

# Cal/Ecotox Toxicity Data for Western Toad (*Bufo boreas*)\*

Page 1

Chemical	Tox Exposure	Endpoint Type	Endpoint Description	Endpoint Value	Note	Reference
CHLORPYRIFOS	0, 30, 60 ppb	TOX-Non-Repro-Sublethal - whole animal	temperature tolerance, estimated by heating water at 1C/3min and using onset of spasms in frogs as the endpoint	decrease @ 30 and 60 ppb	a	1
COPPER SULFATE	0, 0.02, 3.7 mg/l Cu++	TOX-MORT - dose-response data	100% mortality reported	increase @ 3.7 mg/l	b	2
FENTHION	0, 30, 60 ppb	TOX-Non-Repro-Sublethal - whole animal	temperature tolerance, estimated by heating water at 1C/3min and using onset of spasms in frogs as the endpoint	decrease @ 60 ppb	c	1
IRON SULFATE	0, 3, 10, 20, 30, 35, 40, 72, 144, 288 mg/l Fe++	TOX-MORT - dose-response data		increase @ 30-288 mg/l	d	2
METHYLPARATHION	0, 25, 50 ppb	TOX-Non-Repro-Sublethal - whole animal	temperature tolerance, estimated by heating water at 1C/3min and using onset of spasms in frogs as the endpoint	decrease @ 25 and 50 ppb	e	1
ZINC SULFATE	0, 0.1, 39 mg/l Zn++	TOX-MORT - dose-response data	100% mortality reported	increase @ 39 mg/l	f	2

## Notes

- a Juvenile; Lab; NR; Species - California (R)=*Bufo boreas*; TOX - Chemical=2921-88-2; N=10 animals/replicate; 2 replicates/dose; Tox Exp Tech=waterborne; Tox Exp Dur=24 hr; Tox Study Dur=24 hr; Tox Stat Sig=Y
- b Juvenile; Lab; NR; Species - California (R)=*Bufo boreas*; TOX - Chemical=7758-98-7; N=5-25/dose; Age=larvae; Tox Exp Tech=waterborne; Tox Exp Dur=61 d; Tox Study Dur=61 d; Tox Stat Sig=NR; see citation for toxicity of mine drainage mixture
- c Juvenile; Lab; NR; Species - California (R)=*Bufo boreas*; TOX - Chemical=55-38-9; N=10 animals/replicate; 2 replicates/dose; Tox Exp Tech=waterborne; Tox Exp Dur=24 hr; Tox Study Dur=24 hr; Tox Stat Sig=Y
- d Juvenile; Lab; NR; Species - California (R)=*Bufo boreas*; TOX - Chemical=7782-63-0; N=5-25/dose; Age=larvae; Tox Exp Tech=waterborne; Tox Exp Dur=39 d; Tox Study Dur=39 d; Tox Stat Sig=NR
- e Juvenile; Lab; NR; Species - California (R)=*Bufo boreas*; TOX - Chemical=298-00-0; N=10 animals/replicate; 2 replicates/dose; Tox Exp Tech=waterborne; Tox Exp Dur=24 hr; Tox Study Dur=24 hr; Tox Stat Sig=Y
- f Juvenile; Lab; NR; Species - California (R)=*Bufo boreas*; TOX - Chemical=7733-02-0; N=5-25/dose; Age=larvae; Tox Exp Tech=waterborne; Tox Exp Dur=61 d; Tox Study Dur=61 d; Tox Stat Sig=NR; see citation for toxicity of mine drainage mixture

## References

- 1 Johnson, Clifford Ray and Jerry E. Prine. 1976. The effects of sublethal concentrations of organophosphorus insecticides and an insect growth regulator on temperature tolerance in hydrated and dehydrated juvenile western toads, *Bufo boreas*. *Comp. Biochem. Physiol., A, Comp. Physiol.* 53:147-149.
- 2 Porter, Kenneth R and Dean E. Hakanson. 1976. Toxicity of mine drainage to embryonic and larval boreal toads (*Bufo boreas*). *Copeia*. 1976(2):327-331.

\* Cal/EPA, OEHHA and the University of California Regents are not responsible for damages of any kind resulting from the use of or reliance on information in this report. Users are encouraged to consult the original data. Updated: February 1999.

