

GRASSLAND BYPASS PROJECT

MONTHLY DATA REPORT

May 2008

September 8, 2008

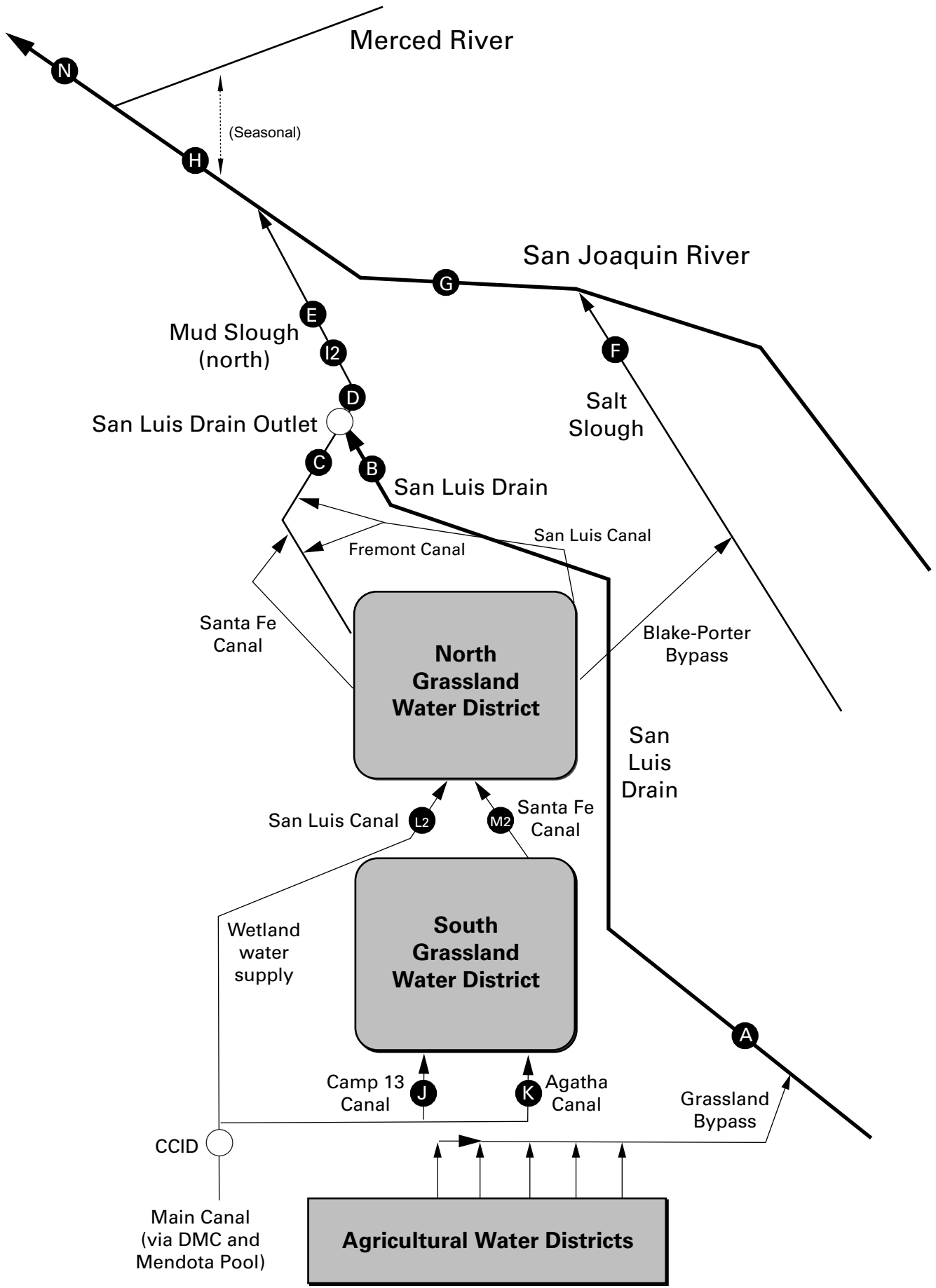
Preliminary Results

A cooperative effort of:

U.S. Bureau of Reclamation
Central Valley Regional Water Quality Control Board
U.S. Fish and Wildlife Service
California Department of Fish and Game
San Luis & Delta-Mendota Water Authority
U.S. Environmental Protection Agency
U.S. Geological Survey

compiled by San Francisco Estuary Institute





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LIST OF TABLES FOR MONTHLY REPORT**Continuous Monitoring**

1. Continuous water monitoring at Station A (inflow to San Luis Drain), May 2008.
- 2a. Continuous water monitoring at Stations B and B2 (San Luis Drain Terminus), May 2008.
- 2b. Monthly selenium discharges from the terminus of the San Luis Drain into Mud Slough compared to load values.
3. Continuous water monitoring at Station D (Mud Slough North downstream of drainage discharges), May 2008.
4. Continuous water monitoring at Station F (Salt Slough at Highway 165), May 2008.
5. Continuous water monitoring at Station N (San Joaquin River at Crow's Landing), May 2008.

Weekly Monitoring

- 6a. Weekly water quality monitoring at Station A (inflow to San Luis Drain), taken from grab samples.
- 6b. Weekly water quality monitoring at Station A (inflow to San Luis Drain), taken from composite samples.
7. Weekly water quality monitoring at Station B (discharge from San Luis Drain).
8. Weekly water quality monitoring at Station C (Mud Slough North upstream of drainage discharge).
9. Weekly water quality monitoring at Station D (Mud Slough North downstream of drainage discharge).
10. Weekly water quality monitoring at Station I2 (Mud Slough backwater downstream of Station D).
11. Weekly water quality monitoring at Station F (Salt Slough at Lander Avenue).
12. Weekly water quality monitoring at Station J (Camp 13 Ditch).
13. Weekly water quality monitoring at Station K (Agatha Canal).
14. Weekly water quality monitoring at Station L2 (San Luis Canal at splits).
15. Weekly water quality monitoring at Station M2 (Santa Fe Canal at weir).
16. Weekly water quality monitoring at Central California Irrigation District Main Canal at Russell Avenue (MER510).
17. Weekly water quality monitoring at Station G (San Joaquin River at Fremont Ford).
18. Weekly water quality monitoring at Station H (San Joaquin River at Hills Ferry).
19. Weekly water quality monitoring at Station N (San Joaquin River at Crow's Landing).

Monthly Monitoring

20. Summary of fathead minnow (*Pimephales promelas*) larvae survival in 7-day tests using water samples collected from June 2007 to May 2008.
21. Summary of fathead minnow (*Pimephales promelas*) larvae growth in 7-day tests using water samples collected from June 2007 to May 2008.
22. Summary of *Daphnia magna* survival in 7-day tests using water samples collected from June 2007 to May 2008.
23. Summary of *Daphnia magna* reproduction in 7-day tests using water samples collected from June 2007 to May 2008.
24. Summary of *Selenastrum capricornutum* growth in 4-day tests using water samples collected from June 2007 to May 2008.
25. Summary of selenium concentrations in grab water samples collected at study stations for use in laboratory toxicity tests, March 2008 to May 2008.
26. Summary of total suspended solids concentrations in grab water samples collected from March 2008 to May 2008.
27. Explanations of footnotes and agency abbreviations.

Table 1. Continuous water monitoring at Station A (inflow to San Luis Drain), May 2008.

See Table 27 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow	Specific Conductance
DATA SOURCE	SLDMWA	SLDMWA
UNITS	cfs	µS/cm
May-01-2008	31	4,880
May-02-2008	28	4,780
May-03-2008	23	4,660
May-04-2008	23	4,680
May-05-2008	24	4,560
May-06-2008	30	4,370
May-07-2008	28	4,650
May-08-2008	30	4,280
May-09-2008	29	4,550
May-10-2008	26	4,630
May-11-2008	28	4,340
May-12-2008	28	3,840
May-13-2008	26	4,190
May-14-2008	26	4,150
May-15-2008	23	4,050
May-16-2008	27	3,970
May-17-2008	25	3,740
May-18-2008	24	3,800
May-19-2008	23	4,080
May-20-2008	24	4,190
May-21-2008	36	4,320
May-22-2008	30	4,350
May-23-2008	27	4,160
May-24-2008	26	3,750
May-25-2008	26	3,740
May-26-2008	48	4,070
May-27-2008	35	4,320
May-28-2008	42	4,520
May-29-2008	39	4,590
May-30-2008	32	4,590
May-31-2008	26	4,470
Mean	28.8	4,300

Table 2a. Continuous water monitoring at Stations B and B2 (San Luis Drain Terminus), May 2008.

See Table 27 for explanation of footnotes and agency abbreviations.

PARAMETER	San Luis Drain Outlet Flow	Temperature	Boron	Specific Conductance	Selenium (total)	Selenium (total) Load
DATA SOURCE	SLDMWA*	SLDMWA	CVRWQCB	SLDMWA	CVRWQCB	Computed
UNITS	cfs	°C	mg/L	µS/cm	µg/L	lbs
May-01-2008	25	19.2	P	4,410	55.2	7.5
May-02-2008	32	19.7	P	4,690	59.5	10.3
May-03-2008	28	20.2	P	4,610	50.1	7.7
May-04-2008	23	20.8	P	4,960	75.6	9.5
May-05-2008	22	20.9	P	5,180	78.7	9.5
May-06-2008	24	22.2	P	5,300	73.0	9.4
May-07-2008	29	23.2	P	4,910	60.8	9.5
May-08-2008	28	22.2	P	4,870	55.4	8.3
May-09-2008	29	22.5	P	4,760	54.4	8.5
May-10-2008	30	22.0	P	4,610	67.5	10.8
May-11-2008	26	22.8	P	4,810	66.2	9.4
May-12-2008	26	21.5	P	4,530	59.5	8.4
May-13-2008	28	20.5	P	4,590	58.3	8.9
May-14-2008	27	22.5	P	4,840	61.4	8.9
May-15-2008	27	24.1	P	4,730	58.4	8.4
May-16-2008	24	26.3	P	4,140	40.2	5.2
May-17-2008	26	28.1	P	4,200	42.0	6.0
May-18-2008	26	29.1	P	4,430	47.2	6.5
May-19-2008	24	28.7	P	4,130	36.9	4.8
May-20-2008	23	28.1	P	4,010	41.1	5.2
May-21-2008	22	24.0	P	3,880	37.8	4.5
May-22-2008	33	18.5	P	3,770	28.5	5.0
May-23-2008	35	18.7	P	4,050	34.0	6.4
May-24-2008	28	19.1	P	4,270	42.8	6.4
May-25-2008	27	18.6	P	4,570	63.0	9.1
May-26-2008	29	18.9	P	4,550	55.1	8.5
May-27-2008	48	20.5	P	3,990	41.9	10.9
May-28-2008	37	20.3	P	3,820	38.2	7.6
May-29-2008	29	18.9	P	4,130	59.7	9.2
May-30-2008	40	23.1	P	4,510	48.9	10.6
May-31-2008	32	23.4	P	4,790	66.3	11.5
Mean	29	22.2	P	4,490	53.5	8.1
Total Acre-feet	1,760					
Total (lbs)						252

Load Limitation for May 2008 (lbs)	407
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◆To improve the accuracy of flow measurements, Reclamation and the San Luis & Delta-Mendota Water Authority, with technical assistance from the USGS, are measuring flow at the San Luis Drain Outlet. The Outlet is located two miles from Station B. Discharge is measured as stage over a sharp-crested weir, identical to Station A. This is a simpler and more accurate method that will not be altered by sediment accumulation. Water quality data are still collected at the old Site B.

Figure 2b. Monthly selenium discharges from the terminus of the San Luis Drain into Mud Slough compared to load values.

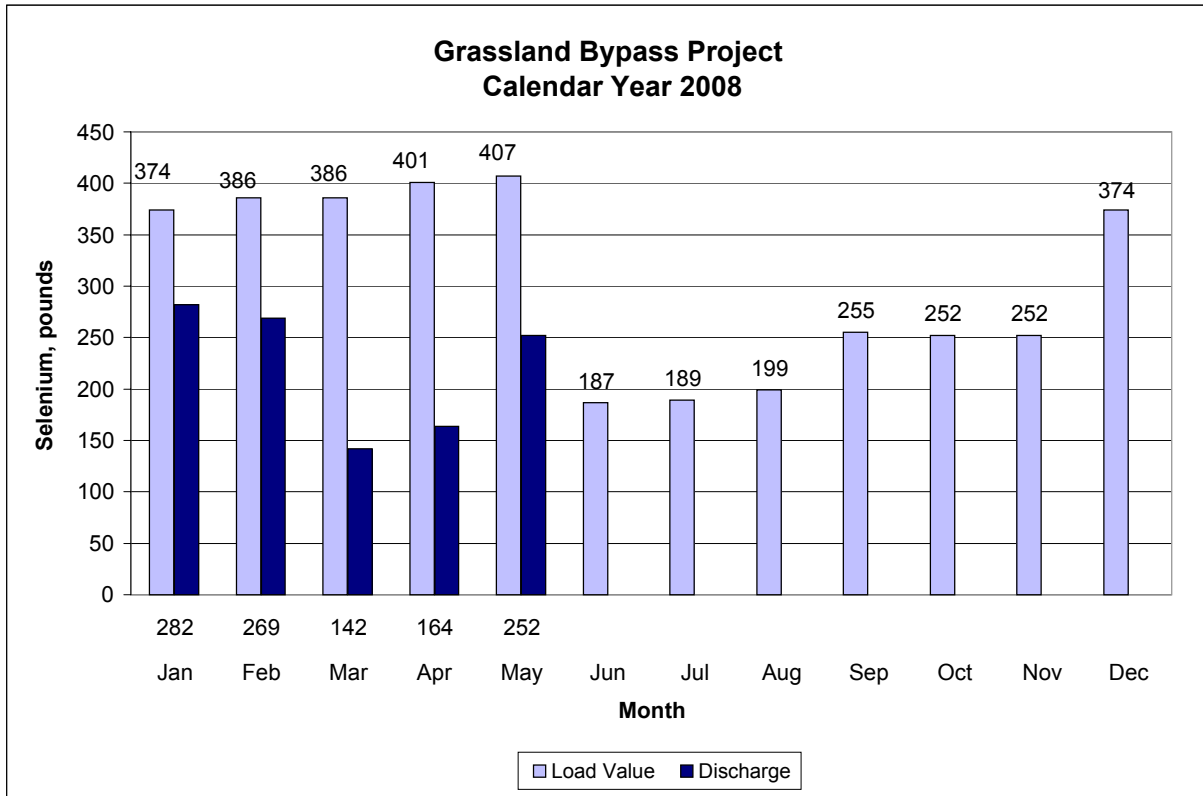


Table 3. Continuous water monitoring at Station D (Mud Slough North downstream of drainage discharges), May 2008.

See Table 27 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow	Temperature	Specific Conductance
DATA SOURCE	usgs	usgs	usgs
UNITS	cfs	°C	µS/cm
May-01-2008	47	17.7	4,510
May-02-2008	55	18.6	4,290
May-03-2008	47	19.2	4,600
May-04-2008	47	20.3	4,250
May-05-2008	43	20.8	4,580
May-06-2008	44	21.5	4,710
May-07-2008	46	21.6	4,920
May-08-2008	47	21.3	4,680
May-09-2008	44	21.0	5,050
May-10-2008	48	21.1	4,160
May-11-2008	51	21.8	3,840
May-12-2008	50	20.0	3,990
May-13-2008	44	19.4	4,550
May-14-2008	46	21.5	4,700
May-15-2008	52	24.1	4,220
May-16-2008	61	26.5	3,080
May-17-2008	57	27.3	3,050
May-18-2008	53	27.4	3,310
May-19-2008	54	26.6	2,910
May-20-2008	41	25.9	3,550
May-21-2008	49	21.4	3,080
May-22-2008	54	17.0	3,390
May-23-2008	64	18.2	3,010
May-24-2008	54	17.8	3,180
May-25-2008	54	17.5	3,120
May-26-2008	49	19.0	3,380
May-27-2008	56	18.9	3,650
May-28-2008	46	19.4	3,460
May-29-2008	48	20.9	3,490
May-30-2008	45	21.7	3,640
May-31-2008	45	22.3	3,530
Mean	50	21.2	3,870

Table 4. Continuous water monitoring at Station F (Salt Slough at Highway 165), May 2008.

See Table 27 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow	Temperature	Specific Conductance
DATA SOURCE	usgs	usgs	usgs
UNITS	cfs	°C	µS/cm
May-01-2008	79	17.8	1,860
May-02-2008	99	18.9	1,830
May-03-2008	110	19.7	1,740
May-04-2008	95	20.7	1,720
May-05-2008	104	20.6	1,620
May-06-2008	104	21.3	1,500
May-07-2008	119	21.3	1,430
May-08-2008	120	20.6	1,330
May-09-2008	117	20.6	1,390
May-10-2008	123	20.8	1,400
May-11-2008	125	21.8	1,360
May-12-2008	124	19.9	1,300
May-13-2008	124	19.4	1,260
May-14-2008	121	21.5	1,260
May-15-2008	111	24.2	1,370
May-16-2008	108	26.6	1,410
May-17-2008	107	27.6	1,440
May-18-2008	108	27.4	1,450
May-19-2008	115	26.5	1,410
May-20-2008	132	25.6	1,400
May-21-2008	144	21.8	1,370
May-22-2008	128	17.5	1,380
May-23-2008	117	18.6	1,400
May-24-2008	97	17.8	1,480
May-25-2008	101	17.0	1,510
May-26-2008	121	18.8	1,470
May-27-2008	141	19.2	1,410
May-28-2008	149	19.1	1,360
May-29-2008	133	20.8	1,420
May-30-2008	127	21.4	1,400
May-31-2008	127	21.8	1,370
Mean	117	21.2	1,450

Table 5. Continuous water monitoring at Station N (San Joaquin River at Crow's Landing), May 2008.

See Table 27 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow	Temperature	Specific Conductance	Selenium (total)
DATA SOURCE	usgs	usgs	cvrwqcb	cvrwqcb
UNITS	cfs	°C	µS/cm	µg/L
May-01-2008	1,580	15.5	NA	NA
May-02-2008	1,640	15.7	NA	NA
May-03-2008	1,640	16.1	NA	NA
May-04-2008	1,590	17.0	NA	NA
May-05-2008	1,430	17.9	600	1.1
May-06-2008	1,310	18.9	610	1.2
May-07-2008	1,250	19.4	620	1.5
May-08-2008	1,260	19.4	630	1.6
May-09-2008	1,260	19.2	650	1.5
May-10-2008	1,320	18.8	630	1.3
May-11-2008	1,410	19.1	600	1.4
May-12-2008	1,460	18.2	570	1.5
May-13-2008	1,450	17.7	540	1.2
May-14-2008	1,420	18.6	520	1.3
May-15-2008	1,420	19.7	540	1.3
May-16-2008	1,430	21.1	550	1.3
May-17-2008	1,310	22.3	580	1.2
May-18-2008	1,170	23.0	630	0.9
May-19-2008	1,050	23.0	690	1.2
May-20-2008	880	23.0	760	1.4
May-21-2008	724	21.1	880	1.3
May-22-2008	659	18.1	1,020	1.4
May-23-2008	634	18.7	1,030	1.6
May-24-2008	626	18.7	1,160	2.1
May-25-2008	631	18.1	1,140	1.7
May-26-2008	636	19.4	1,150	2.2
May-27-2008	615	19.2	1,100	2.7
May-28-2008	595	19.6	1,210	3.3
May-29-2008	563	21.0	1,220	3.0
May-30-2008	537	21.8	1,180	2.8
May-31-2008	535	22.6	1,260	4.0
Mean	1,100	19.4	NA	1.7

Table 6a. Weekly water quality monitoring at Station A (inflow to San Luis Drain), taken from grab samples.

See Table 27 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow	.	.	Specific Conductance	Total Suspended Solids	.	.	.
DATA SOURCE	SLDMWA	.	.	CVRWQCB	CVRWQCB	.	.	.
UNITS	cfs	.	.	µS/cm	mg/L	.	.	.
Mar-05-2008	28	.	.	4,630	140	.	.	.
Mar-12-2008	42	.	.	3,030	280	.	.	.
Mar-19-2008	20	.	.	4,210	170	.	.	.
Mar-26-2008	17	.	.	4,970	57	.	.	.
Apr-02-2008	16	.	.	4,780	60	.	.	.
Apr-09-2008	17	.	.	4,640	60	.	.	.
Apr-16-2008	29	.	.	4,060	160	.	.	.
Apr-23-2008	35	.	.	4,040	190	.	.	.
Apr-30-2008	26	.	.	4,920	160	.	.	.
May-07-2008	28	.	.	4,780	180	.	.	.
May-14-2008	26	.	.	4,520	88	.	.	.
May-21-2008	36	.	.	4,610	180	.	.	.
May-28-2008	42	.	.	4,610	180	.	.	.

Table 6b. Weekly water quality monitoring at Station A (inflow to San Luis Drain), taken from composite samples.

See Table 27 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow	.	.	Specific Conductance	.	Selenium (total)	.	Boron
DATA SOURCE	SLDMWA	.	.	CVRWQCB	.	CVRWQCB	.	CVRWQCB
UNITS	cfs	.	.	µS/cm	.	µg/L	.	mg/L
Mar-04-2008	24	.	.	4,380	.	41.6	.	P
Mar-11-2008	37	.	.	3,710	.	34.0	.	P
Mar-18-2008	22	.	.	3,640	.	26.1	.	P
Mar-25-2008	17	.	.	4,710	.	33.6	.	P
Apr-01-2008	18	.	.	4,710	.	39.1	.	P
Apr-08-2008	21	.	.	4,640	.	45.8	.	P
Apr-15-2008	31	.	.	4,560	.	40.3	.	P
Apr-22-2008	39	.	.	3,720	.	35.9	.	P
Apr-29-2008	21	.	.	4,540	.	56.2	.	P
May-06-2008	30	.	.	4,860	.	62.3	.	P
May-13-2008	26	.	.	4,530	.	55.3	.	P
May-20-2008	24	.	.	4,080	.	39.8	.	P
May-27-2008	35	.	.	4,300	.	49.7	.	P

Table 7. Weekly water quality monitoring at Station B (discharge from San Luis Drain), taken from grab samples.

See Table 27 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow	Temperature	pH	Specific Conductance	Total Suspended Solids	Selenium (total)	Boron
DATA SOURCE	usgs	CVRWQCB	CVRWQCB	CVRWQCB	CVRWQCB	CVRWQCB	CVRWQCB
UNITS	cfs	°C	.	µS/cm	mg/L	µg/L	mg/L
Mar-06-2008	34	13.6	8.4	3,830	31	29.8	P
Mar-13-2008	46	17.3	8.4	3,910	32	36.7	P
Mar-20-2008	24	15.8	8.7	3,660	36	23.6	P
Mar-27-2008	19	15.7	8.8	4,290	27	25.6	P
Apr-03-2008	19	16.6	8.9	4,110	40	28.4	P
Apr-10-2008	19	16.0	8.9	4,830	64	38.5	P
Apr-17-2008	31	17.1	8.7	4,570	48	35.1	P
Apr-24-2008	38	16.0	8.0	4,040	42	45.7	P
May-01-2008	25	16.9	8.7	4,440	92	56.1	P
May-08-2008	28	19.7	8.4	4,960	44	55.7	P
May-15-2008	27	22.0	8.4	4,770	52	58.3	P
May-22-2008	32	16.3	8.3	3,570	160	31.0	P
May-29-2008	29	19.2	7.9	4,140	52	56.5	P

Table 8. Weekly water quality monitoring at Station C (Mud Slough North upstream of drainage discharges).

See Table 27 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow	Temperature	pH	Specific Conductance	.	Selenium (total)	Boron
DATA SOURCE	calculated **	CVRWQCB	CVRWQCB	CVRWQCB	.	CVRWQCB	CVRWQCB
UNITS	cfs	°C	.	µS/cm	.	µg/L	mg/L
Mar-06-2008	126	13.1	8.1	2,060	.	0.6	P
Mar-13-2008	77	16.5	7.9	2,320	.	0.8	P
Mar-20-2008	105	15.7	8.1	2,080	.	1.1	P
Mar-27-2008	72	13.3	8.2	2,350	.	0.6	P
Apr-03-2008	104	15.4	8.3	2,860	.	0.7	P
Apr-10-2008	45	14.7	8.4	2,650	.	0.7	P
Apr-17-2008	33	16.9	8.4	1,520	.	1.2	P
Apr-24-2008	22	17.3	8.4	2,570	.	0.8	P
May-01-2008	22	15.6	8.2	2,630	.	0.6	P
May-08-2008	19	18.8	8.2	1,990	.	0.8	P
May-15-2008	25	22.0	8.0	2,500	.	0.8	P
May-22-2008	22	14.1	8.2	2,050	.	0.6	P
May-29-2008	19	18.3	8.2	2,500	.	0.4	P

++ Calculated flow value. Flow at Station C = flow at Station D - flow at Station B.

Table 9. Weekly water quality monitoring at Station D (Mud Slough North downstream of drainage discharges).

See Table 27 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow	Temperature	pH	Specific Conductance	Selenium (total)	Boron
DATA SOURCE	USGS	CVRWQCB	CVRWQCB	CVRWQCB	CVRWQCB	CVRWQCB
UNITS	cfs	°C	.	µS/cm	µg/L	mg/L
Mar-06-2008	160	13.0	8.2	2,470	5.7	P
Mar-13-2008	123	16.6	8.0	2,770	10.9	P
Mar-20-2008	129	16.1	8.3	2,340	4.1	P
Mar-27-2008	91	13.8	8.2	2,770	4.2	P
Apr-03-2008	123	15.6	8.3	2,800	4.8	P
Apr-10-2008	64	15.0	8.5	3,590	12.7	P
Apr-17-2008	64	16.5	8.5	3,720	19.0	P
Apr-24-2008	60	16.0	8.2	3,700	30.1	P
May-01-2008	47	16.2	8.6	4,210	40.9	P
May-08-2008	47	19.0	8.3	3,940	32.0	P
May-15-2008	52	21.8	8.4	3,880	31.8	P
May-22-2008	54	15.1	8.3	3,310	22.9	P
May-29-2008	48	18.7	8.2	4,060	51.1	P

Table 10. Weekly water quality monitoring at Station I2 (Mud Slough backwater downstream of Station D).

See Table 27 for explanation of footnotes and agency abbreviations.

PARAMETER		pH	Specific Conductance	Turbidity	Selenium	Boron
DATA SOURCE		USBR	USBR	USBR	USBR	USBR
UNITS		.	µS/cm	NTU	µg/L	mg/L
Mar-06-2008	.	8.1	2,460	49	5.7	2.7
Mar-10-2008	.	8.1	2,590	58	6.4	2.8
Mar-19-2008	.	8.2	2,520	55	2.2	2.4
Mar-27-2008	.	8.2	3,250	40	4.2	3.1
Apr-01-2008	.	8.3	2,740	43	5.0	3.3
Apr-07-2008	.	8.2	3,920	39	10.8	4.7
Apr-15-2008	.	8.4	3,660	43	16.4	5.0
Apr-25-2008	.	8.7	3,510	32	27.6**	4.6
Apr-30-2008	.	8.6	3,300	45	23.6**	4.3
May-06-2008	.	8.7	4,440	33	43.4	6.1
May-12-2008	.	8.8	3,680	42	33.4	5.0
May-20-2008	.	7.8	3,500	29	21.4	4.8
May-28-2008	.	8.8	3,790	64	33.4	5.8

Table 11. Weekly water quality monitoring at Station F (Salt Slough at Lander Avenue).

See Table 27 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow	Temperature	pH	Specific Conductance	Selenium (total)	Boron
DATA SOURCE	USGS	CVRWQCB	CVRWQCB	CVRWQCB	CVRWQCB	CVRWQCB
UNITS	cfs	°C	.	µS/cm	µg/L	mg/L
Mar-06-2008	268	13.0	7.6	1,600	0.7	P
Mar-13-2008	240	16.2	7.6	1,580	0.7	P
Mar-20-2008	259	16.5	7.7	1,630	1.0	P
Mar-27-2008	169	14.5	7.8	1,870	0.5	P
Apr-03-2008	139	15.3	7.5	1,060	0.6	P
Apr-10-2008	141	14.7	7.7	1,660	0.8	P
Apr-17-2008	142	15.5	7.8	1,380	0.6	P
Apr-24-2008	136	15.2	8.0	1,480	0.6	P
May-01-2008	79	14.8	7.9	1,880	<0.4	P
May-08-2008	120	18.2	7.8	1,430	0.5	P
May-15-2008	111	21.4	7.7	1,540	0.5	P
May-22-2008	128	15.1	8.1	1,400	0.5	P
May-29-2008	133	18.2	8.0	1,380	0.4	P

Table 12. Weekly water quality monitoring at Station J (Camp 13 Ditch).

See Table 27 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow	.	.	Specific Conductance	Selenium (total)	Boron
DATA SOURCE	SLDMWA ^{††}	.	.	CVRWQCB	CVRWQCB	CVRWQCB
UNITS	cfs	.	.	µS/cm	µg/L	mg/L
Mar-05-2008	10	.	.	690	1.9	P
Mar-12-2008	10	.	.	590	1.4	P
Mar-19-2008	10	.	.	730	1.5	P
Mar-26-2008	20	.	.	850	1.2	P
Apr-02-2008	10	.	.	810	1.3	P
Apr-09-2008	10	.	.	800	1.8	P
Apr-16-2008	10	.	.	670	1.1	P
Apr-23-2008	10	.	.	730	1.1	P
Apr-30-2008	20	.	.	690	0.9	P
May-07-2008	35	.	.	710	1.0	P
May-14-2008	40	.	.	640	0.9	P
May-21-2008	50	.	.	620	0.8	P
May-28-2008	25	.	.	590	0.9	P

Table 13. Weekly water quality monitoring at Station K (Agatha Canal).

See Table 27 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow	.	.	Specific Conductance	Selenium (total)	Boron
DATA SOURCE	SLDMWA ^{††}	.	.	CVRWQCB	CVRWQCB	CVRWQCB
UNITS	cfs	.	.	µS/cm	µg/L	mg/L
Mar-05-2008	40	.	.	720	1.3	P
Mar-12-2008	20	.	.	1,070	2.0	P
Mar-19-2008	20	.	.	750	1.0	P
Mar-26-2008	10	.	.	1,310	1.2	P
Apr-02-2008	20	.	.	840	1.6	P
Apr-09-2008	20	.	.	820	1.3	P
Apr-16-2008	20	.	.	720	1.5	P
Apr-23-2008	20	.	.	740	1.8	P
Apr-30-2008	20	.	.	680	1.3	P
May-07-2008	80	.	.	640	1.0	P
May-14-2008	100	.	.	580	1.2	P
May-21-2008	80	.	.	620	1.1	P
May-28-2008	60	.	.	590	1.2	P

Table 14. Weekly water quality monitoring at Station L2 (San Luis Canal at splits).

See Table 27 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow	.	.	Specific Conductance	Selenium (total)	Boron
DATA SOURCE	SLDMWA ^{††}	.	.	CVRWQCB	CVRWQCB	CVRWQCB
UNITS	cfs	.	.	µS/cm	µg/L	mg/L
Mar-05-2008	0	.	.	1,950	1.9	P
Mar-12-2008	0	.	.	2,140	1.0	P
Mar-19-2008	0	.	.	1,800	2.4	P
Mar-26-2008	0	.	.	1,820	2.4	P
Apr-02-2008	0	.	.	2,730	3.4	P
Apr-09-2008	0	.	.	1,620	1.6	P
Apr-16-2008	25	.	.	1,260	1.6	P
Apr-23-2008	25	.	.	1,190	1.4	P
Apr-30-2008	65	.	.	830	1.3	P
May-07-2008	65	.	.	800	0.8	P
May-14-2008	65	.	.	810	1.1	P
May-21-2008	65	.	.	740	0.9	P
May-28-2008	55	.	.	800	1.1	P

Table 15. Weekly water quality monitoring at Station M2 (Santa Fe Canal at weir).

See Table 27 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow	.	.	Specific Conductance	Selenium (total)	Boron
DATA SOURCE	SLDMWA^{††}	.	.	CVRWQCB	CVRWQCB	CVRWQCB
UNITS	cfs	.	.	µS/cm	µg/L	mg/L
Mar-05-2008	NA	.	.	1,640	1.0	P
Mar-12-2008	NA	.	.	1,950	1.2	P
Mar-19-2008	NA	.	.	1,950	1.5	P
Mar-26-2008	NA	.	.	2,060	0.9	P
Apr-02-2008	NA	.	.	1,960	1.5	P
Apr-09-2008	NA	.	.	1,590	1.6	P
Apr-16-2008	NA	.	.	2,410	1.4	P
Apr-23-2008	NA	.	.	1,470	1.0	P
Apr-30-2008	NA	.	.	1,250	1.2	P
May-07-2008	NA	.	.	990	1.0	P
May-14-2008	NA	.	.	1,000	1.0	P
May-21-2008	NA	.	.	1,070	1.1	P
May-28-2008	NA	.	.	1,000	0.9	P

Table 16. Weekly water quality monitoring at Central California Irrigation District Main Canal at Russell Avenue (MER510).

See Table 27 for explanation of footnotes and agency abbreviations.

PARAMETER	.	.	.	Specific Conductance	Selenium (total)	Boron
DATA SOURCE	.	.	.	CVRWQCB	CVRWQCB	CVRWQCB
UNITS	.	.	.	µS/cm	µg/L	mg/L
Mar-05-2008	.	.	.	660	1.4	P
Mar-12-2008	.	.	.	640	1.1	P
Mar-19-2008	.	.	.	560	1.2	P
Mar-26-2008	.	.	.	710	1.5	P
Apr-02-2008	.	.	.	660	1.6	P
Apr-09-2008	.	.	.	760	1.8	P
Apr-16-2008	.	.	.	710	1.0	P
Apr-23-2008	.	.	.	660	1.3	P
Apr-30-2008	.	.	.	650	1.0	P
May-07-2008	.	.	.	660	0.9	P
May-14-2008	.	.	.	590	0.6	P
May-21-2008	.	.	.	610	0.8	P
May-28-2008	.	.	.	NA	NA	P

Table 17. Weekly water quality monitoring at Station G (San Joaquin River at Fremont Ford).

See Table 27 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow	Temperature	pH	Specific Conductance	Selenium (total)	Boron
DATA SOURCE	USGS	CVRWQCB	CVRWQCB	CVRWQCB	CVRWQCB	CVRWQCB
UNITS	cfs	°C	.	µS/cm	µg/L	mg/L
Mar-06-2008	415	13.4	7.8	1,360	0.6	P
Mar-13-2008	335	16.5	7.7	1,610	0.7	P
Mar-20-2008	312	15.2	8.0	1,750	0.7	P
Mar-27-2008	232	14.8	8.0	2,100	0.5	P
Apr-03-2008	174	16.0	7.7	2,280	0.5	P
Apr-10-2008	176	15.5	7.8	2,030	0.6	P
Apr-17-2008	157	16.8	7.6	1,730	0.6	P
Apr-24-2008	164	16.7	7.6	1,880	0.5	P
May-01-2008	114	16.3	7.7	1,920	<0.4	P
May-08-2008	157	19.8	7.9	1,660	0.6	P
May-15-2008	135	22.6	7.7	1,630	0.6	P
May-22-2008	144	16.1	7.7	1,610	0.5	P
May-29-2008	159	19.1	7.2	1,480	0.5	P

Table 18. Weekly water quality monitoring at Station H (San Joaquin River at Hills Ferry).

(Collected data intended for use with biological monitoring.)

See Table 27 for explanation of footnotes and agency abbreviations.

PARAMETER	.	.	.	Specific Conductance	Selenium (total)	Boron
DATA SOURCE	.	.	.	SLDMWA	SLDMWA	SLDMWA
UNITS	.	.	.	µS/cm	µg/L	mg/L
Mar-04-2008	.	.	.	1,830	2.1	1.3
Mar-11-2008	.	.	.	2,100	2.1	1.6
Mar-18-2008	.	.	.	1,540	1.5	1.5
Mar-25-2008	.	.	.	2,290	1.5	1.6
Apr-01-2008	.	.	.	2,560	1.9	1.8
Apr-08-2008	.	.	.	2,550	3.1	1.8
Apr-15-2008	.	.	.	2,330	4.5	1.6
Apr-29-2008	.	.	.	2,740	6.5	1.7
May-06-2008	.	.	.	2,700	8.6	1.7
May-13-2008	.	.	.	2,360	8.2	1.6
May-20-2008	.	.	.	2,200	4.4	1.5

Table 19. Weekly water quality monitoring at Station N (San Joaquin River at Crow's Landing).

See Table 27 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow	Temperature	pH	Specific Conductance	Selenium (total)	Boron
DATA SOURCE	usgs	CVRWQCB	CVRWQCB	CVRWQCB	CVRWQCB	CVRWQCB
UNITS	cfs	°C	.	µS/cm	µg/L	mg/L
Mar-06-2008	1,260	13.5	8.0	1,230	1.3	P
Mar-13-2008	1010	16.8	7.9	1,560	1.8	P
Mar-20-2008	877	15.6	8.0	1,560	1.6	P
Mar-27-2008	820	15.3	8.1	1,590	0.9	P
Apr-03-2008	702	16.5	8.0	1,670	1.2	P
Apr-10-2008	604	16.5	8.1	1,570	1.6	P
Apr-17-2008	574	17.3	8.0	1,570	2.3	P
Apr-24-2008	794	16.3	8.0	1,020	2.1	P
May-01-2008	1,580	15.0	8.2	500	0.8	P
May-08-2008	1,260	18.2	8.1	660	1.6	P
May-15-2008	1,420	18.9	8.0	560	1.4	P
May-22-2008	659	16.9	8.0	1,040	1.4	P
May-29-2008	563	19.4	7.9	1,220	2.3	P

Table 20. Summary of fathead minnow (*Pimephales promelas*) larvae survival in 7-day tests using water samples collected from June 2007 to May 2008. Each value is the mean of 4 replicates with 10 fish in each replicate.

See Table 27 for explanation of footnotes and agency abbreviations.

LOCATION	Station B	Station C	Station D	Station F	Delta Mendota Canal	Laboratory Control
DATA SOURCE	SLDMWA	SLDMWA	SLDMWA	SLDMWA	SLDMWA	SLDMWA
UNITS	%	%	%	%	%	%
Jun-2007	98	93	90	90	93	90
Jul-2007	100	98	98	100	100	100
Aug-2007	93	100	100	95	93	100
Sep-2007	93	90	88	93	93	100
Oct-2008	88	98	93	95	98	100
Nov-2008	95	95	100	100	100	98
Dec-2008	93	93	98	98	95	95
Jan-2008	100	100	95	98	100	100
Feb-2008	100	95	100	95	98	100
Mar-2008	93	95	100	100	73	100
Apr-2008	98	100	100	100	95	98
May-2008	98	95	98	95	98	100

Table 21. Summary of fathead minnow (*Pimephales promelas*) larvae growth in 7-day tests using water samples collected from June 2007 to May 2008. Each value is the mean of 4 replicates with 10 fish in each replicate.

See Table 27 for explanation of footnotes and agency abbreviations.

LOCATION	Station B	Station C	Station D	Station F	Delta Mendota Canal	Laboratory Control
DATA SOURCE	SLDMWA	SLDMWA	SLDMWA	SLDMWA	SLDMWA	SLDMWA
UNITS	mg	mg	mg	mg	mg	mg
Jun-2007	0.36	0.33	0.33	0.31	0.31	0.33
Jul-2007	0.36	0.32	0.26*	0.36	0.36	0.33
Aug-2007	0.30	0.29	0.32	0.33	0.27	0.26
Sep-2007	0.26	0.24	0.25	0.26	0.27	0.25
Oct-2008	0.32	0.36	0.34	0.41	0.36	0.34
Nov-2008	0.32*	0.32*	0.35	0.33	0.36	0.33
Dec-2008	0.31	0.33	0.32	0.32	0.32	0.32
Jan-2008	0.40	0.40	0.41	0.41	0.37	0.35
Feb-2008	0.46	0.43	0.41	0.41	0.38	0.33
Mar-2008	0.33	0.33	0.37	0.38	0.22	0.29
Apr-2008	0.31	0.39	0.31	0.24*	0.30	0.27
May-2008	0.31	0.31	0.29*	0.31	0.34	0.32

Table 22. Summary of *Daphnia magna* survival in 7-day tests using water samples collected from June 2007 to May 2008. Each value is the mean of 10 replicates with 1 animal in each replicate.

See Table 27 for explanation of footnotes and agency abbreviations.

LOCATION	Station B	Station C	Station D	Station F	Delta Mendota Canal	Laboratory Control
DATA SOURCE	SLDMWA	SLDMWA	SLDMWA	SLDMWA	SLDMWA	SLDMWA
UNITS	%	%	%	%	%	%
Jun-2007	60*	100	80	100	100	100
Jul-2007	80	80	80	90	80	100
Aug-2007	100	70	90	90	80	100
Sep-2007	100	100	100	100	100	80
Oct-2008	90	80	100	90	90	80
Nov-2008	100	100	100	100	100	100
Dec-2008	90	100	100	100	100	80
Jan-2008	70	100	90	100	100	90
Feb-2008	100	90	80	90	100	100
Mar-2008	100	100	90	100	100	90
Apr-2008	100	100	80	100	90	90
May-2008	80	70	80	100	90	90

Table 23. Summary of *Daphnia magna* reproduction in 7-day tests using water samples collected from June 2007 to May 2008. Each value is the mean of 10 replicates with 1 animal in each replicate.

See Table 27 for explanation of footnotes and agency abbreviations.

LOCATION	Station B	Station C	Station D	Station F	Delta Mendota Canal	Laboratory Control
DATA SOURCE	SLDMWA	SLDMWA	SLDMWA	SLDMWA	SLDMWA	SLDMWA
UNITS	neonates per female	neonates per female	neonates per female	neonates per female	neonates per female	neonates per female
Jun-2007	18.3*	34.9	34.9	32.6	28.2	27.2
Jul-2007	43.1	32.5	34.6	20.9	20.8	36.3
Aug-2007	29.8	26.3	40.7	33.9	25.9	26.3
Sep-2007	19.2*	32.0	31.0	23.8	29.3	19.6
Oct-2008	35.8	31.1	34.4	27.5	24.3	26.2
Nov-2008	49.9	44.0	46.9	41.6	42.5	40.3
Dec-2008	32.2	24.4	32.2	28.7	30.7	23.0
Jan-2008	36.4	47.8	41.5	40.3	48.8	45.2
Feb-2008	35.6	33.6	33.4	35.8	27.7	28.3
Mar-2008	27.4	29.0	29.5	26.2	30.1	19.6
Apr-2008	31.4	31.1	27.5	24.8	33.6	25.8
May-2008	22.2	19.6	23.5	33.1	25.7	28.8

Table 24. Summary of *Selenastrum capricornutum* growth in 4-day tests using water samples collected from June 2007 to May 2008. Each value is the mean of 4 replicates.

See Table 27 for explanation of footnotes and agency abbreviations.

LOCATION	Station B	Station C	Station D	Station F	Delta Mendota Canal	Laboratory Control
DATA SOURCE	SLDMWA	SLDMWA	SLDMWA	SLDMWA	SLDMWA	SLDMWA
UNITS	10 ⁵ cells/mL	10 ⁵ cells/mL	10 ⁵ cells/mL	10 ⁵ cells/mL	10 ⁵ cells/mL	10 ⁵ cells/mL
Jun-2007	12.3	15.3	13.6	14.5	11.2	16.0
Jul-2007	10.4	15.4	11.2	15.5	9.4	13.4
Aug-2007	12.0	15.9	12.6	13.7	9.9	13.7
Sep-2007	11.8	8.9	11.5	13.5	9.2††††	3.8†††† ‡
Oct-2008	12.0	13.9	14.1	14.8	10.8	13.8 ‡
Nov-2008	9.7*	17.3	21.4	19.1	13.2	15.1
Dec-2008	11.7	19.3	17.7	18.3	13.2	14.1
Jan-2008	15.8	16.3	22.6	19.9	16.3	16.1
Feb-2008	6.2	13.9	12.1	12.8	7.7††††	12.3
Mar-2008	18.1	14.2*	22.2	11.2*	20.5	24.9
Apr-2008	13.3*	16.7	22.4	11.9*	17.2	18.3
May-2008	17.1	30.5	22.3	14.2*	21.6	19.8

Table 25. Summary of selenium concentrations in grab water samples collected at study stations for use in laboratory toxicity tests, March 2008 to May 2008.

See Table 27 for explanation of footnotes and agency abbreviations

LOCATION	Station B	Station C	Station D	Station F	Delta Mendota Canal
DATA SOURCE	SLDMWA/USBR	SLDMWA/USBR	SLDMWA/USBR	SLDMWA/USBR	SLDMWA/USBR
UNITS	µg/L	µg/L	µg/L	µg/L	µg/L
Mar-10-2008	30	0.8	6.5	0.7	0.8
Mar-12-2008	28	0.8	7.7	0.6	<0.4
Mar-14-2008	25	0.8	8.5	0.6	0.5
Apr-07-2008	40	0.7	9.4	0.7	<0.4
Apr-09-2008	38	0.5	13	0.7	<0.4
Apr-11-2008	46	0.5	15	0.7	<0.4
May-05-2008	P	P	P	P	P
May-07-2008	P	P	P	P	P
May-09-2008	P	P	P	P	P

Table 26. Summary of total suspended solids concentrations in grab water samples collected at study stations for use in laboratory toxicity tests, March 2008 to May 2008.

See Table 27 for explanation of footnotes and agency abbreviations

LOCATION	Station B	Station C	Station D	Station F	Delta Mendota Canal
DATA SOURCE	SLDMWA	SLDMWA	SLDMWA	SLDMWA	SLDMWA
UNITS	mg/L	mg/L	mg/L	mg/L	mg/L
Mar-10-2008	13	113	77	60	40
Mar-12-2008	26	104	83	53	17
Mar-14-2008	21	107	89	56	10
Apr-07-2008	54	78	65	68	16
Apr-09-2008	45	58	62	45	16
Apr-11-2008	73	90	87	105	9
May-05-2008	71	49	74	103	7
May-07-2008	49	32	86	95	9
May-09-2008	89	89	94	111	11

Table 27. Explanations of footnotes and agency abbreviations.

Footnote	Explanation
CVRWQCB	California Regional Water Quality Control Board, Central Valley Region
SLDMWA	San Luis & Delta-Mendota Water Authority
USBR	U.S. Bureau of Reclamation
USGS	U.S. Geological Survey
e	Estimated value
.	Not applicable
<	Less than MDL. If needed in calculation, use 1/2 MDL
NA	Not analyzed - operator error, data will not be available in the future
NP	Not Provided. Data may be available in the future.
NT	Not tested
P	Pending, data not available at this time but will be available in the future
*	Significantly reduced from Delta Mendota Canal (p<0.05)
**	Sample re-analyzed and result confirmed.
L	Result may be biased low. Sample was not preserved in the field
†	DMC water failed to meet the survival (>80%) acceptability criteria.
††	Data from records of the Grassland Water District. Data is not subjected to the criteria documented in the Compliance Monitoring Program for the Use and Operation of the Grassland Bypass Project (1996) nor the Quality Assurance Project Plan for the GBP.
†††	DMC water failed to meet the reproduction (>10 neonates/adult) acceptability criteria.
††††	DMC water failed to meet minimum growth (10 ⁶ cell/mL) acceptability criteria.
‡	Control value exceeds suggested maximum variance (20%) acceptability criteria.
‡‡	Fungal growth observed on test organisms.
‡‡‡	Failed cell density requirement of 1E6 cells.
#	New testing laboratory with reporting limit of 0.4 µg/L as of June 1998.
❖	Based on definitive bioassay, NOEC is 50 percent
D	Sample was dechlorinated