

GRASSLAND BYPASS PROJECT

MONTHLY DATA REPORT

October 2001

January 14, 2002

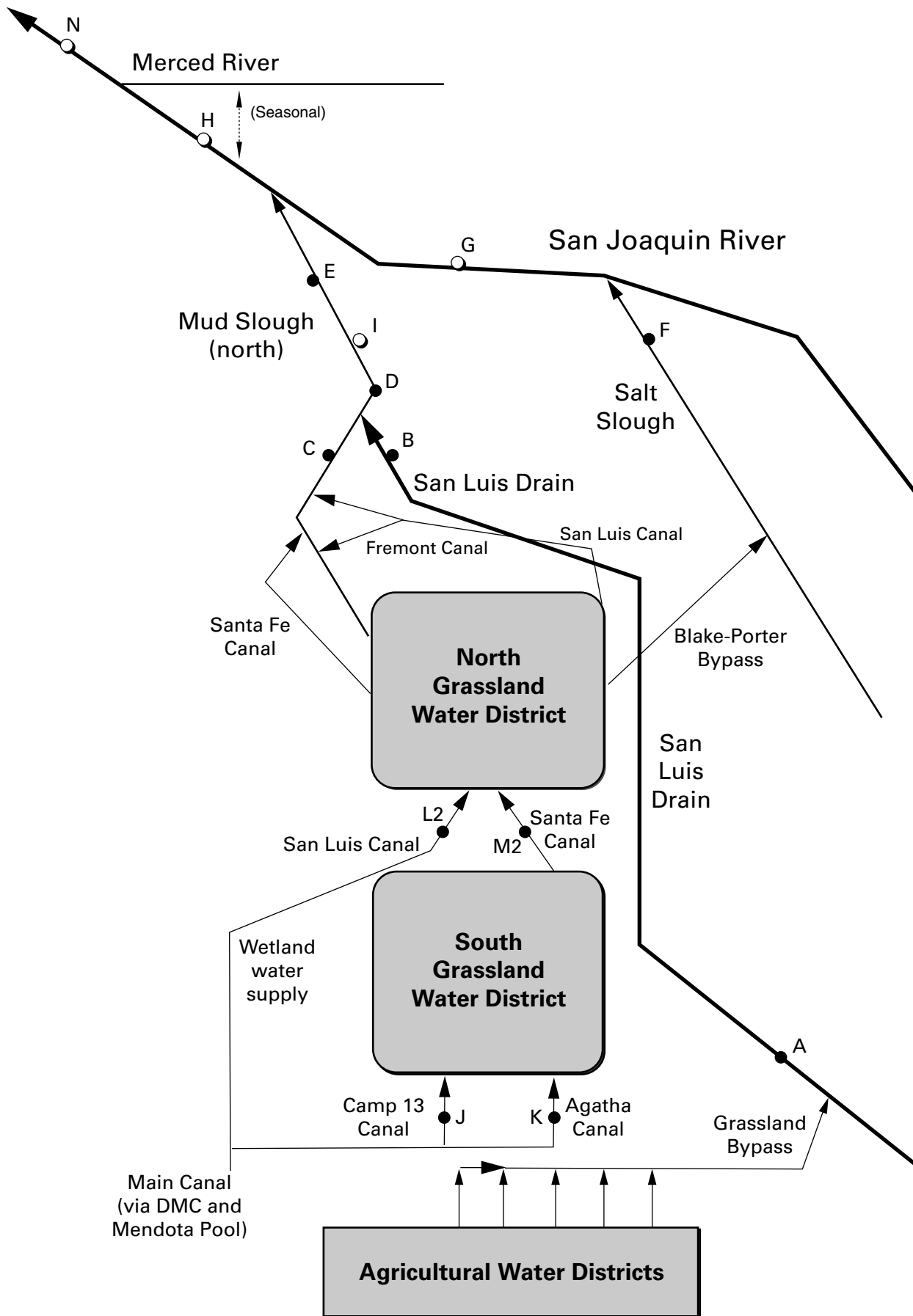
Preliminary Results

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), October 2001.

See Table 26 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow	Specific Conductance
DATA SOURCE	SLDMWA	SLDMWA
UNITS	cfs	µS/cm
Oct-01-2001	6	4,500
Oct-02-2001	6	4,870
Oct-03-2001	8	5,070
Oct-04-2001	10	4,390
Oct-05-2001	11	4,510
Oct-06-2001	16	4,840
Oct-07-2001	14	4,540
Oct-08-2001	13	4,300
Oct-09-2001	15	4,250
Oct-10-2001	19	5,240
Oct-11-2001	18	5,190
Oct-12-2001	13	5,730
Oct-13-2001	11	6,070
Oct-14-2001	12	6,070
Oct-15-2001	12	6,240
Oct-16-2001	10	5,900
Oct-17-2001	11	5,320
Oct-18-2001	10	4,800
Oct-19-2001	11	4,910
Oct-20-2001	13	5,070
Oct-21-2001	11	4,890
Oct-22-2001	9	4,870
Oct-23-2001	9	4,860
Oct-24-2001	8	4,930
Oct-25-2001	8	5,010
Oct-26-2001	9	4,900
Oct-27-2001	10	5,030
Oct-28-2001	9	4,960
Oct-29-2001	8	4,380
Oct-30-2001	8	4,160
Oct-31-2001	11	4,610
Mean	11	4,980

Table 2. Continuous water monitoring at Station B (discharge from San Luis Drain), October 2001.

See Table 26 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow	Temperature	Boron	Specific Conductance	Selenium (total)	Selenium (total) Load
DATA SOURCE	uscs	USGS	CVRWQCB	CVRWQCB	CVRWQCB	Computed
UNITS	cfs	°C	mg/L	µS/cm	µg/L	lbs
Oct-01-2001	11	23.6	7.1	4,350	35.0	2.1
Oct-02-2001	10	24.2	7.1	4,380	33.3	1.8
Oct-03-2001	9	24.5	6.8	4,260	32.2	1.6
Oct-04-2001	10	24.2	6.6	4,110	25.8	1.4
Oct-05-2001	13	23.3	6.7	4,200	25.3	1.8
Oct-06-2001	16	22.4	7.2	4,310	26.4	2.3
Oct-07-2001	21	21.9	7.2	4,310	24.8	2.8
Oct-08-2001	21	21.7	6.6	3,990	28.1	3.2
Oct-09-2001	22	20.6	6.0	3,820	28.1	3.3
Oct-10-2001	23	19.9	7.0	4,290	38.2	4.7
Oct-11-2001	27	20.1	7.4	4,520	39.9	5.8
Oct-12-2001	29	19.1	7.0	4,410	57.8	9.0
Oct-13-2001	22	19.5	6.1	3,960	50.1	5.9
Oct-14-2001	18	20.2	6.0	3,710	29.8	2.9
Oct-15-2001	19	21.1	5.5	3,460	22.5	2.3
Oct-16-2001	19	21.3	5.3	3,570	33.1	3.4
Oct-17-2001	17	21.0	5.7	4,120	55.9	5.1
Oct-18-2001	18	20.7	5.7	4,030	52.6	5.1
Oct-19-2001	17	20.5	5.6	4,040	51.4	4.7
Oct-20-2001	17	20.6	6.0	4,210	49.1	4.5
Oct-21-2001	20	20.2	6.4	4,420	52.3	5.6
Oct-22-2001	19	19.4	6.4	4,430	52.1	5.3
Oct-23-2001	18	19.4	6.4	4,460	53.0	5.1
Oct-24-2001	17	17.9	6.5	4,400	48.6	4.5
Oct-25-2001	15	17.7	6.3	4,240	37.0	3.0
Oct-26-2001	14	18.0	6.3	4,120	30.0	2.3
Oct-27-2001	15	18.4	6.3	4,140	29.0	2.3
Oct-28-2001	17	18.2	6.7	4,340	33.2	3.0
Oct-29-2001	17	18.2	6.3	4,410	53.4	4.9
Oct-30-2001	17	18.2	6.1	4,270	47.7	4.4
Oct-31-2001	18	17.9	6.3	4,230	37.7	3.7
Mean	18	20.4	6.4	4,180	39.1	
Total						118

Load Limitation for October 2001	(lbs)	315
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**Table 3. Continuous water monitoring at Station D
(Mud Slough North downstream of drainage discharges), October 2001.**

See Table 26 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow	Temperature	Specific Conductance
DATA SOURCE	usgs	usgs	usgs
UNITS	cfs	°C	µS/cm
Oct-01-2001	93	NA	NA
Oct-02-2001	95	NA	NA
Oct-03-2001	99	NA	NA
Oct-04-2001	105	23.8	1,600
Oct-05-2001	110	22.3	1,550
Oct-06-2001	114	21.1	1,580
Oct-07-2001	128	20.8	1,590
Oct-08-2001	143	20.9	1,460
Oct-09-2001	140	19.9	1,440
Oct-10-2001	137	19.2	1,520
Oct-11-2001	142	19.5	1,690
Oct-12-2001	149	18.7	1,630
Oct-13-2001	151	19.1	1,510
Oct-14-2001	161	19.9	1,390
Oct-15-2001	176	20.8	1,320
Oct-16-2001	163	21.3	1,360
Oct-17-2001	146	20.5	1,510
Oct-18-2001	140	20.2	1,580
Oct-19-2001	133	19.8	1,600
Oct-20-2001	143	20.1	1,560
Oct-21-2001	149	19.8	1,610
Oct-22-2001	144	18.7	1,640
Oct-23-2001	139	18.8	1,630
Oct-24-2001	124	16.9	1,730
Oct-25-2001	115	17.0	1,790
Oct-26-2001	109	17.8	1,800
Oct-27-2001	106	18.3	1,820
Oct-28-2001	106	18.0	1,860
Oct-29-2001	107	18.1	1,880
Oct-30-2001	111	18.1	1,870
Oct-31-2001	124	17.7	1,750

Table 4. Continuous water monitoring at Station F (Salt Slough at Highway 165), October 2001.

See Table 26 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow	Temperature	Specific Conductance
DATA SOURCE	usgs	usgs	usgs
UNITS	cfs	°C	µS/cm
Oct-01-2001	55	22.8	1,610
Oct-02-2001	47	23.2	1,700
Oct-03-2001	48	23.6	1,800
Oct-04-2001	57	22.7	1,690
Oct-05-2001	70	21.6	1,440
Oct-06-2001	76	20.3	1,470
Oct-07-2001	79	20.0	1,550
Oct-08-2001	95	20.1	1,400
Oct-09-2001	114	19.5	1,210
Oct-10-2001	109	18.7	1,250
Oct-11-2001	105	18.9	1,320
Oct-12-2001	109	18.1	1,420
Oct-13-2001	134	18.6	1,250
Oct-14-2001	153	19.2	1,170
Oct-15-2001	159	20.0	1,140
Oct-16-2001	158	20.4	1,140
Oct-17-2001	158	19.9	1,140
Oct-18-2001	147	19.5	1,210
Oct-19-2001	116	19.1	1,430
Oct-20-2001	87	19.0	1,670
Oct-21-2001	81	18.8	1,680
Oct-22-2001	82	17.9	1,640
Oct-23-2001	83	18.1	1,610
Oct-24-2001	79	16.5	1,600
Oct-25-2001	73	16.5	1,650
Oct-26-2001	73	17.2	1,740
Oct-27-2001	75	17.5	1,740
Oct-28-2001	76	17.4	1,700
Oct-29-2001	75	17.3	1,720
Oct-30-2001	78	17.4	1,760
Oct-31-2001	90	17.1	1,660

Table 5. Continuous water monitoring at Station N (San Joaquin River at Crow's Landing), October 2001.

See Table 26 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
Oct-01-2001	407	22.5	1,190	1.6
Oct-02-2001	371	23.0	1,190	1.6
Oct-03-2001	355	23.3	1,360	1.7
Oct-04-2001	384	22.8	1,320	1.6
Oct-05-2001	428	21.7	1,270	1.4
Oct-06-2001	479	20.8	1,240	1.3
Oct-07-2001	462	20.4	1,220	1.2
Oct-08-2001	524	20.3	1,210	1.3
Oct-09-2001	514	19.6	1,200	0.9
Oct-10-2001	512	18.5	1,230	1.4
Oct-11-2001	488	18.7	1,200	1.4
Oct-12-2001	481	NA	1,200	1.8
Oct-13-2001	483	NA	1,290	2.2
Oct-14-2001	518	NA	1,260	2.6
Oct-15-2001	570	NA	1,110	1.9
Oct-16-2001	585	20.3	1,060	1.3
Oct-17-2001	602	19.8	1,090	1.1
Oct-18-2001	775	19.4	912	1.1
Oct-19-2001	972	18.7	NA	NA
Oct-20-2001	1,010	18.1	NA	NA
Oct-21-2001	1,030	17.9	NA	NA
Oct-22-2001	1,060	17.3	NA	NA
Oct-23-2001	1,040	17.2	NA	NA
Oct-24-2001	1,030	16.0	NA	NA
Oct-25-2001	1,070	15.8	NA	NA
Oct-26-2001	1,070	16.3	NA	NA
Oct-27-2001	1,100	16.5	NA	NA
Oct-28-2001	1,070	16.5	NA	NA
Oct-29-2001	1,060	16.5	NA	NA
Oct-30-2001	1,080	16.5	NA	NA
Oct-31-2001	1,120	16.3	NA	NA

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

See Table 26 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow	.	.	Specific Conductance	Total Suspended Solids	Selenium (total)	Selenium (dissolved)	Boron
DATA SOURCE	SLDMWA	.	.	CVRWQCB	CVRWQCB	CVRWQCB	CVRWQCB	CVRWQCB
UNITS	cfs	.	.	µS/cm	mg/L	µg/L	µg/L	mg/L
Aug-01-2001	59	.	.	3,930	100	Selenium and boron analyses		
Aug-08-2001	56	.	.	3,320	170	from weekly grab		
Aug-15-2001	61	.	.	3,480	130	discontinued 2/1/00.		
Aug-22-2001	48	.	.	3,590	95	.	.	.
Aug-29-2001	53	.	.	4,370	85	.	.	.
Sep-05-2001	33	.	.	3,970	54	.	.	.
Sep-12-2001	17	.	.	4,620	51	.	.	.
Sep-19-2001	14	.	.	4,840	79	.	.	.
Sep-26-2001	7	.	.	5,600	74	.	.	.
Oct-03-2001	8	.	.	5,820	78	.	.	.
Oct-10-2001	19	.	.	4,550	430	.	.	.
Oct-17-2001	11	.	.	5,430	140	.	.	.
Oct-24-2001	8	.	.	5,030	79	.	.	.
Oct-31-2001	11	.	.	4,960	93	.	.	.

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

See Table 26 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
Aug-07-2001	59	.	.	3,760	.	34.3	.	6.1
Aug-14-2001	57	.	.	NA	.	30.4	.	5.8
Aug-21-2001	52	.	.	3,750	.	36.6	.	6.0
Aug-28-2001	49	.	.	4,070	.	48.2	.	6.0
Sep-04-2001	31	.	.	4,270	.	51.1	.	7.0
Sep-11-2001	22	.	.	4,490	.	53.5	.	6.9
Sep-18-2001	13	.	.	5,190	.	53.4	.	8.6
Sep-25-2001	7	.	.	5,140	.	45.7	.	9.0
Oct-02-2001	6	.	.	5,470	.	52.2	.	10
Oct-09-2001	15	.	.	4,410	.	56.0	.	6.7
Oct-16-2001	10	.	.	5,110	.	78.0	.	7.5
Oct-23-2001	9	.	.	5,130	.	63.5	.	8.1
Oct-30-2001	8	.	.	5,030	.	55.6	.	8.2

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

See Table 26 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow	Temperature	pH	Specific Conductance	Total Suspended Solids	Selenium (total)	Selenium (dissolved)	Boron
DATA SOURCE	USGS	CVRWQCB	CVRWQCB	CVRWQCB	CVRWQCB	CVRWQCB	CVRWQCB	CVRWQCB
UNITS	cfs	°C		µS/cm	mg/L	µg/L	µg/L	mg/L
Aug-02-2001	59	24.8	8.3	3,830	50	37.6	Selenium	6.7
Aug-09-2001	56	26.7	8.3	3,550	41	32.4	(dissolved)	6.0
Aug-16-2001	61	24.8	8.4	3,770	39	32.7	analyses	6.2
Aug-23-2001	50	22.7	8.4	3,650	32	42.3	discontinued	5.7
Aug-30-2001	54	24.0	8.4	4,260	58	53.1	1/15/2000.	5.9
Sep-06-2001	36	24.2	8.0	3,810	P	48.3	.	6.0
Sep-13-2001	19	22.5	8.6	4,260	P	53.0	.	6.6
Sep-20-2001	16	23.7	8.4	4,570	P	48.5	.	7.4
Sep-27-2001	9	23.2	8.2	5,100	P	54.0	.	8.4
Oct-04-2001	10	22.9	8.1	4,090	P	25.4	.	6.4
Oct-11-2001	27	18.9	8.6	4,340	P	38.3	.	6.9
Oct-18-2001	18	19.4	8.2	3,940	P	49.5	.	5.4
Oct-25-2001	15	16.4	8.3	4,250	P	35.1	.	6.5

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

See Table 26 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
Aug-02-2001	8	24.4	8.3	2,000	0.6	1.7
Aug-09-2001	8	23.2	7.9	3,170	0.4	2.6
Aug-16-2001	6	25.6	8.0	1,390	0.7	1.2
Aug-23-2001	17	22.7	8.1	812	0.7	0.9
Aug-30-2001	11	23.3	7.7	1,430	<0.4	0.9
Sep-06-2001	14	21.9	7.8	1,200	<0.4	0.75
Sep-13-2001	31	23.4	7.8	1,230	<0.4	0.76
Sep-20-2001	34	22.4	7.8	1,120	<0.4	0.62
Sep-27-2001	60	21.5	7.6	1,020	<0.4	0.56
Oct-04-2001	95	22.0	7.5	1,130	<0.4	0.63
Oct-11-2001	115	18.3	7.6	1,130	<0.4	0.62
Oct-18-2001	122	18.7	7.5	1,230	<0.4	0.68
Oct-25-2001	100	15.8	7.7	1,420	<0.4	0.85

++ 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 26 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
Aug-02-2001	67	25.0	8.4	2,170	34.0	6.1
Aug-09-2001	64	26.5	8.4	3,370	27.6	5.3
Aug-16-2001	67	25.0	8.4	3,420	30.5	5.3
Aug-23-2001	67	22.5	8.3	3,100	29.5	4.5
Aug-30-2001	65	24.3	8.3	3,820	43.2	5.2
Sep-06-2001	50	22.9	8.0	2,970	28.0	4.3
Sep-13-2001	50	22.3	8.0	2,470	18.8	3.4
Sep-20-2001	50	22.5	7.7	2,540	19.6	3.1
Sep-27-2001	69	21.7	7.5	1,870	9.7	2.0
Oct-04-2001	105	22.1	7.4	1,610	4.3	1.4
Oct-11-2001	142	18.2	7.6	1,870	8.2	2.0
Oct-18-2001	140	18.8	7.6	1,680	8.0	1.4
Oct-25-2001	115	15.5	7.7	1,950	6.1	1.7

Table 10. Weekly water quality monitoring at Station I2 .

See Table 26 for explanation of footnotes and agency abbreviations.

PARAMETER		pH	Specific Conductance	Turbidity	Selenium	Boron
DATA SOURCE		USBR	USBR	USBR	USBR	USBR
UNITS			µS/cm		µg/L	mg/L
Oct-03-2001	.	NA	NA	NA	0.4	0.5
Oct-09-2001	.	7.2	897	47.5	0.8	0.5
Oct-15-2001	.	7.4	1,430	17.0	3.2	1.2
Oct-19-2001	.	7.4	1,750	32.1	7.6	1.5
Oct-29-2001	.	7.0	2,050	15.0	6.7	1.8

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

See Table 26 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
Aug-02-2001	173	23.9	7.9	999	0.5	0.4
Aug-09-2001	114	25.9	7.6	1,210	0.5	0.5
Aug-16-2001	147	24.1	7.5	1,080	0.4	0.4
Aug-23-2001	197	22.1	7.7	1,030	0.9	0.4
Aug-30-2001	78	25.8	8.3	1,430	<0.4	0.5
Sep-06-2001	56	20.8	7.8	1,560	<0.4	0.7
Sep-13-2001	63	20.1	7.7	1,530	<0.4	0.7
Sep-20-2001	51	21.5	7.9	1,690	0.5	0.7
Sep-27-2001	61	22.5	8.0	1,480	<0.4	0.7
Oct-04-2001	57	19.9	7.8	1,460	<0.4	0.9
Oct-11-2001	105	17.8	7.9	1,200	0.5	0.6
Oct-18-2001	147	18.3	7.8	1,170	0.6	0.6
Oct-25-2001	73	15.8	7.2	1,700	<0.4	0.8

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

See Table 26 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
Aug-01-2001	0	.	.	505	1.1	0.3
Aug-08-2001	0	.	.	622	1.9	0.4
Aug-15-2001	6	.	.	690	1.7	0.5
Aug-22-2001	15	.	.	648	0.9	0.2
Aug-29-2001	25	.	.	632	0.9	0.3
Sep-05-2001	75	.	.	693	0.8	0.2
Sep-12-2001	90	.	.	731	0.9	0.4
Sep-19-2001	170	.	.	737	0.9	0.3
Sep-26-2001	170	.	.	708	0.8	0.2
Oct-03-2001	150	.	.	732	0.8	0.3
Oct-10-2001	100	.	.	638	0.8	0.2
Oct-17-2001	40	.	.	662	0.7	0.2
Oct-24-2001	40	.	.	650	0.5	0.2
Oct-31-2001	40	.	.	697	0.8	0.2

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

See Table 26 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
Aug-01-2001	10	.	.	467	0.8	0.2
Aug-08-2001	10	.	.	573	0.9	0.3
Aug-15-2001	10	.	.	634	0.8	0.3
Aug-22-2001	10	.	.	772	1.0	0.5
Aug-29-2001	80	.	.	653	0.6	0.2
Sep-05-2001	95	.	.	688	0.7	0.2
Sep-12-2001	115	.	.	691	0.6	0.2
Sep-19-2001	130	.	.	728	0.8	0.2
Sep-26-2001	165	.	.	678	0.6	0.2
Oct-03-2001	165	.	.	663	0.8	0.2
Oct-10-2001	165	.	.	622	0.5	0.2
Oct-17-2001	65	.	.	669	0.5	0.2
Oct-24-2001	65	.	.	652	0.5	0.2
Oct-31-2001	65	.	.	674	0.6	0.2

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

See Table 26 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
Aug-01-2001	40	.	.	701	1.0	0.5
Aug-08-2001	30	.	.	781	1.1	0.6
Aug-15-2001	50	.	.	713	1.0	0.4
Aug-22-2001	70	.	.	698	1.0	0.3
Aug-29-2001	90	.	.	754	0.8	0.4
Sep-05-2001	150	.	.	762	0.9	0.4
Sep-12-2001	130	.	.	725	1.3	0.2
Sep-19-2001	150	.	.	719	0.7	0.2
Sep-26-2001	130	.	.	784	0.8	0.3
Oct-03-2001	130	.	.	752	0.9	0.3
Oct-10-2001	35	.	.	676	0.6	0.2
Oct-17-2001	0	.	.	678	0.7	0.2
Oct-24-2001	0	.	.	1,220	1.2	0.9
Oct-31-2001	0	.	.	929	1.4	1.1

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

See Table 26 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
Aug-01-2001	37	.	.	1,260	1.4	2.1
Aug-08-2001	58	.	.	1,330	1.6	1.8
Aug-15-2001	46	.	.	1,530	1.8	2.4
Aug-22-2001	50	.	.	1,420	1.7	1.8
Aug-29-2001	3	.	.	1,240	1.3	0.8
Sep-05-2001	7	.	.	684	1.2	0.4
Sep-12-2001	67	.	.	909	0.8	0.5
Sep-19-2001	79	.	.	877	0.7	0.4
Sep-26-2001	88	.	.	869	0.8	0.4
Oct-03-2001	77	.	.	771	0.6	0.4
Oct-10-2001	145	.	.	826	0.6	0.4
Oct-17-2001	177	.	.	953	0.6	0.6
Oct-24-2001	131	.	.	940	0.5	0.6
Oct-31-2001	162	.	.	919	0.6	0.6

Table 16. Weekly water quality monitoring at Station G (San Joaquin River at Fremont Ford).

See Table 26 for explanation of footnotes and agency abbreviations.

PARAMETER	.	Temperature	pH	Specific Conductance	Selenium (total)	Boron
DATA SOURCE	.	CVRWQCB	CVRWQCB	CVRWQCB	CVRWQCB	CVRWQCB
UNITS	.	°C		µS/cm	µg/L	mg/L
Aug-02-2001	.	26.6	7.6	1,050	0.4	0.4
Aug-09-2001	.	26.4	7.7	1,320	0.6	0.5
Aug-16-2001	.	23.3	7.7	1,170	0.4	0.4
Aug-23-2001	.	22.2	7.7	1,100	0.5	0.4
Aug-30-2001	.	22.2	7.4	1,580	<0.4	0.5
Sep-06-2001	.	21.8	7.6	1,890	<0.4	0.6
Sep-13-2001	.	22.2	7.8	2,020	<0.4	0.7
Sep-20-2001	.	22.1	7.8	2,130	<0.4	0.7
Sep-27-2001	.	21.8	7.7	2,180	<0.4	0.7
Oct-04-2001	.	20.7	7.5	2,190	<0.4	0.8
Oct-11-2001	.	16.8	7.8	1,360	0.5	0.6
Oct-18-2001	.	18.1	7.7	1,250	0.5	0.5
Oct-25-2001	.	14.2	7.7	1,800	<0.4	0.7

Table 17. Weekly water quality monitoring at Station H (San Joaquin River at Hills Ferry).

(Collected data intended for use with biological monitoring.)

See Table 26 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
Aug-07-2001	.	.	.	1,950	9.9	2.1
Aug-14-2001	.	.	.	1,990	8.7	1.8
Aug-21-2001	.	.	.	1,700	7.1	1.6
Aug-28-2001	.	.	.	1,780	8.7	1.5
Sep-04-2001	.	.	.	2,200	10.4	1.8
Sep-11-2001	.	.	.	2,030	8.3	1.3
Sep-18-2001	.	.	.	2,350	7.5	1.4
Sep-25-2001	.	.	.	2,140	4.6	1.2
Oct-02-2001	.	.	.	1,690	3.2	0.9
Oct-09-2001	.	.	.	1,620	3.3	0.9
Oct-16-2001	.	.	.	1,340	1.7	0.6
Oct-23-2001	.	.	.	1,780	3.4	0.8
Oct-30-2001	.	.	.	1,970	3.6	P

Table 18. Weekly water quality monitoring at Station N (San Joaquin River at Crow's Landing).

See Table 26 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
Aug-02-2001	483	25.0	8.0	1,260	4.1	1.1
Aug-09-2001	383	26.1	8.1	1,390	3.7	1.1
Aug-16-2001	414	24.0	8.1	1,320	3.4	1.1
Aug-23-2001	490	22.5	8.0	1,130	2.7	0.8
Aug-30-2001	351	23.9	8.1	1,450	4.0	0.9
Sep-06-2001	318	21.9	7.9	1,470	3.7	0.9
Sep-13-2001	309	22.5	7.9	1,330	2.8	0.8
Sep-20-2001	357	22.0	7.8	1,270	2.7	0.8
Sep-27-2001	370	20.7	7.8	1,100	1.7	0.6
Oct-04-2001	384	21.8	7.7	1,340	1.4	0.7
Oct-11-2001	488	17.9	7.7	1,180	1.6	0.7
Oct-18-2001	775	18.8	7.8	842	1.3	0.4
Oct-25-2001	1,070	15.7	8.0	610	0.9	0.3

Table 19. Summary of fathead minnow (*Pimephales promelas*) larvae survival in 7-day tests using water samples collected from November 2000 to October 2001. Each value is the mean of 4 replicates with 10 fish in each replicate.

See Table 26 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	%	%	%	%	%	%
Nov-2000	88	15*	23*	63*	95	100
Dec-2000	100	63*	73	88	88	93
Jan-2001	95	85	93	90	100	100
Feb-2001	100	90	93	78	78	100
Mar-2001	100	93	93	90	95	100
Apr-2001	100	100	95	93	95	100
May-2001	88	97	90	90	90	100
Jun-2001	88	98	98	98	98	100
Jul-2001	90	93	98	100	93	98
Aug-2001	95	95	98	95	98	98
Sep-2001	98	100	90	100	100	98
Oct-2001	100	98	100	100	100	100

Table 20. Summary of fathead minnow (*Pimephales promelas*) larvae growth in 7-day tests using water samples collected from November 2000 to October 2001. Each value is the mean of 4 replicates with 10 fish in each replicate.

See Table 26 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
Nov-2000	0.29	0.05*	0.07*	0.21*	0.28	0.31
Dec-2000	0.72	0.40*	0.49*	0.67	0.74	0.60
Jan-2001	0.63	0.50	0.59	0.55	0.62	0.57
Feb-2001	0.54*	0.53*	0.64	0.61	0.68	0.65
Mar-2001	0.61	0.66	0.67	0.63	0.64	0.60
Apr-2001	0.64	0.72	0.71	0.73	0.67	0.57
May-2001	0.45	0.45	0.46	0.43	0.45	0.46
Jun-2001	0.61*	0.83	0.85	0.85	0.74	0.65
Jul-2001	0.42	0.39	0.48	0.47	0.45	0.44
Aug-2001	0.43	0.44	0.35	0.38	0.36	0.36
Sep-2001	0.43	0.43	0.44	0.42	0.34	0.36
Oct-2001	0.63	0.71	0.78	0.65	0.66	0.58

Table 21. Summary of *Daphnia magna* survival in 7-day tests using water samples collected from November 2000 to October 2001. Each value is the mean of 10 replicates with 1 animal in each replicate.

See Table 26 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	%	%	%	%	%	%
Nov-2000	100	100	100	100	90	100
Dec-2000	100	80	80	100	100	60*
Jan-2001	90	70*	100	100	90	80
Feb-2001	100	100	90	100	90	100
Mar-2001	100	100	90	90	90	90
Apr-2001	100	100	100	100	89	89
May-2001	0††	100	100	100	70	100
Jun-2001	50*	70*	70*	90	100	100
Jul-2001	100	100	60*	80	90	90
Aug-2001	50*	100	30*	100	90	90
Sep-2001	80	100	90	100	90	80
Oct-2001	90	100	90	90	70†	90

Table 22. Summary of *Daphnia magna* reproduction in 7-day tests using water samples collected from November 2000 to October 2001. Each value is the mean of 10 replicates with 1 animal in each replicate.

See Table 26 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
Nov-2000	45.7	40.4	43.9	35.1	22.8	26.3
Dec-2000	13.7	15.7	13.3	11.2	13.4	4.4*
Jan-2001	30.8	31.3	46.2	36.9	30.8	27.1
Feb-2001	31.2	25.7	25.1	29.9	27.2	27.5
Mar-2001	11.7	21.9	19.3	15.6	13.4	17.8
Apr-2001	30.7	28.6	36.5	26.2	24.9	24.8
May-2001	0†	25.0	27.5	23.3	13.1	25.2
Jun-2001	18.9*	28.3*	27.6*	47.9	44.5	36.4
Jul-2001	25.3	28.5	16.8	17.7	26.2	15.9
Aug-2001	11.7*	42.9	15.5*	52.5	27.1	36.3
Sep-2001	27.7	31.5	32.5	31.5	25.6	20.7
Oct-2001	39.5	39.1	29.8	35.3	21.1	31.7

Table 23. Summary of *Selenastrum capricornutum* growth in 4-day tests using water samples collected from November 2000 to October 2001. Each value is the mean of 4 replicates.

See Table 26 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
Nov-2000	8.3	7.5	8.1	7.6	7.7	7.9
Dec-2000	7.8*	13.6	15.4	14.9	13.1	13.3
Jan-2001	2.0	2.0	2.1	2.3 ‡	2.1 ‡	2.2
Feb-2001	11.3 ‡	23.8	21.5	16.7 ‡	22.5	17.6
Mar-2001	18.9	24.6	20.0	21.7	18.4	23.5
Apr-2001	9.9	10.5	10.2	5.8*	10.7	20.2
May-2001	10.1* ❖	18.4	13.1	19.6	15.5	14.5
Jun-2001	4.2*	12.9*	10.3*	14.7*	21.8	16.4
Jul-2001	8.3	8.5	8.5	9.4	8.0	9.1
Aug-2001	10.4*	12.4	3.0*	15.6	13.8	10.0
Sep-2001	6.5*	13.0	11.3	12.3	10.8	9.6
Oct-2001	9.1	10.7	11.3	11.4	10.3	9.3

Table 24. Summary of selenium concentrations in grab water samples collected at study stations for use in laboratory toxicity tests, August 2001 to October 2001.

See Table 26 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
Aug-13-2001	32	0.9	35	0.6	<0.4
Aug-15-2001	33	0.6	27	0.5	<0.4
Aug-17-2001	32	1.3	25	0.4	<0.4
Sep-10-2001	53	0.5	20	<0.4	<0.4
Sep-12-2001	56	0.5	24	<0.4	<0.4
Sep-14-2001	29	<0.4	20	<0.4	<0.4
Oct-22-2001	53	<0.4	7.3	<0.4	<0.4
Oct-24-2001	51	0.4	7.8	<0.4	<0.4
Oct-26-2001	30	<0.4	5.2	<0.4	<0.4

Table 25. Summary of total suspended solids concentrations in grab water samples collected from August 2001 to October 2001.

See Table 26 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
Aug-13-2001	51	41	53	142	22
Aug-15-2001	55	43	55	177	22
Aug-17-2001	62	107	88	230	24
Sep-10-2001	39	49	31	44	19
Sep-12-2001	45	27	66	68	34
Sep-14-2001	80	35	43	163	26
Oct-22-2001	44	16	11	52	4
Oct-24-2001	54	28	21	65	11
Oct-26-2001	55	8	32	126	5

Table 26. 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 (1997 draft).
†††	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.
#	New testing laboratory with reporting limit of 0.4 µg/L as of June 1998.
❖	Based on definitive bioassay, NOEC is 50 percent