

GRASSLAND BYPASS PROJECT

MONTHLY DATA REPORT

May 2006

October 5, 2006

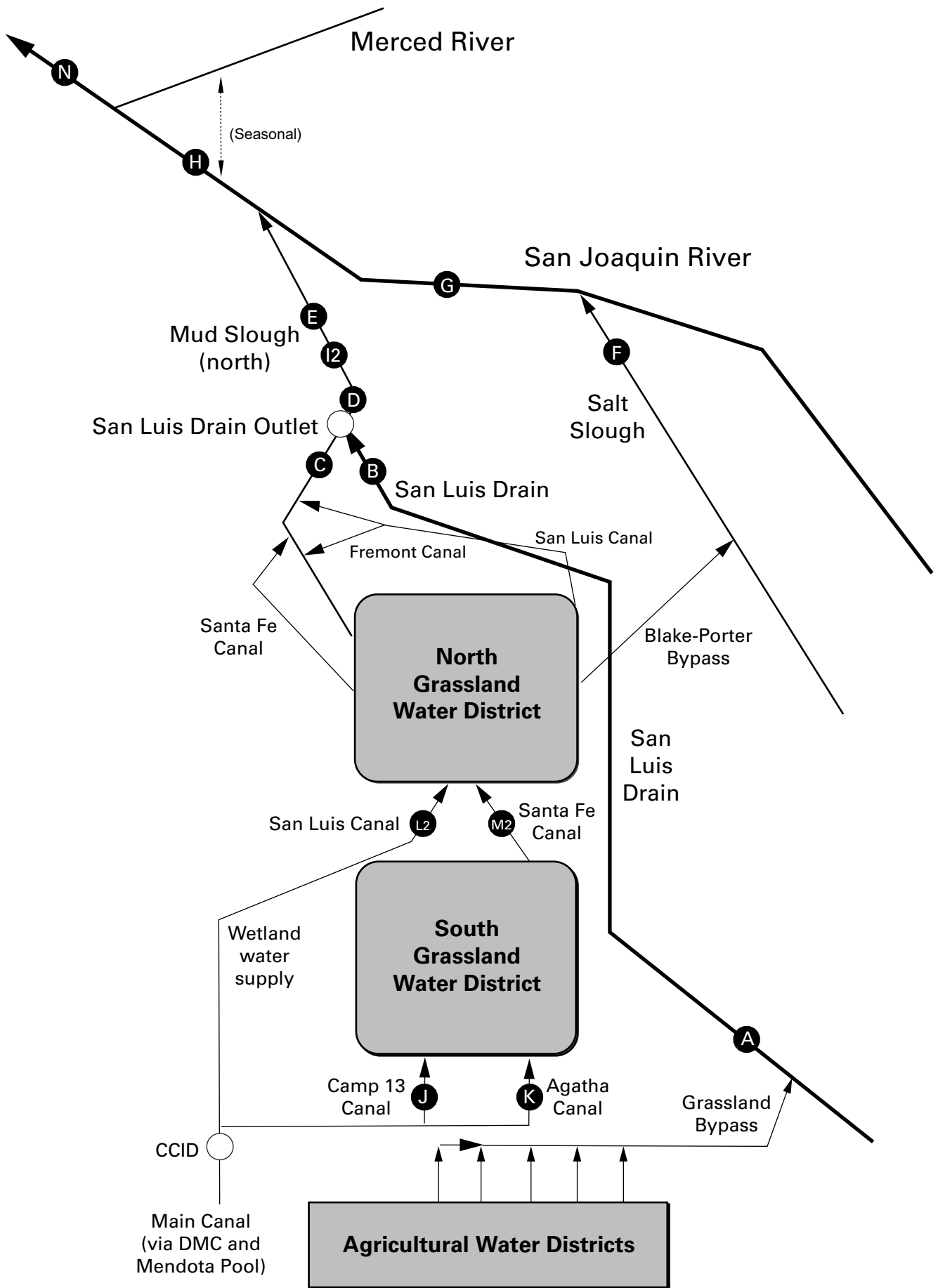
Preliminary Results

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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Table 1. Continuous water monitoring at Station A (inflow to San Luis Drain), May 2006.

See Table 27 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow	Specific Conductance
DATA SOURCE	SLDMWA	SLDMWA
UNITS	cfs	µS/cm
May-01-2006	34	5,970
May-02-2006	32	6,070
May-03-2006	34	5,920
May-04-2006	37	5,660
May-05-2006	38	5,630
May-06-2006	38	5,000
May-07-2006	38	4,690
May-08-2006	35	5,080
May-09-2006	35	4,940
May-10-2006	37	4,830
May-11-2006	36	4,360
May-12-2006	34	3,620
May-13-2006	35	3,480
May-14-2006	29	4,200
May-15-2006	28	4,820
May-16-2006	26	4,830
May-17-2006	26	5,360
May-18-2006	27	5,080
May-19-2006	34	4,630
May-20-2006	36	4,360
May-21-2006	40	4,660
May-22-2006	52	4,260
May-23-2006	48	4,460
May-24-2006	39	4,280
May-25-2006	29	4,400
May-26-2006	29	4,820
May-27-2006	31	5,180
May-28-2006	30	5,070
May-29-2006	30	5,230
May-30-2006	30	5,320
May-31-2006	30	5,330
Mean	34	4,890

Table 2a. Continuous water monitoring at Stations B and B2 (San Luis Drain Terminus), May 2006.

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*	USGS	CVRWQCB	CVRWQCB	CVRWQCB	Computed
UNITS	cfs	°C	mg/L	µS/cm	µg/L	lbs
May-01-2006	37	23.8	9.7	5,670	89.9	18.1
May-02-2006	35	24.0	10.0	5,570	91.2	17.4
May-03-2006	34	23.8	10.0	5,610	90.0	16.3
May-04-2006	35	22.3	9.3	5,580	89.8	17.1
May-05-2006	37	22.5	9.1	5,690	102.0	20.6
May-06-2006	39	22.4	9.0	5,560	102.0	21.6
May-07-2006	40	22.4	8.7	5,620	106.0	22.7
May-08-2006	39	23.1	8.6	5,340	85.6	18.1
May-09-2006	36	22.8	8.1	5,210	82.7	16.1
May-10-2006	38	23.4	8.2	4,610	69.3	14.1
May-11-2006	38	24.8	8.1	4,590	68.3	14.1
May-12-2006	38	25.6	8.2	4,590	68.7	13.9
May-13-2006	35	25.6	8.2	4,740	68.3	12.8
May-14-2006	37	25.4	8.6	4,540	70.6	14.0
May-15-2006	32	26.2	7.4	4,090	62.4	10.9
May-16-2006	29	26.7	6.1	3,430	30.4	4.7
May-17-2006	27	27.2	5.9	3,290	29.4	4.3
May-18-2006	27	27.4	6.1	3,390	28.9	4.2
May-19-2006	27	27.6	6.2	4,290	40.3	6.0
May-20-2006	34	27.6	7.4	4,370	38.9	7.1
May-21-2006	38	27.5	8.0	4,850	45.8	9.5
May-22-2006	45	27.4	7.7	4,740	49.7	12.1
May-23-2006	53	27.4	6.9	4,110	46.8	13.5
May-24-2006	49	27.4	7.6	4,380	51.5	13.6
May-25-2006	41	23.3	6.5	4,030	44.6	9.9
May-26-2006	32	23.4	7.3	4,220	48.8	8.4
May-27-2006	30	22.9	7.3	4,300	50.8	8.3
May-28-2006	32	22.0	6.9	4,000	41.6	7.2
May-29-2006	32	22.3	6.6	3,860	36.8	6.3
May-30-2006	30	22.7	6.9	4,350	41.8	6.9
May-31-2006	31	23.6	7.8	4,910	54.6	9.0
Mean	36	24.7	7.8	4,630	62.2	12.2
Total Acre-feet	2,200					
Total (lbs)						379

Load Limitation for May 2006 (lbs)	512
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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.

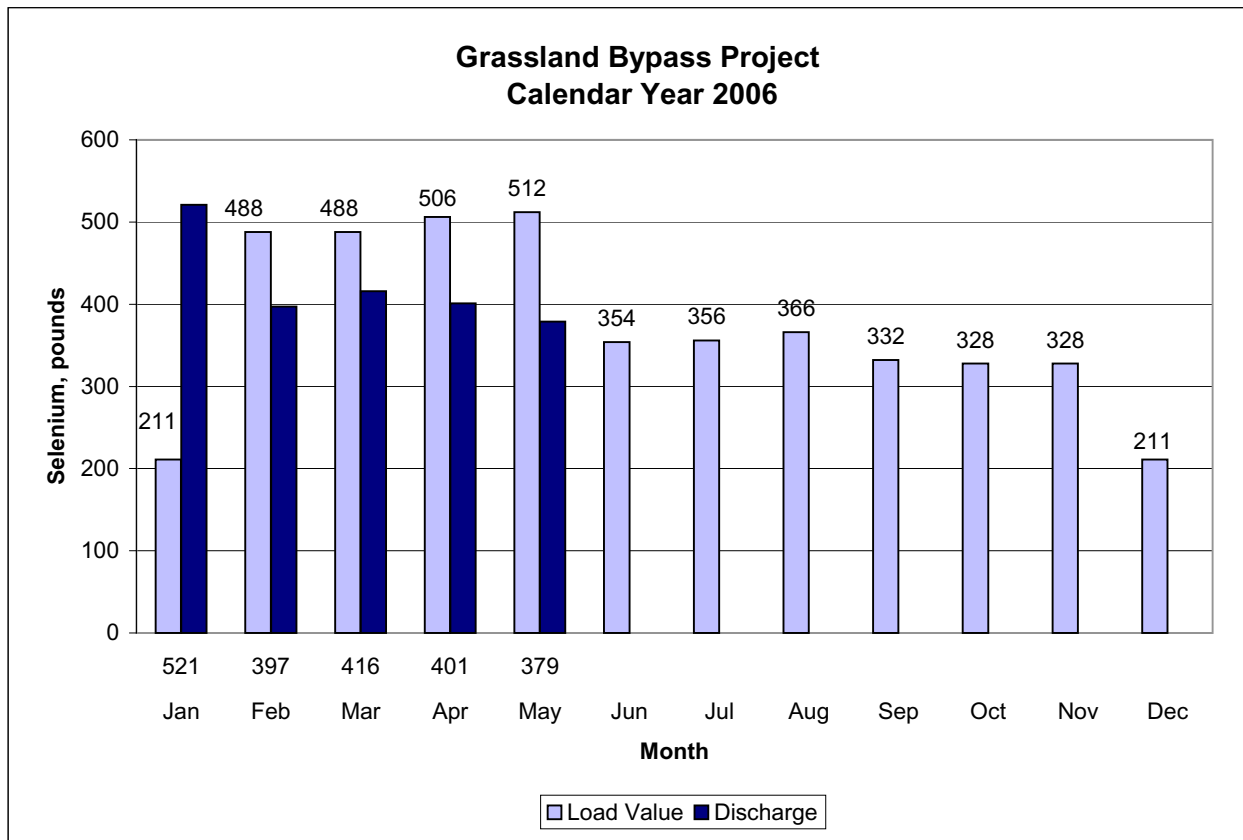


Table 3. Continuous water monitoring at Station D (Mud Slough North downstream of drainage discharges), May 2006.

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-01-2006	114	22.9	4,330
May-02-2006	113	23.1	4,580
May-03-2006	112	23.0	3,970
May-04-2006	110	21.6	4,490
May-05-2006	108	21.9	5,110
May-06-2006	108	21.9	4,930
May-07-2006	107	21.8	4,280
May-08-2006	102	22.5	3,830
May-09-2006	102	22.2	3,820
May-10-2006	101	22.6	4,200
May-11-2006	101	23.9	3,630
May-12-2006	101	24.7	3,470
May-13-2006	99	24.9	4,150
May-14-2006	101	24.5	4,070
May-15-2006	102	25.4	3,890
May-16-2006	106	25.8	3,040
May-17-2006	104	26.2	2,640
May-18-2006	94	26.8	2,570
May-19-2006	92	25.9	2,900
May-20-2006	98	24.1	2,810
May-21-2006	112	22.1	1,730
May-22-2006	129	21.0	1,630
May-23-2006	149	22.4	1,610
May-24-2006	169	22.7	1,680
May-25-2006	175	NA	NA
May-26-2006	171	NA	NA
May-27-2006	159	21.1	1,310
May-28-2006	137	20.7	1,320
May-29-2006	123	21.1	1,430
May-30-2006	116	21.7	1,500
May-31-2006	116	22.9	1,630
Mean	117	23.2	3,120

Table 4. Continuous water monitoring at Station F (Salt Slough at Highway 165), May 2006.

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-01-2006	336	22.3	960
May-02-2006	339	22.6	853
May-03-2006	339	22.3	895
May-04-2006	334	20.4	1,010
May-05-2006	332	20.4	1,010
May-06-2006	334	20.9	886
May-07-2006	339	20.8	742
May-08-2006	341	21.6	648
May-09-2006	343	21.8	626
May-10-2006	340	22.1	672
May-11-2006	328	23.2	731
May-12-2006	311	23.8	931
May-13-2006	299	23.9	991
May-14-2006	292	23.5	1,010
May-15-2006	288	24.6	1,010
May-16-2006	289	24.9	907
May-17-2006	277	25.2	898
May-18-2006	262	26.0	849
May-19-2006	253	24.9	943
May-20-2006	252	23.1	911
May-21-2006	260	21.4	894
May-22-2006	282	20.2	864
May-23-2006	302	21.2	779
May-24-2006	319	22.1	770
May-25-2006	324	22.2	775
May-26-2006	316	21.7	787
May-27-2006	297	20.5	803
May-28-2006	274	20.1	810
May-29-2006	254	20.5	806
May-30-2006	242	21.4	845
May-31-2006	237	22.4	878
Mean	301	22.3	850

Table 5. Continuous water monitoring at Station N (San Joaquin River at Crow's Landing), May 2006.

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-01-2006	16,300	19.7	168	0.7
May-02-2006	16,000	19.9	162	0.5
May-03-2006	15,700	20.2	159	0.6
May-04-2006	15,400	19.5	153	<0.4
May-05-2006	15,100	19.1	155	0.6
May-06-2006	14,800	19.0	147	0.6
May-07-2006	14,500	19.1	147	0.8
May-08-2006	14,300	19.6	147	0.5
May-09-2006	14,100	19.7	150	0.6
May-10-2006	14,100	19.7	147	0.5
May-11-2006	14,100	20.4	146	0.7
May-12-2006	13,900	21.0	NA	NA
May-13-2006	13,700	21.1	NA	NA
May-14-2006	13,600	20.8	NA	NA
May-15-2006	13,600	21.4	NA	NA
May-16-2006	13,600	21.8	NA	NA
May-17-2006	13,500	22.0	NA	NA
May-18-2006	13,300	22.4	NA	NA
May-19-2006	12,900	21.9	NA	NA
May-20-2006	12,700	20.7	NA	NA
May-21-2006	12,800	19.8	NA	NA
May-22-2006	13,200	18.4	NA	NA
May-23-2006	13,700	19.1	NA	NA
May-24-2006	14,200	19.8	NA	NA
May-25-2006	14,600	19.8	NA	NA
May-26-2006	14,800	19.8	NA	NA
May-27-2006	14,300	19.2	NA	NA
May-28-2006	13,300	19.1	NA	NA
May-29-2006	12,400	19.3	NA	NA
May-30-2006	11,700	19.6	NA	NA
May-31-2006	11,300	20.3	NA	NA
Mean	13,920	20.1	150	0.6

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-01-2006	59	.	.	4,310	130	.	.	.
Mar-08-2006	47	.	.	4,760	91	.	.	.
Mar-15-2006	37	.	.	4,920	120	.	.	.
Mar-22-2006	33	.	.	5,650	96	.	.	.
Mar-29-2006	38	.	.	5,970	140	.	.	.
Apr-05-2006	35	.	.	5,680	110	.	.	.
Apr-12-2006	38	.	.	5,600	79	.	.	.
Apr-19-2006	27	.	.	6,150	47	.	.	.
Apr-26-2006	42	.	.	5,980	64	.	.	.
May-03-2006	34	.	.	5,700	130	.	.	.
May-10-2006	37	.	.	4,940	130	.	.	.
May-17-2006	26	.	.	5,230	150	.	.	.
May-24-2006	39	.	.	4,420	170	.	.	.
May-31-2006	30	.	.	4,810	100	.	.	.

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-07-2006	50	.	.	4,900	.	58.4	.	7.7
Mar-14-2006	34	.	.	5,050	.	57.8	.	8.4
Mar-21-2006	35	.	.	4,920	.	58.3	.	7.9
Mar-28-2006	37	.	.	6,160	.	71.4	.	11.0
Apr-04-2006	35	.	.	5,890	.	70.6	.	10.0
Apr-11-2006	39	.	.	5,830	.	68.0	.	11.0
Apr-18-2006	25	.	.	5,690	.	63.6	.	10.0
Apr-25-2006	39	.	.	5,940	.	84.2	.	10.0
May-02-2006	32	.	.	5,760	.	96.4	.	9.2
May-09-2006	35	.	.	4,970	.	79.0	.	6.9
May-16-2006	26	.	.	4,230	.	P	.	7.7
May-23-2006	48	.	.	4,510	.	48.1	.	7.9
May-30-2006	30	.	.	4,650	.	54.2	.	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-02-2006	62	13.3	7.6	4,410	62	52.6	6.7
Mar-09-2006	51	14.0	8.1	4,730	78	57.0	7.2
Mar-16-2006	40	13.0	8.2	4,930	42	49.8	8.2
Mar-23-2006	38	14.1	8.3	4,600	45	48.6	8.5
Mar-30-2006	43	13.6	8.2	5,860	P	65.3	11.0
Apr-06-2006	40	14.7	8.5	5,550	53	59.6	9.2
Apr-13-2006	42	15.5	8.4	5,510	61	58.5	P
Apr-20-2006	30	17.8	8.5	5,180	58	54.4	9.4
Apr-27-2006	44	19.7	8.5	5,790	P	87.8	P
May-04-2006	35	20.7	8.8	5,630	72	93.0	8.2
May-11-2006	38	22.7	8.1	4,310	49	64.7	P
May-18-2006	27	25.9	8.4	3,480	36	33.7	6.2
May-25-2006	41	21.6	8.0	3,980	58	41.6	6.5

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-02-2006	285	13.0	7.9	1,740	.	0.6	1.5
Mar-09-2006	234	13.5	7.9	1,900	.	0.6	1.7
Mar-16-2006	176	12.7	8.0	2,090	.	1.1	1.9
Mar-23-2006	132	14.1	8.1	2,320	.	0.6	1.9
Mar-30-2006	138	13.0	8.1	2,170	.	0.5	2.1
Apr-06-2006	314	14.0	8.1	1,850	.	0.5	1.8
Apr-13-2006	220	15.5	8.2	1,900	.	1.7	P
Apr-20-2006	91	17.7	7.9	2,090	.	0.5	1.3
Apr-27-2006	65	18.1	8.1	1,170	.	0.5	P
May-04-2006	75	18.9	8.1	797	.	0.6	0.8
May-11-2006	63	22.7	7.9	892	.	0.5	P
May-18-2006	67	24.9	7.8	916	.	0.6	0.9
May-25-2006	134	20.7	7.7	657	.	0.7	0.8

** 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-02-2006	347	13.1	7.9	2,290	10.2	2.5
Mar-09-2006	285	13.5	8.0	2,430	10.4	2.7
Mar-16-2006	216	12.7	8.0	2,700	8.5	3.3
Mar-23-2006	170	13.9	8.2	2,870	10.7	3.5
Mar-30-2006	181	13.0	8.2	3,090	14.6	4.2
Apr-06-2006	354	14.3	8.1	2,530	10.2	3.2
Apr-13-2006	262	15.4	8.2	NA	10.7	P
Apr-20-2006	121	17.8	8.4	2,340	10.6	3.2
Apr-27-2006	109	18.6	8.2	2,000	18.0	P
May-04-2006	110	19.6	8.3	2,120	17.3	2.5
May-11-2006	101	22.6	8.4	2,260	16.4	P
May-18-2006	94	25.7	8.2	2,210	9.0	2.3
May-25-2006	175	21.0	8.0	1,600	10.7	2.2

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-07-2006	.	7.9	2,510	36	10.4	2.9
Mar-14-2006	.	7.7	2,680	26	10.4	3.2
Mar-22-2006	.	8.1	3,010	25	12.2	3.5
Apr-05-2006	.	8.5	3,010	56	8.6	3.0
Apr-13-2006	.	8.5	2,640	22	10.8	3.3
Apr-19-2006	.	8.6	2,060	33	7.7	2.8
Apr-26-2006	.	8.6	2,770	25	22.7	4.3
May-01-2006	.	8.5	2,640	24	29.2	3.9
May-11-2006	.	8.7	2,570	24	27.2	4.0
May-15-2006	.	8.6	2,550	24	26.3	3.8
May-25-2006	.	8.4	1,610	39	10.4	2.2

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-02-2006	430	13.1	7.8	1,310	0.7	0.6
Mar-09-2006	367	13.6	7.5	1,550	0.6	0.7
Mar-16-2006	367	12.5	7.7	1,610	0.8	0.9
Mar-23-2006	390	13.7	7.6	1,640	1.0	1.1
Mar-30-2006	375	13.1	7.8	1,610	0.8	1.3
Apr-06-2006	308	14.4	7.6	1,300	0.7	0.8
Apr-13-2006	413	15.5	7.3	1,320	0.8	P
Apr-20-2006	348	16.9	7.5	1,090	<0.4	0.7
Apr-27-2006	327	18.3	7.4	984	0.4	P
May-04-2006	334	19.2	7.5	1,020	0.5	0.7
May-11-2006	328	21.9	7.2	665	<0.4	P
May-18-2006	262	24.7	7.3	827	0.4	0.4
May-25-2006	324	21.1	7.0	750	0.5	0.5

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	SJDMWA ^{††}	.	.	CVRWQCB	CVRWQCB	CVRWQCB
UNITS	cfs	.	.	µS/cm	µg/L	mg/L
Mar-01-2006	15	.	.	569	1.2	0.4
Mar-08-2006	15	.	.	598	1.3	0.5
Mar-15-2006	15	.	.	502	2.1	0.3
Mar-22-2006	15	.	.	463	2.0	0.4
Mar-29-2006	15	.	.	282	0.5	0.2
Apr-05-2006	20	.	.	203	<0.4	0.2
Apr-12-2006	20	.	.	522	1.5	0.5
Apr-19-2006	20	.	.	277	0.7	0.3
Apr-26-2006	20	.	.	238	<0.4	<0.1
May-03-2006	5	.	.	108	0.4	0.1
May-10-2006	50	.	.	105	0.5	0.1
May-17-2006	65	.	.	107	0.5	<0.1
May-24-2006	65	.	.	106	0.5	0.1
May-31-2006	40	.	.	108	0.5	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-01-2006	50	.	.	411	1.1	0.3
Mar-08-2006	50	.	.	504	1.4	0.4
Mar-15-2006	50	.	.	482	1.7	0.5
Mar-22-2006	50	.	.	390	1.9	0.4
Mar-29-2006	50	.	.	333	0.5	0.5
Apr-05-2006	50	.	.	172	<0.4	0.2
Apr-12-2006	50	.	.	252	0.4	0.3
Apr-19-2006	50	.	.	166	<0.4	0.2
Apr-26-2006	50	.	.	111	<0.4	0.2
May-03-2006	0	.	.	81	0.5	0.0
May-10-2006	50	.	.	100	<0.4	0.1
May-17-2006	75	.	.	100	0.4	<0.1
May-24-2006	75	.	.	82	<0.4	<0.1
May-31-2006	50	.	.	82	0.6	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-01-2006	0	.	.	1,660	2.5	2.1
Mar-08-2006	25	.	.	1,820	2.3	2.5
Mar-15-2006	10	.	.	2,760	2.9	4.3
Mar-22-2006	8	.	.	2,620	3.1	3.5
Mar-29-2006	15	.	.	1,720	1.9	1.7
Apr-05-2006	0	.	.	603	0.7	0.8
Apr-12-2006	75	.	.	763	5.0	0.8
Apr-19-2006	75	.	.	260	0.4	0.2
Apr-26-2006	75	.	.	128	<0.4	0.1
May-03-2006	0	.	.	124	<0.4	0.1
May-10-2006	20	.	.	105	<0.4	<0.1
May-17-2006	20	.	.	281	0.6	0.2
May-24-2006	20	.	.	188	0.5	0.1
May-31-2006	20	.	.	217	0.5	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-01-2006	80	.	.	1,270	1.0	1.1
Mar-08-2006	71	.	.	1,520	0.9	1.6
Mar-15-2006	126	.	.	1,500	1.0	1.7
Mar-22-2006	139	.	.	1,600	1.2	1.6
Mar-29-2006	118	.	.	1,660	0.9	1.8
Apr-05-2006	142	.	.	1,150	0.7	1.3
Apr-12-2006	62	.	.	948	0.7	1.1
Apr-19-2006	69	.	.	666	<0.4	0.8
Apr-26-2006	20	.	.	560	<0.4	0.7
May-03-2006	108	.	.	532	0.8	0.7
May-10-2006	103	.	.	507	0.7	0.6
May-17-2006	107	.	.	363	0.6	0.4
May-24-2006	110	.	.	421	0.5	0.6
May-31-2006	94	.	.	537	0.8	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-01-2006	.	.	.	453	1.2	0.2
Mar-08-2006	.	.	.	500	1.6	0.4
Mar-15-2006	.	.	.	362	1.9	0.1
Mar-22-2006	.	.	.	373	2.0	0.2
Mar-29-2006	.	.	.	117	<0.4	<0.1
Apr-05-2006	.	.	.	98	<0.4	<0.1
Apr-12-2006	.	.	.	201	0.5	0.2
Apr-19-2006	.	.	.	72	<0.4	<0.1
Apr-26-2006	.	.	.	76	<0.4	0.1
May-03-2006	.	.	.	66	0.5	<0.1
May-10-2006	.	.	.	70	<0.4	<0.1
May-17-2006	.	.	.	76	<0.4	<0.1
May-24-2006	.	.	.	86	<0.4	<0.1
May-31-2006	.	.	.	89	0.6	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-02-2006	535	13.3	7.6	1,200	0.6	0.5
Mar-09-2006	941	13.5	7.5	881	<0.4	0.4
Mar-16-2006	1,040	12.4	7.6	798	0.4	0.4
Mar-23-2006	1,380	13.4	7.7	589	0.5	0.2
Mar-30-2006	1,720	13.2	7.7	445	<0.4	0.3
Apr-06-2006	6,320	NA	NA	NA	NA	NA
Apr-13-2006	16,700	NA	NA	NA	NA	NA
Apr-20-2006	12,000	NA	NA	NA	NA	NA
Apr-27-2006	11,900	NA	NA	NA	NA	NA
May-04-2006	10,300	NA	NA	NA	NA	NA
May-11-2006	9,660	NA	NA	NA	NA	NA
May-18-2006	8,220	NA	NA	NA	NA	NA
May-25-2006	11,200	NA	NA	NA	NA	NA

Note:

Site G was flooded and water from the Mud Slough (north) overflow was comingling with water from the San Joaquin River.

Site G is intended to represent the San Joaquin River upstream of inflows from Mud Slough (north).

However, due to the flooding, it was impossible to collect representative samples in April and May.

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-07-2006	.	.	.	NA	<0.4	0.1
Mar-14-2006	.	.	.	NA	<0.4	0.1
Mar-21-2006	.	.	.	NA	<0.4	0.1
Mar-28-2006	.	.	.	NA	0.4	0.1
Apr-04-2006	.	.	.	NA	<0.4	0.1
Apr-11-2006	.	.	.	NA	<0.4	0.1
Apr-18-2006	.	.	.	NA	<0.4	0.1
Apr-25-2006	.	.	.	NA	<0.4	0.1
May-02-2006	.	.	.	NA	<0.4	0.0
May-09-2006	.	.	.	NA	<0.4	0.1
May-16-2006	.	.	.	NA	<0.4	0.1
May-23-2006	.	.	.	NA	0.4	0.5

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-02-2006	2,740	13.1	7.8	751	1.6	0.5
Mar-09-2006	4020	12.3	7.7	555	1.0	0.4
Mar-16-2006	4,330	11.3	7.8	467	0.7	0.3
Mar-23-2006	4,240	12.5	7.9	477	0.8	0.3
Mar-30-2006	4,960	12.1	7.7	421	0.7	0.4
Apr-06-2006	10,900	14.4	7.5	301	0.4	0.1
Apr-13-2006	21,500	14.5	7.0	182	<0.4	P
Apr-20-2006	16,900	16.3	7.4	177	<0.4	0.1
Apr-27-2006	17,200	17.6	7.2	162	<0.4	P
May-04-2006	15,400	19.4	7.4	149	0.5	0.1
May-11-2006	14,100	20.1	7.2	135	<0.4	P
May-18-2006	13,300	22.3	7.1	124	<0.4	0.1
May-25-2006	14,600	19.6	7.3	113	<0.4	<0.1

Table 20. Summary of fathead minnow (*Pimephales promelas*) larvae survival in 7-day tests using water samples collected from June 2005 to May 2006. 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-2005	100	93	98	95	90	95
Jul-2005	98	100	95	98	80	93
Aug-2005	93	95	95	95	100	98
Sep-2005	100	100	100	98	93	95
Oct-2005	90	93	98	100	90	100
Nov-2006	98	95	90	98	95	98
Dec-2006	95	28*	55*	63	95	98
Jan-2006	100	95	95	100	73	100
Feb-2006	98	95	98	100	100	100
Mar-2006	93	95	98	90	98	95
Apr-2006	90	95	98	100	95	100
May-2006	95	100	98	100	88	100

Table 21. Summary of fathead minnow (*Pimephales promelas*) larvae growth in 7-day tests using water samples collected from June 2005 to May 2006. 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-2005	0.51	0.50	0.50	0.50	0.47	0.36
Jul-2005	0.39	0.39	0.35	0.33	0.35	0.39
Aug-2005	0.52	0.56	0.60	0.51	0.48	0.42
Sep-2005	0.54	0.04	0.45	0.45	0.42	0.38
Oct-2005	0.38	0.41	0.41	0.36	0.39	0.40
Nov-2006	0.31	0.32	0.30	0.29	0.31	0.31
Dec-2006	0.36	0.12*	0.23	0.25	0.33	0.31
Jan-2006	0.47	0.43	0.46	0.43	0.35	0.36
Feb-2006	0.39	0.39	0.42	0.42	0.31	0.28
Mar-2006	0.49	0.45	0.45	0.45	0.46	0.40
Apr-2006	0.31	0.38	0.36	0.36	0.29	0.28
May-2006	0.38	0.43	0.39	0.58	0.34	0.33

Table 22. Summary of *Daphnia magna* survival in 7-day tests using water samples collected from June 2005 to May 2006. 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-2005	90	90	80	90	80	100
Jul-2005	90	100	80	90	80	90
Aug-2005	100	100	100	80	80	70†
Sep-2005	90	90	100	80	20†	30†
Oct-2005	30*	80	78	100	90	80
Nov-2006	80	80	100	90	100	100
Dec-2006	100	80	70	70	80	100
Jan-2006	90	90	80	80	80	100
Feb-2006	100	100	100	100	100	50†
Mar-2006	100	90	80	80	80	100
Apr-2006	80	90	100	90	100	100
May-2006	100	90	100	100	100	100

Table 23. Summary of *Daphnia magna* reproduction in 7-day tests using water samples collected from June 2005 to May 2006. 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-2005	41.8	35.1	36.8	42.5	30.7	31.9
Jul-2005	41.8	49.4	43.1	45.5	39.6	34.0
Aug-2005	29.3	36.1	32.5	29.4	22.1	21.0
Sep-2005	11.4	11.0	12.0	10.8	5.3†††	7.8†††
Oct-2005	11.7*	28.3	23.9	25.7	24.5	22.6
Nov-2006	17.8	16.1	16.7	15.7	16.9	17.0
Dec-2006	19.0	17.4	14.9	13.4	19.8	22.4
Jan-2006	32.2	29.6	33.1	24.7	25.3	26.6
Feb-2006	30.7	34.8	34.9	30.8	32.0	13.2
Mar-2006	39.0	33.0	28.2	28.8	31.5	33.9
Apr-2006	43.6	42.7	43.5	39.9	32.7	37.4
May-2006	49.2	28.1	27.3	26.4	22.9	18.2

Table 24. Summary of *Selenastrum capricornutum* growth in 4-day tests using water samples collected from June 2005 to May 2006. 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-2005	21.4	17.8	21.2	14.6	16.3	20.6
Jul-2005	10.0*	13.0	7.4*	7.7*	11.9	13.0
Aug-2005	6.1*	21.0	7.3*	22.9	16.7	18.2
Sep-2005	21.5	23.1	25.0	28.3	21.6	22.4
Oct-2005	18.3	14.8	17.1	17.4	9.1	17.5
Nov-2006	17.7	22.3	22.8	19.0	15.6	18.1
Dec-2006	13.8*	26.9	37.2	21.1	22.1	23.4
Jan-2006	8.9*	27.5	29.5	24.3	22.5	25.5
Feb-2006	8.3*	12.6	5.9*	1.7*	12.8	23.8
Mar-2006	17.4	24.2	25.0	24.0	15.4	23.9
Apr-2006	9.9	21.5	18.8	18.6	12.7	19.7
May-2006	20.6	11.5*	15.9	13.6	15.4	16.4

Table 25. Summary of selenium concentrations in grab water samples collected at study stations for use in laboratory toxicity tests, March 2006 to May 2006.

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-13-2006	63	0.6	10	0.8	<0.4
Mar-15-2006	55	0.6	10	0.8	<0.4
Mar-17-2006	51	0.6	10	0.8	<0.4
Apr-10-2006	62	<0.4	9	<0.4	<0.4
Apr-12-2006	58	0.5	11	<0.4	<0.4
Apr-14-2006	61	0.4	11	<0.4	<0.4
May-08-2006	75	0.4	13	0.4	<0.4
May-10-2006	67	0.5	9.4	<0.4	<0.4
May-12-2006	65	0.4	15	<0.4	<0.4

Table 26. Summary of total suspended solids concentrations in grab water samples collected at study stations for use in laboratory toxicity tests, March 2006 to May 2006.

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-13-2006	44	83	78	67	10
Mar-15-2006	61	92	75	67	17
Mar-17-2006	53	124	91	53	17
Apr-10-2006	54	39	66	28	6
Apr-12-2006	76	51	62	35	7
Apr-14-2006	70	148	111	39	12
May-08-2006	61	94	68	70	8
May-10-2006	60	68	58	88	13
May-12-2006	52	88	85	110	7

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.
†	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