

Appendix A. APMP Phase 2 Sampling Matrix for 2003 Field Season

Pesticide ¹	Sample Location/ Applicator Entity	Sampling Metrics								
		Water Chemistry Sample Frequency ^{2,3}	Number of Stations	Sediment Chemistry Sample Frequency	Number of Stations	Toxicity Testing ⁴	Sample Frequency	Bio-assessments ⁵	Sample Frequency ⁶	Special Studies ⁷
2,4-D (S)	Stone Lake/ USFWS	Pre, 1-24 hrs post	1	Pre & 2wks post	2	W- EPA 3 species tox; S- Hyallela	same frequency as water & sed collection	B, EI	Pre, 2wks Post	none
Acrolein (C)	Livingston Canal/ Merced ID	Pre, 1-24 hrs post	2	NA	NA	NA	NA	NA	NA	AM
Copper Sulfate (C)	Bon Tempe/Lagunitas/ Nicassio Reservoirs/ Marin MWD	Pre, 1-24 hrs post; Nicassio also 1 wk post	Bon Tempe/Lagunitas - 1; Nicassio - 2	Pre, 2wks, 4-6wks post; Nicassio not 4-6wks	Bon - 6; Lag - 1; Nic - 5	W- cerio, juvi rainbow trout; S- Hyallela	same frequency as water & sed collection	B, PP	Pre, 2wks, 4-6wks Post; Nicassio not 4-6wks	none
Chelated Copper (C)	Byrnes Canal/ Solano ID	Pre, 1-24 hrs post	3	Pre & 2wks post	2	W- cerio, juvi rainbow trout; S- Hyallela	same frequency as water & sed collection	B, EI	Pre & 2wks post	M
	East Fork Russian River Irrigation Canals/ Potter Valley ID	Pre, 1-24 hrs post	2	Pre & 2wks post	1	W- cerio, juvi rainbow trout	same frequency as water collection	B	Pre & 2wks post	none
Diquat (C)	San Bay Isle/ Aquatic Env. Inc.	Pre, 1-24 hrs post	1	Pre & 2wks post	2	W- EPA 3 species tox; S- Hyallela	same frequency as water & sed collection	B, EI	Pre & 2wks post	none
	7 Mile Slough/ DBW	Pre, 1-24 hrs post	1	1-24 hrs post & 2wks post	1	W- EPA 3 species tox; S- Hyallela	same frequency as water & sed collection	B, EI	1-24 hrs post & 2wks post	none
Mixed Site - Diquat & Copper	San Bay Isle/ Aquatic Env. Inc.	none	none	Pre & 2 day post	2	none	none	B	Pre & 2 day post	none
Fluridone (S)	Costa Ponds/ CDFA	Pre, 1-24 hrs post	2	Pre, 2wks, 6wks Post	5	W- EPA 3 species tox; S- Hyallela & Typha	same frequency as water & sed collection	B, EI	Pre, 2wks, 6wks Post	M

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	Big Bear Lake/ Big Bear MWD	none	none	Pre & 2wks post	6	S- Hyallela & Typha	same as sed collection	B, EI	Pre, 2wks Post	none
Glyphosate (S)	Stone Lake/ DBW	Pre, 1-24 hrs post	2	1-24 hrs post, 4wk post, 8wk post	3	W- EPA 3 species tox	same frequency as water collection	B, EI	1-24 hrs post, 4wk post, 8wk post	none
	Atwater Drain/ Merced ID	Pre, 1-24 hrs post	2	none	none	W- EPA 3 species tox	same as water collection	EI	Pre, 1-24 hrs post	none
	Doris Drain/ Ventura Flood Control	Pre, 1-24 hrs post	1	Pre, 1-24 hrs post	1	W- EPA 3 species tox	same as water collection	B, EI	Pre, 1-24 hrs post	none
Methoprene (C)	Swanton's Marsh/ Contra Costa VCD	Pre, 1-24 hrs post	3	Pre & 96hrs post	3	S- Hyallela & Chironomid	same as sed collection	none	none	IST
Triclopyr (S)	Bear Creek/ CDFG	Pre, 1-24 hrs post	2	none	none	W- EPA 3 species tox	same as water collection	EI	Pre, 1-24 hrs post, 2wks Post	none

1 Systemic (S), Contact (C)

2 Water chemistry includes lab analysis of pesticide, DOC, TSS, Total N & P, Chla, Alkalinity, and Hardness. Field water quality measures (DO, pH, Conductivity, Temp, Salinity) collected at every sampling event at all stations.

3 Post application collection time dependent upon exact site conditions

4 Water (W), Sediment (S); EPA Species - water flea, fathead minnow, algae; Typha - cattail seeds; Chironomid - midge larvae; Water tox collected at every water chem station, while sed tox collected at every sed station

5 Benthic invertebrates (B), Epiphytic Macroinvertebrates (EI), Phytoplankton (PP)

6 Triplicate samples collected at every sediment chemistry station

7 In-situ sediment toxicity (IST) - field conducted; Modeling experiments (e.g. tracer studies) (M) - field conducted; Analytical methods validation (AM)