

# GRASSLAND BYPASS PROJECT

## MONTHLY DATA REPORT

**November 2001**

February 08, 2002

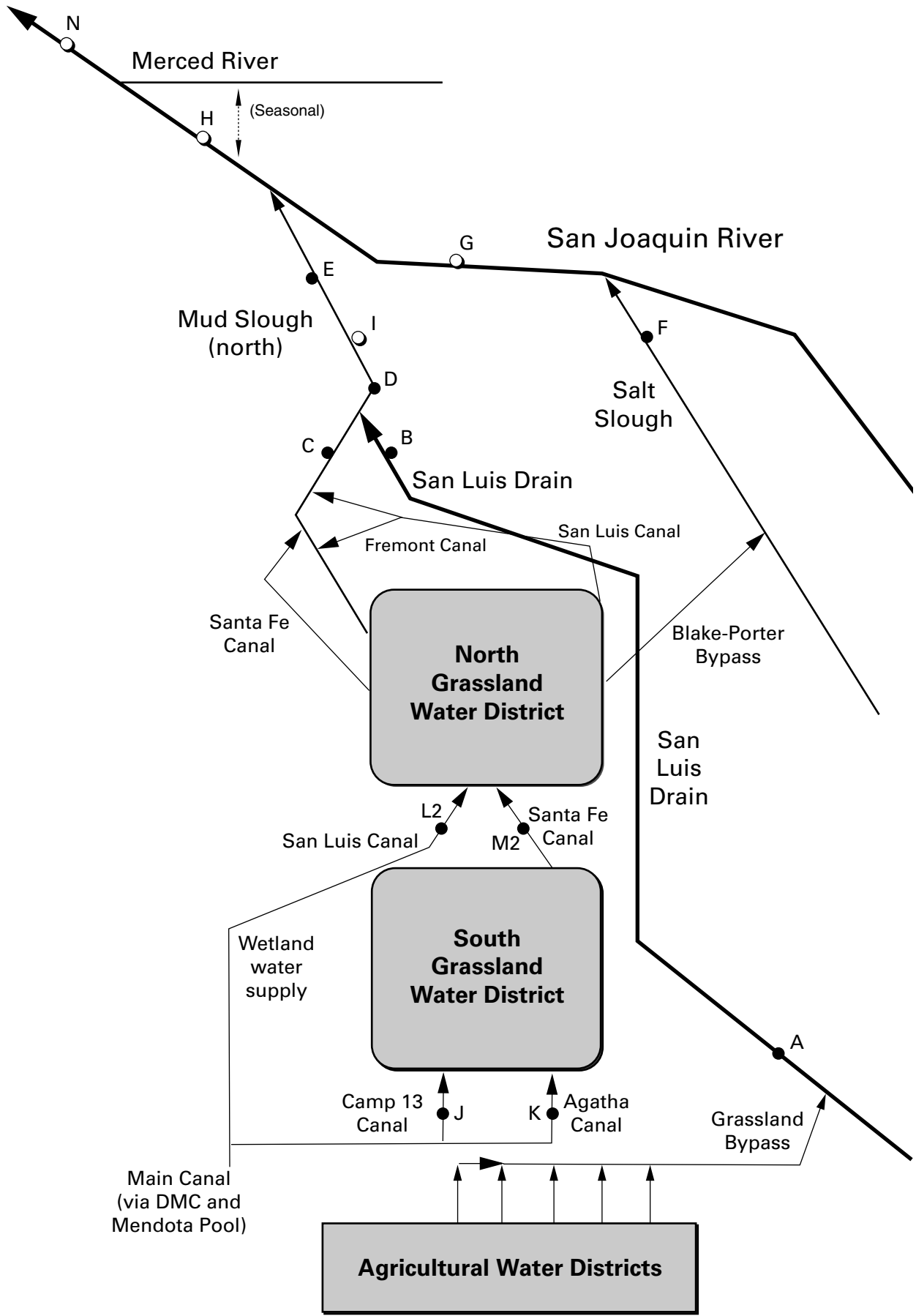
### Preliminary Results

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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## MONTHLY DATA REPORT

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**Table 1. Continuous water monitoring at Station A (inflow to San Luis Drain), November 2001.**

See Table 26 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow	Specific Conductance
DATA SOURCE	SLDMWA	SLDMWA
UNITS	cfs	µS/cm
Nov-01-2001	9	4,280
Nov-02-2001	10	4,680
Nov-03-2001	11	5,230
Nov-04-2001	12	4,490
Nov-05-2001	11	4,070
Nov-06-2001	11	4,230
Nov-07-2001	11	3,980
Nov-08-2001	11	3,940
Nov-09-2001	9	4,180
Nov-10-2001	10	4,580
Nov-11-2001	12	4,430
Nov-12-2001	15	4,470
Nov-13-2001	29	2,170
Nov-14-2001	16	3,260
Nov-15-2001	14	4,360
Nov-16-2001	14	4,550
Nov-17-2001	14	4,820
Nov-18-2001	12	4,640
Nov-19-2001	12	4,540
Nov-20-2001	10	4,610
Nov-21-2001	12	4,910
Nov-22-2001	12	4,840
Nov-23-2001	11	4,760
Nov-24-2001	12	4,990
Nov-25-2001	12	5,050
Nov-26-2001	12	4,920
Nov-27-2001	14	4,650
Nov-28-2001	13	4,580
Nov-29-2001	14	4,720
Nov-30-2001	16	4,830
.	.	.
Mean	13	4,460

Table 2. Continuous water monitoring at Station B (discharge from San Luis Drain), November 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
Nov-01-2001	20	17.7	P	4,170	33.3	3.6
Nov-02-2001	19	17.7	P	4,160	31.8	3.3
Nov-03-2001	19	17.8	P	4,240	33.6	3.4
Nov-04-2001	20	18.0	P	4,280	35.9	3.9
Nov-05-2001	21	18.0	P	4,330	37.6	4.3
Nov-06-2001	21	17.9	P	4,110	39.8	4.5
Nov-07-2001	20	17.1	P	3,790	31.4	3.4
Nov-08-2001	20	16.7	P	3,910	41.8	4.5
Nov-09-2001	19	16.9	P	4,030	45.5	4.7
Nov-10-2001	17	16.8	P	4,310	56.6	5.2
Nov-11-2001	18	17.3	P	4,570	64.2	6.2
Nov-12-2001	22	16.9	P	4,020	46.6	5.5
Nov-13-2001	27	16.2	P	3,720	39.6	5.8
Nov-14-2001	37	16.6	P	3,780	38.1	7.6
Nov-15-2001	28	16.7	P	3,690	27.4	4.1
Nov-16-2001	24	16.7	P	4,080	32.4	4.2
Nov-17-2001	24	16.3	P	4,160	40.3	5.2
Nov-18-2001	24	15.9	P	4,290	51.7	6.7
Nov-19-2001	22	15.5	P	4,180	51.9	6.2
Nov-20-2001	21	15.3	P	3,660	35.5	4.0
Nov-21-2001	20	15.2	P	3,540	25.5	2.8
Nov-22-2001	21	15.5	P	4,020	45.1	5.1
Nov-23-2001	22	15.2	P	4,160	51.6	6.1
Nov-24-2001	21	14.5	P	4,340	57.3	6.5
Nov-25-2001	21	13.4	P	4,330	55.6	6.3
Nov-26-2001	23	12.7	P	4,130	44.2	5.5
Nov-27-2001	21	11.6	P	4,050	38.6	4.4
Nov-28-2001	21	10.8	P	4,290	43.8	5.0
Nov-29-2001	21	10.4	P	4,340	44.7	5.1
Nov-30-2001	22	11.1	P	4,360	46.9	5.6
.	.	.	.	.	.	.
Mean	22	15.6	P	4,100	42.3	
<b>Total</b>						<b>148</b>

<b>Load Limitation for November 2001</b>	<b>(lbs)</b>	<b>315</b>
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**Table 3. Continuous water monitoring at Station D  
(Mud Slough North downstream of drainage discharges), November 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
Nov-01-2001	133	17.6	1,720
Nov-02-2001	132	17.4	1,720
Nov-03-2001	130	17.7	1,750
Nov-04-2001	141	17.9	1,690
Nov-05-2001	149	18.0	1,700
Nov-06-2001	149	17.7	1,700
Nov-07-2001	141	NA	NA
Nov-08-2001	140	NA	NA
Nov-09-2001	142	NA	NA
Nov-10-2001	142	NA	NA
Nov-11-2001	160	NA	NA
Nov-12-2001	178	NA	NA
Nov-13-2001	218	NA	NA
Nov-14-2001	243	NA	NA
Nov-15-2001	243	NA	NA
Nov-16-2001	238	NA	NA
Nov-17-2001	225	NA	NA
Nov-18-2001	221	NA	NA
Nov-19-2001	207	NA	NA
Nov-20-2001	195	NA	1,430
Nov-21-2001	188	NA	1,480
Nov-22-2001	156	NA	1,450
Nov-23-2001	138	NA	1,460
Nov-24-2001	150	NA	1,700
Nov-25-2001	177	NA	1,700
Nov-26-2001	174	NA	1,690
Nov-27-2001	162	NA	1,670
Nov-28-2001	148	NA	1,750
Nov-29-2001	147	NA	1,880
Nov-30-2001	148	NA	1,860
.	.	.	.

**Table 4. Continuous water monitoring at Station F (Salt Slough at Highway 165), November 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
Nov-01-2001	104	16.8	1,560
Nov-02-2001	115	16.8	1,440
Nov-03-2001	112	16.9	1,510
Nov-04-2001	115	16.9	1,520
Nov-05-2001	124	16.9	1,450
Nov-06-2001	143	16.6	1,350
Nov-07-2001	158	15.8	1,330
Nov-08-2001	144	15.3	1,410
Nov-09-2001	132	15.5	1,520
Nov-10-2001	131	15.6	1,470
Nov-11-2001	134	16.7	1,460
Nov-12-2001	143	16.4	1,420
Nov-13-2001	173	15.5	1,310
Nov-14-2001	205	15.6	1,220
Nov-15-2001	202	15.8	1,290
Nov-16-2001	190	15.7	1,370
Nov-17-2001	181	15.4	1,410
Nov-18-2001	161	14.8	1,460
Nov-19-2001	147	14.4	1,470
Nov-20-2001	136	14.3	1,500
Nov-21-2001	132	14.5	1,520
Nov-22-2001	131	15.0	1,530
Nov-23-2001	134	14.6	1,520
Nov-24-2001	137	14.1	1,530
Nov-25-2001	144	12.9	1,560
Nov-26-2001	152	12.0	1,540
Nov-27-2001	162	10.9	1,500
Nov-28-2001	153	10.2	1,570
Nov-29-2001	152	10.2	1,600
Nov-30-2001	172	10.9	1,440
.	.	.	.

**Table 5. Continuous water monitoring at Station N (San Joaquin River at Crow's Landing), November 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
Nov-01-2001	1,130	16.0	NA	NA
Nov-02-2001	1,070	15.9	NA	NA
Nov-03-2001	1,000	16.1	NA	NA
Nov-04-2001	987	16.1	NA	NA
Nov-05-2001	984	16.3	NA	NA
Nov-06-2001	954	16.1	NA	NA
Nov-07-2001	930	15.4	NA	NA
Nov-08-2001	937	15.0	NA	NA
Nov-09-2001	953	15.2	NA	NA
Nov-10-2001	1,010	15.2	NA	NA
Nov-11-2001	1,040	16.1	NA	NA
Nov-12-2001	1,060	16.1	NA	NA
Nov-13-2001	1,050	15.5	NA	NA
Nov-14-2001	1,070	15.7	NA	NA
Nov-15-2001	1,100	15.7	NA	NA
Nov-16-2001	1,120	15.5	NA	NA
Nov-17-2001	1,110	15.3	NA	NA
Nov-18-2001	1,080	14.9	NA	NA
Nov-19-2001	1,040	14.6	NA	NA
Nov-20-2001	1,000	14.5	NA	NA
Nov-21-2001	950	14.5	NA	NA
Nov-22-2001	914	14.9	NA	NA
Nov-23-2001	877	14.6	NA	NA
Nov-24-2001	847	14.3	NA	NA
Nov-25-2001	861	13.3	NA	NA
Nov-26-2001	911	12.2	NA	NA
Nov-27-2001	914	11.0	NA	NA
Nov-28-2001	942	10.5	NA	NA
Nov-29-2001	963	10.4	NA	NA
Nov-30-2001	900	11.1	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
Sep-05-2001	33	.	.	3,970	54	Selenium and boron analyses		
Sep-12-2001	17	.	.	4,620	51	from weekly grab		
Sep-19-2001	14	.	.	4,840	79	discontinued 2/1/00.		
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	.	.	.
Nov-07-2001	11	.	.	4,180	49	.	.	.
Nov-14-2001	16	.	.	3,740	140	.	.	.
Nov-20-2001	10	.	.	5,000	92	.	.	.
Nov-28-2001	13	.	.	4,920	20	.	.	.

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
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
Nov-06-2001	11	.	.	4,850	.	84.1	.	P
Nov-13-2001	29	.	.	4,460	.	57.6	.	P
Nov-19-2001	12	.	.	NA	.	73.3	.	P
Nov-26-2001	12	.	.	5,180	.	74.5	.	P

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
Sep-06-2001	36	24.2	8.0	3,810	P	48.3	Selenium	6.0
Sep-13-2001	19	22.5	8.6	4,260	P	53.0	(dissolved)	6.6
Sep-20-2001	16	23.7	8.4	4,570	P	48.5	analyses	7.4
Sep-27-2001	9	23.2	8.2	5,100	P	54.0	discontinued	8.4
Oct-04-2001	10	22.9	8.1	4,090	P	25.4	1/15/2000.	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
Nov-01-2001	20	17.6	8.2	4,000	41	33.1	.	6.2
Nov-08-2001	20	15.7	8.8	4,090	35	52.3	.	6.0
Nov-15-2001	28	16.0	7.9	3,610	38	26.6	.	4.9
Nov-20-2001	21	14.9	7.5	3,510	33	33.7	.	5.3
Nov-29-2001	21	9.3	NA	4,350	39	43.4	.	6.7

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
Sep-06-2001	14	21.9	7.8	1,200	<0.4	0.8
Sep-13-2001	31	23.4	7.8	1,230	<0.4	0.8
Sep-20-2001	34	22.4	7.8	1,120	<0.4	0.6
Sep-27-2001	60	21.5	7.6	1,020	<0.4	0.6
Oct-04-2001	95	22.0	7.5	1,130	<0.4	0.6
Oct-11-2001	115	18.3	7.6	1,130	<0.4	0.6
Oct-18-2001	122	18.7	7.5	1,230	<0.4	0.7
Oct-25-2001	100	15.8	7.7	1,420	<0.4	0.9
Nov-01-2001	113	17.1	7.8	1,330	<0.4	0.9
Nov-08-2001	120	15.4	8.1	1,450	<0.4	1.0
Nov-15-2001	215	15.5	7.8	1,250	<0.4	0.8
Nov-20-2001	174	15.0	7.9	1,420	<0.4	1.0
Nov-29-2001	126	10.9	NA	1,540	<0.4	1.1

++ 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
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
Nov-01-2001	133	17.0	7.8	1,800	5.0	1.7
Nov-08-2001	140	15.4	8.1	1,850	4.2	1.6
Nov-15-2001	243	15.5	7.8	1,540	3.2	1.3
Nov-20-2001	195	14.9	7.8	1,720	4.4	1.6
Nov-29-2001	147	10.9	NA	2,040	6.7	2.0

**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
Nov-08-2001	.	7.5	1,800	14.7	4.1	1.5
Nov-14-2001	.	7.2	680	21.0	6.2	1.5
Nov-19-2001	.	7.5	1,900	14.8	6.0	1.6
Nov-27-2001	.	7.7	2,010	24.4	5.5	1.9

**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
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
Nov-01-2001	104	16.0	7.7	1,680	0.4	0.9
Nov-08-2001	144	14.6	8.6	1,440	0.5	0.7
Nov-15-2001	202	18.3	7.7	1,280	0.5	0.7
Nov-20-2001	136	14.4	7.6	1,570	<0.4	0.9
Nov-29-2001	152	9.9	7.7	1,710	<0.4	0.9

**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 <sup>††</sup>	.	.	CVRWQCB	CVRWQCB	CVRWQCB
UNITS	cfs	.	.	µS/cm	µg/L	mg/L
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
Nov-07-2001	20	.	.	682	0.8	P
Nov-14-2001	20	.	.	585	0.6	P
Nov-20-2001	10	.	.	583	0.8	P
Nov-28-2001	10	.	.	551	0.9	P

**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 <sup>††</sup>	.	.	CVRWQCB	CVRWQCB	CVRWQCB
UNITS	cfs	.	.	µS/cm	µg/L	mg/L
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
Nov-07-2001	65	.	.	680	0.7	P
Nov-14-2001	65	.	.	606	0.5	P
Nov-20-2001	50	.	.	569	0.5	P
Nov-28-2001	50	.	.	632	0.8	P

**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 <sup>††</sup>	.	.	CVRWQCB	CVRWQCB	CVRWQCB
UNITS	cfs	.	.	µS/cm	µg/L	mg/L
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
Nov-07-2001	0	.	.	1,490	1.8	P
Nov-14-2001	30	.	.	638	0.7	P
Nov-20-2001	0	.	.	1,660	2.1	P
Nov-28-2001	0	.	.	1,240	0.7	P

**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 <sup>††</sup>	.	.	CVRWQCB	CVRWQCB	CVRWQCB
UNITS	cfs	.	.	µS/cm	µg/L	mg/L
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
Nov-07-2001	137	.	.	1,000	0.5	P
Nov-14-2001	139	.	.	1,020	0.8	P
Nov-20-2001	132	.	.	1,050	0.5	P
Nov-28-2001	131	.	.	1,080	0.5	P

**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
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
Nov-01-2001	.	15.7	7.8	1,760	<0.4	0.8
Nov-08-2001	.	13.7	7.7	1,440	0.5	0.7
Nov-15-2001	.	15.4	8.1	1,240	0.4	0.6
Nov-20-2001	.	13.6	7.7	1,640	<0.4	0.8
Nov-29-2001	.	9.6	7.6	1,790	<0.4	0.9

**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
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	1.0
Nov-06-2001	.	.	.	1,680	2.5	0.9
Nov-15-2001	.	.	.	1,350	2.2	0.9
Nov-20-2001	.	.	.	1,650	2.8	1.1
Nov-27-2001	.	.	.	1,760	2.3	1.1

**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
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
Nov-01-2001	1,130	15.8	8.0	594	0.8	0.3
Nov-08-2001	937	15.0	8.3	742	0.8	0.4
Nov-15-2001	1,100	15.8	7.8	855	1.3	0.5
Nov-20-2001	1,000	14.2	7.8	965	1.4	0.6
Nov-29-2001	963	12.7	7.4	960	1.0	0.6



Table 19. Summary of fathead minnow (*Pimephales promelas*) larvae survival in 7-day tests using water samples collected from December 2000 to November 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	%	%	%	%	%	%
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
Nov-2001	98	83	60*	88	100	100

Table 20. Summary of fathead minnow (*Pimephales promelas*) larvae growth in 7-day tests using water samples collected from December 2000 to November 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
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
Nov-2001	0.70	0.49	0.49	0.59	0.67	0.52

Table 21. Summary of *Daphnia magna* survival in 7-day tests using water samples collected from December 2000 to November 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	%	%	%	%	%	%
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
Nov-2001	100	89	90	100	80	90

Table 22. Summary of *Daphnia magna* reproduction in 7-day tests using water samples collected from December 2000 to November 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
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
Nov-2001	27.4	28.2	34.2	33.4	25.4	29.6

Table 23. Summary of *Selenastrum capricornutum* growth in 4-day tests using water samples collected from December 2000 to November 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 <sup>5</sup> cells/mL	10 <sup>5</sup> cells/mL	10 <sup>5</sup> cells/mL	10 <sup>5</sup> cells/mL	10 <sup>5</sup> cells/mL	10 <sup>5</sup> cells/mL
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
Nov-2001	6.0*	11.1	11.0	10.0	9.2 †††	6.4 †††

**Table 24. Summary of selenium concentrations in grab water samples collected at study stations for use in laboratory toxicity tests, September 2001 to November 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
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	<0.4	<0.4
Oct-24-2001	51	0.4	8	<0.4	<0.4
Oct-26-2001	30	<0.4	5	<0.4	<0.4
Nov-26-2001	44	<0.4	6.0	<0.4	<0.4
Nov-28-2001	47	<0.4	5.2	<0.4	<0.4
Nov-30-2001	49	<0.4	6.2	<0.4	0.5

**Table 25. Summary of total suspended solids concentrations in grab water samples collected from September 2001 to November 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
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
Nov-26-2001	45	39	20	57	11
Nov-28-2001	62	21	28	NA	16
Nov-30-2001	57	29	53	101	23

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 <sup>6</sup> 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