

Table 1. Examples of freshwater criteria and benchmarks currently available for selected current-use pesticides. Review of original sources is recommended prior to selecting a numeric target, as values are subject to change. The lowest acute and chronic values for each pesticide are highlighted in blue.

Pesticide	EPA Acute (µg/L)	EPA Chronic (µg/L)	CDFW Acute (µg/L)	CDFW Chronic (µg/L)	UCD Acute ^a (µg/L)	UCD Chronic ^a (µg/L)	Lowest Acute OPP Benchmark ^b (µg/L)	Lowest Chronic OPP Benchmark ^b (µg/L)
Acrolein	3 ^c	3 ^c	n/a	n/a	n/a	n/a	7	7.1
Atrazine	1500 ^d	n/a	n/a	n/a	n/a	n/a	1 (nonvascular plant)	60 (invert)
Bifenthrin	n/a	n/a	n/a	n/a	0.004	0.0006	0.075	0.0013
Carbaryl	2.1 ^e	2.1 ^e	2.53 ^{ft}	2.53 ^{ft}	n/a	n/a	0.85	0.5
Chlorpyrifos	0.083 ^g	0.041 ^g	0.025 ^h	0.015 ^h	0.010	0.010	0.05	0.04
Cyfluthrin	n/a	n/a	n/a	n/a	0.0003	0.00005	0.0125	0.007
Cypermethrin	n/a	n/a	0.002 ^{it}	n/a	0.001	0.0002	0.195	0.069
Diazinon	0.170 ^j	0.170 ^j	0.160 ^h	0.100 ^h	0.200	0.070	0.11	0.17
Diuron	n/a	n/a	n/a	n/a	170	1.3	2.4 (nonvascular plant)	26 (fish)
Endosulfan	0.22 ^k	0.056 ^k	n/a	n/a	n/a	n/a	0.05	0.01
Esfenvalerate	n/a	n/a	n/a	n/a	0.020*	0.003*	0.025	0.017
Lambda-cyhalothrin	n/a	n/a	n/a	n/a	0.001	0.0005	0.0035	0.002
Malathion	n/a	0.100 ^l	0.43 ^m	n/a	0.170	0.028	0.3	0.035
Methomyl	n/a	n/a	5.5 ^{nt}	0.5 ^{nt}	n/a	n/a	2.5	0.7
Methyl parathion	n/a	n/a	n/a	0.08 ^{ot}	n/a	n/a	0.49	0.25
Permethrin	n/a	n/a	0.03 ^{it}	n/a	0.010	0.002	0.01	0.0014
Thiobencarb	n/a	n/a	n/a	3.1 ^p	n/a	n/a	17	1

^a All documents available at:

http://www.swrcb.ca.gov/rwqcb5/water_issues/tmdl/central_valley_projects/central_valley_pesticides/criteria_method/index.shtml

^b Dates and data for each benchmark available at:

http://www.epa.gov/oppefed1/ecorisk_ders/aquatic_life_benchmark.htm

^c Final 2009 (<http://water.epa.gov/scitech/swguidance/standards/criteria/aqlife/acrolein/upload/aq-final.pdf>)

^d Revised draft 2003

(http://water.epa.gov/scitech/swguidance/standards/upload/2003_11_07_criteria_atrazine_rev-draft.pdf)

^e Final 2012 (<http://water.epa.gov/scitech/swguidance/standards/criteria/aqlife/upload/carbaryl2012.pdf>)

^f Interim 1998 (http://www.cdpr.ca.gov/docs/emon/surfwtr/hazasm/hazasm98_1.pdf)

^g Final 1986

(http://water.epa.gov/scitech/swguidance/standards/upload/2001_10_12_criteria_ambientwqc_chlorpyrifos86.pdf)

^h Revised Final 2004. Described in related TMDL staff report:

http://www.swrcb.ca.gov/rwqcb5/water_issues/tmdl/central_valley_projects/delta_op_pesticide/final_staff_report/delta_dc_bpa_staff_rpt.pdf

ⁱ Interim 2000 (http://www.cdpr.ca.gov/docs/emon/surfwtr/hazasm/hazasm00_6.pdf)

^j Final 2005 (http://water.epa.gov/scitech/swguidance/standards/upload/2006_02_16_criteria_diazinon_final-doc.pdf)

^k Final 1980 (followed a similar process as given in the EPA 1985 guidelines;
http://water.epa.gov/scitech/swguidance/standards/criteria/current/upload/2001_10_12_criteria_ambientwqc_endingosulfan80.pdf)

^l Final 1976 (Red Book, did not follow EPA 1985 guidelines;
http://water.epa.gov/scitech/swguidance/standards/criteria/current/upload/2009_01_13_criteria_redbook.pdf)

^m Final 1998 (http://www.cdpr.ca.gov/docs/emon/surfwtr/hazasm/hazasm98_2.pdf)

ⁿ Interim 1996 (http://www.cdpr.ca.gov/docs/emon/surfwtr/hazasm/hazasm96_6.pdf)

^o Interim 1992 (http://www.cdpr.ca.gov/docs/emon/surfwtr/hazasm/hazasm92_1.pdf)

^p Final 1990 (http://www.cdpr.ca.gov/docs/emon/surfwtr/hazasm/hazasm90_1.pdf)

*Draft – final expected by Dec 2014

[†] Interim criterion, data set did not meet minimum EPA guideline requirements