GRASSLAND BYPASS PROJECT

MONTHLY DATA REPORT

January 2006

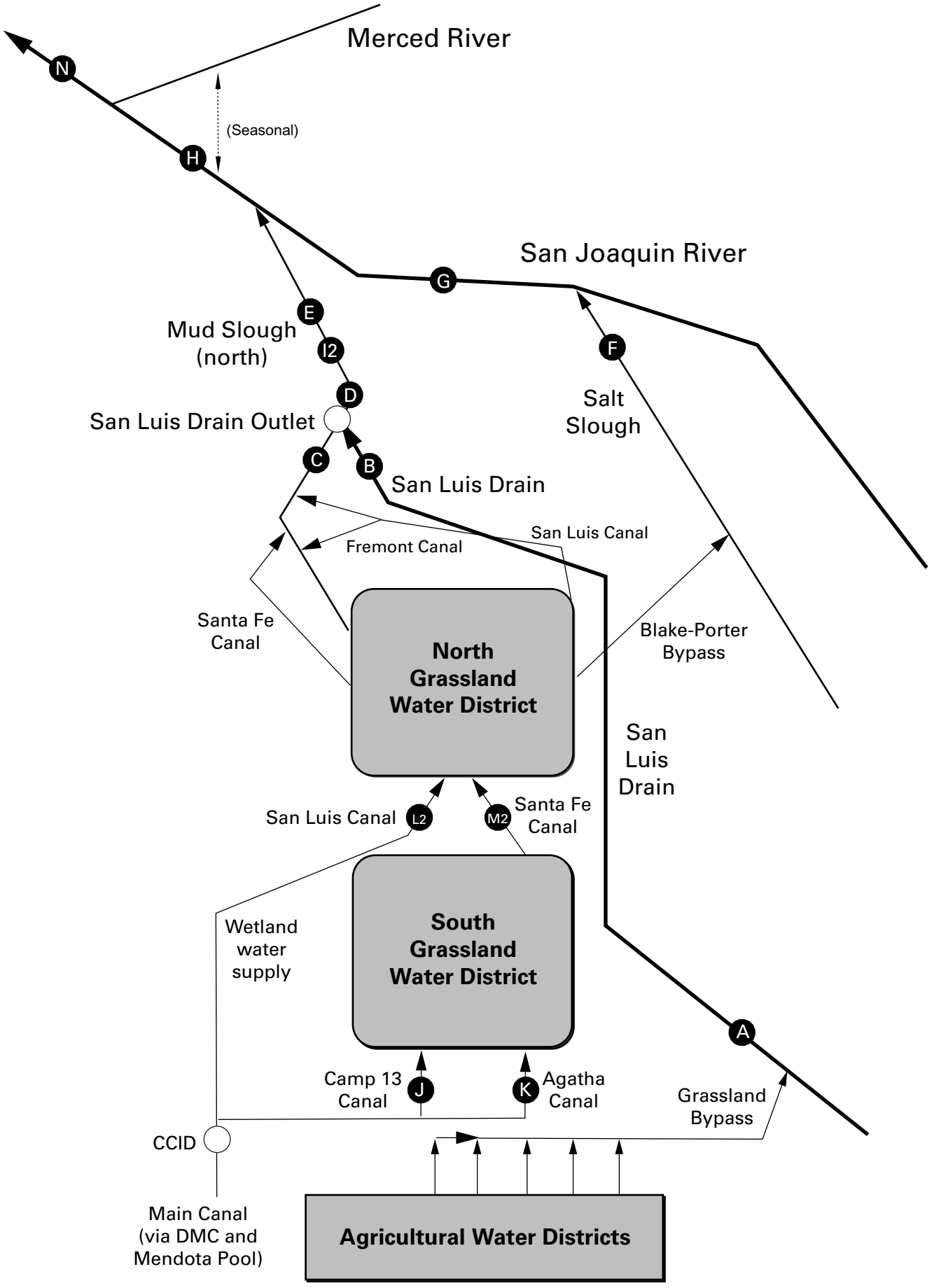
May 24, 2006

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


Merced River
N
(Seasonal)
H
San Joaquin River
G
E
Mud Slough
(north)
I2
F
D
San Luis Drain Outlet
Salt
Slough
C
B
San Luis Drain
San Luis Canal
Fremont Canal
Santa Fe
Canal
North
Grassland
Water District
Blake-Porter
Bypass
San
Luis
Drain
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L2
M2
Santa Fe
Canal
Wetland
water
supply
South
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Water District
A
Camp 13
Canal
J
K
Agatha
Canal
Grassland
Bypass
CCID
Main Canal
(via DMC and
Mendota Pool)
Agricultural Water Districts

GRASSLAND BYPASS PROJECT

MONTHLY DATA REPORT

LIST OF TABLES FOR MONTHLY REPORT

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

See Table 27 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow	Specific Conductance
DATA SOURCE	SLDMWA	SLDMWA
UNITS	cfs	µS/cm
Jan-01-2006	29	3,240
Jan-02-2006	68	3,340
Jan-03-2006	108	1,930
Jan-04-2006	118	2,420
Jan-05-2006	79	3,060
Jan-06-2006	69	3,680
Jan-07-2006	61	4,260
Jan-08-2006	48	4,790
Jan-09-2006	44	4,920
Jan-10-2006	45	4,980
Jan-11-2006	46	4,840
Jan-12-2006	45	4,840
Jan-13-2006	48	5,420
Jan-14-2006	49	5,190
Jan-15-2006	46	5,270
Jan-16-2006	42	5,320
Jan-17-2006	42	5,200
Jan-18-2006	43	5,130
Jan-19-2006	42	5,190
Jan-20-2006	42	5,220
Jan-21-2006	38	5,350
Jan-22-2006	34	5,430
Jan-23-2006	34	5,490
Jan-24-2006	37	5,350
Jan-25-2006	40	5,230
Jan-26-2006	39	5,320
Jan-27-2006	37	5,330
Jan-28-2006	36	5,310
Jan-29-2006	35	5,320
Jan-30-2006	35	5,340
Jan-31-2006	38	5,260
Mean	49	4,740

Table 2a. Continuous water monitoring at Stations B and B2 (San Luis Drain Terminus), January 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
Jan-01-2006	36	11.7	7.3	4,310	54.7	10.7
Jan-02-2006	46	11.4	6.6	4,200	51.8	12.8
Jan-03-2006	81	11.4	6.4	4,160	54.9	24.1
Jan-04-2006	109	11.6	5.4	3,300	41.4	24.4
Jan-05-2006	114	11.8	2.8	2,140	25.2	15.5
Jan-06-2006	86	11.8	3.2	2,400	27.6	12.8
Jan-07-2006	75	12.2	4.0	2,780	29.2	11.8
Jan-08-2006	67	12.2	6.2	3,550	36.4	13.2
Jan-09-2006	56	12.0	6.5	3,830	44.4	13.3
Jan-10-2006	51	12.0	7.1	4,320	53.0	14.6
Jan-11-2006	51	11.9	8.2	4,730	58.4	16.2
Jan-12-2006	53	11.4	8.2	4,840	60.8	17.2
Jan-13-2006	52	11.6	8.1	4,870	68.6	19.3
Jan-14-2006	53	11.8	8.1	4,800	67.5	19.2
Jan-15-2006	52	11.3	8.1	4,780	71.4	20.1
Jan-16-2006	50	10.9	9.6	5,130	82.7	22.5
Jan-17-2006	47	10.9	8.0	4,890	74.2	18.9
Jan-18-2006	47	11.1	8.5	4,890	76.2	19.3
Jan-19-2006	48	10.6	8.5	4,970	75.4	19.4
Jan-20-2006	48	10.4	7.8	4,950	74.2	19.1
Jan-21-2006	48	10.5	8.7	4,880	67.7	17.4
Jan-22-2006	44	10.7	8.7	4,870	72.6	17.2
Jan-23-2006	41	10.5	8.7	4,960	78.5	17.3
Jan-24-2006	41	10.7	9.0	4,920	68.2	15.0
Jan-25-2006	44	10.8	8.3	4,980	70.6	16.6
Jan-26-2006	46	11.5	8.5	4,910	70.3	17.3
Jan-27-2006	45	11.3	7.8	4,960	64.3	15.6
Jan-28-2006	44	11.7	7.8	4,800	63.4	15.0
Jan-29-2006	42	12.8	8.0	4,830	63.8	14.6
Jan-30-2006	41	13.1	8.0	4,900	68.7	15.2
Jan-31-2006	42	13.0	7.4	4,920	66.8	15.0
Mean	55	11.5	7.4	4,440	60.7	16.8
Total Acre-feet	**3,370**					
Total (lbs)						**521**

Load Limitation for January 2006 (lbs)	**211**

♦To improve the accuracy of flow measurements, Reclamation and the San Luis & Delta-Mendota Water Authority, with technica 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.

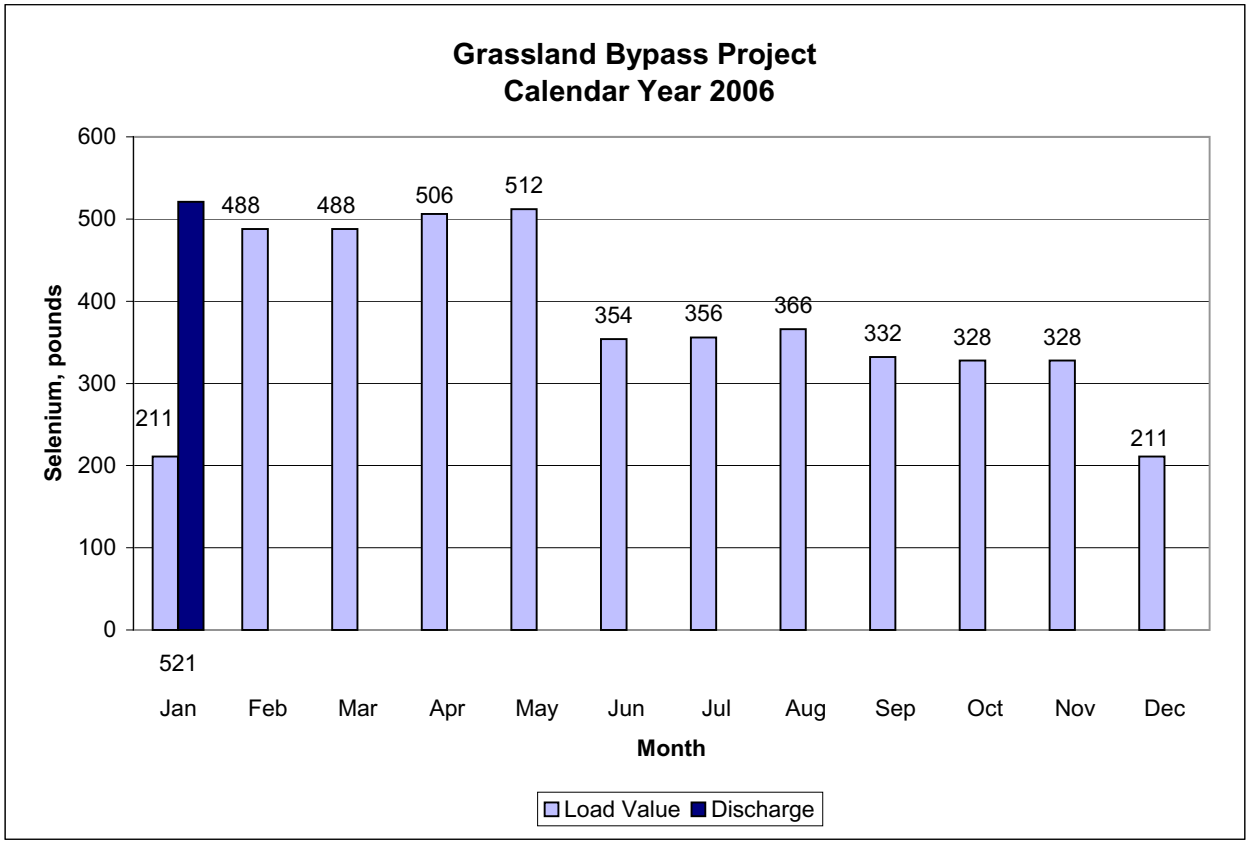

Table 3. Continuous water monitoring at Station D (Mud Slough North downstream of drainage discharges), January 2006.

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
Jan-01-2006	282	11.1	1,970
Jan-02-2006	354	10.9	1,900
Jan-03-2006	502	10.5	1,850
Jan-04-2006	573	10.9	1,760
Jan-05-2006	602	11.2	1,490
Jan-06-2006	610	11.2	1,480
Jan-07-2006	582	12.0	1,550
Jan-08-2006	547	11.9	1,640
Jan-09-2006	509	11.2	1,630
Jan-10-2006	440	10.9	1,770
Jan-11-2006	355	11.0	2,180
Jan-12-2006	279	10.5	2,420
Jan-13-2006	245	11.0	2,520
Jan-14-2006	240	11.3	2,570
Jan-15-2006	216	10.4	2,680
Jan-16-2006	188	9.8	2,910
Jan-17-2006	165	10.1	2,920
Jan-18-2006	151	10.7	3,020
Jan-19-2006	151	10.3	3,080
Jan-20-2006	146	9.7	3,100
Jan-21-2006	150	9.7	3,030
Jan-22-2006	165	10.1	2,820
Jan-23-2006	175	9.9	2,700
Jan-24-2006	202	10.0	2,490
Jan-25-2006	257	9.9	2,100
Jan-26-2006	197	11.0	2,670
Jan-27-2006	163	10.9	2,850
Jan-28-2006	154	11.3	2,820
Jan-29-2006	144	12.8	2,880
Jan-30-2006	138	12.8	2,860
Jan-31-2006	139	12.2	2,810
Mean	291	10.9	2,400

Table 4. Continuous water monitoring at Station F (Salt Slough at Highway 165), January 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
Jan-01-2006	237	11.3	1,660
Jan-02-2006	287	11.1	1,660
Jan-03-2006	405	10.7	1,520
Jan-04-2006	541	11.0	1,280
Jan-05-2006	592	10.9	1,270
Jan-06-2006	568	10.9	1,440
Jan-07-2006	518	11.5	1,610
Jan-08-2006	476	11.5	1,690
Jan-09-2006	438	11.1	1,730
Jan-10-2006	406	10.7	1,790
Jan-11-2006	366	10.7	1,850
Jan-12-2006	324	10.6	1,930
Jan-13-2006	300	11.1	1,970
Jan-14-2006	283	11.5	2,060
Jan-15-2006	259	10.8	2,110
Jan-16-2006	240	10.2	2,160
Jan-17-2006	202	10.3	2,280
Jan-18-2006	180	11.4	2,350
Jan-19-2006	184	10.9	2,260
Jan-20-2006	187	10.3	2,120
Jan-21-2006	174	10.1	2,090
Jan-22-2006	169	10.6	2,090
Jan-23-2006	173	10.5	2,090
Jan-24-2006	176	10.5	2,120
Jan-25-2006	178	10.3	2,190
Jan-26-2006	190	11.1	2,110
Jan-27-2006	194	11.0	1,970
Jan-28-2006	186	11.4	1,940
Jan-29-2006	182	12.8	1,920
Jan-30-2006	191	12.8	1,820
Jan-31-2006	209	12.3	1,710
Mean	291	11.0	1,900

Table 5. Continuous water monitoring at Station N (San Joaquin River at Crow's Landing), January 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
Jan-01-2006	3,680	11.6	405	0.5
Jan-02-2006	3,720	11.2	436	0.7
Jan-03-2006	4,480	10.9	449	0.5
Jan-04-2006	5,170	11.0	355	0.6
Jan-05-2006	5,850	11.1	344	0.7
Jan-06-2006	6,470	11.1	335	0.7
Jan-07-2006	6,770	11.3	387	0.6
Jan-08-2006	6,780	11.2	422	0.6
Jan-09-2006	6,580	10.9	436	0.6
Jan-10-2006	6,230	10.6	444	0.7
Jan-11-2006	5,910	10.6	429	0.7
Jan-12-2006	5,660	10.5	438	0.8
Jan-13-2006	5,340	10.6	455	0.9
Jan-14-2006	4,850	10.8	503	1.1
Jan-15-2006	4,520	10.7	506	1.0
Jan-16-2006	4,050	10.2	562	1.2
Jan-17-2006	3,790	10.1	578	1.2
Jan-18-2006	3,470	10.4	594	1.2
Jan-19-2006	3,040	10.4	663	1.3
Jan-20-2006	2,850	10.0	697	1.5
Jan-21-2006	2,810	9.8	694	1.5
Jan-22-2006	2,700	9.8	669	1.5
Jan-23-2006	2,670	10.1	685	1.4
Jan-24-2006	2,580	10.1	708	1.4
Jan-25-2006	2,430	9.9	767	1.4
Jan-26-2006	2,410	10.4	764	1.3
Jan-27-2006	2,240	10.5	875	1.7
Jan-28-2006	2,160	10.7	905	1.7
Jan-29-2006	2,160	11.6	892	1.7
Jan-30-2006	2,120	12.0	884	1.7
Jan-31-2006	2,100	11.6	884	1.6
Mean	4,050	10.7	590	1.1

PRELIMINARY RESULTS

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	.	.	.
Nov-02-2005	13	.	.	5,160	50	.	.	.
Nov-09-2005	14	.	.	6,110	59	.	.	.
Nov-16-2005	13	.	.	5,240	43	.	.	.
Nov-22-2005	17	.	.	5,090	54	.	.	.
Nov-30-2005	11	.	.	4,930	35	.	.	.
Dec-07-2005	17	.	.	5,130	51	.	.	.
Dec-14-2005	15	.	.	3,670	26	.	.	.
Dec-21-2005	10	.	.	4,700	20	.	.	.
Jan-04-2006	118	.	.	2,450	160	.	.	.
Jan-11-2006	46	.	.	4,780	220	.	.	.
Jan-18-2006	43	.	.	5,040	P	.	.	.
Jan-25-2006	40	.	.	6,170	110	.	.	.
Jan-31-2006	38	.	.	5,200	170	.	.	.

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
Nov-01-2005	12	.	.	5,580	.	86.2	.	9.6
Nov-08-2005	14	.	.	5,390	.	86.6	.	10.0
Nov-15-2005	14	.	.	5,030	.	68.2	.	7.7
Nov-21-2005	20	.	.	4,960	.	71.2	.	8.3
Nov-28-2005	16	.	.	5,160	.	84.5	.	8.2
Dec-06-2005	15	.	.	5,140	.	76.2	.	7.5
Dec-13-2005	14	.	.	4,070	.	48.2	.	6.5
Dec-20-2005	11	.	.	3,700	.	38.2	.	5.7
Dec-27-2005	20	.	.	4,710	.	61.6	.	8.3
Jan-09-2006	44	.	.	4,240	.	60.2	.	7.4
Jan-17-2006	42	.	.	5,070	.	77.0	.	9.0
Jan-24-2006	37	.	.	5,100	.	75.8	.	8.3
Jan-30-2006	35	.	.	5,090	.	69.4	.	8.5

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
Nov-03-2005	20	15.7	8.3	4,640	51	52.3	6.8
Nov-10-2005	21	15.1	7.6	4,460	37	49.0	6.9
Nov-17-2005	21	14.8	7.8	4,220	30	31.8	5.7
Nov-22-2005	27	14.0	7.9	4,430	32	43.4	6.8
Dec-01-2005	22	11.3	8.1	4,710	35	57.3	7.0
Dec-08-2005	25	9.7	8.0	4,350	36	49.8	5.9
Dec-15-2005	23	9.4	7.8	3,880	17	27.1	4.9
Dec-22-2005	25	12.2	7.9	3,230	NA	20.8	4.5
Dec-29-2005	29	12.4	7.9	4,310	39	46.6	6.7
Jan-05-2006	114	11.3	7.6	1,940	230	26.0	2.8
Jan-12-2006	53	11.0	8.1	4,880	49	70.0	8.4
Jan-19-2006	48	9.8	8.1	5,020	40	72.6	9.1
Jan-26-2006	46	10.7	8.0	5,020	48	67.8	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
Nov-03-2005	156	14.8	7.6	1,030	.	<0.4	0.7
Nov-10-2005	134	14.7	7.7	1,190	.	0.5	0.9
Nov-17-2005	151	14.4	7.8	1,210	.	<0.4	0.8
Nov-22-2005	153	13.5	6.9	1,240	.	0.4	0.9
Dec-01-2005	174	11.8	7.8	1,310	.	<0.4	1.0
Dec-08-2005	162	9.6	7.9	1,380	.	<0.4	1.1
Dec-15-2005	159	8.6	7.9	1,430	.	<0.4	1.1
Dec-22-2005	229	12.3	7.7	1,410	.	<0.4	1.0
Dec-29-2005	257	11.5	7.7	1,460	.	0.4	1.3
Jan-05-2006	488	10.2	7.8	1,330	.	0.4	1.1
Jan-12-2006	226	10.2	7.9	1,670	.	0.5	1.5
Jan-19-2006	102	9.3	7.9	2,150	.	<0.4	1.9
Jan-26-2006	151	10.4	8.0	1,810	.	0.6	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
Nov-03-2005	176	14.9	7.6	1,540	7.2	1.5
Nov-10-2005	155	14.8	7.6	1,710	6.9	1.7
Nov-17-2005	172	14.3	7.7	1,620	3.6	1.4
Nov-22-2005	180	13.6	7.4	1,770	6.4	1.7
Dec-01-2005	196	11.7	7.9	1,740	6.4	1.6
Dec-08-2005	187	9.6	7.9	1,850	6.8	1.6
Dec-15-2005	182	8.8	7.8	1,900	4.8	1.9
Dec-22-2005	254	12.2	7.8	1,590	2.9	1.3
Dec-29-2005	276	11.6	7.8	1,800	4.2	1.8
Jan-05-2006	602	10.7	7.7	1,460	6.2	1.5
Jan-12-2006	279	10.3	7.9	2,390	14.0	3.1
Jan-19-2006	151	9.5	7.9	3,120	21.8	4.0
Jan-26-2006	197	10.4	7.2	2,560	14.6	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
Nov-01-2005	.	7.7	1,660	13	6.2	1.8
Nov-10-2005	.	7.8	1,970	12	5.9	2.0
Nov-17-2005	.	7.5	1,760	12	3.3	1.8
Nov-22-2005	.	7.8	1,940	15	5.9	2.0
Dec-01-2005	.	7.8	1,810	13	6.4	1.8
Dec-06-2005	.	7.9	1,830	6	3.9	1.8
Dec-15-2005	.	7.8	2,010	8	4.9	2.0
Dec-22-2005	.	7.7	1,770	10	2.4	1.5
Jan-05-2006	.	7.6	1,450	50	5.4	1.5
Jan-10-2006	.	7.7	1,760	33	7.2	1.9
Jan-17-2006	.	7.8	3,090	13	17.1	3.5
Jan-24-2006	.	8.0	2,410	42	11.4	2.8

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
Nov-03-2005	163	14.5	7.6	1,210	0.4	0.6
Nov-10-2005	150	14.6	7.7	1,280	0.6	0.7
Nov-17-2005	185	13.3	7.8	1,180	<0.4	0.5
Nov-22-2005	185	12.1	7.7	1,090	0.4	0.7
Dec-01-2005	233	11.5	7.6	1,210	0.5	0.7
Dec-08-2005	238	9.4	7.7	1,330	0.5	0.7
Dec-15-2005	142	9.3	7.7	1,750	<0.4	1.0
Dec-22-2005	159	12.6	7.7	1,640	0.4	1.1
Dec-29-2005	218	11.7	7.7	1,620	0.5	1.1
Jan-05-2006	592	10.6	7.5	1,140	0.8	0.9
Jan-12-2006	324	10.4	7.6	1,920	0.7	1.6
Jan-19-2006	184	10.1	7.6	2,310	<0.4	1.3
Jan-26-2006	190	10.1	7.7	2,100	0.5	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
Nov-02-2005	30	.	.	466	0.8	0.3
Nov-09-2005	30	.	.	461	0.7	0.3
Nov-16-2005	30	.	.	511	0.7	0.2
Nov-22-2005	30	.	.	622	0.5	0.3
Nov-30-2005	30	.	.	699	0.8	0.3
Dec-07-2005	20	.	.	601	<0.4	0.2
Dec-14-2005	20	.	.	690	<0.4	0.3
Dec-21-2005	20	.	.	646	0.4	0.3
Dec-28-2005	20	.	.	NA	NA	NA
Jan-04-2006	0	.	.	1,440	2.1	2.4
Jan-11-2006	0	.	.	1,700	1.2	2.6
Jan-18-2006	20	.	.	419	0.4	0.3
Jan-25-2006	20	.	.	359	0.7	0.4
Jan-31-2006	NA	..	.	488	0.8	0.5

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
Nov-02-2005	80	.	.	438	0.6	0.2
Nov-09-2005	60	.	.	437	0.7	0.3
Nov-16-2005	70	.	.	486	0.7	0.2
Nov-22-2005	70	.	.	621	0.6	0.3
Nov-30-2005	70	.	.	636	0.7	0.2
Dec-07-2005	70	.	.	704	0.5	0.3
Dec-14-2005	70	.	.	579	<0.4	0.2
Dec-21-2005	50	.	.	721	0.6	0.4
Dec-28-2005	50	.	.	NA	NA	NA
Jan-04-2006	0	.	.	1,210	9.3	1.4
Jan-11-2006	0	.	.	928	0.9	1.5
Jan-18-2006	70	.	.	363	0.5	0.3
Jan-25-2006	70	.	.	417	2.1	0.3
Jan-31-2006	NA	.	.	80	<0.4	0.1

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
Nov-02-2005	0	.	.	1,300	1.4	1.6
Nov-09-2005	0	.	.	1,150	1.1	1.4
Nov-16-2005	0	.	.	1,020	0.8	0.9
Nov-22-2005	0	.	.	1,130	0.9	0.9
Nov-30-2005	0	.	.	1,430	2.1	1.7
Dec-07-2005	0	.	.	1,190	1.0	1.0
Dec-14-2005	0	.	.	1,160	1.1	1.3
Dec-21-2005	0	.	.	802	0.6	0.8
Dec-28-2005	0	.	.	NA	NA	NA
Jan-04-2006	0	.	.	970	1.3	1.2
Jan-11-2006	0	.	.	2,550	3.8	4.1
Jan-18-2006	0	.	.	1,800	2.1	2.5
Jan-25-2006	0	.	.	1,350	1.4	1.4
Jan-31-2006	0	.	.	2,040	1.7	2.1

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
Nov-02-2005	130	.	.	830	0.6	0.7
Nov-09-2005	92	.	.	921	0.6	0.9
Nov-16-2005	87	.	.	882	0.6	0.7
Nov-22-2005	84	.	.	925	0.6	0.8
Nov-30-2005	99	.	.	974	0.4	0.8
Dec-07-2005	106	.	.	1,130	0.5	0.9
Dec-14-2005	119	.	.	624	<0.4	1.0
Dec-21-2005	107	.	.	1,210	0.7	1.1
Dec-28-2005	128	.	.	NA	NA	NA
Jan-04-2006	128	.	.	1,350	1.6	1.7
Jan-11-2006	114	.	.	1,640	0.8	2.1
Jan-18-2006	105	.	.	1,530	0.4	1.6
Jan-25-2006	103	.	.	1,350	1.9	1.3
Jan-31-2006	P	.	.	1,210	0.6	1.2

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
Nov-02-2005	.	.	.	424	0.5	0.2
Nov-09-2005	.	.	.	446	0.8	0.2
Nov-16-2005	.	.	.	548	0.9	0.2
Nov-22-2005	.	.	.	757	0.8	0.3
Nov-30-2005	.	.	.	773	1.5	0.4
Dec-07-2005	.	.	.	588	0.8	0.2
Dec-14-2005	.	.	.	1,810	0.4	0.2
Dec-21-2005	.	.	.	539	0.7	0.3
Jan-04-2006	.	.	.	916	2.6	1.1
Jan-11-2006	.	.	.	1,780	2.1	3.5
Jan-18-2006	.	.	.	1,220	1.4	1.3
Jan-25-2006	.	.	.	196	0.6	0.1
Jan-31-2006	.	.	.	112	<0.4	0.1

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
Nov-03-2005	232	14.6	7.8	1,100	<0.4	0.5
Nov-10-2005	207	14.6	7.2	1,230	0.4	0.6
Nov-17-2005	229	13.6	7.3	1,150	0.5	0.5
Nov-22-2005	226	11.5	7.7	1,250	<0.4	0.6
Dec-01-2005	263	11.5	7.7	1,220	0.5	0.6
Dec-08-2005	284	9.0	7.7	1,330	0.4	0.7
Dec-15-2005	197	9.0	7.6	1,810	<0.4	0.9
Dec-22-2005	247	12.4	7.7	1,510	<0.4	0.8
Dec-29-2005	554	12.0	7.5	935	0.5	0.6
Jan-05-2006	2,600	10.9	7.0	300	<0.4	NA
Jan-12-2006	804	10.1	7.3	1,240	0.8	0.8
Jan-19-2006	278	10.1	7.7	1,530	<0.4	0.7
Jan-26-2006	212	10.3	7.6	1,600	0.4	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
Nov-01-2005	.	.	.	NA	2.4	1.0
Nov-08-2005	.	.	.	NA	2.3	1.1
Nov-15-2005	.	.	.	NA	2.8	1.1
Nov-23-2005	.	.	.	NA	3.0	1.2
Nov-29-2005	.	.	.	NA	2.7	1.1
Dec-06-2005	.	.	.	NA	1.6	1.1
Dec-13-2005	.	.	.	NA	2.9	1.3
Dec-20-2005	.	.	.	NA	1.3	1.2
Jan-05-2006	.	.	.	NA	<0.4	0.1
Jan-10-2006	.	.	.	NA	0.7	0.2
Jan-17-2005	.	.	.	NA	4.3	1.4
Jan-24-2005	.	.	.	NA	4.2	1.3

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
Nov-03-2005	915	15.0	7.7	910	1.3	0.5
Nov-10-2005	793	14.9	7.5	1,030	1.6	0.6
Nov-17-2005	738	14.2	7.6	1,080	1.3	0.6
Nov-22-2005	751	12.1	7.6	1,130	1.6	0.8
Dec-01-2005	785	11.9	7.8	1,160	1.8	0.7
Dec-08-2005	946	9.4	7.9	1,040	1.6	0.7
Dec-15-2005	824	9.3	7.9	1,230	1.4	0.8
Dec-22-2005	972	12.3	7.8	1,120	0.7	0.7
Dec-29-2005	2,770	12.2	7.7	440	0.5	0.3
Jan-05-2006	5,850	11.2	7.5	341	0.8	0.3
Jan-12-2006	5,660	10.5	7.8	449	0.9	0.4
Jan-19-2006	3,040	10.3	7.7	685	1.3	0.5
Jan-26-2006	2,410	10.5	7.8	755	1.6	P

Table 20. Summary of fathead minnow (*Pimephales promelas*) larvae survival in 7-day tests using water samples collected from February 2005 to January 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	%	%	%	%	%	%
Feb-2005	95	88	98	80	90	98
Mar-2005	88	73	93	83	85	73†
Apr-2005	95	100	95	93	100	90
May-2005	100	98	93	100	83	98
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

Table 21. Summary of fathead minnow (*Pimephales promelas*) larvae growth in 7-day tests using water samples collected from February 2005 to January 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
Feb-2005	0.76	0.62	0.69	0.63	0.62	0.54
Mar-2005	0.41	0.38	0.49	0.44	0.46	0.35
Apr-2005	0.42	0.40	0.44	0.42	0.38	0.29
May-2005	0.40	0.46	0.39	0.43	0.29	0.42
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

Table 22. Summary of *Daphnia magna* survival in 7-day tests using water samples collected from February 2005 to January 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	%	%	%	%	%	%
Feb-2005	80	100	100	90	100	30†
Mar-2005	80	100	90	100	100	90
Apr-2005	90	90	100	90	90	100
May-2005	90	90	100	100	90	90
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

Table 23. Summary of *Daphnia magna* reproduction in 7-day tests using water samples collected from February 2005 to January 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
Feb-2005	15.2	13.6	17.3	8.5	12.2	4.0
Mar-2005	37.4	38.9	42.4	38.8	31.6	44.0
Apr-2005	26.4	35.9	42.3	37.1	30.4	27.0
May-2005	39.8	38.6	45.5	36.1	34.1	40.9
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

Table 24. Summary of *Selenastrum capricornutum* growth in 4-day tests using water samples collected from February 2005 to January 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
Feb-2005	13.7	17.7	19.5	10.7*	13.1	22.4
Mar-2005	14.9	20.1	19.7	20.7	11.5	16.0
Apr-2005	17.4	25.6	21.1	19.6	19.2	24.5
May-2005	24.0	23.5	24.5	19.7	16.1	30.4
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

Table 25. Summary of selenium concentrations in grab water samples collected at study stations for use in laboratory toxicity tests, November 2005 to January 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
Nov-14-2005	55	<0.4	6.3	<0.4	<0.4
Nov-16-2005	27	<0.4	3.4	<0.4	<0.4
Nov-18-2005	40	<0.4	4.2	<0.4	<0.4
Dec-05-2005	29	<0.4	3.6	0.4	<0.4
Dec-07-2005	51	<0.4	7.4	<0.4	<0.4
Dec-09-2005	48	<0.4	6.9	<0.4	<0.4
Jan-16-2006	79	<0.4	21	<0.4	<0.4
Jan-18-2006	71	<0.4	20	<0.4	<0.4
Jan-20-2006	69	<0.4	21	<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, November 2005 to January 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
Nov-14-2005	9	19	29	63	9
Nov-16-2005	33	16	31	71	11
Nov-18-2005	34	39	24	51	9
Dec-05-2005	12	6	12	16	ND
Dec-07-2005	27	9	6	15	4
Dec-09-2005	16	16	13	52	3
Jan-16-2006	39	27	46	39	13
Jan-18-2006	40	40	42	30	14
Jan-20-2006	57	95	11	44	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.
†	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 (10^6cell/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.
v	Based on definitive bioassay, NOEC is 50 percent
D	Sample was dechlorinated