

# GRASSLAND BYPASS PROJECT

## MONTHLY DATA REPORT

December 2001

March 14, 2001

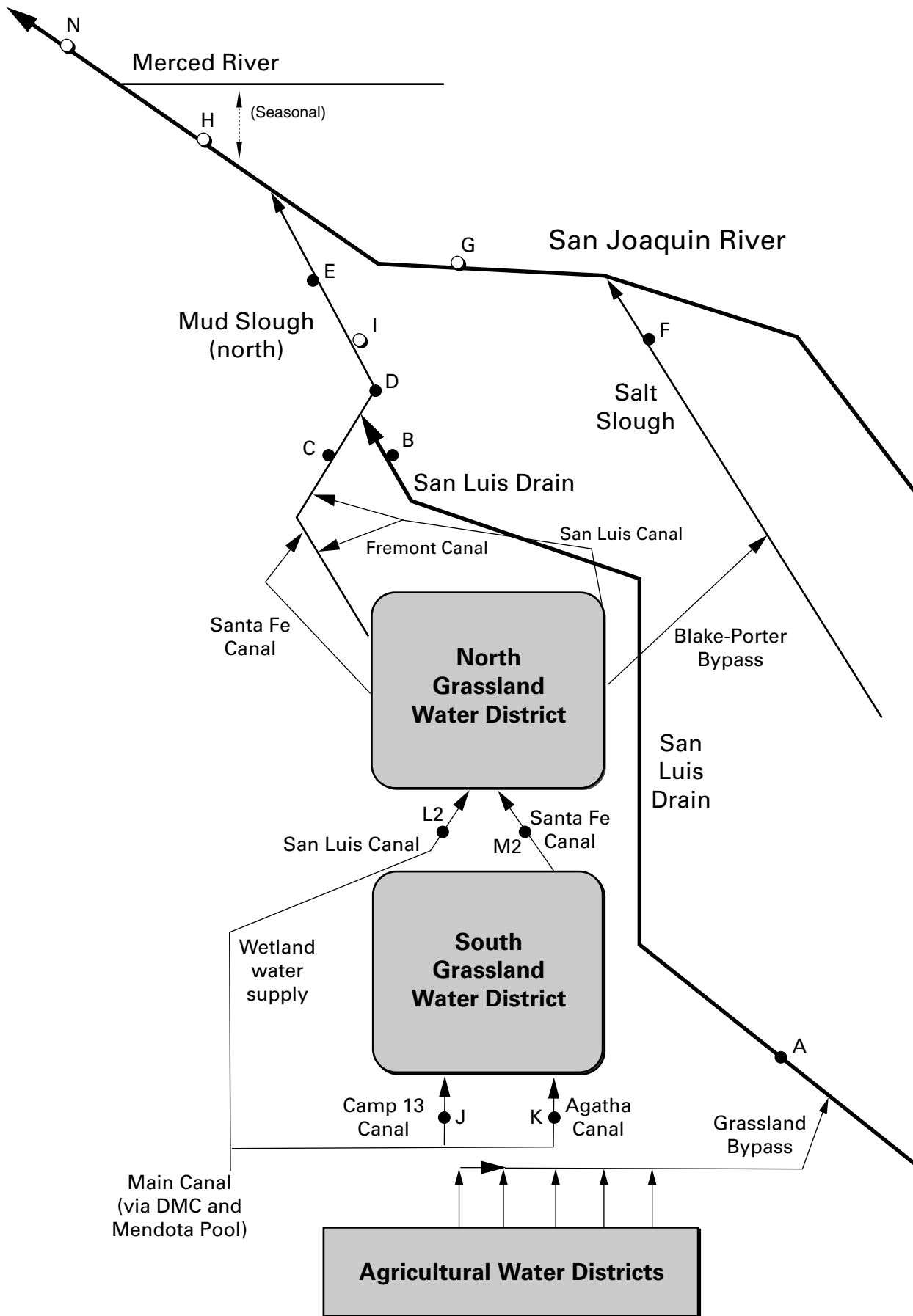
### Preliminary Results

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), December 2001.**

See Table 26 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow	Specific Conductance
DATA SOURCE	SLDMWA	SLDMWA
UNITS	cfs	µS/cm
Dec-01-2001	14	5,030
Dec-02-2001	15	4,870
Dec-03-2001	17	4,620
Dec-04-2001	14	4,530
Dec-05-2001	12	4,720
Dec-06-2001	11	4,780
Dec-07-2001	12	4,790
Dec-08-2001	12	4,880
Dec-09-2001	12	4,850
Dec-10-2001	12	4,990
Dec-11-2001	12	5,070
Dec-12-2001	12	5,140
Dec-13-2001	12	5,180
Dec-14-2001	13	4,860
Dec-15-2001	14	4,740
Dec-16-2001	12	4,560
Dec-17-2001	10	4,720
Dec-18-2001	11	4,660
Dec-19-2001	11	4,570
Dec-20-2001	11	4,740
Dec-21-2001	11	4,850
Dec-22-2001	10	4,890
Dec-23-2001	10	4,760
Dec-24-2001	10	4,680
Dec-25-2001	10	4,760
Dec-26-2001	10	4,740
Dec-27-2001	10	4,740
Dec-28-2001	11	4,760
Dec-29-2001	17	4,600
Dec-30-2001	19	4,400
Dec-31-2001	16	4,180
Mean	12	4,760

**Table 2. Continuous water monitoring at Station B (discharge from San Luis Drain), December 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
Dec-01-2001	23	11.1	P	4,430	49.7	6.2
Dec-02-2001	22	10.9	P	4,410	56.5	6.7
Dec-03-2001	27	11.2	P	4,330	52.6	7.7
Dec-04-2001	28	11.0	P	4,080	44.0	6.6
Dec-05-2001	23	10.5	P	4,130	46.5	5.8
Dec-06-2001	20	11.0	P	NA	48.2 e	5.2
Dec-07-2001	20	11.9	P	4,450	49.8	5.4
Dec-08-2001	20	11.7	P	4,490	65.8	7.1
Dec-09-2001	21	11.1	P	4,330	60.2	6.8
Dec-10-2001	22	9.8	P	4,250	51.9	6.2
Dec-11-2001	20	9.5	P	4,120	43.8	4.7
Dec-12-2001	20	9.8	P	4,210	43.5	4.7
Dec-13-2001	19	10.0	P	4,260	44.0	4.5
Dec-14-2001	23	9.9	P	4,330	45.4	5.6
Dec-15-2001	22	8.3	P	4,400	46.6	5.5
Dec-16-2001	22	8.0	P	4,400	49.5	5.9
Dec-17-2001	18	8.4	P	4,390	50.1	4.9
Dec-18-2001	17	8.7	P	4,470	54.2	5.0
Dec-19-2001	16	8.9	P	4,480	53.5	4.6
Dec-20-2001	16	9.1	P	4,470	57.1	4.9
Dec-21-2001	18	9.6	P	4,380	63.2	6.1
Dec-22-2001	17	9.6	P	4,190	60.8	5.6
Dec-23-2001	17	9.9	P	4,080	54.2	5.0
Dec-24-2001	15	9.7	P	4,030	47.8	3.9
Dec-25-2001	15	9.7	P	4,130	44.6	3.6
Dec-26-2001	15	9.9	P	4,110	46.2	3.7
Dec-27-2001	15	10.0	P	4,090	47.0	3.8
Dec-28-2001	16	10.3	P	4,180	49.8	4.3
Dec-29-2001	18	10.8	P	4,220	53.4	5.2
Dec-30-2001	26	11.6	P	4,190	50.4	7.1
Dec-31-2001	28	12.4	P	4,170	49.3	7.4
Mean	20	10.1	P	4,270	51.0	
<b>Total</b>						<b>170</b>

<b>Load Limitation for December 2001</b>	<b>(lbs)</b>	<b>353</b>
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**Table 3. Continuous water monitoring at Station D  
(Mud Slough North downstream of drainage discharges), December 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
Dec-01-2001	144	NA	1,950
Dec-02-2001	154	NA	1,970
Dec-03-2001	171	NA	1,870
Dec-04-2001	181	NA	1,790
Dec-05-2001	175	9.9	1,880
Dec-06-2001	166 e	10.5	2,000
Dec-07-2001	156 e	11.7	2,110
Dec-08-2001	146 e	11.3	2,200
Dec-09-2001	137 e	10.7	2,260
Dec-10-2001	130 e	9.2	2,370
Dec-11-2001	120 e	8.8	2,440
Dec-12-2001	113 e	NA	NA
Dec-13-2001	101 e	NA	NA
Dec-14-2001	98	9.7	2,440
Dec-15-2001	94	8.0	2,480
Dec-16-2001	104	7.5	2,410
Dec-17-2001	98	8.1	2,410
Dec-18-2001	98	8.6	2,380
Dec-19-2001	101	8.8	2,360
Dec-20-2001	110	9.1	2,340
Dec-21-2001	122	9.6	2,240
Dec-22-2001	124	9.9	2,200
Dec-23-2001	129	10.1	2,140
Dec-24-2001	132	9.4	2,100
Dec-25-2001	127	9.4	2,150
Dec-26-2001	122	9.7	2,170
Dec-27-2001	122	9.9	2,150
Dec-28-2001	115	10.4	2,250
Dec-29-2001	134	10.9	2,190
Dec-30-2001	158	11.7	2,150
Dec-31-2001	172	12.5	2,110

**Table 4. Continuous water monitoring at Station F (Salt Slough at Highway 165), December 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
Dec-01-2001	165	11.0	1,500
Dec-02-2001	176	10.9	1,480
Dec-03-2001	204	11.0	1,430
Dec-04-2001	211	10.6	1,450
Dec-05-2001	216	10.1	1,460
Dec-06-2001	224	10.5	1,420
Dec-07-2001	226	11.6	1,420
Dec-08-2001	215	11.4	1,460
Dec-09-2001	208	10.7	1,480
Dec-10-2001	205	9.4	1,500
Dec-11-2001	188	8.9	1,590
Dec-12-2001	147	9.5	1,730
Dec-13-2001	131	10.0	1,790
Dec-14-2001	108	10.0	1,860
Dec-15-2001	86	8.6	2,050
Dec-16-2001	78	8.6	2,150
Dec-17-2001	77	9.5	2,190
Dec-18-2001	74	10.2	2,220
Dec-19-2001	71	10.4	2,270
Dec-20-2001	73	10.7	2,290
Dec-21-2001	75	11.0	2,250
Dec-22-2001	76	10.9	2,240
Dec-23-2001	76	11.3	2,210
Dec-24-2001	75	10.8	2,270
Dec-25-2001	69	10.7	2,290
Dec-26-2001	65	11.0	2,350
Dec-27-2001	66	11.2	2,360
Dec-28-2001	68	11.6	2,360
Dec-29-2001	73	12.1	2,350
Dec-30-2001	90	12.9	2,250
Dec-31-2001	98	13.5	2,180

**Table 5. Continuous water monitoring at Station N (San Joaquin River at Crow's Landing), December 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
Dec-01-2001	878	11.1	NA	NA
Dec-02-2001	909	10.9	NA	NA
Dec-03-2001	915	11.0	NA	NA
Dec-04-2001	1,060	10.6	NA	NA
Dec-05-2001	1,130	10.1	NA	NA
Dec-06-2001	1,170	10.5	NA	NA
Dec-07-2001	1,170	11.5	NA	NA
Dec-08-2001	1,130	11.2	NA	NA
Dec-09-2001	1,080	10.6	NA	NA
Dec-10-2001	1,040	NA	NA	NA
Dec-11-2001	1,010	NA	NA	NA
Dec-12-2001	998	NA	NA	NA
Dec-13-2001	918	NA	NA	NA
Dec-14-2001	863	NA	NA	NA
Dec-15-2001	814	NA	NA	NA
Dec-16-2001	777	NA	NA	NA
Dec-17-2001	760	NA	NA	NA
Dec-18-2001	744	NA	NA	NA
Dec-19-2001	732	9.6	NA	NA
Dec-20-2001	745	9.9	NA	NA
Dec-21-2001	802	10.3	NA	NA
Dec-22-2001	818	10.4	NA	NA
Dec-23-2001	830	10.5	NA	NA
Dec-24-2001	833	10.0	NA	NA
Dec-25-2001	823	9.9	NA	NA
Dec-26-2001	801	10.5	NA	NA
Dec-27-2001	783	10.5	NA	NA
Dec-28-2001	776	10.6	NA	NA
Dec-29-2001	865	11.0	NA	NA
Dec-30-2001	1,250	11.7	NA	NA
Dec-31-2001	1,910	12.0	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
Oct-03-2001	8	.	.	5,820	78	Selenium and boron analyses		
Oct-10-2001	19	.	.	4,550	430	from weekly grab		
Oct-17-2001	11	.	.	5,430	140	discontinued 2/1/00.		
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	.	.	.
Dec-05-2001	12	.	.	4,960	23	.	.	.
Dec-12-2001	12	.	.	5,410	24	.	.	.
Dec-19-2001	11	.	.	4,880	49	.	.	.
Dec-27-2001	10	.	.	5,050	33	.	.	.

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
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	.	7.4
Nov-13-2001	29	.	.	4,460	.	57.6	.	7.2
Nov-19-2001	12	.	.	NA	.	73.3	.	7.2
Nov-26-2001	12	.	.	5,180	.	74.5	.	8.6
Dec-04-2001	14	.	.	4,990	.	P	.	P
Dec-11-2001	12	.	.	5,160	.	P	.	P
Dec-18-2001	11	.	.	5,080	.	P	.	P
Dec-25-2001	10	.	.	5,060	.	P	.	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
Oct-04-2001	10	22.9	8.1	4,090	P	25.4	Selenium	6.4
Oct-11-2001	27	18.9	8.6	4,340	P	38.3	(dissolved)	6.9
Oct-18-2001	18	19.4	8.2	3,940	P	49.5	analyses	5.4
Oct-25-2001	15	16.4	8.3	4,250	P	35.1	discontinued	6.5
Nov-01-2001	20	17.6	8.2	4,000	41	33.1	1/15/2000.	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
Dec-06-2001	20	10.2	7.8	4,320	37	P	.	P
Dec-13-2001	19	9.3	8.1	4,710	50	P	.	P
Dec-20-2001	16	9.1	8.1	4,590	43	P	.	P
Dec-27-2001	15	10.1	7.9	4,170	36	P	.	P

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
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
Dec-06-2001	146	9.9	7.9	1,590	<0.4	P
Dec-13-2001	82	8.8	8.0	2,110	P	P
Dec-20-2001	94	9.7	8.1	1,960	<0.4	P
Dec-27-2001	107	10.3	7.9	1,920	P	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 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
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
Dec-06-2001	166 e	9.8	7.8	1,920	6.3	P
Dec-13-2001	101 e	8.9	8.0	2,740	P	P
Dec-20-2001	110	9.4	8.0	2,520	10	P
Dec-27-2001	122	10.3	7.9	2,270	P	P

**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	NTU	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
Dec-04-2001	.	7.8	2,060	15.8	7.2	1.9
Dec-10-2001	.	7.9	2,790	18.0	6.7	2.3
Dec-18-2001	.	7.9	2,960	15.0	9.3	2.7
Dec-21-2001	.	8.0	2,940	20.5	8.9	2.5

**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
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
Dec-06-2001	224	9.9	7.7	1,480	0.5	P
Dec-13-2001	131	9.4	7.7	2,020	P	P
Dec-20-2001	73	10.8	7.8	2,420	<0.4	P
Dec-27-2001	66	10.7	7.7	2,470	P	P

**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
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	0.3
Nov-14-2001	20	.	.	585	0.6	0.2
Nov-20-2001	10	.	.	583	0.8	0.3
Nov-28-2001	10	.	.	551	0.9	0.2
Dec-05-2001	10	.	.	641	0.6	P
Dec-12-2001	10	.	.	685	0.7	P
Dec-19-2001	10	.	.	757	0.8	P
Dec-27-2001	10	.	.	629	P	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
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	0.3
Nov-14-2001	65	.	.	606	0.5	0.2
Nov-20-2001	50	.	.	569	0.5	0.2
Nov-28-2001	50	.	.	632	0.8	0.3
Dec-05-2001	35	.	.	788	0.6	P
Dec-12-2001	35	.	.	843	0.5	P
Dec-19-2001	35	.	.	711	<0.4	P
Dec-27-2001	35	.	.	988	P	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
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	1.4
Nov-14-2001	30	.	.	638	0.7	0.7
Nov-20-2001	0	.	.	1,660	2.1	1.8
Nov-28-2001	0	.	.	1,240	0.7	1.2
Dec-05-2001	6	.	.	782	0.7	P
Dec-12-2001	0	.	.	1,560	1.5	P
Dec-19-2001	0	.	.	2,040	2.5	P
Dec-27-2001	22	.	.	1,650	P	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
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	0.7
Nov-14-2001	139	.	.	1,020	0.8	0.8
Nov-20-2001	132	.	.	1,050	0.5	0.9
Nov-28-2001	131	.	.	1,080	0.5	0.9
Dec-05-2001	171	.	.	1,320	0.5	P
Dec-12-2001	108	.	.	1,410	0.4	P
Dec-19-2001	94	.	.	1,500	<0.4	P
Dec-27-2001	79	.	.	1,420	P	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
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
Dec-06-2001	.	10.2	7.4	1,320	<0.4	P
Dec-13-2001	.	8.6	7.7	2,110	P	P
Dec-20-2001	.	9.7	7.8	2,690	<0.4	P
Dec-27-2001	.	10.6	7.7	2,430	P	P

**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
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
Dec-04-2001	.	.	.	1,740	2.7	1.2
Dec-11-2001	.	.	.	1,880	2.7	1.3
Dec-18-2001	.	.	.	2,640	3.7	1.7
Dec-28-2001	.	.	.	2,350	2.6	1.5

**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
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	1100	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
Dec-06-2001	1,170	10.5	7.8	1,010	1.2	P
Dec-13-2001	918	9.7	7.6	1,170	P	P
Dec-20-2001	745	9.7	7.9	1,240	1.6	P
Dec-27-2001	783	10.5	7.8	1,180	P	P



Table 19. Summary of fathead minnow (*Pimephales promelas*) larvae survival in 7-day tests using water samples collected from January 2001 to December 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	%	%	%	%	%	%
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
Dec-2001	98	55*	68*	90	98	100

Table 20. Summary of fathead minnow (*Pimephales promelas*) larvae growth in 7-day tests using water samples collected from January 2001 to December 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
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
Dec-2001	0.48	0.34*	0.41	0.55	0.47	0.50

Table 21. Summary of *Daphnia magna* survival in 7-day tests using water samples collected from January 2001 to December 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	%	%	%	%	%	%
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
Dec-2001	90	100	90	90	100	100

Table 22. Summary of *Daphnia magna* reproduction in 7-day tests using water samples collected from January 2001 to December 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
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
Dec-2001	41.3	45.9	43.3	42.4	45.1	36.7

Table 23. Summary of *Selenastrum capricornutum* growth in 4-day tests using water samples collected from January 2001 to December 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
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 †††
Dec-2001	7.5*	9.4	9.6	9.3	8.9 †††	9.1 †††

**Table 24. Summary of selenium concentrations in grab water samples collected at study stations for use in laboratory toxicity tests, October 2001 to December 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
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
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
Dec-10-2001	55	<0.4	8.2	<0.4	<0.4
Dec-12-2001	45	<0.4	7.4	<0.4	<0.4
Dec-14-2001	47	<0.4	8.4	<0.4	<0.4

**Table 25. Summary of total suspended solids concentrations in grab water samples collected from October 2001 to December 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
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
Dec-10-2001	32	18	15	49	74
Dec-12-2001	40	8	13	48	25
Dec-14-2001	58	23	43	57	12

**Table 26. Explanations of footnotes and agency abbreviations.**

<b>Footnote</b>	<b>Explanation</b>
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.
‡‡‡	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

<b>LOCATION</b>	<b>Station B</b>	<b>Station C</b>	<b>Station D</b>	<b>Station F</b>	<b>Canal</b>	<b>Control</b>
<b>DATA SOURCE</b>	EPA	EPA	EPA	EPA	EPA	EPA
<b>UNITS</b>	%	%	%	%	%	%
Nov-2001	100	58	64	90	100	100