Biotic Ligand Model Application in the United States

Submitted by: Australia
BLM Application in the USA

**ACUTE TOXICITY TESTS**

- **LC50s**
  - Test pH, DOC, Ca²⁺, etc

- **BLM Speciation Calcs**
  - (single set of Cu-BLM parameters)

- **Lethal Accumulation Values (LA50s)**
  - Standard test water

- **BLM Toxicity Calcs**

- **Normalized LC50s**
  - (SMAV and GMAV)

- **Sensitivity Dist**

- **FAV**
  - (CMC and CCC)

- **BLM Speciation Calc**

- **LA50 at FAV**
  - Site water

- **BLM Toxicity Calc**

**Assumption:** LA50 does not change with water chemistry

**“Site-specific” FAV**
- (CMC and CCC)

**Performed once to calibrate**

**Performed for each site**
BLM Application in Europe

**NOECs (or EC10s)**
Test pH, DOC, Ca$^{2+}$, etc

**Lethal Accumulation Values**

**Site-specific NOECs**
(Species Mean NOECs)

**Site**
Water

**BLM Speciation Calcs**
(separate Cu-BLM parameters for daphnids, fish, and algae)

**BLM Toxicity Calcs**

**Sensitivity Dist**

**PNEC**
50% LCL of 5-percentile SM-NOEC

**CHRONIC TOXICITY TEST**

Performed for each site