Department of the Interior

Alternative Toxicology Test Method Activities
DOI Mission

- 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