

GRASSLAND BYPASS PROJECT

MONTHLY DATA REPORT

February 2007

June 5, 2007

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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MONTHLY DATA REPORT

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Table 1. Continuous water monitoring at Station A (inflow to San Luis Drain), February 2007.

See Table 27 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow	Specific Conductance
DATA SOURCE	SLDMWA	SLDMWA
UNITS	cfs	µS/cm
Feb-01-2007	38	4,390
Feb-02-2007	40	4,390
Feb-03-2007	39	4,300
May-01-2007	39	4,210
Feb-05-2007	41	4,200
Feb-06-2007	39	4,170
Feb-07-2007	41	4,080
Feb-08-2007	44	4,210
Feb-09-2007	43	4,460
Feb-10-2007	43	4,210
Feb-11-2007	42	4,430
Feb-12-2007	40	4,620
Feb-13-2007	39	4,740
Feb-14-2007	38	4,740
Feb-15-2007	34	5,100
Feb-16-2007	34	4,840
Feb-17-2007	32	4,720
Feb-18-2007	34	4,670
Feb-19-2007	37	4,560
Feb-20-2007	38	4,280
Feb-21-2007	37	4,300
Feb-22-2007	43	4,060
Feb-23-2007	47	3,750
Feb-24-2007	38	3,510
Feb-25-2007	31	3,410
Feb-26-2007	28	3,460
Feb-27-2007	29	3,390
Feb-28-2007	26	3,980
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Mean	38	4,260

Table 2a. Continuous water monitoring at Stations B and B2 (San Luis Drain Terminus), February 2007.

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
Feb-01-2007	44	11.6	5.3	4,110	62.6	15.0
Feb-02-2007	43	11.8	5.3	4,040	58.8	13.8
Feb-03-2007	45	11.9	5.2	4,120	63.0	15.2
May-01-2007	43	12.2	5.2	4,060	61.2	14.3
Feb-05-2007	44	12.5	5.1	4,040	63.0	14.8
Feb-06-2007	45	12.6	5.4	4,020	60.5	14.8
Feb-07-2007	45	12.5	5.2	3,900	56.0	13.6
Feb-08-2007	47	12.4	5.3	3,820	54.8	14.0
Feb-09-2007	49	12.6	5.3	3,840	53.3	14.1
Feb-10-2007	49	13.2	4.9	3,730	49.2	13.0
Feb-11-2007	48	14.2	5.2	3,910	51.8	13.4
Feb-12-2007	47	14.6	5.9	3,970	60.2	15.2
Feb-13-2007	43	14.5	5.5	3,830	55.2	12.9
Feb-14-2007	44	14.2	5.7	4,020	57.2	13.5
Feb-15-2007	42	14.4	5.9	4,260	59.0	13.4
Feb-16-2007	39	14.9	6.4	4,220	59.4	12.4
Feb-17-2007	39	15.5	5.9	4,150	59.2	12.3
Feb-18-2007	37	15.7	6.6	4,470	62.1	12.4
Feb-19-2007	36	13.5	6.8	4,390	64.8	12.7
Feb-20-2007	42	13.2	6.2	4,210	49.8	11.3
Feb-21-2007	42	14.0	6.2	4,300	45.6	10.4
Feb-22-2007	43	13.4	5.9	4,120	48.5	11.2
Feb-23-2007	47	12.6	5.9	4,060	46.7	11.7
Feb-24-2007	50	12.8	5.7	3,900	42.4	11.5
Feb-25-2007	43	12.7	5.4	3,740	42.1	9.9
Feb-26-2007	37	12.6	5.2	3,610	40.4	8.1
Feb-27-2007	34	12.9	4.5	3,250	30.4	5.6
Feb-28-2007	34	12.6	4.7	3,240	25.0	4.6
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Mean	43	13.3	5.6	3,980	52.9	12.3
Total Acre-feet	2,390					
Total (lbs)						345

Load Limitation for February 2007 (lbs)	415
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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.

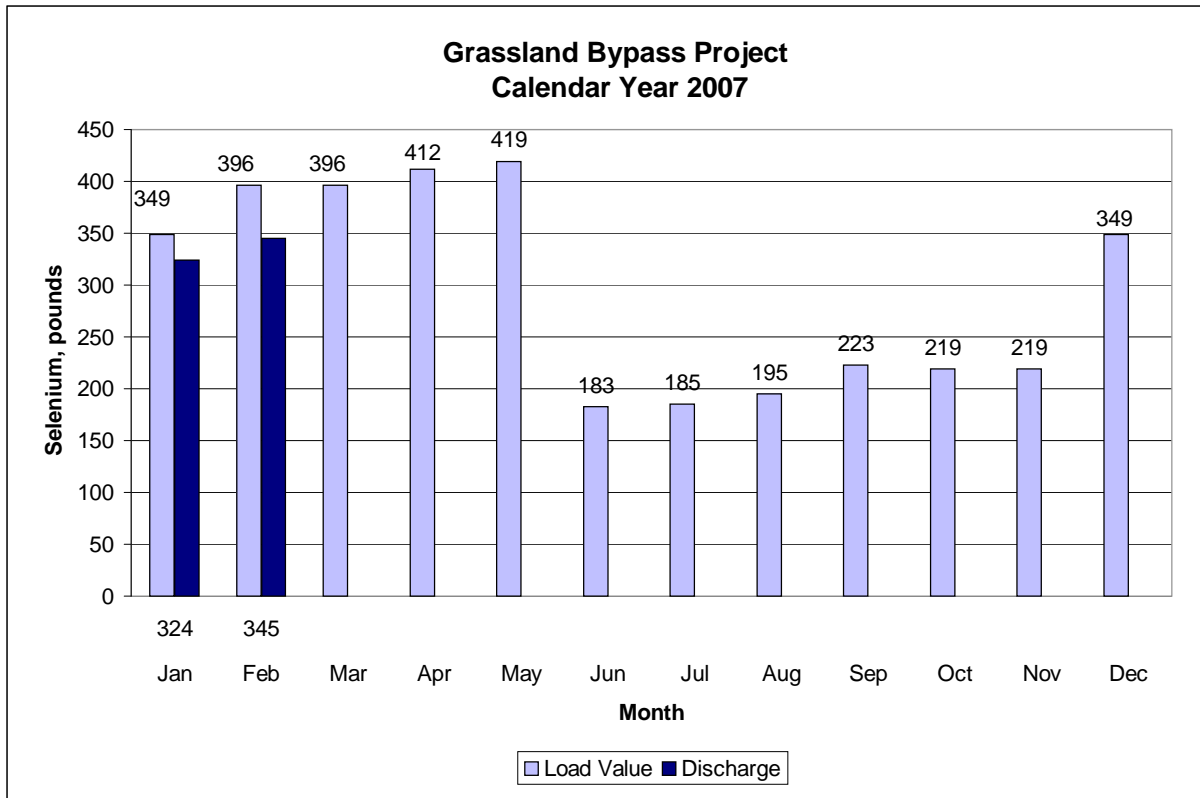


Table 3. Continuous water monitoring at Station D (Mud Slough North downstream of drainage discharges), February 2007.

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
Feb-01-2007	137	10.8	2,610
Feb-02-2007	136	11.4	2,580
Feb-03-2007	139	11.4	2,590
May-01-2007	139	11.7	2,540
Feb-05-2007	142	12.1	2,480
Feb-06-2007	144	12.1	2,470
Feb-07-2007	149	12.1	2,410
Feb-08-2007	162	11.8	2,320
Feb-09-2007	164	12.1	2,330
Feb-10-2007	161	12.9	2,360
Feb-11-2007	166	14.0	2,360
Feb-12-2007	165	14.1	2,420
Feb-13-2007	158	13.6	2,430
Feb-14-2007	161	13.1	2,450
Feb-15-2007	166	13.7	2,510
Feb-16-2007	165	14.4	2,530
Feb-17-2007	162	15.2	2,570
Feb-18-2007	163	15.3	2,570
Feb-19-2007	158	12.7	2,680
Feb-20-2007	146	12.6	2,810
Feb-21-2007	140	13.6	2,870
Feb-22-2007	136	12.8	2,920
Feb-23-2007	137	11.8	2,940
Feb-24-2007	137	12.0	2,890
Feb-25-2007	132	12.1	2,870
Feb-26-2007	129	12.1	2,760
Feb-27-2007	136	12.3	2,520
Feb-28-2007	139	11.7	2,530
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Mean	149	12.7	2,580

Table 4. Continuous water monitoring at Station F (Salt Slough at Highway 165), February 2007.

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
Feb-01-2007	217	10.4	1,430
Feb-02-2007	216	10.8	1,300
Feb-03-2007	210	10.7	1,160
May-01-2007	218	10.8	1,040
Feb-05-2007	223	11.1	1,040
Feb-06-2007	239	11.0	1,030
Feb-07-2007	231	11.0	1,120
Feb-08-2007	214	11.4	1,210
Feb-09-2007	221	11.8	1,200
Feb-10-2007	234	12.8	1,210
Feb-11-2007	228	13.9	1,250
Feb-12-2007	232	13.9	1,250
Feb-13-2007	212	13.4	1,350
Feb-14-2007	192	13.0	1,460
Feb-15-2007	191	13.5	1,510
Feb-16-2007	201	14.1	1,600
Feb-17-2007	203	14.7	1,700
Feb-18-2007	198	14.6	1,660
Feb-19-2007	220	12.7	1,670
Feb-20-2007	244	12.2	1,560
Feb-21-2007	245	12.7	1,550
Feb-22-2007	222	12.5	1,580
Feb-23-2007	240	11.8	1,510
Feb-24-2007	260	11.7	1,450
Feb-25-2007	265	11.9	1,470
Feb-26-2007	267	12.0	1,450
Feb-27-2007	272	12.4	1,420
Feb-28-2007	281	11.8	1,380
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Mean	228	12.3	1,380

Table 5. Continuous water monitoring at Station N (San Joaquin River at Crow's Landing), February 2007.

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
Feb-01-2007	791	10.8	1,460	3.7
Feb-02-2007	800	11.1	1,420	3.5
Feb-03-2007	792	11.1	1,450	3.6
May-01-2007	813	11.2	1,440	3.5
Feb-05-2007	812	11.6	1,420	3.8
Feb-06-2007	828	11.8	1,390	3.5
Feb-07-2007	843	11.9	1,380	3.6
Feb-08-2007	857	11.8	1,400	3.4
Feb-09-2007	886	12.0	1,400	3.2
Feb-10-2007	908	12.6	1,390	3.3
Feb-11-2007	1,000	13.5	1,350	3.1
Feb-12-2007	1,010	13.9	1,330	2.7
Feb-13-2007	1,070	13.7	1,350	2.7
Feb-14-2007	1,190	13.2	1,280	2.7
Feb-15-2007	1,200	13.2	1,120	2.3
Feb-16-2007	1,150	13.8	1,090	2.2
Feb-17-2007	1,020	14.5	1,210	2.4
Feb-18-2007	1,010	14.8	1,270	2.4
Feb-19-2007	951	13.4	1,290	2.4
Feb-20-2007	933	12.8	1,350	2.6
Feb-21-2007	884	13.5	1,430	2.8
Feb-22-2007	863	13.6	1,430	2.6
Feb-23-2007	849	12.7	1,430	2.5
Feb-24-2007	838	12.3	1,460	2.7
Feb-25-2007	861	12.6	1,450	2.7
Feb-26-2007	857	12.3	1,450	2.5
Feb-27-2007	876	12.4	1,440	2.1
Feb-28-2007	959	12.3	1,380	1.9
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Mean	920	12.7	1,370	2.9

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	.	.	.
Dec-06-2006	13	.	.	4,980	17	.	.	.
Dec-13-2006	17	.	.	4,130	64	.	.	.
Dec-20-2006	8	.	.	4,820	13	.	.	.
May-01-2007	16	.	.	4,480	32	.	.	.
Jan-10-2007	19	.	.	4,660	120	.	.	.
Jan-17-2007	30	.	.	3,960	120	.	.	.
Jan-24-2007	36	.	.	4,370	140	.	.	.
Jan-31-2007	39	.	.	4,290	170	.	.	.
Feb-07-2007	41	.	.	3,880	210	.	.	.
Feb-14-2007	38	.	.	4,330	210	.	.	.
Feb-21-2007	37	.	.	3,860	210	.	.	.
Feb-28-2007	26	.	.	3,720	110	.	.	.

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
Dec-05-2006	14	.	.	4,870	.	87.6	.	8.0
Dec-12-2006	16	.	.	4,780	.	88.5	.	7.0
Dec-19-2006	9	.	.	4,850	.	54.9	.	7.5
Dec-26-2006	15	.	.	4,760	.	58.2	.	7.8
Jan-09-2007	18	.	.	4,720	.	87.2	.	7.0
Jan-16-2007	27	.	.	NA	.	73.8	.	6.2
Jan-23-2007	35	.	.	4,090	.	66.4	.	5.4
Jan-30-2007	38	.	.	4,150	.	62.8	.	5.6
Feb-06-2007	39	.	.	4,050	.	62.2	.	5.6
Feb-13-2007	39	.	.	4,230	.	61.2	.	6.0
Feb-20-2007	38	.	.	4,530	.	56.8	.	6.8
Feb-27-2007	29	.	.	3,460	.	31.6	.	5.1

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
Dec-07-2006	21	8.8	7.9	4,200	22	57.0	5.8
Dec-14-2006	23	11.4	7.8	4,300	15	70.5	6.1
May-01-2007	17	7.3	8.1	4,180	15	59.2	6.1
Dec-28-2006	25	5.8	8.2	3,690	54	23.1	5.2
Jan-04-2007	22	8.8	7.8	3,640	39	56.6	4.9
Jan-11-2007	24	7.6	8.0	4,380	37	70.3	6.4
Jan-18-2007	35	5.1	8.1	4,590	20	60.4	6.2
Jan-25-2007	42	7.9	7.7	3,950	52	59.9	5.1
Feb-01-2007	44	10.7	7.3	4,150	47	65.0	5.6
Feb-08-2007	47	11.7	7.6	3,930	43	54.2	5.2
Feb-15-2007	42	12.9	8.0	4,390	36	58.6	6.0
Feb-22-2007	43	12.4	7.8	4,260	41	47.2	5.9

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
Dec-07-2006	120	8.4	7.9	1,550	.	<0.4	1.2
Dec-14-2006	134	11.9	7.8	1,490	.	<0.4	1.1
Dec-21-2006	151	6.7	8.0	1,440	.	<0.4	1.1
Dec-28-2006	185	5.6	8.1	1,370	.	<0.4	1.1
Jan-04-2007	155	9.0	7.9	1,810	.	<0.4	1.1
Jan-11-2007	145	7.2	8.0	1,490	.	<0.4	1.1
Jan-18-2007	115	5.1	8.1	1,620	.	<0.4	1.2
Jan-25-2007	114	7.8	7.9	1,670	.	0.5	1.2
Feb-01-2007	93	9.9	7.6	1,930	.	<0.4	1.5
Feb-08-2007	115	11.6	7.8	1,840	.	0.4	1.5
Feb-15-2007	124	12.0	7.9	1,970	.	0.5	1.6
Feb-22-2007	93	12.2	7.9	2,220	.	<0.4	1.7

** 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
Dec-07-2006	141	8.5	7.9	2,030	8.6	1.9
Dec-14-2006	157	11.7	7.8	1,950	8.9	1.8
Dec-21-2006	168	6.7	8.0	1,770	6.0	1.6
May-01-2007	210	5.6	8.1	1,680	3.0	1.6
Jan-04-2007	177	8.9	7.9	1,810	7.8	1.8
Jan-11-2007	169	7.2	8.0	1,940	9.2	1.9
Jan-18-2007	150	5.1	8.0	2,360	14.6	2.5
Jan-25-2007	156	7.8	7.8	2,320	14.2	2.3
Feb-01-2007	137	10.1	7.5	2,660	19.4	2.8
Feb-08-2007	162	11.7	7.7	2,390	14.4	2.5
Feb-15-2007	166	12.2	7.8	2,650	14.0	2.7
Feb-22-2007	136	12.3	7.9	2,890	13.3	3.0

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
Dec-05-2006	.	8.2	1,920	12	7.0	2.0
Dec-21-2006	.	8.9	1,770	10	5.7	1.8
Dec-28-2006	.	8.1	1,830	11	3.0	1.8
Jan-09-2007	.	7.8	1,960	19	8.2	2.0
Jan-16-2007	.	8.3	2,090	17	12.0	2.2
Jan-23-2007	.	NA	2,330	27	14.3	2.6
Jan-30-2007	.	7.9	2,500	21	15.6	2.7
Feb-05-2007	.	NA	2,640	30	17.0	3.1
Feb-14-2007	.	8.0	2,680	NA	12.2	3.0
Feb-20-2007	.	7.6	3,310	24	12.2	3.4 L
Feb-28-2007	.	7.9	2,680	29	6.3	2.7

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
Dec-07-2006	100	8.5	7.7	1,850	<0.4	1.0
Dec-14-2006	76	12.5	7.7	707	0.4	1.1
May-01-2007	151	6.9	7.8	1,590	0.4	1.0
Dec-28-2006	198	6.2	8.0	1,350	0.4	0.9
Jan-04-2007	176	9.0	7.7	1,420	<0.4	1.0
Jan-11-2007	183	7.4	7.8	1,450	0.4	0.9
Jan-18-2007	195	5.2	7.8	1,380	0.6	0.9
Jan-25-2007	203	7.2	7.4	1,420	0.5	0.9
Feb-01-2007	217	10.1	7.0	1,450	0.6	0.9
Feb-08-2007	214	11.2	7.7	1,450	0.7	0.7
Feb-15-2007	191	12.4	7.5	1,730	0.7	0.9
Feb-22-2007	222	12.4	7.6	1,450	0.8	0.6

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 ^{1†}	.	.	CVRWQCB	CVRWQCB	CVRWQCB
UNITS	cfs	.	.	µS/cm	µg/L	mg/L
Dec-06-2006	0	.	.	1,170	0.9	1.3
Dec-13-2006	25	.	.	584	0.5	0.3
Dec-20-2006	40	.	.	724	0.7	0.3
Jan-03-2007	25	.	.	636	0.7	0.4
Jan-10-2007	25	.	.	700	1.3	0.4
Jan-17-2007	25	.	.	690	0.8	0.4
Jan-24-2007	25	.	.	606	1.0	0.3
Jan-31-2007	0	.	.	649	1.7	0.4
Feb-07-2007	0	.	.	784	1.7	0.5
Feb-14-2007	0	.	.	891	2.7	0.5
Feb-21-2007	0	.	.	1,630	0.9	1.8
Feb-28-2007	0	.	.	644	0.9	0.4

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
Dec-06-2006	0	.	.	662	0.6	0.6
Dec-13-2006	50	.	.	539	0.5	0.2
May-01-2007	50	.	.	646	0.8	0.3
Jan-03-2007	50	.	.	600	0.7	0.3
Jan-10-2007	50	.	.	654	0.7	0.3
Jan-17-2007	50	.	.	663	0.8	0.3
Jan-24-2007	50	.	.	596	0.7	0.2
Jan-31-2007	0	.	.	634	1.3	0.3
Feb-07-2007	20	.	.	642	1.3	0.3
Feb-14-2007	20	.	.	NA	2.1	0.5
Feb-21-2007	20	.	.	913	1.8	0.7
Feb-28-2007	20	.	.	682	1.0	0.4

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
Dec-06-2006	0	.	.	1,370	0.8	1.5
Dec-13-2006	25	.	.	563	1.1	0.3
Dec-20-2006	25	.	.	590	0.6	0.3
Jan-03-2007	0	.	.	576	0.8	0.3
Jan-10-2007	25	.	.	604	0.6	0.3
Jan-17-2007	25	.	.	674	0.9	0.3
Jan-24-2007	25	.	.	717	0.9	0.4
Jan-31-2007	0	.	.	646	1.3	0.5
Feb-07-2007	NA	.	.	1,220	1.3	1.1
Feb-14-2007	NA	.	.	1,340	2.1	1.2
Feb-21-2007	NA	.	.	1,080	2.3	0.7
Feb-28-2007	NA	.	.	1,080	2.3	0.7

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
Dec-06-2006	NA	.	.	1,250	<0.4	1.5
Dec-13-2006	NA	.	.	1,290	0.7	1.4
Dec-20-2006	NA	.	.	1,090	0.6	1.0
May-01-2007	NA	.	.	1,040	0.5	1.0
Jan-10-2007	NA	.	.	1,100	0.5	1.0
Jan-17-2007	NA	.	.	1,120	0.5	1.0
Jan-24-2007	NA	.	.	1,210	0.6	1.0
Jan-31-2007	NA	.	.	1,220	1.0	1.1
Feb-07-2007	NA	.	.	1,310	1.0	1.3
Feb-14-2007	NA	.	.	1,680	1.3	1.6
Feb-21-2007	NA	.	.	1,760	1.2	1.7
Feb-28-2007	NA	.	.	1,660	1.2	1.7

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
Dec-06-2006	.	.	.	352	0.6	0.2
Dec-13-2006	.	.	.	715	0.7	0.3
Dec-20-2006	.	.	.	750	0.8	0.3
Jan-03-2007	.	.	.	570	0.6	0.3
Jan-10-2007	.	.	.	609	0.5	0.2
Jan-17-2007	.	.	.	628	0.6	0.2
Jan-24-2007	.	.	.	673	1.1	0.3
Jan-31-2007	.	.	.	562	1.4	0.2
Feb-07-2007	.	.	.	619	1.4	0.3
Feb-14-2007	.	.	.	NA	2.4	0.3
Feb-21-2007	.	.	.	646	1.3	0.3
Feb-28-2007	.	.	.	548	1.0	0.3

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
Dec-07-2006	178	8.1	7.8	1,650	<0.4	0.8
Dec-14-2006	153	12.3	7.8	1,780	<0.4	0.7
Dec-21-2006	201	6.6	7.9	1,470	<0.4	0.8
May-01-2007	227	6.2	7.8	1,450	<0.4	0.9
Jan-04-2007	225	8.9	7.8	1,480	0.4	0.9
Jan-11-2007	227	7.2	7.7	1,550	<0.4	0.9
Jan-18-2007	244	5.0	7.8	1,540	0.4	0.8
Jan-25-2007	250	7.2	7.5	1,560	<0.4	0.8
Feb-01-2007	263	9.7	7.4	1,500	0.5	0.8
Feb-08-2007	266	11.1	7.4	1,540	0.7	0.7
Feb-15-2007	535	12.1	7.4	931	0.5	0.3
Feb-22-2007	322	12.4	7.8	1,430	0.7	0.5

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
Dec-05-2006	.	.	.	NA	3.2	1.3
Dec-12-2006	.	.	.	NA	<0.4	0.2
Dec-19-2006	.	.	.	NA	2.1	1.2
Jan-04-2007	.	.	.	NA	<0.4	0.2
Jan-09-2007	.	.	.	NA	3.3	1.3
Jan-16-2007	.	.	.	NA	3.9	1.3
Jan-24-2007	.	.	.	NA	5.1	1.3
Jan-31-2007	.	.	.	NA	5.0	1.4
Feb-06-2007	.	.	.	NA	5.3	1.3
Feb-13-2007	.	.	.	NA	4.4	1.3
Feb-20-2007	.	.	.	NA	<0.4	0.2

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
Dec-07-2006	798	9.2	7.8	1,300	1.6	0.8
Dec-14-2006	802	12.5	7.8	1,260	2.1	0.8
Dec-21-2006	873	7.3	7.9	1,120	1.4	0.7
May-01-2007	897	7.3	8.0	1,180	0.8	0.8
Jan-04-2007	880	9.3	7.9	1,230	2.0	0.9
Jan-11-2007	875	7.7	7.8	1,250	2.1	0.8
Jan-18-2007	860	5.9	8.0	1,290	2.6	0.9
Jan-25-2007	800	8.0	8.0	1,380	3.4	0.9
Feb-01-2007	791	10.5	7.6	1,470	3.8	1.0
Feb-08-2007	857	11.6	7.8	1,410	3.2	1.0
Feb-15-2007	1,200	12.6	7.8	1,100	2.4	0.6
Feb-22-2007	863	13.3	7.8	1,460	2.7	0.9

Table 20. Summary of fathead minnow (*Pimephales promelas*) larvae survival in 7-day tests using water samples collected from March 2006 to February 2007. 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	%	%	%	%	%	%
Mar-2006	93	95	98	90	98	95
Apr-2006	90	95	98	100	95	100
May-2006	95	100	98	100	88	100
May-2007	93	100	98	98	98	100
Jul-2006	83	98	100	100	95	95
Aug-2006	98	98	95	98	98	90
Sep-2006	98	95	98	98	100	98
Oct-2006	95	85	85	90	98	100
Nov-2007	95	98	85	100	100	98
Dec-2007	98	100	85*	93	98	98
Jan-2007	100	100	90	93	98	100
Feb-2007	98	90	95	88	98	100

Table 21. Summary of fathead minnow (*Pimephales promelas*) larvae growth in 7-day tests using water samples collected from March 2006 to February 2007. 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
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
Jun-2006	0.45*	0.41*	0.46*	0.49	0.54	0.41
Jul-2006	0.34	0.36	0.38	0.56	0.36	0.35
Aug-2006	0.36	0.33	0.38	0.37	0.39	0.33
Sep-2006	0.31	0.39	0.41	0.35	0.33	0.34
Oct-2006	0.39	0.36	0.36	0.35	0.40	0.40
Nov-2007	0.30	0.28*	0.30	0.33	0.33	0.32
Dec-2007	0.35	0.40	0.41	0.45	0.32	0.31
Jan-2007	0.30	0.35	0.37	0.34	0.31	0.31
Feb-2007	0.45	0.41	0.43	0.33	0.37	0.38

Table 22. Summary of *Daphnia magna* survival in 7-day tests using water samples collected from March 2006 to February 2007. 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	%	%	%	%	%	%
Mar-2006	100	90	80	80	80	100
Apr-2006	80	90	100	90	100	100
May-2006	100	90	100	100	100	100
Jun-2006	90	90	100	90	90	80
Jul-2006	80	100	80	90	80	100
Aug-2006	100	100	90	100	100	100
Sep-2006	100	80	100	100	100	90
Oct-2006	70	80	100	80	90	80
Nov-2007	90	100	100	90	90	100
Dec-2007	90	70	100	90	100	90
Jan-2007	90	90	80	90	90	80
Feb-2007	100	80	90	90	100	90

Table 23. Summary of *Daphnia magna* reproduction in 7-day tests using water samples collected from March 2006 to February 2007. 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
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
May-2007	26.2	25.9	29.9	26.7	20.9	19.1
Jul-2006	35.8	42.3	42.1	35.4	32.7	29.3
Aug-2006	34.7	33.3	23.9*	31.4	36.2	30.8
Sep-2006	25.9	20.1	23.8	26.9	27.6	23.6
Oct-2006	25.9	27.4	30.1	26.3	26.9	19.6
Nov-2007	36.6	49.6	47.0	47.9	38.3	46.2
Dec-2007	28.4	22.5	29.6	31.5	27.8	22.3
Jan-2007	20.5	27.3	23.2	26.0	28.5	21.4
Feb-2007	31.7	32.9	39.4	31.6	28.6	30.5

Table 24. Summary of *Selenastrum capricornutum* growth in 4-day tests using water samples collected from March 2006 to February 2007. 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
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
Jun-2006	12.0	9.7	10.0	10.2	11.3	16.0
Jul-2006	19.0	14.4	22.5	17.9	9.5	14.0
Aug-2006	16.4	17.8	17.3	21.4	16.8	13.5
Sep-2006	4.1*	20.7	21.7	22.6	17.7	12.9
Oct-2006	21.4	27.8	30.4	23.4	12.5	20.3
Nov-2007	17.6	26.2	23.3	24.7	17.7	17.5
Dec-2007	13.4	13.9	12.8	5.4*	7.5	17.2
Jan-2007	8.9	20.3	18.5	21.0	11.4	16.9
Feb-2007	7.9*	22.9	17.9	31.8	13.4	15.7

Table 25. Summary of selenium concentrations in grab water samples collected at study stations for use in laboratory toxicity tests, December 2006 to February 2007.

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
Dec-04-2006	63	<0.4	6.8	<0.4	0.4
Dec-06-2006	58	<0.4	8.0	<0.4	<0.4
Dec-08-2006	58	<0.4	9.8	<0.4	<0.4
May-01-2007	63	0.4	9.9	0.5	0.7
Jan-17-2007	72	<0.4	14	0.4	<0.4
Jan-19-2007	50	0.4	12	0.5	<0.4
Jan-22-2007	58	<0.4	15	0.6	<0.4
Feb-12-2007	58	0.7	13	0.9	1.4**
Feb-14-2007	54	0.7	13	0.7	1.2**
Feb-16-2007	57	0.6	12	0.8	1.2**
Feb-20-2007	46	0.5	14	0.9	<0.4

Table 26. Summary of total suspended solids concentrations in grab water samples collected at study stations for use in laboratory toxicity tests, December 2006 to February 2007.

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
Dec-04-2006	9	21	16	35	10
Dec-06-2006	13	14	18	32	5
Dec-08-2006	18	16	19	36	10
Jan-15-2007	17	37	16	23	9
Jan-17-2007	23	58	24	22	NA
Jan-19-2007	67	35	41	26	14
Jan-22-2007	37	22	30	27	13
Feb-12-2007	38	54	58	81	11
Feb-14-2007	43	52	39	66	23
Feb-16-2007	74	89	65	161	20
Feb-20-2007	24	41	35	86	8

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
39,203.00	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
L	Result may be biased low
D	Sample was dechlorinated