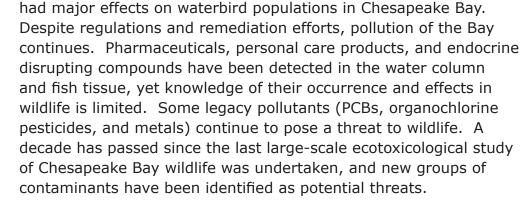


Patuxent Wildlife Research Center

Contaminant Exposure, Food Chain Transfer and Potential Health Effects on Chesapeake Bay Waterbirds







The Challenge: Agricultural, industrial and urban activities have

• **The Science:** Measurement of contaminants in water, the concentration in fish, and biomagnification in higher trophic level species (predatory fish, ospreys), will enhance our understanding of the fate, effects, and food chain transfer of emerging and legacy contaminants. A suite of indicators will be used to evaluate healthand reproductive fitness of fish (in collaboration with USGS-Leetown Science Center). Molecular and genetic endpoints, condition indices, and reproductive success will be monitored in ospreys. As laid out in the Chesapeake Executive Order, this integrated effort will focus on the Potomac, Susquehanna and James Rivers, and Regions of Concern (Anacostia, Patapsco and Elizabeth Rivers).



• **The Future:** This study will expand the geographic scope of our knowledge, document spatial and temporal trends of contaminant exposure in fish and wildlife, and may have mplications for human health. These data will be used by regulatory and resource management agencies to prioritize contaminants of concern, and develop management actions to mitigate pollution. Ultimately, findings will contribute to the improvement of environmental quality, ecosystem integrity, and sustainability of the Chesapeake Bay.

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