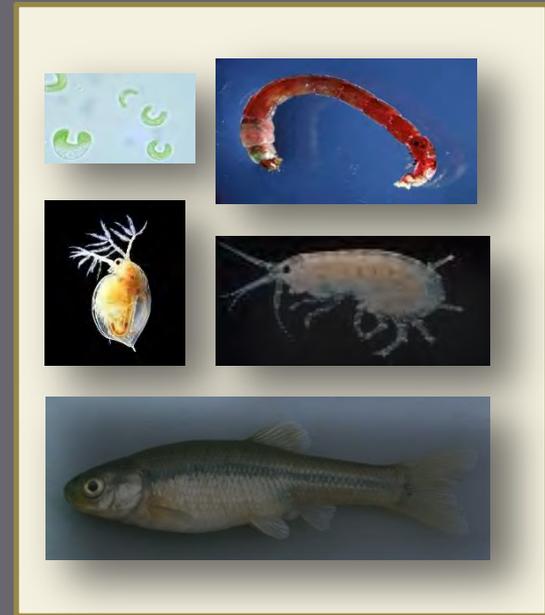


DPR's Surface Water Protection Program (SWPP)



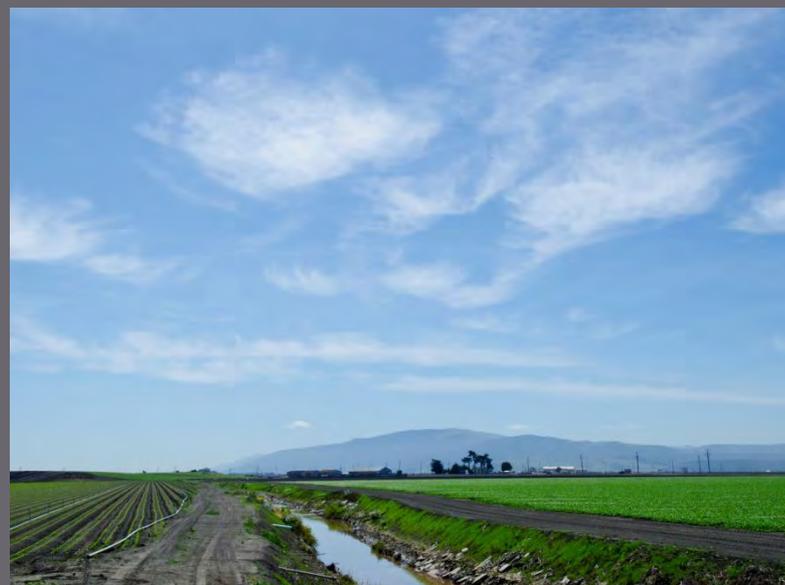
CVRWQB Meeting
June 23, 2016
Jennifer Teerlink, Ph.D.

Surface Water Monitoring

- ▣ Representative sites to evaluate long-term trends in pesticide concentrations.
- ▣ Monitoring efforts have evolved with input from Water Board Staff through MAA protocol review process.
- ▣ All of our data available in SURF.



Urban Monitoring



Agricultural Monitoring



Sacramento

San Francisco

Northern California
Stormdrains – 5 sites
Receiving waters – 7 sites

 DPR Sites

Sampling Frequency

Dry weather – 2 per year

Storm events – 2 per year

Samples

Aqueous

Sediment

Toxicity

Southern California
Stormdrains – 5 sites
Receiving waters – 7 sites

Los Angeles

San Diego

Agricultural Sampling Regions



Sites

Receiving Water – 44%
Agricultural Drains – 56%

Sampling Frequency

Between 1–6 times per year

Samples

Aqueous
Sediment
Toxicity

Analytical Methods

Pyrethroid	CDFA Detection Limits (ng/L)	2015 UCD 1 st percentile (ng/L)	2015 UCD 5 th percentile (ng/L)
Bifenthrin	1.0	0.06 acute 0.01 chronic	0.8 acute 0.1 chronic
Cyfluthrin	2.0	0.07 acute 0.01 chronic	0.8 acute 0.2 chronic
Cypermethrin	5.0	0.04 acute 0.01 chronic	1.0 acute 0.3 chronic
Esfenvalerate	5.0	0.20 acute 0.03 chronic	2.0 acute 0.3 chronic
Lambda- cyhalothrin	2.0	0.03 acute 0.01 chronic	0.7 acute 0.3 chronic
Permethrin	5.0	6.0 acute 1.0 chronic	6.0 acute 1.0 chronic

Aquatic Toxicity

UC Davis Aquatic Health Program



Hyalella azteca



96-hour Exposure



Percent Survival

Monitoring Pesticides in Wastewater

- ▣ Data available is limited to influent and effluent concentrations.
- ▣ Objective to quantify the relative contribution of pesticides from various indoor sources.

Wastewater Treatment Plant



Residential

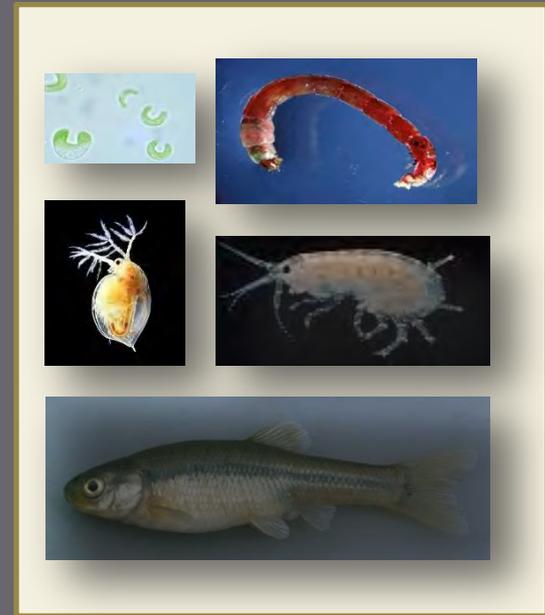


Institutional



Commercial

DPR's Surface Water Protection Program (SWPP)



Effectiveness of 2012 Pyrethroid Regulations

- ❑ Data analysis of pesticide use reporting and surface water monitoring.
- ❑ Focused look at Roseville long-term monitoring sites.
- ❑ Work with DPR Enforcement Branch and County Agricultural Commissioner to ensure regulations are enforced.
- ❑ Collaborate with City of Roseville on outreach and education.



Thank You