Department of the Interior

Alternative Toxicology Test Method Activities





-Protects and manages the Nation's natural resources & cultural heritage

-Provides scientific & other information about those resources

-Honors trust responsibilities & commitments to American Indians, Alaska Natives & affiliated island communities



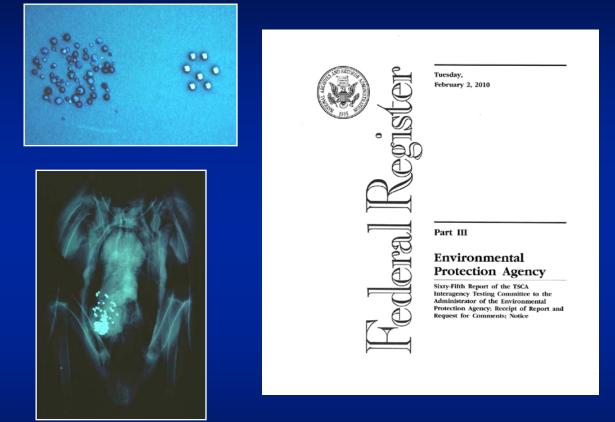
Some Toxicological Research Very limited regulatory authority on chemicals U.S. Geological Survey U.S. Fish and Wildlife Service

- 1. Toxicological research (hypothesis testing)
- 2. Environmental contaminant biomonitoring
- 3. Natural Resource Damage Assessment
- 4. Registration of "shot" used in hunting
- 5. Registration of chemicals used in aquaculture

Embrace 3 R's



Registration of Non-toxic Shot



lead replacements: steel bismuth-tin copper-clad iron tungsten-bronze tungsten-iron tungsten-matrix tungsten-nickel-iron tungsten-polymer tungsten-tin-bismuth tungsten-tin-iron tungsten-tin-iron-nickel

Bottom Line – many shot types registered using existing information, risk assessment and no toxicity test (harmonized with Canada)

Screening and Testing Candidate Fishery Management Chemicals

Toxicants and therapeutics

Developing a tiered approach:
Physiochemical data to identify SAR
Developing *in vitro* fish cell lines to replace *in vivo* testing
Genomic analyses attempting to identify biomarkers of toxicant-sensitive and resistant species

Adverse Outcome Pathway

