species federally listed as threatened or endangered. Key findings of the BO include:

- *“The NJSWQS specifies an aquatic life criterion of 14,000 ppq for PCBs. The NJSWQS human-health criterion for PCBs is 244 ppq. However, it is the Service's understanding that the latter is being disapproved by EPA; therefore, the Federal Toxics Rule human health criterion of 44 ppq will remain in effect for PCBs in New Jersey. Although the Federal Toxics Rule human health criterion of 44 ppq for PCBs is less than the Great Lakes Initiative (GLI) wildlife criterion of 74 ppq, the Service is concerned about the adoption of the 44 ppq criterion because of the information presented by Ludwig et al. (1993) and the accumulating data indicating high levels of PCBs in the New Jersey bald eagle and peregrine falcon populations (U.S. Fish and Wildlife Service, 1995c; 1996a in prep.). A more stringent water quality criterion for PCBs has been derived (Ludwig et al., 1993), based on the toxicological responses of wildlife. Ludwig et al. (1993) provide a basis for a PCB water quality criterion of 1.0 ppq, based on a LOAEL derived from either field observations or from controlled laboratory studies. The toxicological impacts of PCBs to the New Jersey raptor populations would be at least stabilized by promulgation of a more stringent NJSWQS criterion than the existing criterion of 44 ppq.*
- *“The GLI wildlife criterion for mercury is 1,300 ppq, whereas New Jersey proposes a human-health criterion for mercury of 144,000 ppq. This is a factor of 110 times greater than the GLI wildlife criterion. Thus, the New Jersey proposed criterion for mercury is unlikely to be protective of bald eagles and peregrine falcons.*
- *The Great Lakes Initiative (GLI) wildlife criterion for DDT and metabolites is 11 parts per quadrillion (ppq), whereas the New Jersey chronic aquatic life criterion for DDT is almost 700 ppq, and the chronic human-health criterion for DDT and DDE is 588 ppq. If the human-health criterion of 588 ppq is applied to all waters, it would be a factor 53 times greater than the proposed GLI criterion.... the NJSWQS criterion for DDT and its derivatives is unlikely to be protective of bald eagles and peregrine falcons.*

**2. Scientific basis for standards complete July 2001. See the EPA/USFWS/DEP joint basis for Wildlife Criteria "Derivation of New Jersey-Specific Wildlife Values as Surface Water Quality Criteria for: PCBs, DDT, and Mercury" July 2001 at <http://www.state.nj.us/dep/wmm/bfbm/sgwqt.html>**

### 3. USEPA Directs NJDEP to adopt protective wildlife standards or EPA may do so - March 17, 2000 (available upon request)

### 4. DEP proposed the standards in November 2002: 11/18/02 NJ Register DEP proposed wildlife criteria <http://www.state.nj.us/dep/wmm/sgwqt/7-9Bprop2002.pdf>

“As part of the 1994 approval of the New Jersey SWQS triennial review process, the USEPA, in collaboration with the USFWS, indicated that the human health based criteria for PCBs were not protective of the threatened and endangered species bald eagle, peregrine falcon, and dwarf

wedgemussel. As a result, the Service prepared a Biological Opinion document in 1996 (*Biological opinion on the effects of the U.S. Environmental Protection Agency's approval of the state of New Jersey's surface water quality standards on the bald eagle, peregrine falcon, and dwarf wedgemussel*. U.S. Department of the Interior, Fish & Wildlife Service, New Jersey Field Office, Pleasantville, New Jersey. 1996). The lack of wildlife criteria for DDT and its metabolites, mercury, and PCBs was a concern to the USFWS. DDT and its metabolites, mercury, and PCBs are bioaccumulative pollutants that are persistent in the environment, accumulate in biological tissues, and biomagnify in the food chain. Due to these characteristics, the concentration of these contaminants may increase as they are transferred up through various food chain levels. As a result, adverse impacts to non-aquatic, piscivorous (fish-eating) organisms may arise from low surface water concentrations. The peregrine falcon is not a piscivorous species. However, it feeds on other piscivorous bird species. Therefore, biomagnification may be of even greater concern for the peregrine falcon.

#### **5. DEP Reiterated Support for Standards in 2003**

In the 5/19/03 NJ Register, DEP pledged to adopt the standards "later in 2003." This commitment was not honored, and the proposal was allowed to expire without formally being withdrawn.

<http://www.nj.gov/dep/rules/adoptions/042203a.pdf>

"The Department has determined it is not necessary to delay the adoption of the Category 1 upgrades while the committee reviews the technical comments on the wildlife criteria. Therefore, the Department will adopt the proposed wildlife criteria, the applicable design flow, and the definitions later in 2003."

**6. EPA reiterates support October 2003** (see link at end of press release)

**7. November 18, 2003 – proposal expires, must be re-proposed**

**8. May 16, 2005 NJ Register - DEP Public Notice. Governor Codey extends expiration date and DEP outlines plans to re-adopt NJ Surface Water Quality Standards. Notice does not include any plans to re-propose expired wildlife criteria.**

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