



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

## DTSC Regional Office Ecological Risk Assessment Workshops

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

# **DTSC Regional Office Ecological Risk Assessment Workshops: Agenda**

- 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. Beckye Stanton and Vicki Lake (DFG/OSPR)
- 10:15-10:30 am:** Break
- 10:30-11:15 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 (HERD)
- 12:00-12:15 pm:** Discussion/Questions
- 12:15-1:15 pm:** Lunch
- 1:15-3:15 pm:** Components of Marine and Estuarine Ecological Risk Assessments. Denise Klimas and Don MacDonald (NOAA)
- 3:15-3:30 pm:** Discussion/Questions

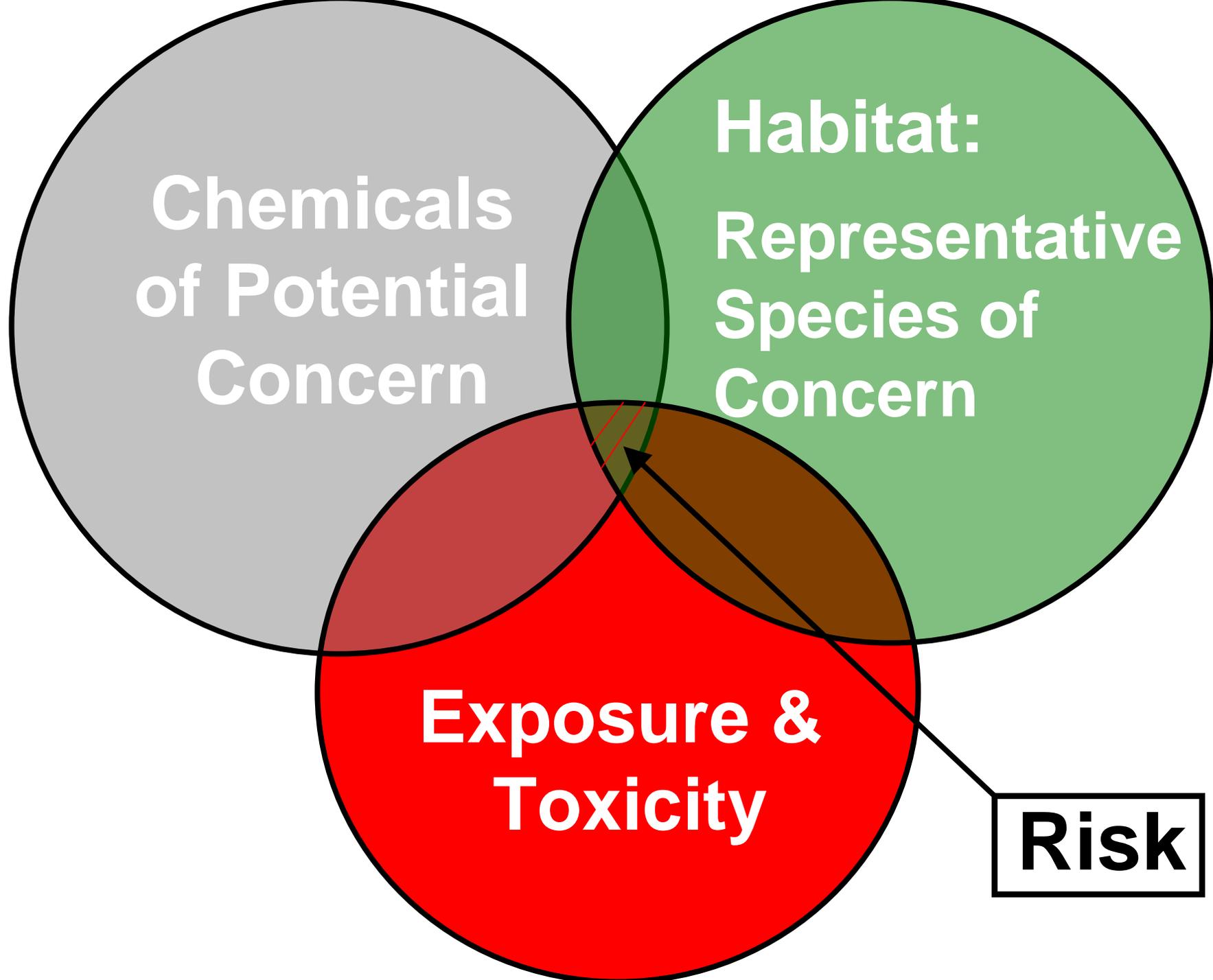
# Goals of the Workshop

- Provide a broad overview of ecological risk assessment within the framework of DTSC Guidance
- Introduce concepts and modeling used in ecological risk assessment
- Use site examples 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

- 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/oswer/riskassessment/superfund_eco_planning.htm)

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