



Department of Pesticide Regulation



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Governor

MEMORANDUM

TO: John S. Sanders, Ph.D.
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FROM: Keith Starner
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Original signed by

DATE: January 11, 2012

SUBJECT: AVAILABILITY OF THE DEPARTMENT OF PESTICIDE REGULATION
SURFACE WATER MONITORING RESULTS, 2008- 2010

The Department of Pesticide Regulation (DPR) collected surface water samples from Santa Cruz, Monterey, San Luis Obispo, Santa Barbara, Merced, and Imperial counties between July 2008 and October 2010. Samples were analyzed for organophosphate and carbamate insecticides, dinitroaniline herbicides, neonicotinoid insecticides as well as additional herbicides. Study protocols (DPR Study 252 and 262) are available (Starner 2008, Starner 2009). The most frequently detected active ingredients were diazinon, chlorpyrifos, methomyl, bensulide, dimethoate, and malathion. The U.S. Environmental Protection Agency toxicity benchmarks (U.S. EPA Agency 2012) were exceeded in 20 percent or more of samples analyzed for diazinon, chlorpyrifos, methomyl, and malathion (Table 1).

Detailed monitoring reports for these results are under development and will be posted to DPR's Web site upon completion. However, as these data are being included in DPR's efforts to develop surface water monitoring regulations, access to the data is now available through DPR's surface water monitoring database Web site. The data are provided in the database under study codes 92 and 93 (DPR 2012).



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Table 1. Pesticide detections, DPR surface water monitoring, 2008-2010.

Chemical	Class	Samples	Detection Frequency (%)	Exceedance Frequency (%)
diazinon	OP insecticide	188	72	35
chlorpyrifos	OP insecticide	194	51	29
methomyl	Carbamate insecticide	188	52	24
malathion	OP insecticide	194	20	20
dimethoate	OP insecticide	194	36	9
imidacloprid	neonicotinoid insecticide	22	91	5
oxyfluorfen	herbicide	106	21	2
DDVP	OP insecticide	194	1	1
disulfoton	OP insecticide	194	1	1
fenamiphos	OP insecticide	194	1	1
carbofuran	Carbamate insecticide	188	2	1
carbaryl	Carbamate insecticide	188	3	1
trifluralin	Dinitroaniline herbicide	106	10	1
benefin	Dinitroaniline herbicide	106	2	1
methidathion	OP insecticide	194	3	0
oxamyl	Carbamate insecticide	188	3	0
bensulide	OP herbicide	125	58	0
acephate	OP insecticide	119	29	0
methamidophos	OP insecticide	119	4	0
pendimethalin	Dinitroaniline herbicide	106	17	0
oryzalin	Dinitroaniline herbicide	106	3	0
prodiamine	Dinitroaniline herbicide	106	2	0
atrazine	triazine herbicide	9	56	0

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References

Starner, K. 2008. Long-term Pesticide Monitoring in High-Use Agricultural Areas: Year Two, Central Coast and Imperial Valley. Study protocol, DPR Study 252. Available at: <http://www.cdpr.ca.gov/docs/emon/pubs/protocol.htm?filter=surfwater>.

Starner, K. 2010. Long-term Pesticide Monitoring in High-Use Agricultural Areas, Year Three. Study protocol, DPR Study 262. Available at: <http://www.cdpr.ca.gov/docs/emon/pubs/protocol.htm?filter=surfwater>.

DPR 2012. DPR Surface Water Database Web page. Available at: <http://www.cdpr.ca.gov/docs/emon/surfwtr/surfddata.htm>.

U.S. EPA 2012. Office of Pesticide Programs' Aquatic Life Benchmarks. Accessed January 9, 2012. Available at: http://www.epa.gov/oppefed1/ecorisk_ders/aquatic_life_benchmark.htm.