



California Department Of Toxic Substances Control Human And Ecological Risk Division (HERD)

Ecological Risk Assessment Process and State Guidance

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<http://www.dtsc.ca.gov/AssessingRisk/eco.cfm>

Workshop Program

- 8:30-8:45 am:** Goals of the Workshop and Overview of ERA
Michael Anderson (HERD)
- 8:45-9:45 am:** Scoping Assessment
Michael Eichelberger (HERD)
- 9:45-10:15 am:** Endangered Species/Natural Resource Trustees
Becky Stanton (DFG/OSPR)
- 10:15-11:15 am:** Phase I Predictive Risk Assessment
Michael Anderson
- 11:15-11:30 am:** Phase II Validation Study
Michael Anderson
- 11:30-12:00 pm:** Validation Study/ Phase III Impact Assessment
Jim Polisini
- 12:00-12:30 pm:** Discussion/Questions

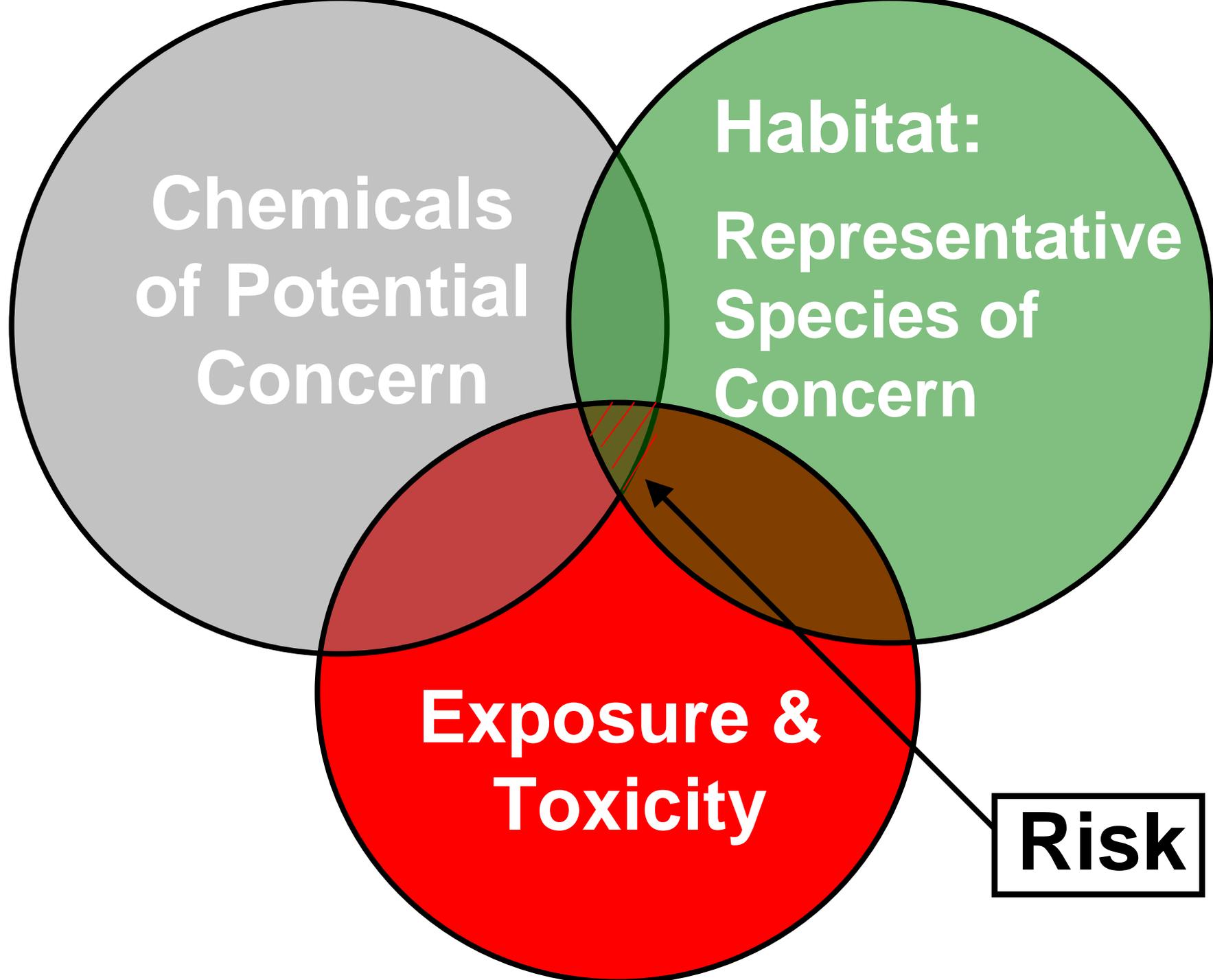
Goals of the Workshop

- Provide a broad overview of ecological risk assessment within the framework of DTSC Guidance
- Introduce concepts and modeling used in ecological risk assessment
- Use a mine site example to demonstrate the process.

Ecological Risk Assessment

Definition

Evaluates the likelihood that adverse ecological effects may occur or are occurring as a result of exposure to one or more stressors (USEPA 1992)



Why Use EcoRisk?

- Protection of ecological resources (i.e., plants and animals) is specified either directly or indirectly in U.S. environmental laws
- Risk based decision-making plays an important role in executing law
- Regulatory programs must consider impacts to ecological resources from chemical releases
- Ecological risk assessment is a tool for decision-making and minimizing threats to the environment

Role of Ecological Risk Assessment in Hazardous Waste Site Decision-Making

Ecological Risk Assessment is used to:

- Identify, on a site-specific basis, chemicals and pathways that pose significant risks to wetland, marine, or terrestrial animals and plants
- Prioritize sites for remedial action or appropriate institutional controls
- In conjunction with human health risk assessments, establish preliminary and final remediation goals

Ecological Risk Assessment

Major Components in DTSC Guidance

1. **Scoping Assessment:** chemicals, plants, and animals on or near the site? Are there potential exposure pathways?



Risk Management Decision Point

2. **Phase I Predictive Assessment:** compare exposure levels to ecological toxicity criteria.



Risk Management Decision Point

3. **Phase II Validation Assessment:** verify predictions.



Risk Management Decision Point

4. **Phase III Impact Assessment:** evaluate cost/benefit of actions.

Ecological Risk Assessment Guidance

California Environmental Protection Agency

DTSC: <http://www.dtsc.ca.gov/AssessingRisk/eco.cfm>

OEHHA: <http://www.oehha.org/ecotox.html>

U.S. Environmental Protection Agency – Office of Solid Waste and Emergency Response

http://www.epa.gov/oswer/riskassessment/superfund_eco_planning.htm

<http://www.epa.gov/ecotox/ecossl/>