

# GRASSLAND BYPASS PROJECT

## MONTHLY DATA REPORT

September 2001

December 06, 2001

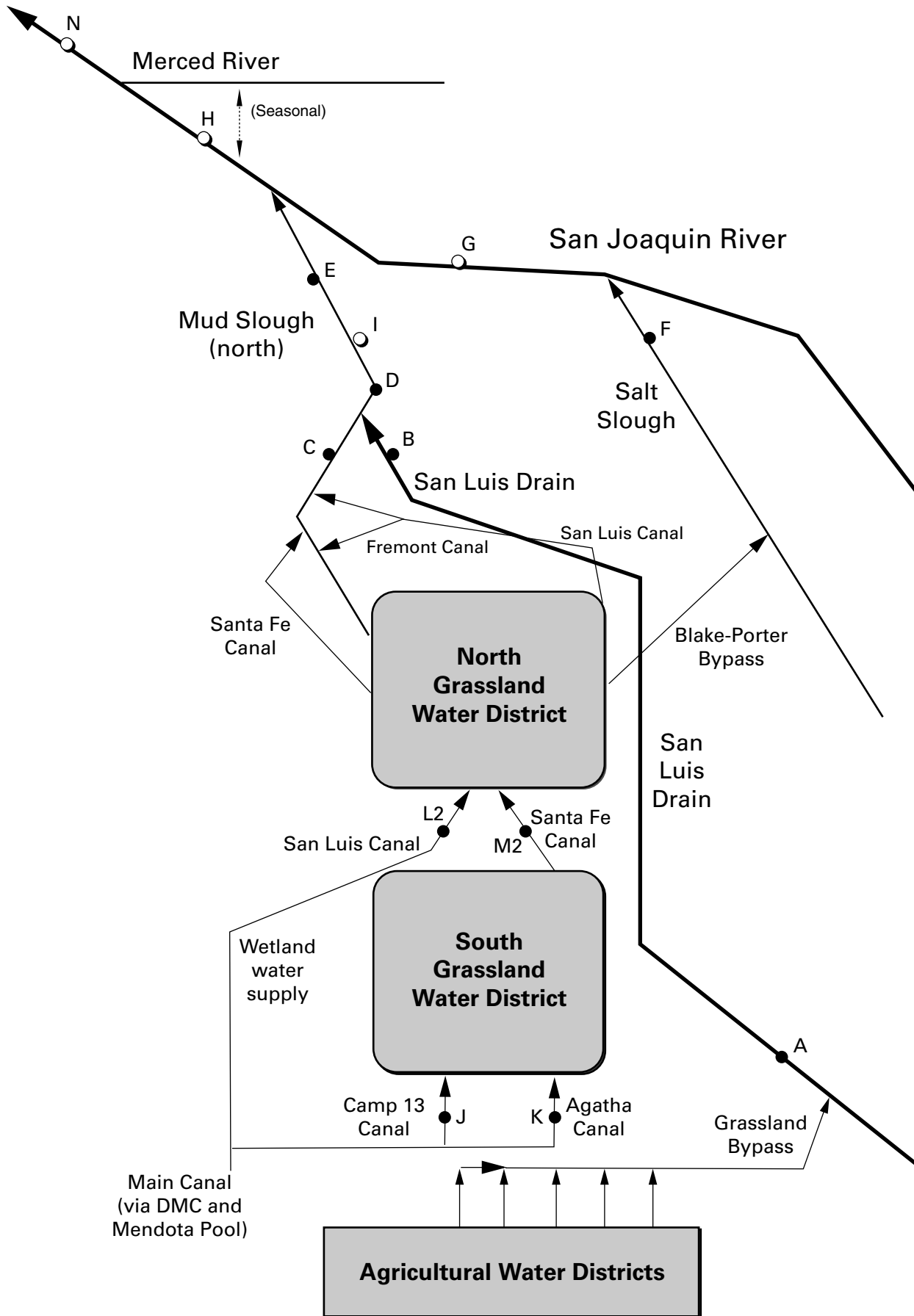
### Preliminary Results

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), September 2001.**

See Table 26 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow	Specific Conductance
DATA SOURCE	SLDMWA	SLDMWA
UNITS	cfs	µS/cm
Sep-01-2001	50	4,160
Sep-02-2001	36	4,740
Sep-03-2001	31	4,890
Sep-04-2001	31	4,930
Sep-05-2001	33	4,530
Sep-06-2001	32	4,650
Sep-07-2001	30	4,730
Sep-08-2001	33	3,900
Sep-09-2001	28	4,600
Sep-10-2001	23	5,190
Sep-11-2001	22	5,290
Sep-12-2001	17	5,100
Sep-13-2001	17	4,700
Sep-14-2001	12	4,470
Sep-15-2001	11	4,660
Sep-16-2001	10	4,580
Sep-17-2001	12	4,460
Sep-18-2001	13	4,990
Sep-19-2001	14	5,210
Sep-20-2001	14	5,300
Sep-21-2001	12	5,050
Sep-22-2001	11	5,020
Sep-23-2001	9	4,770
Sep-24-2001	8	4,860
Sep-25-2001	7	5,180
Sep-26-2001	7	5,390
Sep-27-2001	6	5,440
Sep-28-2001	7	4,490
Sep-29-2001	6	4,630
Sep-30-2001	8	4,120
.	.	.
Mean	18	4,800

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

See Table 26 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow	Temperature	Boron	Specific Conductance	Selenium (total)	Selenium (total) Load
DATA SOURCE	USGS	USGS	CVRWQCB	CVRWQCB	CVRWQCB	Computed
UNITS	cfs	°C	mg/L	µS/cm	µg/L	lbs
Sep-01-2001	51	24.5	7.0	4,630	58.1	16.0
Sep-02-2001	50	25.4	6.6	4,300	54.6	14.7
Sep-03-2001	39	25.9	6.1	3,930	47.0	9.9
Sep-04-2001	33	26.3	6.3	4,110	46.6	8.3
Sep-05-2001	32	26.4	5.8	3,730	38.9	6.7
Sep-06-2001	36	25.0	6.2	4,010	48.1	9.3
Sep-07-2001	34	24.2	7.2	4,470	49.3	9.0
Sep-08-2001	33	24.3	7.2	4,590	48.6	8.6
Sep-09-2001	36	24.2	7.1	4,530	52.1	10.1
Sep-10-2001	31	23.7	6.4	4,170	45.9	7.7
Sep-11-2001	26	23.7	6.5	4,220	47.8	6.7
Sep-12-2001	24	23.9	6.2	4,260	47.3	6.1
Sep-13-2001	19	24.0	6.5	4,460	48.8	5.0
Sep-14-2001	19	24.2	5.8	3,660	29.8	3.1
Sep-15-2001	15	24.8	6.3	3,900	35.6	2.9
Sep-16-2001	12	24.8	7.6	4,630	52.0	3.4
Sep-17-2001	11	24.6	7.8	4,650	53.7	3.2
Sep-18-2001	13	24.8	7.5	4,680	54.0	3.8
Sep-19-2001	15	25.1	7.5	4,790	58.4	4.7
Sep-20-2001	16	24.9	7.3	4,620	50.7	4.4
Sep-21-2001	16	24.5	7.2	4,530	44.6	3.8
Sep-22-2001	15	24.3	6.9	4,430	39.7	3.2
Sep-23-2001	13	24.3	7.2	4,610	38.6	2.7
Sep-24-2001	13	23.7	7.6	4,790	40.9	2.9
Sep-25-2001	11	23.2	7.8	4,930	46.4	2.8
Sep-26-2001	10	23.1	8.0	5,080	56.7	3.0
Sep-27-2001	9	23.5	NA	NA	52.9 e	2.6
Sep-28-2001	8	22.9	7.4	4,810	49.1	2.2
Sep-29-2001	9	22.4	7.2	4,420	39.1	1.9
Sep-30-2001	10	22.9	7.3	4,450	39.6	2.0
.	.	.	.	.	.	.
Mean	22	24.3	6.9	4,430	47.2	
Total						171

<b>Load Limitation for September 2001</b>	<b>(lbs)</b>	<b>350</b>
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**Table 3. Continuous water monitoring at Station D  
(Mud Slough North downstream of drainage discharges), September 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
Sep-01-2001	59	24.8	4,170
Sep-02-2001	60	25.4	3,880
Sep-03-2001	48	25.8	3,590
Sep-04-2001	43	26.0	3,420
Sep-05-2001	43	25.9	3,260
Sep-06-2001	50	24.3	3,050
Sep-07-2001	56	23.7	3,060
Sep-08-2001	71	23.8	2,620
Sep-09-2001	73	23.8	2,820
Sep-10-2001	73	23.4	2,490
Sep-11-2001	70	23.4	2,380
Sep-12-2001	62	23.8	2,600
Sep-13-2001	50	23.8	2,850
Sep-14-2001	49	24.1	2,600
Sep-15-2001	45	24.5	2,440
Sep-16-2001	42	24.2	2,470
Sep-17-2001	44	23.9	2,650
Sep-18-2001	47	NA	NA
Sep-19-2001	49	NA	NA
Sep-20-2001	50	NA	NA
Sep-21-2001	53	NA	NA
Sep-22-2001	63	NA	NA
Sep-23-2001	61	NA	NA
Sep-24-2001	60	NA	NA
Sep-25-2001	72	NA	NA
Sep-26-2001	72	NA	NA
Sep-27-2001	69	NA	NA
Sep-28-2001	71	NA	NA
Sep-29-2001	81	NA	NA
Sep-30-2001	87	NA	NA
.	.	.	.

**Table 4. Continuous water monitoring at Station F (Salt Slough at Highway 165), September 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
Sep-01-2001	87	24.4	1,420
Sep-02-2001	86	25.7	1,330
Sep-03-2001	70	25.7	1,430
Sep-04-2001	57	25.9	1,500
Sep-05-2001	50	25.5	1,620
Sep-06-2001	56	23.5	1,540
Sep-07-2001	56	23.1	1,560
Sep-08-2001	57	23.6	1,540
Sep-09-2001	64	23.1	1,450
Sep-10-2001	66	22.8	1,320
Sep-11-2001	62	23.2	1,390
Sep-12-2001	55	23.5	1,460
Sep-13-2001	63	23.2	1,520
Sep-14-2001	68	23.8	1,440
Sep-15-2001	54	24.5	1,500
Sep-16-2001	48	24.0	1,580
Sep-17-2001	49	23.6	1,590
Sep-18-2001	50	24.0	1,630
Sep-19-2001	52	24.1	1,630
Sep-20-2001	51	23.8	1,660
Sep-21-2001	51	23.4	1,670
Sep-22-2001	42	23.2	1,800
Sep-23-2001	44	22.9	1,850
Sep-24-2001	55	22.0	1,540
Sep-25-2001	76	21.9	1,330
Sep-26-2001	72	22.0	1,360
Sep-27-2001	61	22.4	1,470
Sep-28-2001	71	21.2	1,460
Sep-29-2001	66	20.9	1,480
Sep-30-2001	58	21.8	1,570
.	.	.	.

**Table 5. Continuous water monitoring at Station N (San Joaquin River at Crow's Landing), September 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
Sep-01-2001	399	24.9	NA	NA
Sep-02-2001	435	25.4	NA	NA
Sep-03-2001	448	25.2	NA	NA
Sep-04-2001	404	25.2	NA	NA
Sep-05-2001	345	24.5	NA	NA
Sep-06-2001	318	23.1	NA	NA
Sep-07-2001	350	22.6	1,430	3.5
Sep-08-2001	350	23.1	1,420	3.9
Sep-09-2001	380	23.0	1,460	4.2
Sep-10-2001	422	22.9	1,330	4.0
Sep-11-2001	365	23.1	1,320	3.8
Sep-12-2001	333	23.2	1,340	2.9
Sep-13-2001	309	23.3	1,330	2.9
Sep-14-2001	370	23.7	1,390	3.2
Sep-15-2001	390	24.0	1,350	2.5
Sep-16-2001	390	23.4	1,270	1.7
Sep-17-2001	415	22.9	1,200	1.3
Sep-18-2001	421	23.3	1,140	1.2
Sep-19-2001	367	23.6	1,210	1.7
Sep-20-2001	357	23.5	1,190	1.8
Sep-21-2001	348	22.9	1,310	2.8
Sep-22-2001	324	22.8	1,410	3.2
Sep-23-2001	332	22.6	1,420	2.6
Sep-24-2001	345	21.8	1,350	2.2
Sep-25-2001	380	21.5	1,360	1.9
Sep-26-2001	386	21.8	1,380	1.9
Sep-27-2001	370	22.1	1,170	1.6
Sep-28-2001	373	21.0	1,160	1.9
Sep-29-2001	392	20.6	1,190	2.1
Sep-30-2001	400	21.5	1,200	1.9



**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
Jul-03-2001	59	.	.	4,070	260	Selenium and boron analyses		
Jul-11-2001	60	.	.	4,040	140	from weekly grab		
Jul-18-2001	59	.	.	4,460	97	discontinued 2/1/00.		
Jul-25-2001	53	.	.	4,330	72	.	.	.
Aug-01-2001	59	.	.	3,930	100	.	.	.
Aug-08-2001	56	.	.	3,320	170	.	.	.
Aug-15-2001	61	.	.	3,480	130	.	.	.
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	.	.	.

**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
Jul-02-2001	60	.	.	4,140	.	44.4	.	7.0
Jul-09-2001	62	.	.	3,960	.	41.7	.	6.8
Jul-17-2001	64	.	.	4,230	.	42.6	.	6.8
Jul-24-2001	54	.	.	4,390	.	45.7	.	6.8
Jul-31-2001	56	.	.	4,050	.	41.8	.	6.9
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

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
Jul-05-2001	59	26.4	8.2	4,200	34	48.7	Selenium	7.0
Jul-11-2001	58	25.4	8.3	3,770	41	37.3	(dissolved)	6.6
Jul-19-2001	59	24.7	8.4	4,420	44	45.4	analyses	6.9
Jul-26-2001	53	24.9	8.2	4,440	44	48.9	discontinued	6.9
Aug-02-2001	59	24.8	8.3	3,830	50	37.6	1/15/2000.	6.7
Aug-09-2001	56	26.7	8.3	3,550	41	32.4	.	6.0
Aug-16-2001	61	24.8	8.4	3,770	39	32.7	.	6.2
Aug-23-2001	50	22.7	8.4	3,650	32	42.3	.	5.7
Aug-30-2001	54	24.0	8.4	4,260	58	53.1	.	5.9
Sep-06-2001	36	24.2	8.0	3,810	P	48.3	.	P
Sep-13-2001	19	22.5	8.6	4,260	P	53.0	.	P
Sep-20-2001	16	23.7	8.4	4,570	P	48.5	.	P
Sep-27-2001	9	23.2	8.2	5,100	P	54.0	.	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
Jul-05-2001	17	25.7	7.8	1,670	1.1	1.4
Jul-11-2001	13	28.1	8.2	2,350	0.7	1.9
Jul-19-2001	14	29.2	8.3	2,790	0.5	2.0
Jul-26-2001	10	23.1	7.9	2,200	0.5	1.9
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	P
Sep-13-2001	31	23.4	7.8	1,230	<0.4	P
Sep-20-2001	34	22.4	7.8	1,120	<0.4	P
Sep-27-2001	60	21.5	7.6	1,020	<0.4	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
Jul-05-2001	76	26.0	8.0	3,550	33.7	5.6
Jul-11-2001	71	25.6	8.3	3,750	34.6	6.1
Jul-19-2001	73	25.7	8.3	4,190	42.0	6.5
Jul-26-2001	63	24.7	8.2	4,160	41.7	6.1
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	P
Sep-13-2001	50	22.3	8.0	2,470	18.8	P
Sep-20-2001	50	22.5	7.7	2,540	19.6	P
Sep-27-2001	69	21.7	7.5	1,870	9.7	P

Table 10. 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
Jul-05-2001	128	24.5	7.8	1,340	0.7	0.6
Jul-11-2001	191	23.9	7.8	975	0.8	0.5
Jul-19-2001	195	24.2	7.9	1,100	0.7	0.6
Jul-26-2001	188	27.6	7.1	1,000	<0.4	0.5
Aug-02-2001	173	23.9	7.9	999	0.5	P
Aug-09-2001	114	25.9	7.6	1,210	0.5	P
Aug-16-2001	147	24.1	7.5	1,080	0.4	P
Aug-23-2001	197	22.1	7.7	1,030	0.9	P
Aug-30-2001	78	25.8	8.3	1,430	<0.4	P
Sep-06-2001	56	20.8	7.8	1,560	<0.4	P
Sep-13-2001	63	20.1	7.7	1,530	<0.4	P
Sep-20-2001	51	21.5	7.9	1,690	0.5	P
Sep-27-2001	61	22.5	8.0	1,480	<0.4	P

Table 11. 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
Jul-05-2001	.	25.3	7.6	1,550	0.6	0.6
Jul-11-2001	.	24.6	7.7	1,180	0.7	0.5
Jul-19-2001	.	23.7	7.8	1,180	0.6	0.6
Jul-26-2001	.	24.7	7.7	1,230	<0.4	0.6
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	P
Sep-13-2001	.	22.2	7.8	2,020	<0.4	P
Sep-20-2001	.	22.1	7.8	2,130	<0.4	P
Sep-27-2001	.	21.8	7.7	2,180	<0.4	P

**Table 12a. 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
Jul-06-2001	.	.	.	2,080	9.2	2.1
Jul-10-2001	.	.	.	1,960	10.0	2.0
Jul-17-2001	.	.	.	1,900	8.3	1.9
Jul-24-2001	.	.	.	1,750	8.9	1.7
Jul-31-2001	.	.	.	1,720	8.2	1.7
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

**Table 13. 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
Jul-03-2001	10	.	.	499	1.3	0.3
Jul-11-2001	10	.	.	444	1.0	0.3
Jul-18-2001	4	.	.	547	1.4	0.6
Jul-25-2001	4	.	.	485	1.0	0.3
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

**Table 14. 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
Jul-03-2001	25	.	.	534	1.2	0.3
Jul-11-2001	10	.	.	511	1.3	0.3
Jul-18-2001	10	.	.	475	1.0	0.3
Jul-25-2001	10	.	.	450	0.5	0.2
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

**Table 15. 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
Jul-03-2001	80	.	.	752	1.5	0.5
Jul-11-2001	80	.	.	556	1.2	0.4
Jul-18-2001	40	.	.	828	1.4	0.7
Jul-25-2001	50	.	.	766	0.8	0.5
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	P	0.2
Sep-19-2001	150	.	.	719	0.7	0.2
Sep-26-2001	130	.	.	784	0.8	0.3

**Table 16. 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
Jul-03-2001	53	.	.	1,410	2.1	2.0
Jul-11-2001	11	.	.	1,280	1.9	1.6
Jul-18-2001	45	.	.	1,350	1.6	1.9
Jul-25-2001	15	.	.	1,480	1.4	2.3
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

**Table 17. 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
Jul-05-2001	481	25.4	7.8	1,470	4.6	1.2
Jul-11-2001	489	24.3	7.6	1,370	5.3	1.1
Jul-19-2001	521	23.9	7.9	1,400	4.4	1.1
Jul-26-2001	507	24.9	7.9	1,320	3.5	1.1
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	P
Sep-13-2001	309	22.5	7.9	1,330	2.8	P
Sep-20-2001	357	22.0	7.8	1,270	2.7	P
Sep-27-2001	370	20.7	7.8	1,100	1.7	P

Table 18. Summary of fathead minnow (*Pimephales promelas*) larvae survival in 7-day tests using water samples collected from October 2000 to September 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	%	%	%	%	%	%
Oct-2000	100	75*	93	100	100	98
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

Table 19. Summary of fathead minnow (*Pimephales promelas*) larvae growth in 7-day tests using water samples collected from October 2000 to September 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
Oct-2000	0.66	0.46*	0.58*	0.67	0.68	0.58
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

Table 20. Summary of *Daphnia magna* survival in 7-day tests using water samples collected from October 2000 to September 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	%	%	%	%	%	%
Oct-2000	80	80	60*	80	80	70
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



**Table 21. Summary of *Daphnia magna* reproduction in 7-day tests using water samples collected from October 2000 to September 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
Oct-2000	29.8	41.5	23.9	25.7	31.8	17.7
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

**Table 22. Summary of *Selenastrum capricornutum* growth in 4-day tests using water samples collected from October 2000 to September 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
Oct-2000	15.0	15.7	14.3	16.1	14.4	16.2
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* <sup>⊕</sup>	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

**Table 23. Summary of selenium concentrations in grab water samples collected at study stations for use in laboratory toxicity tests, July 2001 to September 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
Jul-09-2001	37	0.7	33	0.6	<0.4
Jul-11-2001	39	0.7	32	0.6	<0.4
Jul-13-2001	35	0.6	30	0.7	<0.4
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

**Table 24. Summary of sulfate concentrations in grab water samples collected at study stations for use in laboratory toxicity tests, July 2001 to September 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	mg/L	mg/L	mg/L	mg/L	mg/L
Jul-09-2001	1,150	529	1,100	134	28
Jul-11-2001	1,220	489	980	120	28
Jul-13-2001	1,300	583	1,110	115	26
Aug-13-2001	995	490	1,070	122	26
Aug-15-2001	1,050	691	1,010	113	28
Aug-17-2001	1,040	231	804	102	30
Sep-10-2001	1,370	90	547	144	30
Sep-12-2001	1,340	108	581	178	32
Sep-14-2001	988	131	614	164	32

**Table 25. Summary of total suspended solids concentrations in grab water samples collected from July 2001 to September 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
Jul-09-2001	48	34	73	151	23
Jul-11-2001	96	32	71	217	42
Jul-13-2001	57	16	72	330	40
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

**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.
#	New testing laboratory with reporting limit of 0.4 µg/L as of June 1998.
❖	Based on definitive bioassay, NOEC is 50 percent