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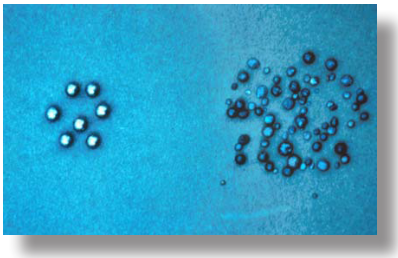
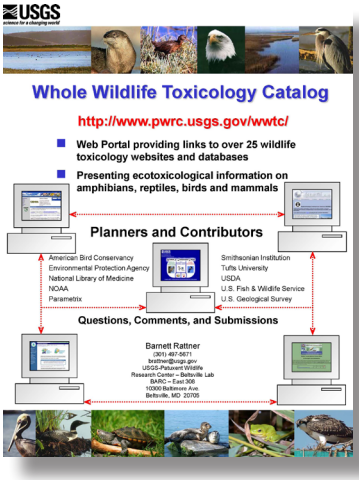
Patuxent Wildlife Research Center

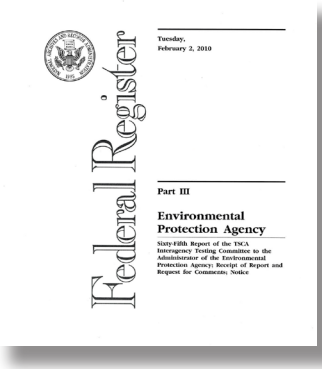
Contaminant-related Activities in Support of Client Agencies in the Department of the Interior



The Challenge: The Department of the Interior has extensive responsibilities for management of fish and wildlife, and their supporting habitat. Stewardship activities include assessment of potentially adverse effects of natural and anthropogenic stressors on biota, including chemical contaminants. We assist by providing scientific information to support development of federal guidelines, regulations and statutes. We identify and communicate information on the exposure and effects of contaminants in wildlife so that responsible agencies may take action to prevent or mitigate adverse effects and remediate polluted habitats.



The Science: The Department of the Interior serves on the Interagency Testing Committee of the Toxic Substances Control Act that gathers information on the fate and environmental effects of various contaminants to help set priorities for the US Environmental Protection Agency. In addition, we provide perspective on the development and regulatory value of toxicological methods that minimize the number of animal subjects used, or replace test subjects altogether by use of in vitro test methods. We also assist the Fish and Wildlife Service though expert opinion on the testing and potential toxicity of various shot and shot coatings used in hunting, and their hazard when ingested by waterfowl and raptors, including the California condor.



The Future: The potential hazards and ecotoxicological data gaps related to surfactants, certain metals and persistent bioaccumulative toxicants continue to be brought to the attention of the Interagency Testing Committee of the Environmental Protection Agency. Information on new types of shot and shot coating to be used in hunting of waterfowl have been evaluated, and now take the place of lead shot that posed an unacceptable hazard to waterfowl and other wildlife. Adverse outcome pathways are being developed for use in ecological risk assessments. Various reviews (e.g., chemical hazards to waterbirds in Chesapeake Bay) and databases (e.g., the Whole Wildlife Toxicology Catalog; (www.pwrc.usgs.gov/wwtc) on toxicity of chemicals to wildlife continue to be compiled and used by risk assessors and natural resource managers.

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