



CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY
REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

Sacramento and San Joaquin Delta
Pesticides Monitoring Report
2002 and 2003



August 2004

State of California

California Environmental Protection Agency

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DISCLAIMER

Mention of trade names or commercial products in this report does not constitute endorsement or recommendation for use.

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The diazinon concentrations were evaluated by month and by site using boxplots (Figures 2 and 3, respectively). The highest diazinon concentration (460 ng/L) was observed in January at the Five Mile Slough site (Table A1). Relatively high concentrations were observed between January and April at the Mosher Slough (Delt02), Five Mile Slough (Delt03), Calaveras River (Delt04), Marsh Creek (Delt09), and Ulatis Creek (Delt10) sites. In September, a high diazinon concentration (110 ng/L) was detected at the Calaveras River site. In May, June, August, and October, the maximum diazinon concentrations were above the LOQ (20 ng/L) but below the diazinon CMC (80 ng/L). In July, no diazinon was detected. In November and December, high diazinon concentrations were detected at the Mosher Slough site (Delt02).

The maximum diazinon concentrations detected at the Mokelumne River (Delt01), Mid-Roberts Island (Delt05), Old River (Delt08), Duck Slough (Delt11), and Sacramento River at Rio Vista (Delt14) sites were over the LOQ but below the diazinon CMC.

Diazinon concentrations were not detected above the LOQ at the Paradise Cut (Delt07), Steamboat Slough (Delt12), Cache Slough (Delt13), Fabian and Bell Canal (Delt15), Middle River (Delt16), San Joaquin River at Hwy 4 (Delt17), San Joaquin River at Antioch (Delt18), and Sacramento River at Freeport (Delt19) sites.

The chlorpyrifos concentrations were also analyzed by month and by site using boxplots (Figures 4 and 5, respectively). The highest chlorpyrifos concentration (360 ng/L) was observed in March at the Mid-Roberts Island Drain site. Relatively high chlorpyrifos concentrations were observed from January to May (Figure 4). In July and August, the concentrations were above the LOQ (10 ng/L) but below the chlorpyrifos CCC (14 ng/L).

In June, October, and November, no chlorpyrifos was detected above the LOQ. In September, the highest chlorpyrifos concentrations were equal to the CMC (20 ng/L).

On December 23, samples collected from all of the sites had chlorpyrifos concentrations between 20 ng/L and 40 ng/L, including sites at which chlorpyrifos was not detected in other months, (the Mokelumne River, Steamboat, Cache Slough, and Sacramento River at Rio Vista sites).

The highest chlorpyrifos concentrations were observed at Mid-Roberts Island Drain (360 ng/L) and Ulatis Creek (110 ng/L) (Table A1 and Figure 5). Samples from most of the sites had observed chlorpyrifos concentrations over 20 ng/L during the entire sampling period (Table A1). Samples collected from the Fabian and Bell Canal, Middle River, and San Joaquin River at Hwy 4 sites (samples were collected only between March 12 and April 4, 2003) contained chlorpyrifos concentrations greater than the LOQ (10 ng/L) but lower than the chlorpyrifos CMC value (20 ng/L). Samples collected during the same limited period from the San Joaquin River at Antioch and Sacramento River near Freeport sites did not contain chlorpyrifos concentrations above the LOQ.

Monthly sampling at the Calaveras River, Mid-Roberts Island, French Camp Slough, Paradise Cut, and Old River at Tracy Rd sites coincided with two storms. Diazinon

Figures

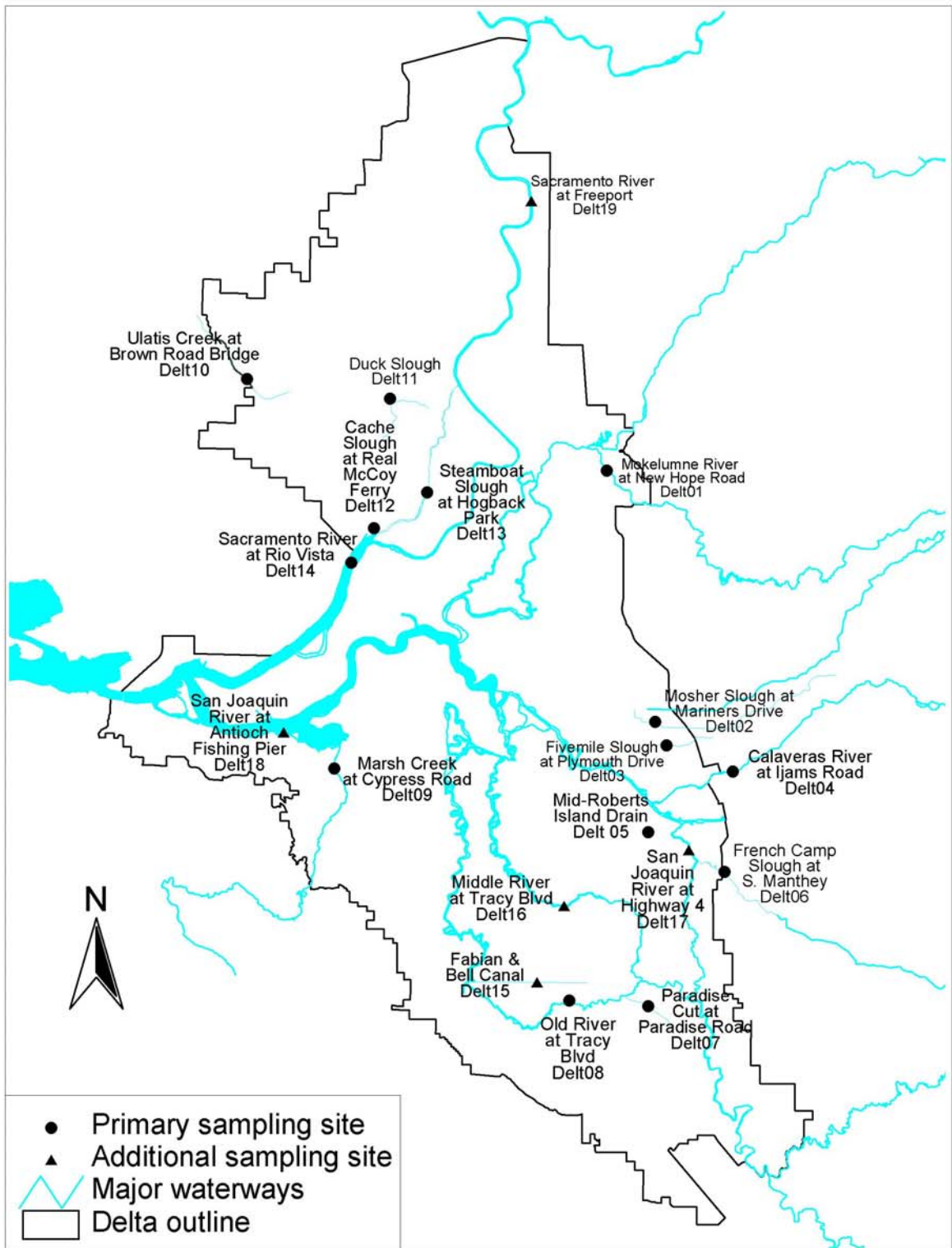


Figure 1. Study area and monitoring sites

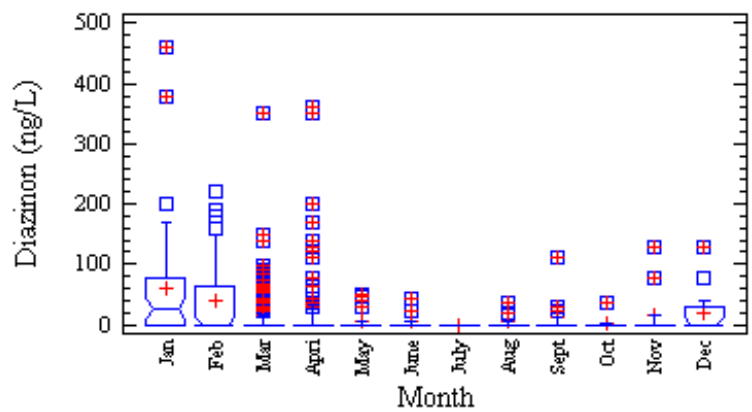


Figure 2. Diazinon concentrations for all sites by month (for each month, a central box covers the middle 50% of the data, the median is the horizontal line inside the box, the plus sign (+) indicates the mean value, the whiskers show the 1.5 times inter-quartile ranges from the lower and upper quartiles, the points between 1.5 times inter-quartile and 3 times inter-quartile are shown as small squares, and the points beyond 3 times inter-quartile are shown, with a plus sign (+) within a small square, as outliers).

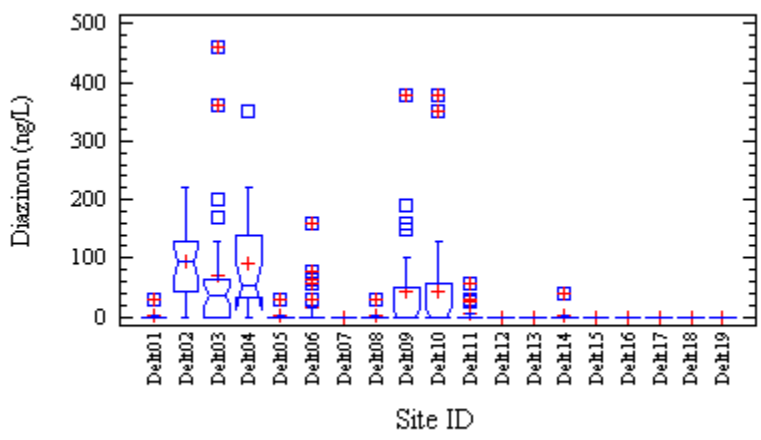


Figure 3. Diazinon concentrations by sampling site (for each site, the mean, median, outliers, and frequency distribution are indicated by a boxplot, see Figure 2 for description of boxplot).

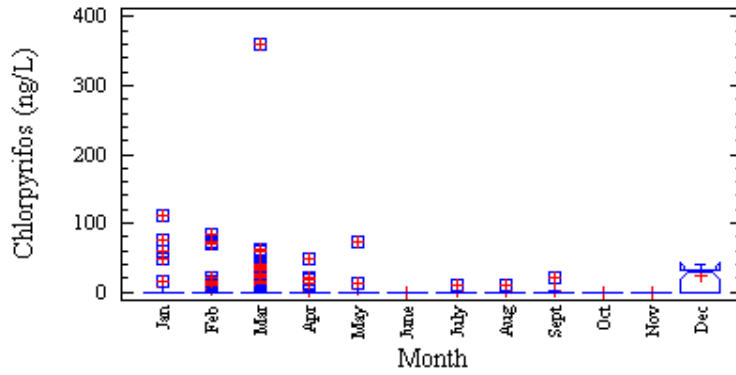


Figure 4. Chlorpyrifos concentrations for all sites by month (for each month, the mean, median, outliers, and frequency distribution are indicated by a boxplot, see Figure 2 for description of boxplot).

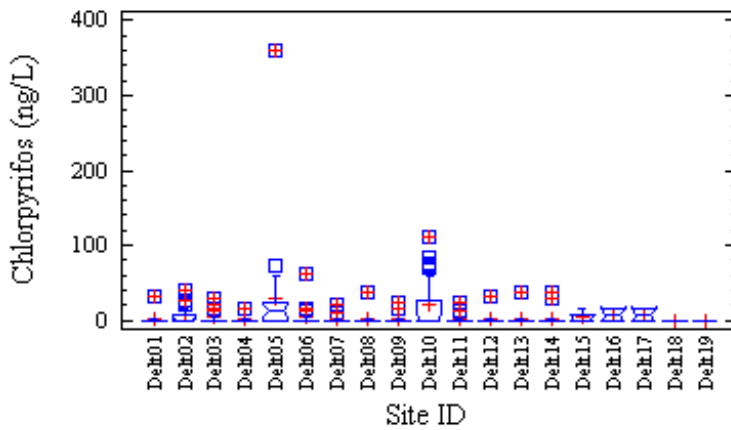


Figure 5. Chlorpyrifos concentrations by sampling site (for each site, a boxplot shows the mean, median, outliers, and frequency distribution, see Figure 2 for description of boxplot).

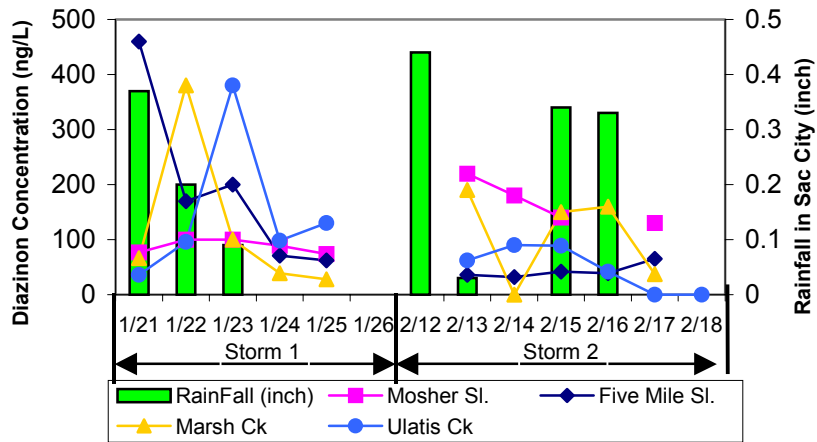


Figure 6. Observed diazinon concentrations during storms

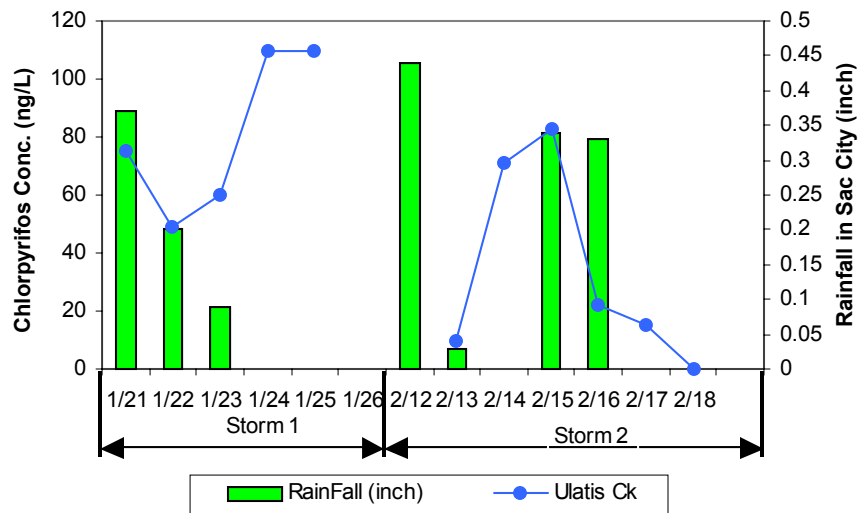


Figure 7. Observed chlorpyrifos concentrations during storms

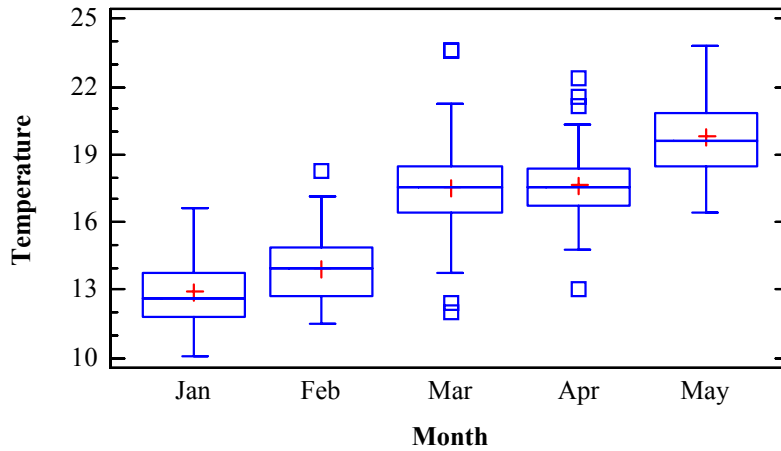


Figure 8. Measured temperature ($^{\circ}\text{C}$) by month (for each month, a boxplot shows the mean, median, outliers, and frequency distribution, see Figure 2 for description of boxplot).

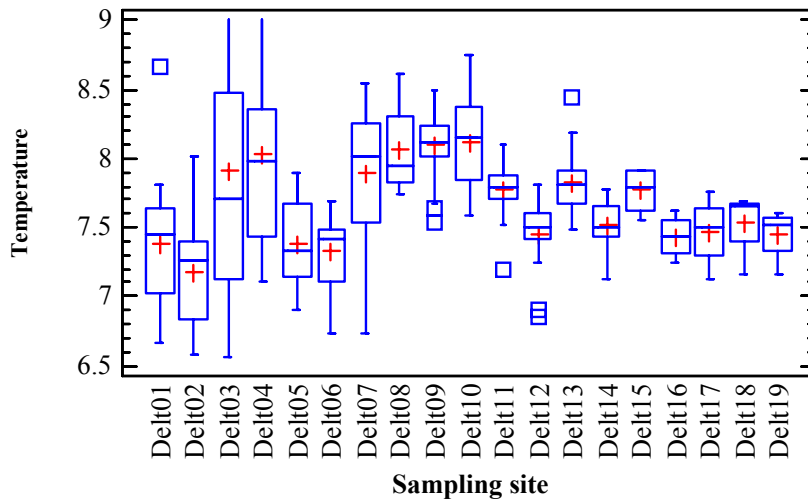


Figure 9. Measured temperature ($^{\circ}\text{C}$) by sampling site (for each site, a boxplot shows the mean, median, outliers, and frequency distribution, see Figure 2 for description of boxplot).

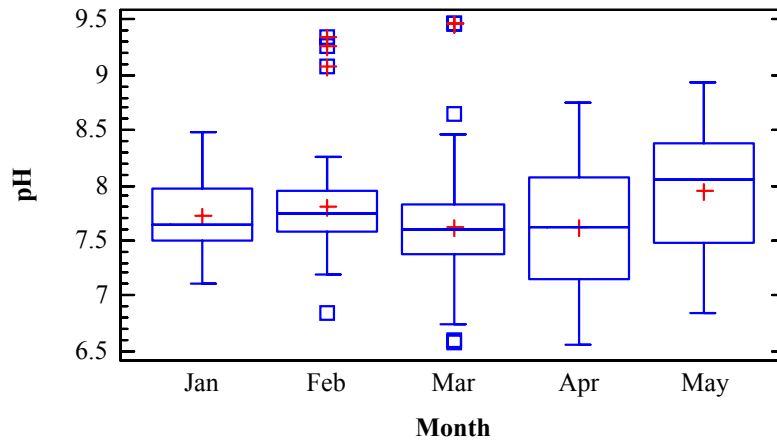


Figure 10. Measured pH by month (for each month, a boxplot shows the mean, median, outliers, and frequency distribution, see Figure 2 for description of boxplot).

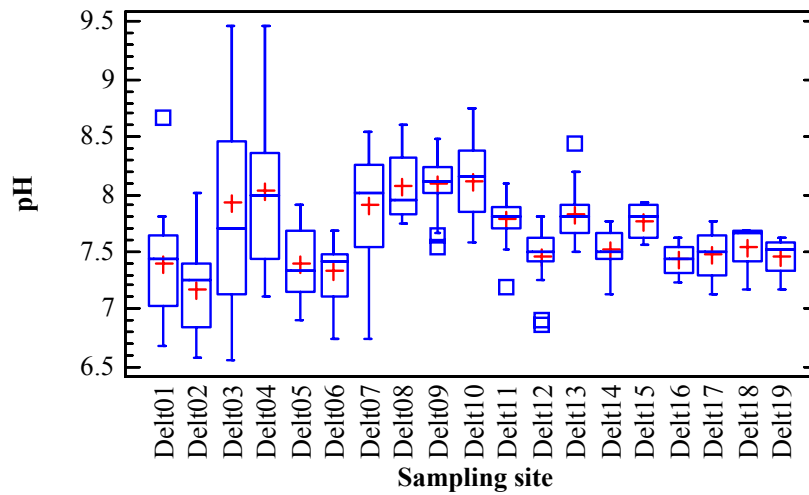


Figure 11. Measured pH by sampling site (for each site, a boxplot shows the mean, median, outliers, and frequency distribution, see Figure 2 for description of boxplot).

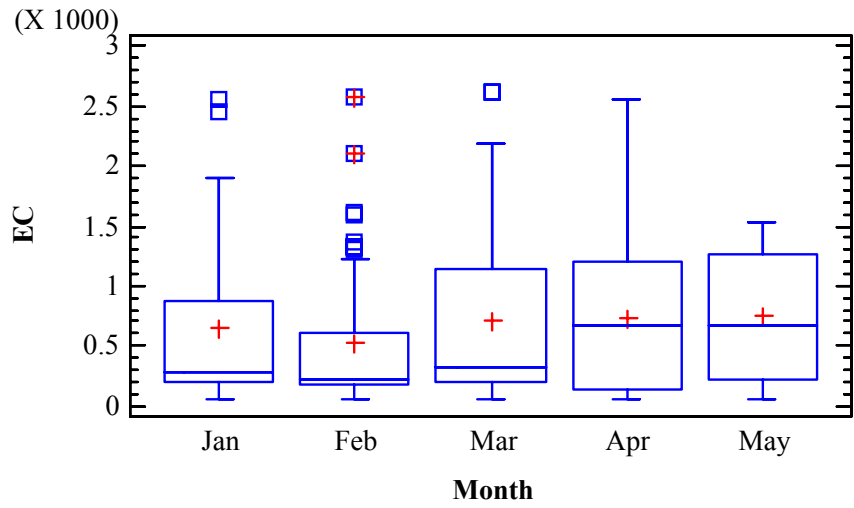


Figure 12. Measured EC (μS) by month (for each month, a boxplot shows the mean, median, outliers, and frequency distribution, see Figure 2 for description of boxplot).

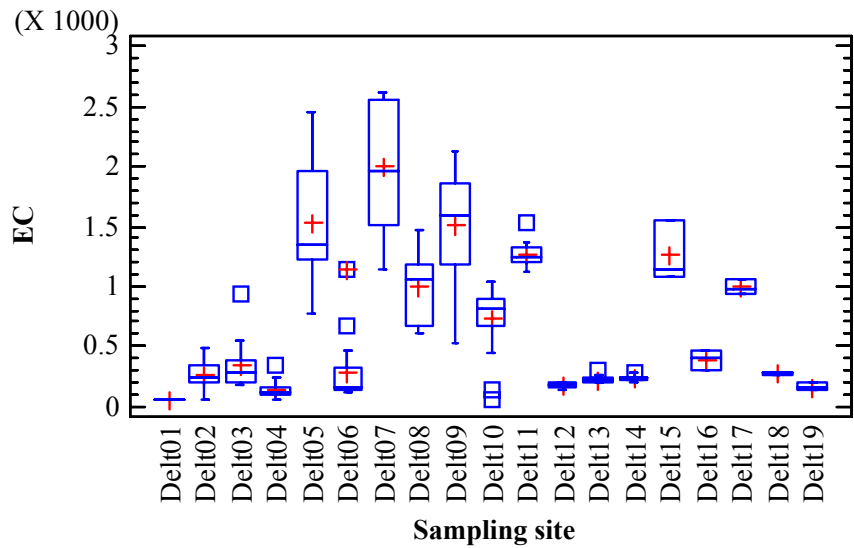


Figure 13. Measured EC (μS) by sampling site (for each site, a boxplot shows the mean, median, outliers, and frequency distribution, see Figure 2 for description of boxplot).

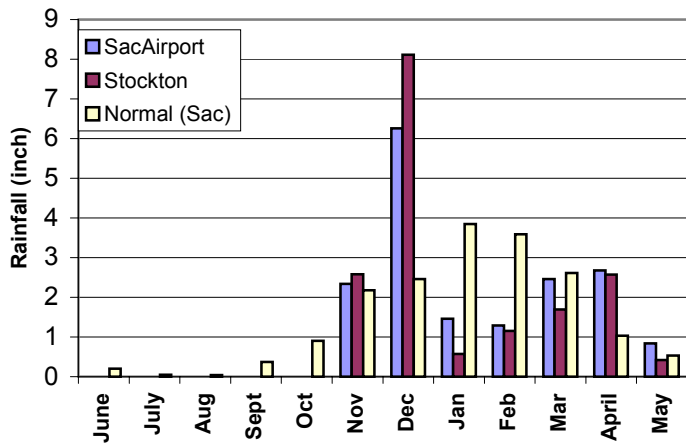


Figure 14. Monthly rainfall during sampling period

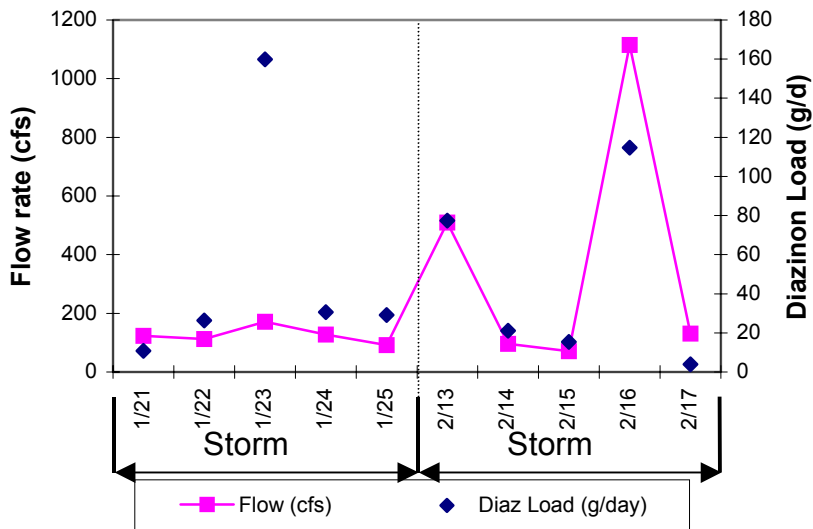


Figure 15. Flow rates and diazinon loads at Ulatis Creek site during storms

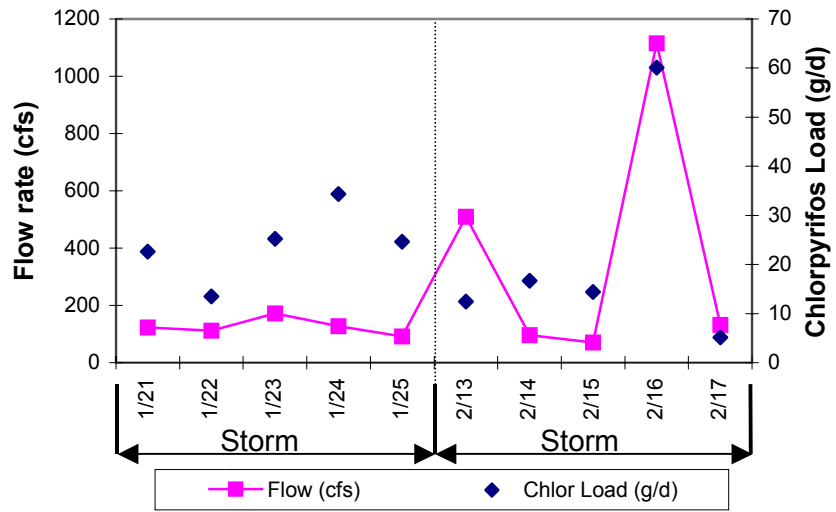


Figure 16. Flow rates and chlorpyrifos loads at Ulatis Creek site during storms

Tables

Table 1. Primary sampling sites and descriptions

Site ID	Site Location	Flow Measure (Y/N)	Type of Waterway	Latitude/ Longitude	Sampling Location
Delt01	Mokelumne River at New Hope Rd Bridge	N	Main River to the Delta	38° 14' 13.30"/ -121° 25' 4.49"	Collected from the bridge
Delt02	Mosher Slough at Mariners Drive	N	Back Slough in the Delta	38° 1' 58.42"/ -121° 21' 1.57"	Collected from the bank near bridge
Delt03	Five Mile Slough at Plymouth Rd	N	Back Slough in the Delta	38° 0' 49.66"/ -121° 21' 6.76"	Collected from the five culverts
Delt04	Calaveras River at Ijams Rd	Y	Tributaries to the Delta	37° 59' 36.41"/ -121° 16' 9.17"	Collected from the bank of the west bridge
Delt05	Mid-Roberts Island Drain	N	Ag. Drain in the Delta	37° 56' 35.15"/ -121° 22' 9.50"	Collected from the platform of the pump station
Delt06	French Camp Slough at S Manthey Rd	N	Back Slough in the Delta	37° 54' 41.86"/ -121° 17' 24.13"	Collected under the bridge
Delt07	Paradise Cut at Paradise Rd	N	Back Slough in the Delta	37° 48' 3.62"/ -121° 22' 1.24"	Collected from the south bridge.
Delt08	Old River at Tracy Road	N	Back Slough in the Delta	37° 48' 16.50"/ -121° 26' 54.57"	Collected under the bridge
Delt09	Marsh Creek at Cypress Rd bridge	Y	Tributary to the Delta	37° 59' 26.55"/ -121° 41' 41.45"	Collected under the bridge
Delt10	Ulatris Creek at Brown Rd	Y	Tributary to the Delta	38° 18' 25.43"/ -121° 47' 33.36"	Collected from the bridge or under the bridge
Delt11	Duck Slough at Five Point	N	Back Slough in the Delta	38° 17' 35.12"/ -121° 38' 35.19"	Collected from the bank near the platform of pump station
Delt12	Steamboat Slough at Hogback Park	N	Back Slough in the Delta	38° 12' 50.85"/ -121° 36' 20.34"	Collected from the west bank of land in the Park
Delt13	Cache Slough at Real McCoy Ferry	N	Back Slough in the Delta	38° 14' 16.26"/ -121° 39' 29.69"	Collected from the bank of Cache Slough, north of the Real McCoy Ferry on Hwy 84, Ryer Island.
Delt14	Sac River at Rio Vista	N	Main River in the Delta	38° 9' 34.64"/ -121° 41' 0.92"	Collected from DWR's dock

Table 1 (continued) Additional sampling sites

Site ID	Site Location	Flow Measure (Y/N)	Type of Waterway	Latitude/ Longitude	Sampling Location
Delt15	Fabian and Bell Canal	N	Canal	37° 49' 8.43"/ -121° 29' 7.63"	Collected from bank on Grimes Rd.
Delt16	Middle River at Tracy Blvd	N	Stream	37° 52' 54.51"/ -121° 27' 18.47"	Collected from downstream (west) side of bridge
Delt17	San Joaquin River at Hwy 4	N	Main River	37° 55' 43.31"/ -121° 19' 37.24"	Collected from bridge walkway
Delt18	San Joaquin River at Antioch Fishing Pier	N	Main River	38° 1' 9.99"/ -121° 44' 57.19"	Collected from the Antioch Fishing Pier
Delt19	Sacramento River near Freeport	N	Main River	38° 27' 23.18"/ -121° 30' 0.58"	Collected from east bank

Table 2. Diazinon and chlorpyrifos concentrations during storms

Storm	Date	Rainfall (inch)	Diazinon (ng/L)				Chlorpyrifos (ng/L)
			Mosher Slough	Five Mile Slough	Marsh Creek	Ulati Creek	Ulati Creek
Storm1	1/21/03	0.37	77	460	66	36	75
Storm1	1/22/03	0.20	100	170	380	96	49
Storm1	1/23/03	0.09	100	200	100	380	60
Storm1	1/24/03	0.00	89	71	39	98	110
Storm1	1/25/03	0.00	74	62	28	130	110
Storm2	2/13/03	0.03	220	36	190	62	10
Storm2	2/14/03	0.00	180	32	ND	90	71
Storm2	2/15/03	0.34	140	42	150	89	83
Storm2	2/16/03	0.33	L	39	160	42	22
Storm2	2/17/03	0.00	130	65	37	ND	15

ND = not detectable (below LOQ or LOD)

L = sample lost

Table 3. Calculated maximum instantaneous loads (g/day)

	Mokelumne River		Calaveras River		Marsh Creek		Ulati Creek	
	Diazinon	Chlorpy.	Diazinon	Chlorpy.	Diazinon	Chlorpy.	Diazinon	Chlorpy.
Maximum Load (g/day)	5.45	ND	1.82	0.20	8.39	0.22	159.90	60.10

Table 4. Summary of field spike sample recovery

Parameter	Diazinon	Chlorpyrifos	Bifenthrin	Chlorpyrifos Methyl (Surrogate)
Number of Analyses	23	21	27	27
Maximum	157%	121%	96%	100%
Minimum	43%	26%	29%	52%
Average	76%	73%	56%	76%
Median	71%	74%	57%	76%
Standard deviation	29%	18%	17%	12%

Table 5. Summary of lab spike sample recovery

Parameter	Diazinon	Chlorpyrifos	Bifenthrin	Chlorpyrifos Methyl (Surrogate)
Number of analyses	73	78	71	79
Maximum	164%	105%	119%	94%
Minimum	47%	46%	59%	48%
Average	83%	72%	84%	76%
Median	75%	72%	83%	76%
Standard deviation	25%	12%	13%	10%

Table 6. Relative percent difference (RPD) of duplicates

Date	Diazinon	Chlorpyrifos
8/20/02	ND	23%
12/23/02	ND	3%
1/22/03	6%	ND
1/22/03	2%	ND
3/11/03	ND	1%

Table 7. Summary of surrogate analysis percent recovery for all samples

Parameter	Lab QC	Field QC	Primary Samples
Maximum	101%	100%	110%
Minimum	45%	52%	18%
Average	75%	79%	80%
Median	76%	80%	81%
Standard Deviation	10%	9%	11%
Number of samples <50%	1	0	7

Table 8. Average monthly diazinon use from 1993 to 2002

Month	Diazinon Use	Major Crops
January	11.9%	Apricot, almond, apple, peach
February	10.0%	Apple, apricot, cherry, peach
March	10.5%	Apple, pear, tomato
April	5.6%	Tomato, apple, pear, cherry
May	14.6%	Apricot, tomato, carrots
June	6.6%	Corn, walnut, carrots
July	4.6%	Corn, tomato, walnut
August	7.1%	Tomato, corn,
September	3.5%	Pear, tomato
October	20.3%	Pear
November	4.7%	Pear
December	0.6%	Peach, cherry, apricot

Table 9. Average monthly chlorpyrifos use from 1993 to 2002

Month	Chlorpyrifos Use	Major Crops
January	0.5%	Apple, peach, alfalfa
February	1.5%	Alfalfa, apple
March	31.2%	Alfalfa
April	4.5%	Alfalfa, walnut, apple, sugarbeet
May	6.6%	Walnut, almond, sugarbeet, apple
June	8.2%	Walnut, corn, sugarbeet, alfalfa
July	15.6%	Sugarbeet, walnut, nursery, alfalfa
August	17.2%	Alfalfa, sugarbeet, asparagus, walnut
September	10.9%	Alfalfa, sugarbeet, asparagus
October	3.3%	Asparagus, sugarbeet, alfalfa
November	0.3%	Asparagus, alfalfa
December	0.3%	Nursery, asparagus, sugarbeet

Appendix

Table A1. Diazinon and chlorpyrifos concentrations.

Site ID	Date Collected	Time Collected	Diazinon (ng/L)	Chlorpyrifos (ng/L)	Chlorpyrifos Methyl (Surrogate)
Mokelumne River	6/18/02	7:25	ND	ND	96%
Mokelumne River	7/23/02	7:50	ND	ND	89%
Mokelumne River	8/20/02	11:20	ND	ND	95%
Mokelumne River	9/18/02	11:20	ND	ND	92%
Mokelumne River	10/24/02	14:30	ND	ND	85%
Mokelumne River	11/21/02	12:15	ND	ND	81%
Mokelumne River	12/23/02	11:50	28	31	83%
Mokelumne River	1/21/03	18:20	ND	ND	76%
Mokelumne River	1/22/03	16:10	ND	ND	78%
Mokelumne River	1/23/03	8:10	ND	ND	87%
Mokelumne River	1/24/03	17:30	ND	ND	83%
Mokelumne River	1/25/03	15:00	ND	ND	81%
Mokelumne River	2/13/03	15:20	ND	ND	92%
Mokelumne River	2/14/03	14:10	ND	ND	82%
Mokelumne River	2/15/03	14:50	ND	ND	82%
Mokelumne River	2/16/03	15:50	ND	ND	91%
Mokelumne River	2/17/03	14:40	ND	ND	91%
Mokelumne River	3/4/03	9:10	ND	ND	73%
Mokelumne River	3/12/03	15:50	ND	ND	78%
Mokelumne River	3/19/03	13:30	ND	ND	77%
Mokelumne River	3/26/03	11:20	ND	ND	78%
Mokelumne River	4/2/03	10:50	ND	ND	71%
Mokelumne River	4/15/03	11:30	ND	ND	77%
Mokelumne River	4/29/03	7:50	ND	ND	72%
Mokelumne River	5/13/03	12:50	ND	ND	85%
Mosher Slough	6/18/02	8:10	22	ND	94%
Mosher Slough	7/23/02	8:40	ND	ND	87%
Mosher Slough	8/20/02	10:35	20	ND	86%
Mosher Slough	9/18/02	10:35	24	ND	98%
Mosher Slough	10/24/02	12:55	35	ND	80%
Mosher Slough	11/21/02	11:35	130	ND	86%
Mosher Slough	12/23/02	11:15	130	40	84%
Mosher Slough	1/21/03	17:50	77	ND	64%
Mosher Slough	1/22/03	11:00	100	ND	80%
Mosher Slough	1/23/03	9:20	100	ND	83%
Mosher Slough	1/24/03	17:00	89	ND	56%
Mosher Slough	1/25/03	14:40	74	ND	62%
Mosher Slough	2/13/03	14:50	220	ND	94%
Mosher Slough	2/14/03	13:40	180	ND	83%
Mosher Slough	2/15/03	14:20	140	ND	85%
Mosher Slough	2/17/03	14:10	130	ND	88%
Mosher Slough	3/3/03	14:50	75	ND	83%
Mosher Slough	3/11/03	10:10	44	ND	84%
Mosher Slough	3/14/03	8:20	40	39	74%
Mosher Slough	3/18/03	14:00	140	27	88%
Mosher Slough	3/21/03	11:10	98	21	72%

Table A1 (continued). Diazinon and chlorpyrifos concentrations.

Site ID	Date Collected	Time Collected	Diazinon (ng/L)	Chlorpyrifos (ng/L)	Chlorpyrifos Methyl (Surrogate)
Mosher Slough	3/25/03	9:30	85	25	73%
Mosher Slough	3/28/03	10:50	66	15	72%
Mosher Slough	4/1/03	11:50	200	12	90%
Mosher Slough	4/4/03	10:40	140	ND	73%
Mosher Slough	4/14/03	11:30	120	ND	76%
Mosher Slough	4/28/03	10:00	110	ND	76%
Mosher Slough	5/12/03	8:20	40	ND	86%
Five Mile Slough	6/18/02	8:30	ND	ND	102%
Five Mile Slough	7/23/02	8:50	ND	ND	97%
Five Mile Slough	8/20/02	10:50	ND	ND	99%
Five Mile Slough	9/18/02	10:45	ND	ND	94%
Five Mile Slough	10/24/02	13:10	ND	ND	83%
Five Mile Slough	11/21/02	11:50	ND	ND	90%
Five Mile Slough	12/23/02	11:20	76	30	85%
Five Mile Slough	1/21/03	17:00	460	14	62%
Five Mile Slough	1/22/03	10:10	170	ND	79%
Five Mile Slough	1/23/03	9:30	200	ND	76%
Five Mile Slough	1/24/03	16:40	71	ND	69%
Five Mile Slough	1/25/03	14:30	62	ND	55%
Five Mile Slough	2/13/03	14:30	36	ND	61%
Five Mile Slough	2/14/03	13:20	32	ND	53%
Five Mile Slough	2/15/03	14:00	42	ND	68%
Five Mile Slough	2/16/03	15:10	39	ND	50%
Five Mile Slough	2/17/03	14:00	65	ND	86%
Five Mile Slough	3/3/03	14:40	21	ND	81%
Five Mile Slough	3/11/03	10:00	ND	ND	75%
Five Mile Slough	3/14/03	8:30	ND	ND	52%
Five Mile Slough	3/18/03	14:20	64	20	88%
Five Mile Slough	3/21/03	11:30	60	14	88%
Five Mile Slough	3/25/03	10:00	35	12	74%
Five Mile Slough	3/28/03	11:10	27	ND	68%
Five Mile Slough	4/1/03	12:10	360	ND	75%
Five Mile Slough	4/4/03	11:00	130	ND	72%
Five Mile Slough	4/14/03	11:40	65	ND	78%
Five Mile Slough	4/28/03	10:20	29	ND	78%
Five Mile Slough	5/12/03	8:50	ND	ND	81%
Calaveras River	6/18/02	8:50	ND	ND	110%
Calaveras River	7/23/02	9:20	ND	ND	76%
Calaveras River	8/20/02	8:40	35	ND	97%
Calaveras River	9/17/02	8:40	110	ND	93%
Calaveras River	12/19/02	8:50	ND	ND	79%
Calaveras River	1/22/03	14:50	54	ND	78%
Calaveras River	2/18/03	14:10	220	ND	78%
Calaveras River	3/3/03	14:10	150	ND	83%
Calaveras River	3/18/03	14:50	52	16	92%
Calaveras River	3/25/03	10:30	350	ND	69%

Table A1 (continued). Diazinon and chlorpyrifos concentrations.

Site ID	Date Collected	Time Collected	Diazinon (ng/L)	Chlorpyrifos (ng/L)	Chlorpyrifos Methyl (Surrogate)
Calaveras River	4/8/03	10:30	170	ND	72%
Calaveras River	4/14/03	12:10	130	ND	80%
Calaveras River	4/22/03	11:20	42	ND	69%
Calaveras River	4/28/03	11:00	76	ND	76%
Calaveras River	5/6/03	9:30	29	ND	88%
Calaveras River	5/12/03	9:10	NW	NW	NW
Calaveras River	5/19/03	11:20	49	ND	80%
Mid-Roberts Is. Drain	6/18/02	9:40	ND	ND	102%
Mid-Roberts Is. Drain	7/23/02	10:10	ND	10	89%
Mid-Roberts Is. Drain	8/20/02	9:40	ND	ND	86%
Mid-Roberts Is. Drain	9/17/02	9:00	ND	ND	88%
Mid-Roberts Is. Drain	10/24/02	13:30	ND	ND	84%
Mid-Roberts Is. Drain	11/19/02	8:10	ND	ND	80%
Mid-Roberts Is. Drain	12/19/02	9:20	ND	23	80%
Mid-Roberts Is. Drain	1/22/03	11:30	28	ND	83%
Mid-Roberts Is. Drain	2/18/03	15:00	ND	ND	70%
Mid-Roberts Is. Drain	3/3/03	12:40	ND	ND	82%
Mid-Roberts Is. Drain	3/11/03	9:00	ND	24	74%
Mid-Roberts Is. Drain	3/14/03	8:50	ND	360	66%
Mid-Roberts Is. Drain	3/18/03	15:40	ND	60	83%
Mid-Roberts Is. Drain	3/21/03	12:10	ND	35	72%
Mid-Roberts Is. Drain	3/25/03	12:00	ND	31	72%
Mid-Roberts Is. Drain	3/28/03	11:30	ND	16	78%
Mid-Roberts Is. Drain	4/1/03	13:20	ND	19	81%
Mid-Roberts Is. Drain	4/4/03	11:30	ND	22	77%
Mid-Roberts Is. Drain	4/8/03	11:10	ND	49	73%
Mid-Roberts Is. Drain	4/14/03	12:50	ND	13	73%
Mid-Roberts Is. Drain	4/22/03	12:00	ND	ND	65%
Mid-Roberts Is. Drain	4/28/03	11:40	ND	ND	75%
Mid-Roberts Is. Drain	5/6/03	10:00	ND	72	88%
Mid-Roberts Is. Drain	5/12/03	9:50	ND	12	83%
Mid-Roberts Is. Drain	5/19/03	12:00	ND	ND	89%
French Camp Slough	6/18/02	10:20	ND	ND	102%
French Camp Slough	7/23/02	10:30	ND	ND	100%
French Camp Slough	8/20/02	10:10	ND	ND	91%
French Camp Slough	9/17/02	9:30	ND	ND	94%
French Camp Slough	10/24/02	14:00	ND	ND	86%
French Camp Slough	11/19/02	8:30	77	ND	90%
French Camp Slough	12/19/02	9:40	ND	ND	80%
French Camp Slough	1/22/03	12:00	64	ND	66%
French Camp Slough	2/18/03	12:00	160	ND	75%
French Camp Slough	3/3/03	12:20	58	ND	84%
French Camp Slough	3/11/03	8:40	ND	ND	79%
French Camp Slough	3/14/03	9:10	ND	62	80%
French Camp Slough	3/18/03	16:50	30	13	82%
French Camp Slough	3/21/03	12:30	ND	14	84%

Table A1 (continued). Diazinon and chlorpyrifos concentrations.

Site ID	Date Collected	Time Collected	Diazinon (ng/L)	Chlorpyrifos (ng/L)	Chlorpyrifos Methyl (Surrogate)
French Camp Slough	3/25/03	11:30	ND	ND	73%
French Camp Slough	3/28/03	12:00	ND	ND	72%
French Camp Slough	4/1/03	13:50	ND	ND	81%
French Camp Slough	4/4/03	11:50	ND	ND	71%
French Camp Slough	4/8/03	11:30	ND	ND	71%
French Camp Slough	4/14/03	13:10	ND	ND	74%
French Camp Slough	4/22/03	12:20	ND	ND	59%
French Camp Slough	4/28/03	12:10	ND	ND	73%
French Camp Slough	5/6/03	10:30	ND	ND	83%
French Camp Slough	5/12/03	10:15	ND	ND	67%
French Camp Slough	5/19/03	12:40	ND	ND	88%
Paradise Cut	6/18/02	10:50	ND	ND	102%
Paradise Cut	7/23/02	11:00	ND	ND	91%
Paradise Cut	8/20/02	10:40	ND	11	97%
Paradise Cut	9/17/02	10:00	ND	20	97%
Paradise Cut	10/22/02	9:55	ND	ND	70%
Paradise Cut	11/19/02	9:05	ND	ND	88%
Paradise Cut	12/19/02	10:05	ND	ND	84%
Paradise Cut	1/22/03	13:40	ND	ND	63%
Paradise Cut	2/18/03	11:10	ND	ND	67%
Paradise Cut	3/3/03	11:50	ND	ND	83%
Paradise Cut	3/12/03	14:50	ND	11	77%
Paradise Cut	3/19/03	16:20	ND	ND	89%
Paradise Cut	3/26/03	10:20	ND	ND	77%
Paradise Cut	4/2/03	14:30	ND	ND	75%
Paradise Cut	4/8/03	12:00	ND	ND	57%
Paradise Cut	4/14/03	13:40	ND	ND	73%
Paradise Cut	4/22/03	12:50	ND	ND	59%
Paradise Cut	4/28/03	12:30	ND	ND	72%
Paradise Cut	5/6/03	11:00	ND	ND	85%
Paradise Cut	5/12/03	11:00	ND	ND	77%
Paradise Cut	5/19/03	13:30	ND	ND	81%
Old River	6/18/02	11:30	L	L	L
Old River	7/23/02	11:30	ND	ND	94%
Old River	8/20/02	11:10	ND	ND	96%
Old River	9/17/02	10:30	ND	ND	97%
Old River	9/17/02	11:40	28	ND	100%
Old River	10/22/02	10:30	ND	ND	58%
Old River	11/19/02	9:30	ND	ND	81%
Old River	12/19/02	10:30	ND	ND	81%
Old River	1/22/03	14:20	ND	ND	79%
Old River	2/18/03	10:50	ND	ND	83%
Old River	3/3/03	11:20	ND	ND	77%
Old River	3/12/03	14:30	ND	37	73%
Old River	3/19/03	15:50	ND	ND	84%
Old River	3/26/03	10:00	ND	ND	74%

Table A1 (continued). Diazinon and chlorpyrifos concentrations.

Site ID	Date Collected	Time Collected	Diazinon (ng/L)	Chlorpyrifos (ng/L)	Chlorpyrifos Methyl (Surrogate)
Old River	4/2/03	15:10	ND	ND	79%
Old River	4/8/03	12:30	ND	ND	73%
Old River	4/14/03	14:50	ND	ND	67%
Old River	4/22/03	14:30	ND	ND	56%
Old River	4/28/03	13:00	ND	ND	72%
Old River	5/6/03	12:00	ND	ND	85%
Old River	5/12/03	11:50	ND	ND	80%
Old River	5/19/03	14:00	ND	ND	83%
Marsh Creek	6/18/02	12:30	44	ND	109%
Marsh Creek	7/23/02	12:20	ND	ND	97%
Marsh Creek	8/20/02	12:10	ND	ND	98%
Marsh Creek	10/22/02	11:30	ND	ND	74%
Marsh Creek	11/19/02	10:30	ND	ND	77%
Marsh Creek	12/19/02	11:10	ND	24	82%
Marsh Creek	1/21/03	15:30	66	ND	73%
Marsh Creek	1/22/03	12:50	380	ND	82%
Marsh Creek	1/23/03	10:30	100	ND	83%
Marsh Creek	1/24/03	14:50	39	ND	84%
Marsh Creek	1/25/03	11:30	28	ND	69%
Marsh Creek	2/13/03	13:00	190	ND	79%
Marsh Creek	2/14/03	12:00	ND	ND	79%
Marsh Creek	2/15/03	11:40	150	ND	68%
Marsh Creek	2/16/03	13:30	160	ND	87%
Marsh Creek	2/17/03	11:20	37	ND	77%
Marsh Creek	3/4/03	11:20	ND	ND	84%
Marsh Creek	3/11/03	12:40	ND	ND	88%
Marsh Creek	3/13/03	9:50	ND	ND	84%
Marsh Creek	3/17/03	13:10	54	ND	60%
Marsh Creek	3/20/03	13:40	ND	ND	87%
Marsh Creek	3/24/03	12:10	92	15	93%
Marsh Creek	3/27/03	12:20	ND	ND	82%
Marsh Creek	3/31/03	13:00	27	ND	91%
Marsh Creek	4/3/03	12:30	ND	ND	80%
Marsh Creek	4/8/03	13:20	37	ND	72%
Marsh Creek	4/14/03	15:40	ND	ND	75%
Marsh Creek	4/22/03	15:20	ND	ND	61%
Marsh Creek	4/28/03	13:40	ND	ND	76%
Marsh Creek	5/6/03	12:50	ND	ND	88%
Marsh Creek	5/13/03	11:20	ND	ND	88%
Marsh Creek	5/19/03	15:10	ND	ND	92%
Ulatis Creek	6/18/02	14:00	ND	ND	101%
Ulatis Creek	7/23/02	14:25	ND	ND	89%
Ulatis Creek	8/20/02	14:40	ND	ND	81%
Ulatis Creek	9/17/02	13:50	ND	ND	92%
Ulatis Creek	10/22/02	13:30	ND	ND	62%
Ulatis Creek	11/19/02	12:30	ND	ND	86%

Table A1 (continued). Diazinon and chlorpyrifos concentrations.

Site ID	Date Collected	Time Collected	Diazinon (ng/L)	Chlorpyrifos (ng/L)	Chlorpyrifos Methyl (Surrogate)
Ulatis Creek	12/19/02	12:35	ND	32	82%
Ulatis Creek	1/21/03	9:30	36	75	80%
Ulatis Creek	1/22/03	8:00	96	49	86%
Ulatis Creek	1/23/03	15:10	380	60	67%
Ulatis Creek	1/24/03	9:00	98	110	71%
Ulatis Creek	1/25/03	7:50	130	110	71%
Ulatis Creek	2/13/03	7:50	62	10	74%
Ulatis Creek	2/14/03	7:50	83	73	47%
Ulatis Creek	2/14/03	7:50	97	69	47%
Ulatis Creek	2/15/03	8:20	89	83	91%
Ulatis Creek	2/16/03	8:10	42	22	81%
Ulatis Creek	2/17/03	8:00	ND	16	18%
Ulatis Creek	2/17/03	8:00	ND	15	18%
Ulatis Creek	2/18/03	9:00	ND	ND	82%
Ulatis Creek	3/4/03	15:50	ND	ND	87%
Ulatis Creek	3/11/03	10:50	ND	ND	83%
Ulatis Creek	3/13/03	8:10	ND	ND	81%
Ulatis Creek	3/17/03	15:00	52	ND	58%
Ulatis Creek	3/20/03	16:30	ND	ND	75%
Ulatis Creek	3/24/03	14:20	ND	ND	73%
Ulatis Creek	3/27/03	14:10	ND	ND	82%
Ulatis Creek	3/31/03	15:10	ND	ND	86%
Ulatis Creek	4/3/03	14:20	ND	ND	70%
Ulatis Creek	4/8/03	14:50	ND	ND	73%
Ulatis Creek	4/15/03	15:40	350	12	82%
Ulatis Creek	4/22/03	17:10	ND	ND	56%
Ulatis Creek	4/29/03	12:30	30	ND	74%
Ulatis Creek	5/6/03	14:20	46	ND	86%
Ulatis Creek	5/13/03	7:40	ND	ND	84%
Ulatis Creek	5/19/03	17:00	ND	ND	89%
Duck Slough	6/24/02	11:00	ND	ND	72%
Duck Slough	7/24/02	8:10	ND	ND	88%
Duck Slough	8/21/02	8:05	ND	ND	94%
Duck Slough	9/18/02	8:30	ND	ND	92%
Duck Slough	10/24/02	10:15	ND	ND	54%
Duck Slough	11/21/02	9:10	ND	ND	83%
Duck Slough	12/23/02	9:20	ND	24	80%
Duck Slough	1/21/03	12:50	30	ND	77%
Duck Slough	1/22/03	10:40	25	ND	90%
Duck Slough	1/23/03	13:50	58	ND	72%
Duck Slough	2/13/03	11:40	ND	ND	92%
Duck Slough	2/14/03	10:20	ND	ND	80%
Duck Slough	2/15/03	10:20	ND	ND	85%
Duck Slough	2/16/03	12:00	ND	12	85%
Duck Slough	2/17/03	10:10	ND	ND	80%
Duck Slough	3/4/03	14:10	ND	ND	81%

Table A1 (continued). Diazinon and chlorpyrifos concentrations.

Site ID	Date Collected	Time Collected	Diazinon (ng/L)	Chlorpyrifos (ng/L)	Chlorpyrifos Methyl (Surrogate)
Duck Slough	3/11/03	15:30	ND	ND	80%
Duck Slough	3/13/03	11:30	ND	ND	70%
Duck Slough	3/17/03	10:20	ND	ND	80%
Duck Slough	3/20/03	10:40	ND	ND	87%
Duck Slough	3/24/03	10:50	ND	ND	78%
Duck Slough	3/27/03	9:40	ND	ND	81%
Duck Slough	3/31/03	10:30	ND	ND	83%
Duck Slough	4/3/03	9:50	ND	ND	85%
Duck Slough	4/15/03	13:00	ND	ND	76%
Duck Slough	4/29/03	10:30	ND	ND	72%
Duck Slough	5/13/03	9:40	ND	ND	83%
Steamboat Slough	7/24/02	9:50	ND	ND	98%
Steamboat Slough	8/20/02	8:35	ND	ND	97%
Steamboat Slough	9/18/02	9:00	ND	ND	96%
Steamboat Slough	10/24/02	10:45	ND	ND	88%
Steamboat Slough	11/21/02	10:10	ND	ND	83%
Steamboat Slough	12/23/02	9:45	ND	33	81%
Steamboat Slough	1/21/03	13:20	ND	ND	64%
Steamboat Slough	1/22/03	11:10	ND	ND	76%
Steamboat Slough	1/23/03	13:10	ND	ND	84%
Steamboat Slough	1/24/03	12:30	ND	ND	81%
Steamboat Slough	1/25/03	10:40	ND	ND	57%
Steamboat Slough	2/13/03	12:00	ND	ND	90%
Steamboat Slough	2/14/03	10:50	ND	ND	81%
Steamboat Slough	2/15/03	10:40	ND	ND	75%
Steamboat Slough	2/16/03	12:30	ND	ND	84%
Steamboat Slough	2/17/03	10:30	ND	ND	77%
Steamboat Slough	3/4/03	13:40	ND	ND	82%
Steamboat Slough	3/11/03	15:00	ND	ND	84%
Steamboat Slough	3/13/03	11:50	ND	ND	65%
Steamboat Slough	3/17/03	11:00	ND	ND	82%
Steamboat Slough	3/20/03	11:10	ND	ND	85%
Steamboat Slough	3/24/03	11:20	ND	ND	83%
Steamboat Slough	3/27/03	10:20	ND	ND	81%
Steamboat Slough	3/31/03	11:00	ND	ND	65%
Steamboat Slough	4/3/03	10:20	ND	ND	84%
Steamboat Slough	4/15/03	13:30	ND	ND	80%
Steamboat Slough	4/29/03	10:10	ND	ND	69%
Steamboat Slough	5/13/03	10:30	ND	ND	86%
Cache Slough	7/24/02	10:40	ND	ND	100%
Cache Slough	8/20/02	9:05	ND	ND	92%
Cache Slough	9/18/02	9:25	ND	ND	90%
Cache Slough	10/24/02	11:15	ND	ND	87%
Cache Slough	11/21/02	10:40	ND	ND	83%
Cache Slough	12/23/02	10:15	ND	36	81%
Cache Slough	1/21/03	12:30	ND	ND	67%

Table A1 (continued). Diazinon and chlorpyrifos concentrations.

Site ID	Date Collected	Time Collected	Diazinon (ng/L)	Chlorpyrifos (ng/L)	Chlorpyrifos Methyl (Surrogate)
Cache Slough	1/22/03	10:10	ND	ND	88%
Cache Slough	1/23/03	14:10	ND	ND	66%
Cache Slough	1/24/03	11:20	ND	ND	82%
Cache Slough	1/25/03	10:20	ND	ND	53%
Cache Slough	1/26/03	10:10	ND	ND	82%
Cache Slough	2/13/03	11:10	ND	ND	86%
Cache Slough	2/14/03	9:50	ND	ND	90%
Cache Slough	2/15/03	9:50	ND	ND	85%
Cache Slough	2/16/03	11:40	ND	ND	92%
Cache Slough	2/17/03	9:50	ND	ND	68%
Cache Slough	2/18/03	9:30	ND	ND	85%
Cache Slough	3/4/03	14:40	ND	ND	83%
Cache Slough	3/11/03	16:00	ND	ND	81%
Cache Slough	3/13/03	11:00	ND	ND	74%
Cache Slough	3/17/03	11:40	ND	ND	84%
Cache Slough	3/20/03	11:40	ND	ND	89%
Cache Slough	3/24/03	10:20	ND	ND	75%
Cache Slough	3/27/03	10:50	ND	ND	77%
Cache Slough	3/31/03	11:30	ND	ND	80%
Cache Slough	4/3/03	10:50	ND	ND	78%
Cache Slough	4/15/03	14:00	ND	ND	75%
Cache Slough	4/29/03	10:50	ND	ND	72%
Cache Slough	5/13/03	9:20	ND	ND	80%
Sac River at Rio Vista	7/24/02	10:55	ND	ND	97%
Sac River at Rio Vista	8/20/02	9:40	ND	ND	91%
Sac River at Rio Vista	9/18/02	9:50	ND	ND	98%
Sac River at Rio Vista	10/24/02	12:15	ND	ND	83%
Sac River at Rio Vista	11/21/02	10:50	ND	ND	82%
Sac River at Rio Vista	12/19/02	11:50	40	30	83%
Sac River at Rio Vista	12/23/02	10:30	ND	36	84%
Sac River at Rio Vista	1/21/03	11:40	ND	ND	68%
Sac River at Rio Vista	1/22/03	9:40	ND	ND	78%
Sac River at Rio Vista	1/23/03	14:30	ND	ND	71%
Sac River at Rio Vista	1/24/03	10:50	ND	ND	68%
Sac River at Rio Vista	1/25/03	9:30	ND	ND	78%
Sac River at Rio Vista	1/26/03	9:40	ND	ND	47%
Sac River at Rio Vista	1/26/03	9:40	ND	ND	48%
Sac River at Rio Vista	2/13/03	10:50	ND	ND	88%
Sac River at Rio Vista	2/14/03	9:20	ND	ND	47%
Sac River at Rio Vista	2/15/03	9:20	ND	ND	84%
Sac River at Rio Vista	2/16/03	11:10	ND	ND	92%
Sac River at Rio Vista	2/17/03	9:20	ND	ND	80%
Sac River at Rio Vista	2/19/03	8:00	ND	ND	83%
Sac River at Rio Vista	3/4/03	15:00	ND	ND	85%
Sac River at Rio Vista	3/11/03	16:20	ND	ND	77%
Sac River at Rio Vista	3/13/03	10:40	ND	ND	73%

Table A1 (continued). Diazinon and chlorpyrifos concentrations.

Site ID	Date Collected	Time Collected	Diazinon (ng/L)	Chlorpyrifos (ng/L)	Chlorpyrifos Methyl (Surrogate)
Sac River at Rio Vista	3/17/03	12:00	ND	ND	81%
Sac River at Rio Vista	3/20/03	12:10	ND	ND	90%
Sac River at Rio Vista	3/24/03	9:40	ND	ND	80%
Sac River at Rio Vista	3/27/03	11:10	ND	ND	81%
Sac River at Rio Vista	3/31/03	11:50	ND	ND	75%
Sac River at Rio Vista	4/3/03	11:20	ND	ND	83%
Sac River at Rio Vista	4/15/03	14:20	ND	ND	78%
Sac River at Rio Vista	4/29/03	11:30	ND	ND	67%
Sac River at Rio Vista	5/13/03	8:50	ND	ND	88%
Fabian and Bell Canal	3/12/03	14:20	ND	15	75%
Fabian and Bell Canal	3/19/03	15:30	ND	ND	87%
Fabian and Bell Canal	3/26/03	9:50	ND	ND	79%
Fabian and Bell Canal	4/2/03	15:30	ND	ND	76%
Middle River	3/12/03	13:50	ND	14	78%
Middle River	3/19/03	14:50	ND	14	84%
Middle River	3/26/03	9:30	ND	ND	80%
Middle River	4/2/03	16:00	ND	ND	74%
San Joaquin River at Hwy4	3/11/03	7:50	ND	12	74%
San Joaquin River at Hwy4	3/18/03	16:00	ND	16	84%
San Joaquin River at Hwy4	3/25/03	12:20	ND	ND	79%
San Joaquin River at Hwy4	4/1/03	14:10	ND	ND	81%
San Joaquin at Antioch	3/13/03	9:10	ND	ND	83%
San Joaquin at Antioch	3/20/03	15:10	ND	ND	80%
San Joaquin at Antioch	3/27/03	11:50	ND	ND	76%
San Joaquin at Antioch	4/3/03	13:20	ND	ND	61%
Sac River nr Freeport	3/12/03	17:30	ND	ND	69%
Sac River nr Freeport	3/19/03	12:50	ND	ND	82%
Sac River nr Freeport	3/26/03	12:00	ND	ND	73%
Sac River nr Freeport	4/2/03	17:20	ND	ND	82%

*ND = none detected or below LOQ

NW = no water

L = sample lost

Table A2. Pesticide results (excluding diazinon and chlorpyrifos).

(Concentrations are in units of µg/L. ND: Not detected. BQL: the concentrations were above the detection limit but below the quantification level, so the values were estimated. Every sample was also analyzed for propargite, 1-cyhalothrin, cyfluthrin, cypermethrin, and esfenvalerate, which were not present at detectable levels).

Site ID	Date Collected	Time	EPTC (Eptam)	Simazine	Disulfoton	Carbaryl	Metolachlor	Cyanazine	Dacthal (DCFA)	Methidathion	Bifenthrin	Azinphos methyl
Delt01	6/18/02	7:25	ND	BQL (0.012 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt01	7/23/02	7:50	ND	BQL (0.009 J)	ND	ND	BQL (0.011 J)	ND	ND	ND	ND	ND
Delt01	8/20/02	11:20	ND	ND	ND	ND	ND	ND	ND	ND	0.084	ND
Delt01	9/18/02	11:20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Delt01	10/24/02	14:30	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Delt01	11/21/02	12:15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Delt01	12/23/02	11:50	ND	BQL (0.11 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt01	1/21/03	18:20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Delt01	1/22/03	16:10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Delt01	1/23/03	8:10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Delt01	1/24/03	17:30	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Delt01	1/25/03	15:00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Delt01	2/13/03	15:20	ND	BQL (0.011 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt01	2/14/03	14:10	ND	BQL (0.016 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt01	2/15/03	14:50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Delt01	2/16/03	15:50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Delt01	2/17/03	14:40	ND	BQL (0.021 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt01	3/4/03	9:10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Delt01	3/12/03	15:50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Delt01	3/19/03	13:30	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Delt01	3/26/03	11:20	ND	BQL (0.009 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt01	4/2/03	10:50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Delt01	4/15/03	11:30	ND	BQL (0.052 J)	ND	0.11	ND	ND	ND	ND	ND	ND
Delt01	4/29/03	7:50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Delt01	5/13/03	12:50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Delt02	6/18/02	8:10	ND	BQL (0.046 J)	ND	ND	BQL (0.007 J)	ND	ND	ND	ND	ND
Delt02	7/23/02	8:40	ND	BQL (0.066 J)	ND	ND	BQL (0.018 J)	ND	ND	ND	ND	ND

Table A2 (continued).

Site ID	Date Collected	Time	EPTC (Eptam)	Simazine	Disulfoton	Carbaryl	Metolachlor	Cyanazine	Dacthal (DCPA)	Methidathion	Bifenthrin	Azinphos methyl
Del02	8/20/02	10:35	ND	BQL (0.007 J)	ND	ND	ND	ND	ND	ND	ND	0.340
Del02	9/18/02	10:35	ND	BQL (0.020 J)	ND	ND	ND	ND	ND	ND	ND	ND
Del02	10/24/02	12:55	ND	BQL (0.006 J)	ND	BQL (0.008 J)	ND	ND	ND	ND	ND	ND
Del02	11/21/02	11:35	ND	BQL (0.031 J)	ND	0.13	ND	ND	ND	ND	ND	ND
Del02	12/23/02	11:15	ND	0.55	ND	BQL (0.015 J)	0.030	ND	ND	ND	ND	ND
Del02	1/21/03	17:50	ND	0.35	ND	BQL (0.009 J)	ND	ND	ND	ND	ND	ND
Del02	1/22/03	11:00	ND	0.42	ND	BQL (0.012 J)	ND	ND	ND	ND	ND	ND
Del02	1/23/03	9:20	ND	0.49	ND	BQL (0.014 J)	BQL (0.007 J)	ND	ND	ND	ND	ND
Del02	1/24/03	17:00	ND	0.24	ND	BQL (0.007 J)	ND	ND	ND	ND	ND	ND
Del02	1/25/03	14:40	ND	0.31	ND	BQL (0.009 J)	ND	ND	ND	ND	ND	ND
Del02	2/13/03	14:50	ND	0.23	ND	0.031	ND	ND	ND	ND	ND	ND
Del02	2/14/03	13:40	ND	BQL (0.18 J)	ND	0.04	ND	ND	ND	BQL (0.012 J)	ND	ND
Del02	2/15/03	14:20	ND	0.21	ND	BQL (0.019 J)	ND	ND	ND	BQL (0.011 J)	ND	ND
Del02	2/17/03	14:10	ND	BQL (0.070 J)	ND	0.1	ND	ND	ND	ND	ND	ND
Del02	3/3/03	14:50	ND	BQL (0.12 J)	ND	BQL (0.014 J)	ND	ND	ND	ND	ND	ND
Del02	3/11/03	10:10	ND	BQL (0.10 J)	ND	ND	ND	ND	ND	ND	ND	ND
Del02	3/14/03	8:20	ND	BQL (0.089 J)	ND	ND	ND	ND	ND	ND	ND	ND
Del02	3/18/03	14:00	ND	BQL (0.055 J)	ND	0.082	BQL (0.007 J)	ND	BQL (0.007 J)	ND	ND	ND
Del02	3/21/03	11:10	ND	BQL (0.068 J)	ND	0.076	ND	ND	ND	ND	ND	ND
Del02	3/25/03	9:30	ND	BQL (0.11 J)	ND	0.032	ND	ND	ND	ND	ND	ND
Del02	3/28/03	10:50	ND	BQL (0.072 J)	ND	0.028	ND	ND	ND	ND	ND	ND
Del02	4/1/03	11:50	ND	BQL (0.099 J)	ND	0.036	BQL (0.007 J)	ND	ND	ND	ND	ND
Del02	4/4/03	10:40	ND	BQL (0.061 J)	ND	0.43	ND	ND	ND	ND	ND	ND
Del02	4/14/03	11:30	ND	BQL (0.042 J)	ND	0.14	0.021	ND	BQL (0.008 J)	ND	ND	ND
Del02	4/28/03	10:00	ND	BQL (0.018 J)	BQL (0.014 J)	0.31	BQL (0.012 J)	ND	ND	ND	ND	ND
Del02	5/12/03	8:20	ND	BQL (0.031 J)	ND	0.087	BQL (0.010 J)	ND	ND	ND	ND	ND
Del02	6/18/02	8:30	ND	0.22	ND	ND	BQL (0.016 J)	ND	ND	ND	ND	ND
Del02	7/23/02	8:50	ND	BQL (0.025 J)	ND	ND	BQL (0.009 J)	ND	ND	ND	ND	ND
Del02	8/20/02	10:50	ND	BQL (0.009 J)	ND	ND	0.026	ND	ND	ND	ND	ND
Del02	9/18/02	10:45	ND	BQL (0.010 J)	ND	ND	BQL (0.016 J)	ND	ND	ND	ND	ND
Del02	10/24/02	13:10	ND	BQL (0.006 J)	ND	ND	ND	ND	ND	ND	ND	ND
Del02	11/21/02	11:50	ND	ND	ND	0.13	ND	ND	ND	ND	ND	ND
Del02	12/23/02	11:20	ND	BQL (0.016 J)	ND	BQL (0.011 J)	ND	ND	ND	ND	ND	ND
Del02	1/21/03	17:00	ND	BQL (0.057 J)	ND	BQL (0.018 J)	ND	ND	ND	ND	0.063 BQL (0.009 J)	ND
Del02	1/22/03	10:10	ND	BQL (0.057 J)	ND	BQL (0.012 J)	ND	ND	ND	BQL (0.015 J)	ND	ND
Del02	1/23/03	9:30	ND	BQL (0.078 J)	ND	BQL (0.014 J)	ND	ND	ND	BQL (0.017 J)	ND	ND
Del02	1/24/03	16:40	ND	BQL (0.013 J)	ND	ND	ND	ND	ND	ND	ND	ND
Del02	1/25/03	14:30	ND	BQL (0.092 J)	ND	ND	ND	ND	ND	ND	ND	ND
Del02	2/13/03	14:30	ND	BQL (0.15 J)	ND	ND	ND	ND	ND	ND	ND	ND
Del02	2/14/03	13:20	ND	BQL (0.14 J)	ND	ND	ND	ND	ND	ND	ND	ND
Del02	2/15/03	14:00	ND	BQL (0.16 J)	ND	ND	ND	ND	ND	ND	ND	ND
Del02	2/16/03	15:10	ND	BQL (0.047 J)	ND	BQL (0.013 J)	ND	ND	ND	ND	ND	ND

Table A2 (continued).

Site ID	Date Collected	Time	EPTC (Eptam)	Simazine	Disulfoton	Carbaryl	Metolachlor	Cyanazine	Daethal (DCPA)	Methidathion	Bifenthrin	Azinphos methyl
Delt03	2/17/03	14:00	ND	BQL (0.093 J)	ND	0.03	ND	ND	ND	ND	ND	ND
Delt03	3/3/03	14:40	ND	BQL (0.14 J)	ND	ND	ND	ND	ND	ND	BQL(0.008 J)	ND
Delt03	3/11/03	10:00	ND	BQL (0.16 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt03	3/14/03	8:30	ND	BQL (0.10 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt03	3/18/03	14:20	ND	BQL (0.048 J)	ND	0.076	ND	ND	ND	ND	ND	ND
Delt03	3/21/03	11:30	ND	BQL (0.072 J)	ND	BQL (0.018 J)	ND	ND	ND	ND	ND	ND
Delt03	3/25/03	10:00	ND	BQL (0.039 J)	ND	BQL (0.012 J)	ND	ND	ND	ND	ND	ND
Delt03	3/28/03	11:10	ND	BQL (0.11 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt03	4/1/03	12:10	ND	BQL (0.12 J)	ND	0.058	ND	ND	ND	ND	ND	ND
Delt03	4/4/03	11:00	ND	BQL (0.071 J)	ND	0.12	ND	ND	ND	ND	ND	ND
Delt03	4/14/03	11:40	ND	BQL (0.066 J)	ND	0.10	BQL (0.013 J)	ND	ND	ND	ND	ND
Delt03	4/28/03	10:20	ND	BQL (0.031 J)	ND	0.092	BQL (0.013 J)	ND	ND	ND	ND	ND
Delt03	5/12/03	8:50	ND	BQL (0.049 J)	ND	ND	0.025	ND	ND	ND	ND	ND
Delt04	6/18/02	8:50	ND	BQL (0.030 J)	ND	ND	0.062	ND	ND	ND	ND	ND
Delt04	7/23/02	9:20	ND	BQL (0.076 J)	ND	ND	0.036	ND	ND	ND	ND	ND
Delt04	8/20/02	8:40	ND	BQL (0.016 J)	ND	ND	0.048	ND	ND	ND	ND	BQL (0.022 J)
Delt04	9/17/02	8:40	ND	BQL (0.005 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt04	12/19/02	8:50	ND	1.23	ND	ND	ND	ND	ND	ND	ND	ND
Delt04	1/22/03	14:50	ND	BQL (0.14 J)	ND	ND	ND	ND	ND	BQL (0.029 J)	ND	ND
Delt04	2/18/03	14:10	ND	0.49	ND	0.036	0.045	ND	BQL (0.007 J)	BQL (0.017 J)	ND	ND
Delt04	3/3/03	14:10	ND	0.23	ND	ND	BQL(0.019 J)	ND	ND	ND	ND	ND
Delt04	3/18/03	14:50	ND	0.43	ND	ND	BQL(0.007 J)	ND	ND	ND	ND	ND
Delt04	3/25/03	10:30	ND	BQL (0.070 J)	ND	0.27	ND	ND	ND	ND	ND	ND
Delt04	4/8/03	10:30	ND	BQL (0.078 J)	ND	0.20	BQL (0.010 J)	ND	ND	ND	ND	ND
Delt04	4/14/03	12:10	ND	BQL (0.076 J)	ND	0.20	0.022	ND	BQL (0.015 J)	ND	ND	ND
Delt04	4/22/03	11:20	ND	BQL (0.062 J)	ND	ND	BQL (0.019 J)	ND	ND	ND	ND	ND
Delt04	4/28/03	11:00	ND	BQL (0.076 J)	ND	0.26	BQL (0.016 J)	ND	ND	ND	ND	ND
Delt04	5/6/03	9:30	ND	BQL (0.038 J)	ND	ND	BQL (0.012 J)	ND	ND	ND	ND	ND
Delt04	5/12/03	9:10	no water									
Delt04	5/19/03	11:20	ND	BQL (0.024 J)	ND	ND	BQL (0.013 J)	ND	ND	ND	ND	ND
Delt05	6/18/02	9:40	ND	BQL (0.086 J)	ND	BQL (0.009 J)	0.140	ND	ND	ND	ND	ND
Delt05	7/23/02	10:10	ND	BQL (0.042 J)	ND	ND	1.8 E (AQL)	ND	ND	ND	ND	ND
Delt05	8/20/02	9:40	ND	BQL (0.022 J)	ND	ND	0.260	ND	ND	ND	ND	ND
Delt05	9/17/02	9:00	ND	BQL (0.008 J)	ND	ND	0.059	ND	ND	ND	ND	ND
Delt05	10/24/02	13:30	BQL (0.025 J)	BQL (0.012 J)	ND	ND	0.040	ND	ND	ND	ND	ND
Delt05	11/19/02	8:10	ND	BQL (0.083 J)	ND	ND	0.056	ND	ND	ND	ND	ND
Delt05	12/19/02	9:20	ND	1.95	ND	ND	0.30	ND	ND	ND	ND	ND
Delt05	1/22/03	11:30	ND	BQL (0.19 J)	ND	ND	0.043	ND	ND	ND	ND	ND
Delt05	2/18/03	15:00	ND	BQL (0.074 J)	ND	ND	0.04	ND	ND	ND	ND	ND
Delt05	3/3/03	12:40	ND	BQL (0.048 J)	ND	ND	0.036	ND	ND	ND	ND	ND
Delt05	3/11/03	9:00	ND	BQL (0.084 J)	ND	ND	0.037	ND	ND	ND	ND	ND

Table A2 (continued).

Site ID	Date Collected	Time	EPTC (Eptam)	Simazine	Disulfoton	Carbaryl	Metolachlor	Cyanazine	Daethal (DCPA)	Methidathion	Bifenthrin	Azinphos methyl
Delt05	3/14/03	8:50	ND	BQL (0.070 J)	ND	ND	0.035	ND	ND	ND	ND	ND
Delt05	3/18/03	15:40	ND	BQL (0.12 J)	ND	ND	2.4	ND	ND	ND	ND	ND
Delt05	3/21/03	12:10	ND	BQL (0.13 J)	ND	ND	0.15	ND	ND	ND	ND	ND
Delt05	3/25/03	12:00	ND	BQL (0.12 J)	ND	ND	1.9	ND	ND	ND	ND	ND
Delt05	3/28/03	11:30	ND	BQL (0.072 J)	ND	ND	0.10	ND	ND	ND	ND	ND
Delt05	4/1/03	13:20	ND	BQL (0.051 J)	ND	ND	0.13	ND	ND	ND	ND	ND
Delt05	4/4/03	11:30	ND	BQL (0.082 J)	ND	ND	1.9	ND	ND	ND	ND	ND
Delt05	4/8/03	11:10	ND	BQL (0.091 J)	ND	ND	0.064	ND	ND	ND	ND	ND
Delt05	4/14/03	12:50	8.8	BQL (0.035 J)	ND	ND	0.54	ND	ND	ND	ND	ND
Delt05	4/22/03	12:00	0.31	BQL (0.029 J)	ND	ND	0.91	ND	ND	ND	ND	ND
Delt05	4/28/03	11:40	2.6	BQL (0.10 J)	ND	ND	0.92	ND	ND	ND	ND	ND
Delt05	5/6/03	10:00	5.8	BQL (0.063 J)	ND	ND	0.27	ND	ND	ND	ND	ND
Delt05	5/12/03	9:50	5.40	BQL (0.041 J)	ND	ND	0.20	ND	ND	ND	ND	ND
Delt05	5/19/03	12:00	1.7	BQL (0.027 J)	ND	ND	0.32	ND	ND	ND	ND	ND
Delt06	6/18/02	10:20	ND	BQL (0.053 J)	ND	ND	BQL (0.011 J)	0.100	ND	ND	ND	ND
Delt06	7/23/02	10:30	ND	BQL (0.035 J)	ND	ND	BQL (0.008 J)	ND	ND	ND	ND	ND
Delt06	8/20/02	10:10	0.069	BQL (0.006 J)	ND	ND	BQL (0.010 J)	ND	ND	ND	ND	ND
Delt06	9/17/02	9:30	ND	BQL (0.005 J)	ND	ND	BQL (0.012 J)	ND	ND	ND	ND	ND
Delt06	10/24/02	14:00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Delt06	11/19/02	8:30	ND	0.58	ND	0.042	BQL (0.011 J)	BQL (0.033 J)	ND	ND	ND	ND
Delt06	12/19/02	9:40	ND	0.58	ND	ND	0.031	ND	ND	ND	ND	ND
Delt06	1/22/03	12:00	ND	BQL (0.032 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt06	2/18/03	12:00	ND	BQL (0.034 J)	ND	BQL (0.012 J)	BQL (0.012 J)	ND	ND	0.031	ND	ND
Delt06	3/3/03	12:20	ND	BQL (0.028 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt06	3/11/03	8:40	ND	BQL (0.084 J)	ND	ND	ND	ND	BQL (0.009 J)	ND	ND	ND
Delt06	3/14/03	9:10	ND	BQL (0.10 J)	ND	ND	ND	ND	ND	BQL (0.019 J)	ND	ND
Delt06	3/18/03	16:50	ND	BQL (0.14 J)	ND	ND	ND	ND	BQL (0.012 J)	ND	ND	ND
Delt06	3/21/03	12:30	ND	BQL (0.028 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt06	3/25/03	11:30	ND	BQL (0.018 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt06	3/28/03	12:00	ND	BQL (0.18 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt06	4/1/03	13:50	ND	BQL (0.057 J)	ND	0.12	ND	ND	ND	ND	ND	ND
Delt06	4/4/03	11:50	ND	BQL (0.033 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt06	4/8/03	11:30	ND	BQL (0.015 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt06	4/14/03	13:10	ND	BQL (0.039 J)	ND	BQL (0.013 J)	ND	ND	ND	ND	ND	ND
Delt06	4/22/03	12:20	ND	BQL (0.015 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt06	4/28/03	12:10	ND	BQL (0.020 J)	ND	BQL (0.019 J)	ND	ND	ND	ND	ND	ND
Delt06	5/6/03	10:30	ND	BQL (0.020 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt06	5/12/03	10:15	ND	BQL (0.006 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt06	5/19/03	12:40	ND	BQL (0.023 J)	ND	ND	BQL (0.012 J)	ND	ND	ND	ND	ND
Delt07	6/18/02	10:50	BQL (0.045 J)	BQL (0.045 J)	ND	ND	1.26	ND	ND	ND	ND	ND
Delt07	7/23/02	11:00	0.440	BQL (0.030 J)	ND	ND	0.430	ND	ND	ND	ND	ND

Table A2 (continued).												
Site ID	Date Collected	Time	EPTC (Eptam)	Simazine	Disulfoton	Carbaryl	Metolachlor	Cyanazine	Daethal (DCPA)	Methidathion	Bifenthrin	Azinphos methyl
Delt07	8/20/02	10:40	BQL (0.023 J)	BQL (0.007 J)	ND	ND	0.180	ND	ND	ND	ND	ND
Delt07	9/17/02	10:00	ND	BQL (0.007 J)	ND	ND	0.11	ND	ND	ND	ND	ND
Delt07	10/22/02	9:55	ND	ND	ND	ND	0.11	ND	ND	ND	ND	ND
Delt07	11/19/02	9:05	ND	BQL (0.006 J)	ND	ND	0.049	ND	ND	ND	ND	ND
Delt07	12/19/02	10:05	ND	BQL (0.016 J)	ND	ND	BQL (0.012 J)	ND	ND	ND	ND	ND
Delt07	1/22/03	13:40	ND	BQL (0.039 J)	ND	ND	BQL (0.0082 J)	ND	ND	ND	ND	ND
Delt07	2/18/03	11:10	ND	BQL (0.012 J)	ND	ND	BQL (0.007 J)	ND	ND	ND	ND	ND
Delt07	3/3/03	11:50	ND	BQL (0.018 J)	ND	ND	BQL (0.008 J)	ND	ND	ND	ND	ND
Delt07	3/12/03	14:50	ND	BQL (0.017 J)	ND	ND	BQL (0.007 J)	ND	ND	ND	ND	ND
Delt07	3/19/03	16:20	ND	BQL (0.014 J)	ND	ND	BQL (0.007 J)	ND	ND	ND	ND	ND
Delt07	3/26/03	10:20	ND	BQL (0.019 J)	ND	ND	BQL (0.012 J)	ND	ND	ND	ND	ND
Delt07	4/2/03	14:30	ND	BQL (0.036 J)	ND	ND	0.022	ND	ND	ND	ND	ND
Delt07	4/8/03	12:00	0.45	BQL (0.022 J)	ND	ND	BQL (0.013 J)	ND	ND	ND	ND	ND
Delt07	4/14/03	13:40	0.18	BQL (0.024 J)	ND	ND	BQL (0.015 J)	ND	ND	ND	ND	ND
Delt07	4/22/03	12:50	ND	BQL (0.015 J)	ND	ND	BQL (0.008 J)	ND	ND	ND	ND	ND
Delt07	4/28/03	12:30	BQL (0.028 J)	BQL (0.014 J)	ND	ND	0.32	ND	ND	ND	ND	ND
Delt07	5/6/03	11:00	0.078	BQL (0.016 J)	ND	ND	0.58	ND	ND	ND	ND	ND
Delt07	5/12/03	11:00	0.86	BQL (0.008 J)	ND	ND	0.53	ND	ND	ND	ND	ND
Delt07	5/19/03	13:30	9.80	BQL (0.015 J)	ND	ND	0.89	ND	ND	ND	ND	ND
Delt08	6/18/02	11:30	ND	BQL (0.083 J)	ND	ND	0.200	ND	ND	ND	ND	ND
Delt08	7/23/02	11:30	0.120	BQL (0.029 J)	ND	ND	0.110	ND	ND	ND	ND	ND
Delt08	8/20/02	11:10	ND	ND	ND	ND	0.038	ND	ND	ND	ND	ND
Delt08	9/17/02	10:30	ND	BQL (0.008 J)	ND	ND	BQL (0.016 J)	ND	ND	ND	ND	ND
Delt08	9/17/02	11:40	ND	1.1	ND	0.36	ND	ND	ND	ND	ND	ND
Delt08	10/22/02	10:30	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Delt08	11/19/02	9:30	ND	BQL (0.041 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt08	12/19/02	10:30	ND	BQL (0.11 J)	ND	ND	BQL (0.015 J)	ND	ND	ND	ND	ND
Delt08	1/22/03	14:20	ND	BQL (0.026 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt08	2/18/03	10:50	ND	BQL (0.012 J)	ND	0.035	ND	ND	ND	ND	ND	ND
Delt08	3/3/03	11:20	BQL (0.048 J)	BQL (0.020 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt08	3/12/03	14:30	ND	BQL (0.024 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt08	3/19/03	15:50	ND	BQL (0.10 J)	ND	ND	BQL (0.010 J)	ND	ND	ND	ND	ND
Delt08	3/26/03	10:00	ND	BQL (0.047 J)	ND	ND	BQL (0.010 J)	ND	ND	ND	ND	ND
Delt08	4/2/03	15:10	ND	BQL (0.031 J)	ND	ND	BQL (0.007 J)	ND	ND	ND	ND	ND
Delt08	4/8/03	12:30	BQL (0.030 J)	BQL (0.023 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt08	4/14/03	14:50	ND	BQL (0.018 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt08	4/22/03	14:30	0.095	BQL (0.013 J)	ND	ND	BQL (0.010 J)	ND	ND	ND	ND	ND
Delt08	4/28/03	13:00	0.37	BQL (0.029 J)	ND	ND	0.028	ND	ND	ND	ND	ND

Table A2 (continued).

Site ID	Date Collected	Time	EPTC (Eptam)	Simazine	Disulfoton	Carbaryl	Metolachlor	Cyanazine	Daethal (DCPA)	Methidathion	Bifenthrin	Azinphos methyl
Delt08	5/6/03	12:00	0.52	BQL (0.016 J)	ND	ND	0.22	ND	ND	ND	ND	ND
Delt08	5/12/03	11:50	0.33	BQL (0.016 J)	ND	ND	0.65	ND	ND	ND	ND	ND
Delt08	5/19/03	14:00	0.52	BQL (0.009 J)	ND	ND	0.22	ND	ND	ND	ND	ND
Delt09	6/18/02	12:30	ND	BQL (0.045 J)	ND	ND	0.690	ND	ND	ND	ND	ND
Delt09	7/23/02	12:20	ND	BQL (0.022 J)	ND	ND	0.038	ND	ND	ND	ND	ND
Delt09	8/20/02	12:10	ND	BQL (0.006 J)	ND	ND	0.025	ND	ND	ND	ND	ND
Delt09	10/22/02	11:30	ND	BQL (0.027 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt09	11/19/02	10:30	ND	BQL (0.019 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt09	12/19/02	11:10	ND	BQL (0.018 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt09	1/21/03	15:30	ND	BQL (0.006 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt09	1/22/03	12:50	ND	BQL (0.010 J)	ND	0.034	ND	ND	ND	ND	ND	ND
Delt09	1/23/03	10:30	ND	BQL (0.008 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt09	1/24/03	14:50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Delt09	1/25/03	11:30	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Delt09	2/13/03	13:00	ND	BQL (0.026 J)	ND	0.034	0.021	ND	ND	ND	BQL (0.008 J)	ND
Delt09	2/14/03	12:00	ND	ND	0.11	ND	BQL (0.017 J)	ND	ND	ND	ND	ND
Delt09	2/15/03	11:40	ND	BQL (0.011 J)	ND	N	ND	ND	ND	ND	ND	ND
Delt09	2/16/03	13:30	ND	BQL (0.014 J)	ND	0.029	BQL (0.013 J)	ND	ND	ND	BQL (0.014 J)	ND
Delt09	2/17/03	11:20	ND	BQL (0.007 J)	ND	BQL (0.008 J)	ND	ND	ND	ND	ND	ND
Delt09	3/4/03	11:20	ND	BQL (0.008 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt09	3/11/03	12:40	ND	BQL (0.005 J)	ND	0.058	ND	ND	ND	ND	ND	ND
Delt09	3/13/03	9:50	ND	BQL (0.006 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt09	3/17/03	13:10	ND	BQL (0.010 J)	ND	0.12	0.31	ND	ND	ND	ND	ND
Delt09	3/20/03	13:40	ND	BQL (0.009 J)	ND	BQL (0.023 J)	BQL (0.019 J)	ND	ND	ND	ND	ND
Delt09	3/24/03	12:10	ND	BQL (0.010 J)	ND	0.34	BQL (0.009 J)	ND	ND	ND	ND	ND
Delt09	3/27/03	12:20	ND	BQL (0.008 J)	ND	0.023	BQL (0.009 J)	ND	ND	ND	ND	ND
Delt09	3/31/03	13:00	ND	BQL (0.010 J)	ND	ND	BQL (0.010 J)	ND	ND	ND	ND	ND
Delt09	4/3/03	12:30	ND	BQL (0.019 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt09	4/8/03	13:20	ND	BQL (0.008 J)	ND	0.056	ND	ND	ND	ND	ND	ND
Delt09	4/14/03	15:40	ND	ND	ND	0.052	BQL (0.015 J)	ND	ND	ND	ND	ND
Delt09	4/22/03	15:20	ND	BQL (0.013 J)	ND	0.023	ND	ND	ND	ND	ND	ND
Delt09	4/28/03	13:40	ND	BQL (0.008 J)	ND	BQL (0.015 J)	0.12	ND	ND	ND	ND	ND
Delt09	5/6/03	12:50	ND	ND	ND	ND	0.046	ND	ND	ND	ND	ND
Delt09	5/13/03	11:20	ND	BQL (0.007 J)	ND	ND	0.056	ND	ND	ND	ND	ND
Delt09	5/19/03	15:10	ND	BQL (0.052 J)	ND	ND	0.23	ND	ND	ND	ND	ND
Delt10	6/18/02	14:00	ND	BQL (0.095 J)	ND	ND	0.065	ND	ND	ND	ND	ND
Delt10	7/23/02	14:25	ND	BQL (0.093 J)	ND	ND	0.067	ND	ND	ND	ND	ND
Delt10	8/20/02	14:40	ND	BQL (0.023 J)	ND	ND	0.040	ND	ND	ND	ND	ND
Delt10	9/17/02	13:50	ND	BQL (0.022 J)	ND	ND	BQL (0.011 J)	ND	ND	ND	ND	ND
Delt10	10/22/02	13:30	ND	BQL (0.024 J)	ND	ND	BQL (0.011 J)	ND	ND	ND	ND	ND
Delt10	11/19/02	12:30	ND	BQL (0.038 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt10	12/19/02	12:35	ND	BQL (0.12 J)	ND	BQL (0.007 J)	BQL (0.008 J)	ND	ND	ND	ND	ND

Table A2 (continued).

Site ID	Date Collected	Time	EPTC (Eptam)	Simazine	Disulfoton	Carbaryl	Metolachlor	Cyanazine	Daethal (DCPA)	Methidathion	Bifenthrin	Azinphos methyl
Delt10	1/21/03	9:30	ND	BQL (0.080 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt10	1/22/03	8:00	ND	0.45	ND	ND	0.024	ND	ND	ND	ND	ND
Delt10	1/23/03	15:10	ND	0.51	ND	ND	0.036	ND	ND	ND	ND	ND
Delt10	1/24/03	9:00	ND	0.35	ND	ND	0.026	ND	ND	ND	ND	ND
Delt10	1/25/03	7:50	ND	0.27	ND	ND	BQL (0.019 J)	ND	ND	ND	ND	ND
Delt10	2/13/03	7:50	ND	0.82	ND	0.035	BQL (0.008 J)	ND	ND	ND	ND	ND
Delt10	2/14/03	7:50	ND	0.62	ND	ND	BQL (0.009 J)	ND	ND	ND	ND	ND
Delt10	2/14/03	7:50	ND	0.64	ND	ND	BQL (0.009 J)	ND	ND	ND	ND	ND
Delt10	2/15/03	8:20	ND	0.89	ND	ND	BQL (0.008 J)	ND	ND	ND	ND	ND
Delt10	2/16/03	8:10	ND	1	ND	0.031	0.05	ND	ND	ND	ND	ND
Delt10	2/17/03	8:00	ND	BQL (0.17 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt10	2/18/03	9:00	ND	BQL (0.007 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt10	3/4/03	15:50	ND	BQL (0.030 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt10	3/11/03	10:50	ND	BQL (0.025 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt10	3/13/03	8:10	ND	BQL (0.022 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt10	3/17/03	15:00	ND	0.59	ND	ND	ND	ND	ND	ND	ND	ND
Delt10	3/20/03	16:30	ND	BQL (0.13 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt10	3/24/03	14:20	ND	BQL (0.052 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt10	3/27/03	14:10	ND	BQL (0.040 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt10	3/31/03	15:10	ND	BQL (0.041 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt10	4/3/03	14:20	ND	BQL (0.056 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt10	4/8/03	14:50	ND	0.21	ND	ND	BQL (0.007 J)	ND	ND	ND	ND	ND
Delt10	4/15/03	15:40	ND	BQL (0.19 J)	ND	0.12	BQL (0.07 J)	ND	ND	ND	ND	ND
Delt10	4/22/03	17:10	ND	BQL (0.056 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt10	4/29/03	12:30	ND	BQL (0.034 J)	ND	BQL (0.007 J)	ND	ND	ND	ND	ND	ND
Delt10	5/6/03	14:20	ND	BQL (0.074 J)	ND	ND	BQL (0.014 J)	ND	ND	ND	ND	ND
Delt10	5/13/03	7:40	ND	BQL (0.039 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt10	5/19/03	17:00	ND	BQL (0.062 J)	ND	ND	0.11	ND	ND	ND	ND	ND
Delt11	6/24/02	11:00	ND	BQL (0.034 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt11	7/24/02	8:10	ND	BQL (0.016 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt11	8/21/02	8:05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Delt11	9/18/02	8:30	ND	ND	ND	ND	BQL (0.015 J)	ND	ND	ND	ND	ND
Delt11	10/24/02	10:15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Delt11	11/21/02	9:10	ND	BQL (0.11 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt11	12/23/02	9:20	ND	2.8	ND	ND	BQL (0.008 J)	ND	ND	ND	ND	ND
Delt11	1/21/03	12:50	ND	0.21	ND	ND	ND	ND	ND	ND	ND	ND
Delt11	1/22/03	10:40	ND	0.31	ND	ND	ND	ND	ND	ND	ND	ND
Delt11	1/23/03	13:50	ND	BQL (0.17 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt11	2/13/03	11:40	ND	BQL (0.068 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt11	2/14/03	10:20	ND	0.2	ND	ND	ND	ND	ND	ND	ND	ND
Delt11	2/15/03	10:20	ND	BQL (0.11 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt11	2/16/03	12:00	ND	BQL (0.17 J)	ND	ND	ND	ND	ND	ND	ND	ND

Table A2 (continued).

Site ID	Date Collected	Time	EPTC (Eptam)	Simazine	Disulfoton	Carbaryl	Metolachlor	Cyanazine	Daethal (DCPA)	Methidathion	Bifenthrin	Azinphos methyl
Delt11	2/17/03	10:10	ND	0.27	ND	ND	ND	ND	ND	ND	ND	ND
Delt11	3/4/03	14:10	ND	BQL (0.063 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt11	3/11/03	15:30	ND	BQL (0.067 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt11	3/13/03	11:30	ND	BQL (0.063 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt11	3/17/03	10:20	ND	BQL (0.056 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt11	3/20/03	10:40	ND	BQL (0.036 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt11	3/24/03	10:50	ND	BQL (0.14 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt11	3/27/03	9:40	ND	BQL (0.070 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt11	3/31/03	10:30	ND	BQL (0.055 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt11	4/3/03	9:50	ND	BQL (0.062 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt11	4/15/03	13:00	ND	BQL (0.023 J)	ND	0.032	ND	ND	ND	ND	ND	ND
Delt11	4/29/03	10:30	ND	BQL (0.046 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt11	5/13/03	9:40	ND	BQL (0.033 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt12	7/24/02	9:50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Delt12	8/20/02	8:35	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Delt12	9/18/02	9:00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Delt12	10/24/02	10:45	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Delt12	11/21/02	10:10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Delt12	12/23/02	9:45	ND	BQL (0.039 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt12	1/21/03	13:20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Delt12	1/22/03	11:10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Delt12	1/23/03	13:10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Delt12	1/24/03	12:30	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Delt12	1/25/03	10:40	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Delt12	2/13/03	12:00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Delt12	2/14/03	10:50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Delt12	2/15/03	10:40	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Delt12	2/16/03	12:30	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Delt12	2/17/03	10:30	ND	BQL (0.007 J)	ND	BQL (0.007 J)	ND	ND	ND	ND	ND	ND
Delt12	3/4/03	13:40	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Delt12	3/11/03	15:00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Delt12	3/13/03	11:50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Delt12	3/17/03	11:00	ND	BQL (0.011 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt12	3/20/03	11:10	ND	BQL (0.027 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt12	3/24/03	11:20	ND	BQL (0.011 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt12	3/27/03	10:20	ND	BQL (0.007 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt12	3/31/03	11:00	ND	BQL (0.005 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt12	4/3/03	10:20	ND	BQL (0.005 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt12	4/15/03	13:30	ND	BQL (0.006 J)	ND	0.076	ND	ND	ND	ND	ND	ND
Delt12	4/29/03	10:10	ND	BQL (0.006 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt12	5/13/03	10:30	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Delt13	7/24/02	10:40	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Table A2 (continued).

Site ID	Date Collected	Time	EPTC (Eptam)	Simazine	Disulfoton	Carbaryl	Metolachlor	Cyanazine	Dacthal (DCPA)	Methidathion	Bifenthrin	Azinphos methyl
Delt13	8/20/02	9:05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Delt13	9/18/02	9:25	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Delt13	10/24/02	11:15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Delt13	11/21/02	10:40	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Delt13	12/23/02	10:15	ND	BQL (0.065 J)	ND	ND	BQL (0.008 J)	ND	ND	ND	ND	ND
Delt13	1/21/03	12:30	ND	BQL (0.015 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt13	1/22/03	10:10	ND	BQL (0.012 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt13	1/23/03	14:10	ND	BQL (0.014 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt13	1/24/03	11:20	ND	BQL (0.008 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt13	1/25/03	10:20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Delt13	1/26/03	10:10	ND	ND	BQL (0.013 J)	ND	ND	ND	ND	ND	ND	ND
Delt13	2/13/03	11:10	ND	BQL (0.006 J)	ND	ND	ND	ND	ND	BQL (0.011 J)	ND	ND
Delt13	2/14/03	9:50	ND	BQL (0.006 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt13	2/15/03	9:50	ND	BQL (0.005 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt13	2/16/03	11:40	ND	BQL (0.007 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt13	2/17/03	9:50	ND	BQL (0.007 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt13	2/18/03	9:30	ND	BQL (0.009 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt13	3/4/03	14:40	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Delt13	3/11/03	16:00	ND	BQL (0.010 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt13	3/13/03	11:00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Delt13	3/17/03	11:40	ND	BQL (0.028 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt13	3/20/03	11:40	ND	BQL (0.10 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt13	3/24/03	10:20	ND	BQL (0.042 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt13	3/27/03	10:50	ND	BQL (0.027 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt13	3/31/03	11:30	ND	BQL (0.029 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt13	4/3/03	10:50	ND	BQL (0.019 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt13	4/15/03	14:00	ND	BQL (0.012 J)	ND	0.043	ND	ND	ND	ND	ND	ND
Delt13	4/29/03	10:50	ND	BQL (0.011 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt13	5/13/03	9:20	ND	BQL (0.007 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt14	7/24/02	10:55	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Delt14	8/20/02	9:40	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Delt14	9/18/02	9:50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Delt14	10/24/02	12:15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Delt14	11/21/02	10:50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Delt14	12/19/02	11:50	ND	0.38	ND	ND	0.037	ND	ND	ND	ND	ND
Delt14	12/23/02	10:30	ND	BQL (0.061 J)	ND	ND	BQL (0.007 J)	ND	ND	ND	ND	ND
Delt14	1/21/03	11:40	ND	BQL (0.016 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt14	1/22/03	9:40	ND	BQL (0.010 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt14	1/23/03	14:30	ND	BQL (0.015 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt14	1/24/03	10:50	ND	BQL (0.020 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt14	1/25/03	9:30	ND	BQL (0.017 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt14	1/26/03	9:40	ND	ND	BQL (0.012 J)	ND	ND	ND	ND	ND	ND	ND

Table A2 (continued).

Site ID	Date Collected	Time	EPTC (Eptam)	Simazine	Disulfoton	Carbaryl	Metolachlor	Cyanazine	Daethal (DCPA)	Methidathion	Bifenthrin	Azinphos methyl
Delt14	1/26/03	9:40	ND	ND	BQL (0.011 J)	ND	ND	ND	ND	ND	ND	ND
Delt14	2/13/03	10:50	ND	BQL (0.007 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt14	2/14/03	9:20	ND	BQL (0.006 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt14	2/15/03	9:20	ND	BQL (0.006 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt14	2/16/03	11:10	ND	BQL (0.006 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt14	2/17/03	9:20	ND	BQL (0.007 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt14	2/19/03	8:00	ND	BQL (0.019 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt14	3/4/03	15:00	ND	BQL (0.013 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt14	3/11/03	16:20	ND	BQL (0.008 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt14	3/13/03	10:40	ND	BQL (0.006 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt14	3/17/03	12:00	ND	BQL (0.020 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt14	3/20/03	12:10	ND	BQL (0.099 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt14	3/24/03	9:40	ND	BQL (0.061 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt14	3/27/03	11:10	ND	BQL (0.038 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt14	3/31/03	11:50	ND	BQL (0.024 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt14	4/3/03	11:20	ND	BQL (0.017 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt14	4/15/03	14:20	ND	BQL (0.012 J)	ND	0.036	ND	ND	ND	ND	ND	ND
Delt14	4/29/03	11:30	ND	BQL (0.010 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt14	5/13/03	8:50	ND	BQL (0.006 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt15	3/12/03	14:20	ND	BQL (0.022 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt15	3/19/03	15:30	ND	BQL (0.044 J)	ND	ND	BQL (0.008 J)	ND	ND	ND	ND	ND
Delt15	3/26/03	9:50	ND	BQL (0.047 J)	ND	ND	BQL (0.008 J)	ND	ND	ND	ND	ND
Delt15	4/2/03	15:30	ND	BQL (0.027 J)	ND	ND	BQL (0.007 J)	ND	ND	ND	ND	ND
Delt16	3/12/03	13:50	ND	BQL (0.026 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt16	3/19/03	14:50	ND	BQL (0.092 J)	ND	ND	0.029	ND	ND	ND	ND	ND
Delt16	3/26/03	9:30	ND	BQL (0.062 J)	ND	ND	BQL (0.010 J)	ND	ND	ND	ND	ND
Delt16	4/2/03	16:00	ND	BQL (0.039 J)	ND	ND	BQL (0.008 J)	ND	ND	ND	ND	ND
Delt17	3/11/03	7:50	ND	BQL (0.035 J)	ND	0.028	ND	ND	ND	ND	ND	ND
Delt17	3/18/03	16:00	ND	BQL (0.10 J)	ND	BQL (0.008 J)	BQL (0.010 J)	ND	BQL (0.026 J)	ND	ND	ND
Delt17	3/25/03	12:20	ND	BQL (0.056 J)	ND	ND	0.050	ND	ND	ND	ND	ND
Delt17	4/1/03	14:10	ND	BQL (0.034 J)	ND	ND	BQL (0.011 J)	ND	ND	ND	ND	ND
Delt18	3/13/03	9:10	ND	BQL (0.008 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt18	3/20/03	15:10	ND	BQL (0.008 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt18	3/27/03	11:50	ND	BQL (0.037 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt18	4/3/03	13:20	ND	BQL (0.022 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt19	3/12/03	17:30	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Delt19	3/19/03	12:50	ND	BQL (0.030 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt19	3/26/03	12:00	ND	BQL (0.006 J)	ND	ND	ND	ND	ND	ND	ND	ND
Delt19	4/2/03	17:20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Table A3. Field spike percent recovery

Site ID	Date Collected	Time	Diazinon	Chlorpyrifos	Bifenthrin	Chlorpyrifos Methyl (Surrogate)
Delt01	1/21/03	18:20	72%	75%	61%	72%
Delt02	2/14/03	13:40	66%	121%	70%	78%
Delt03	3/28/03	11:10	48%	65%	38%	57%
Delt03	3/28/03*	11:10	48%	NA	43%	52%
Delt03	4/28/03	10:20	71%	83%	47%	76%
Delt03	4/28/03*	10:20	NA	NA	41%	92%
Delt04	3/18/03	14:50	78%	71%	40%	87%
Delt04	3/18/03*	14:50	NA	NA	47%	79%
Delt05	2/18/03	15:00	70%	60%	43%	86%
Delt06	4/14/03	13:10	90%	68%	57%	68%
Delt08	3/12/03	14:30	65%	63%	38%	75%
Delt08	3/12/03*	14:30	NA	NA	39%	69%
Delt09	8/20/02	12:10	142%	86%	85%	100%
Delt09	1/24/03	14:50	44%	26%	29%	59%
Delt09	1/24/03*	14:50	48%	62%	34%	65%
Delt09	4/28/03	13:40	79%	76%	76%	75%
Delt10	2/13/03	7:50	94%	94%	58%	88%
Delt10	3/27/03	14:10	77%	86%	79%	84%
Delt10	4/22/03	17:10	62%	57%	61%	62%
Delt11	2/15/03	10:20	78%	74%	52%	83%
Delt12	3/11/03	15:00	75%	76%	56%	80%
Delt13	10/24/02	11:15	157%	86%	72%	87%
Delt13	3/24/03	10:20	69%	75%	59%	80%
Delt13	4/15/03	14:00	55%	53%	62%	65%
Delt14	5/13/03	8:50	118%	67%	96%	85%
Delt19	4/2/03	17:20	65%	61%	47%	74%
Delt19	4/2/03*	17:20	NA	NA	60%	64%

* ReInjection

NA = not analyzed

Table A4. Field duplicates

Site ID	Date	Time	Diazinon (ng/L)	Chlorpyrifos (ng/L)	Bifenthrin (ng/L)	Chlorpyrifos Methyl (Surrogate)	Type of samples
Delt01	2/17/03	14:40	ND	ND	ND	91%	Primary
Delt01	2/17/03	14:45	ND	ND	ND	83%	Duplicate
Delt02	1/22/03	11:00	100	ND	ND	80%	Primary
Delt02	1/22/03	11:05	110	ND	ND	82%	Duplicate
Delt04	1/22/03	14:50	54	ND	ND	78%	Primary
Delt04	1/22/03	14:55	42	ND	ND	62%	Duplicate
Delt05	10/24/02	13:30	ND	ND	ND	84%	Primary
Delt05	10/24/02	13:40	ND	ND	ND	85%	Duplicate
Delt05	11/19/02	8:10	ND	ND	ND	80%	Primary
Delt05	11/19/02	8:10	ND	ND	ND	79%	Duplicate
Delt05	3/11/03	9:00	ND	24	ND	74%	Primary
Delt05	3/11/03	9:05	ND	25	ND	79%	Duplicate
Delt06	9/17/02	9:30	ND	ND	ND	94%	Primary
Delt06	9/17/02	9:30	ND	ND	ND	90%	Duplicate
Delt06	5/12/03	10:15	ND	ND	ND	67%	Primary
Delt06	5/12/03	10:20	ND	ND	ND	74%	Duplicate
Delt06	5/19/03	12:40	ND	ND	ND	88%	Primary
Delt06	5/19/03	12:45	ND	ND	ND	82%	Duplicate
Delt07	8/20/02	10:40	ND	11	ND	97%	Primary
Delt07	8/20/02	10:40	ND	4	ND	85%	Duplicate
Delt07	12/19/02	10:05	ND	ND	ND	84%	Primary
Delt07	12/19/02	10:05	ND	ND	ND	81%	Duplicate
Delt08	7/23/02	11:30	ND	ND	ND	94%	Primary
Delt08	7/23/02	11:33	ND	ND	ND	97%	Duplicate
Delt09	3/13/03	9:50	ND	ND	ND	84%	Primary
Delt09	3/13/03	9:55	ND	ND	ND	84%	Duplicate
Delt10	4/8/03	14:50	ND	ND	ND	73%	Primary
Delt10	4/8/03	14:55	ND	ND	ND	73%	Duplicate
Delt11	6/24/02	11:00	ND	ND	ND	72%	Primary
Delt11	6/24/02	11:05	ND	ND	ND	73%	Duplicate
Delt11	12/23/02	9:20	ND	24	ND	80%	Primary
Delt11	12/23/02	9:20	ND	27	ND	85%	Duplicate
Delt11	4/3/03	9:50	ND	ND	ND	85%	Primary
Delt11	4/3/03	9:55	ND	ND	ND	79%	Duplicate
Delt12	2/16/03	12:30	ND	ND	ND	84%	Primary
Delt12	2/16/03	12:35	ND	ND	ND	83%	Duplicate
Delt12	3/20/03	11:10	ND	ND	ND	85%	Primary
Delt12	3/20/03	11:15	ND	ND	ND	85%	Duplicate
Delt13	1/24/03	11:20	ND	ND	ND	82%	Primary
Delt13	1/24/03	11:25	ND	ND	ND	79%	Duplicate
Delt14	11/21/02	10:50	ND	ND	ND	82%	Primary
Delt14	11/21/02	10:55	ND	ND	ND	87%	Duplicate
Delt14	3/31/03	11:50	ND	ND	ND	75%	Primary
Delt14	3/31/03	11:55	ND	ND	ND	84%	Duplicate
Delt15	3/19/03	15:30	ND	ND	ND	87%	Primary
Delt15	3/19/03	15:35	ND	ND	ND	87%	Duplicate
Delt17	3/25/03	12:20	ND	ND	ND	79%	Primary
Delt17	3/25/03	12:25	ND	ND	ND	76%	Duplicate

ND = not detected

Table A5. Lab blank data

(No pesticides were present at detectable levels. The pesticides include azinphos methyl, bifenthrin, carbaryl, chlorpyrifos, cyanazine, l-cyhalothrin, cyfluthrins, cypermethrins, diazinon, disulfoton, dacthal (DCPA), esfenvalerate, EPTC (Eptam), metolachlor, methidathion, propargite, simazine)

Date Analyzed	Chlorpyrifos Methyl (Surrogate): Recovery	Date Analyzed	Chlorpyrifos Methyl (Surrogate): Recovery
7/7/02	101%	3/17/03	70%
7/9/02	66%	3/17/03	70%
8/6/02	95%	3/20/03	72%
8/6/02	81%	3/19/03	74%
8/28/02	93%	3/20/03	72%
8/29/02	92%	3/26/03	75%
9/30/02	85%	3/27/03	70%
10/1/02	89%	4/2/03	78%
11/8/02	85%	4/3/03	86%
11/7/02	82%	4/4/03	81%
12/6/02	76%	4/4/03	81%
12/6/02	79%	4/9/03	75%
1/8/03	79%	4/9/03	75%
1/8/03	85%	4/10/03	79%
1/27/03	80%	4/15/03	76%
1/28/03	82%	4/15/03	76%
1/28/03	82%	4/17/03	83%
2/2/03	82%	4/17/03	83%
2/4/03	82%	4/17/03	83%
2/3/03	80%	4/19/03	67%
2/4/03	82%	4/30/03	54%*
2/21/03	87%	4/21/03	63%
2/21/03	87%	4/30/03	58%*
3/1/03	82%	4/21/03	63%
3/2/03	84%	4/30/03	58%*
3/6/03	63%	4/28/03	45%
4/2/03	66%*	4/30/03	47%*
3/10/03	70%	5/2/03	69%
03/10/03	70%	5/13/03	88%*
3/14/03	63%	5/2/03	69%
3/14/03	62%*	5/13/03	88%*
3/14/03	63%		
3/14/03	62%*		

* Reinjection

Table A6. Recovery of lab spikes and surrogates

Date Analyzed	Diazinon	Chlorpyrifos	Bifenthrin	Surrogate	Date Analyzed	Diazinon	Chlorpyrifos	Bifenthrin	Surrogate
7/7/02	70%	97%	94%	74%	3/20/03	62%	59%	70%	67%
7/9/02	67%	83%	69%	65%	4/8/03*	62%	57%	73%	65%
8/6/02	73%	99%	102%	76%	3/26/03	68%	73%	61%	83%
8/6/02	80%	105%	104%	86%	4/8/03*	73%	80%	83%	80%
8/28/02	132%	74%	101%	85%	4/1/03	61%	61%	86%	70%
8/29/02	140%	74%	98%	89%	4/2/03*	61%	60%	94%	71%
9/30/02	121%	70%	93%	85%	4/2/03	64%	61%	90%	72%
10/1/02	151%	81%	100%	94%	4/8/03*	66%	62%	86%	73%
11/8/02	129%	81%	72%	85%	4/3/03	75%	82%	97%	90%
11/7/02	117%	84%	66%	80%	4/4/03	77%	77%	76%	89%
12/6/02	98%	64%	88%	68%	4/5/03	77%	77%	76%	89%
12/6/02	136%	68%	92%	84%	4/9/03	76%	76%	104%	80%
1/8/03	140%	83%	94%	76%	4/9/03	76%	76%	104%	80%
1/8/03	164%	97%	98%	85%	4/10/03	79%	81%	96%	81%
1/27/03	74%	73%	79%	78%	4/15/03	103%	72%	97%	75%
1/28/03	81%	86%	86%	84%	4/15/03	103%	72%	97%	75%
1/28/03	81%	86%	86%	84%	4/17/03	61%	56%	72%	66%
2/2/03	84%	81%	80%	92%	4/29/03*	63%	56%	NR	56%
2/4/03	75%	76%	72%	84%	4/17/03	61%	56%	72%	66%
2/3/03	66%	68%	75%	70%	4/29/03*	63%	56%	NR	56%
3/5/03*	67%	76%	82%	74%	4/17/03	61%	56%	72%	66%
2/4/03	75%	76%	72%	84%	4/29/03*	63%	56%	NR	56%
2/21/03	80%	88%	83%	89%	4/19/03	66%	64%	71%	68%
2/21/03	80%	88%	83%	89%	4/30/03*	69%	61%	71%	64%
2/21/03	80%	88%	83%	89%	4/21/03	88%	64%	90%	66%
3/1/03	74%	78%	59%	80%	4/30/03*	NR	60%	NR	63%
3/1/03*	NR	NR	81%	78%	4/21/03	88%	64%	90%	66%
3/2/03*	77%	78%	73%	84%	4/30/03*	NR	60%	NR	63%
3/6/03	69%	72%	68%	77%	4/28/03	47%	46%	71%	48%
4/2/03*	70%	73%	78%	77%	4/30/03*	49%	51%	69%	50%
3/10/03*	95%	84%	119%	76%	5/2/03	70%	66%	83%	71%
03/10/03	94%	92%	87%	76%	5/2/03*	NR	72%	NR	89%
3/14/03	89%	79%	94%	77%	5/2/03	70%	66%	83%	71%
3/14/03	89%	79%	94%	77%	5/2/03*	NR	72%	NR	89%
3/17/03	68%	62%	80%	72%	5/12/03	102%	59%	83%	77%
4/10/03*	65%	69%	82%	72%	5/13/03*	NR	65%	NR	81%
3/20/03	62%	59%	70%	67%	5/18/03	105%	75%	101%	70%
4/8/03*	62%	57%	73%	65%	5/18/03	105%	75%	101%	70%
3/19/03	66%	69%	66%	80%	6/4/03	121%	71%	101%	80%
4/8/03*	68%	67%	69%	76%					

* Reinjection
NR = not reported

Table A7. Flow rates and instantaneous loads

Site ID	Date	Flow (cfs)	Diazinon Concentration (ng/L)	Chlorpyrifos Concentration (ng/L)	Diazinon Load (g/day)	Chlorpyrifos Load (g/d)
Delt01	1/21/03	NM ¹	ND ²	ND	NC ³	NC
Delt01	1/22/03	NM	8	ND	NC	NC
Delt01	1/23/03	NM	ND	ND	NC	NC
Delt01	1/24/03	NM	ND	ND	NC	NC
Delt01	1/25/03	NM	ND	ND	NC	NC
Delt01	2/13/03	159	14	ND	5.45	NC
Delt01	2/14/03	NM	8	ND	NC	NC
Delt01	2/15/03	NM	ND	ND	NC	NC
Delt01	2/16/03	41	ND	ND	NC	NC
Delt01	2/17/03	79	ND	ND	NC	NC
Delt01	3/4/03	234	ND	ND	NC	NC
Delt01	3/12/03	233	ND	ND	NC	NC
Delt01	3/19/03	NM	ND	ND	NC	NC
Delt01	3/26/03	NM	ND	ND	NC	NC
Delt01	4/2/03	233	ND	ND	NC	NC
Delt01	4/15/03	NM	11	ND	NC	NC
Delt01	4/29/03	170	ND	ND	NC	NC
Delt01	5/13/03	73	ND	ND	NC	NC
Delt04	7/23/02	12	ND	ND	NC	NC
Delt04	8/20/02	5	35	9	0.47	0.12
Delt04	9/17/02	NM	110	ND	NC	NC
Delt04	12/20/02	NM	ND	ND	NC	NC
Delt04	1/22/03	14	54	6	1.82	0.20
Delt04	2/18/03	NM	220	ND	NC	NC
Delt04	3/3/03	NM	150	ND	NC	NC
Delt04	3/18/03	NM	52	16	NC	NC
Delt04	3/25/03	NM	350	13	NC	NC
Delt04	4/8/03	NM	170	6	NC	NC
Delt04	4/14/03	NM	130	ND	NC	NC
Delt04	4/22/03	NM	42	ND	NC	NC
Delt04	4/28/03	NM	76	ND	NC	NC
Delt04	5/6/03	NM	29	ND	NC	NC
Delt04	5/19/03	NM	49	ND	NC	NC
Delt09	7/23/02	8	10	ND	0.20	NC
Delt09	8/20/02	13	18	ND	0.58	NC
Delt09	9/17/02	7	NM	NM	NC	NC
Delt09	10/22/02	3	ND	ND	NC	NC
Delt09	11/19/02	2	ND	24	NC	0.11
Delt09	1/21/03	15	66	ND	2.42	NC
Delt09	1/22/03	9	380	9	8.39	0.20
Delt09	1/23/03	7	100	5	1.82	0.09
Delt09	1/24/03	8	39	ND	0.72	NC
Delt09	1/25/03	6	28	ND	0.39	NC
Delt09	2/13/03	11	190	ND	5.32	NC
Delt09	2/14/03	4	22	12	0.24	0.13
Delt09	2/15/03	4	150	ND	1.37	NC
Delt09	2/16/03	20	160	ND	7.93	

Table A7. (continued) Flow rates and instantaneous loads

SiteID	Date	Flow Rate (cfs)	Diazinon concentration (ng/L)	Chlorpyrifos concentration (ng/L)	Diazinon Load (g/day)	Chlorpyrifos Load (g/d)
Delt09	2/17/03	17	37	ND	1.54	NC
Delt09	3/4/03	5	11	ND	0.13	NC
Delt09	3/11/03	5	ND	ND	NC	NC
Delt09	3/13/03	1	10	ND	0.03	NC
Delt09	3/17/03	19	54	ND	2.48	NC
Delt09	3/20/03	11	16	ND	0.43	NC
Delt09	3/24/03	6	92	15	1.35	0.22
Delt09	3/27/03	4	18	ND	0.16	NC
Delt09	3/31/03	9	27	ND	0.61	NC
Delt09	4/3/03	9	10	ND	0.22	NC
Delt09	4/8/03	5	37	ND	0.48	NC
Delt09	4/14/03	27	19	ND	1.25	NC
Delt09	4/22/03	9	16	ND	0.35	NC
Delt09	4/28/03	18	14	ND	0.61	NC
Delt09	5/6/03	18	17	ND	0.74	NC
Delt09	5/13/03	13	17	ND	0.56	NC
Delt09	5/19/03	11	ND	ND	NC	NC
Delt10	7/23/02	30	ND	8	NC	0.59
Delt10	8/20/02	56	ND	ND	NC	NC
Delt10	9/17/02	8	ND	ND	NC	NC
Delt10	10/22/02	30	ND	ND	NC	NC
Delt10	11/19/02	23	ND	ND	NC	NC
Delt10	12/20/02	NM	ND	32	NC	NC
Delt10	1/21/03	123	36	75	10.85	22.61
Delt10	1/22/03	112	96	49	26.41	13.48
Delt10	1/23/03	172	380	60	159.90	25.25
Delt10	1/24/03	128	98	110	30.63	34.38
Delt10	1/25/03	91	130	110	29.14	24.66
Delt10	2/13/03	509	62	10	77.36	12.48
Delt10	2/14/03	96	90	71	21.18	16.71
Delt10	2/15/03	71	89	83	15.42	14.38
Delt10	2/16/03	1115	42	22	114.73	60.10
Delt10	2/17/03	131	12	16	3.86	5.15
Delt10	3/4/03	35	ND	6	NC	0.52
Delt10	3/11/03	40	ND	5	NC	0.49
Delt10	3/13/03	42	ND	5	NC	0.51
Delt10	3/17/03	185	52	10	23.53	4.52
Delt10	3/20/03	87	9	6	1.92	1.28
Delt10	3/24/03	43	9	4	0.95	0.42
Delt10	3/27/03	39	ND	ND	NC	NC
Delt10	3/31/03	62	ND	ND	NC	NC
Delt10	4/3/03	65	ND	ND	NC	NC
Delt10	4/8/03	57	ND	ND	NC	NC
Delt10	4/15/03	65	350	12	55.71	1.91
Delt10	4/22/03	17	ND	ND	NC	NC
Delt10	4/29/03	72	30	ND	5.32	NC

Table A7. (continued) Flow rates and instantaneous loads

SiteID	Date	Flow Rate (cfs)	Diazinon concentration (ng/L)	Chlorpyrifos concentration (ng/L)	Diazinon Load (g/day)	Chlorpyrifos Load (g/d)
Delt10	5/6/03	62	46	ND	6.96	NC
Delt10	5/13/03	36	ND	ND	NC	NC
Delt10	5/19/03	15	ND	ND	NC	NC

¹NM = flow rate was not measured/measurable or water sample was lost

²ND = below the limit of quantitation (BQL) and the limit of detection (LOD)

³NC = load not calculated (no flow rate and/or concentration data)

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