

# GRASSLAND BYPASS PROJECT

## MONTHLY DATA REPORT

May 2001

July 30, 2001

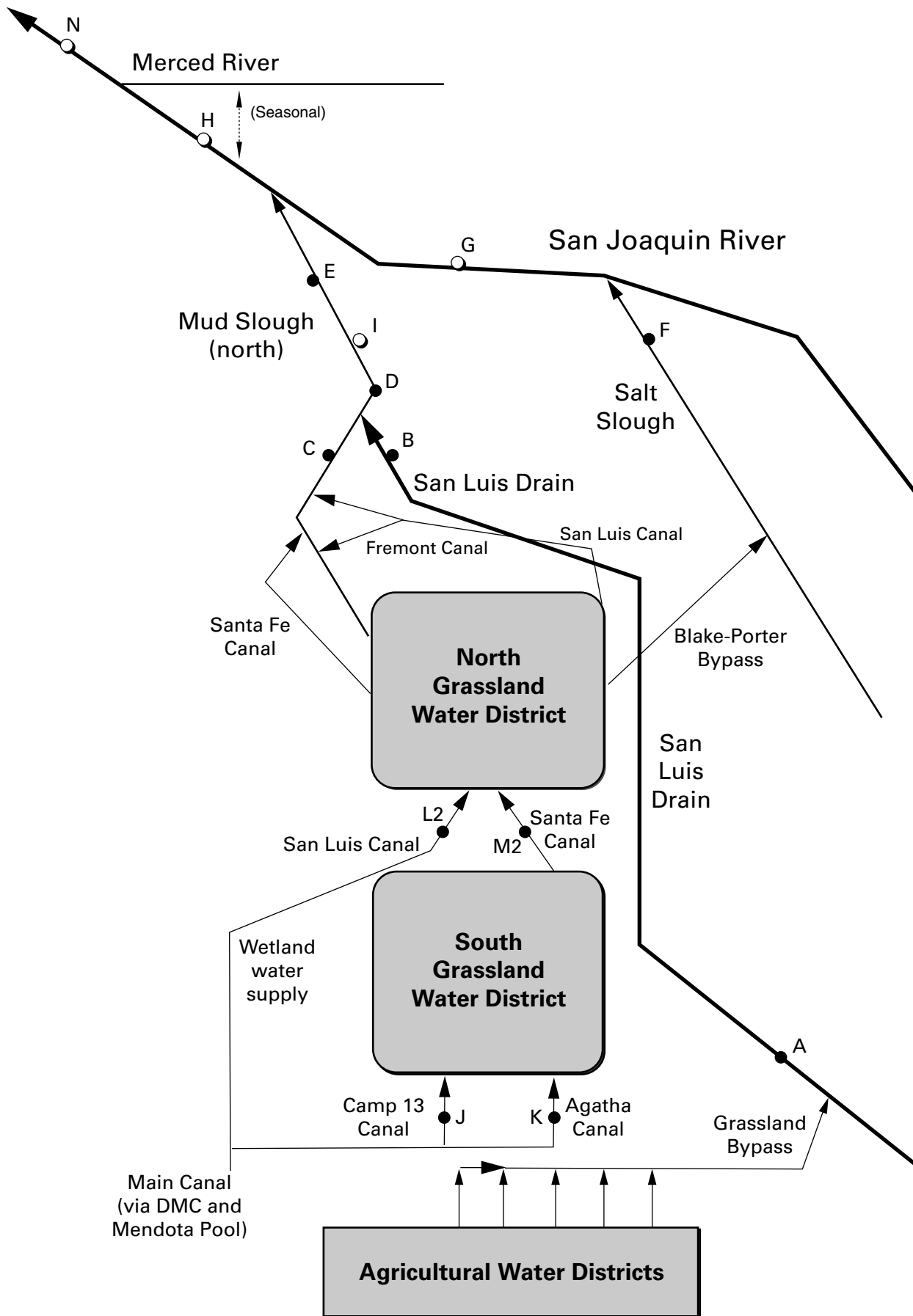
### Preliminary Results

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), May 2001.**

See Table 26 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow	Specific Conductance
DATA SOURCE	SLDMWA	SLDMWA
UNITS	cfs	µS/cm
May-01-2001	33	4,790
May-02-2001	35	4,790
May-03-2001	33	4,880
May-04-2001	34	5,020
May-05-2001	37	4,490
May-06-2001	37	4,560
May-07-2001	39	4,710
May-08-2001	33	4,580
May-09-2001	37	4,830
May-10-2001	36	4,640
May-11-2001	39	4,560
May-12-2001	39	4,470
May-13-2001	44	4,320
May-14-2001	44	4,390
May-15-2001	43	4,430
May-16-2001	42	4,350
May-17-2001	42	4,040
May-18-2001	43	4,230
May-19-2001	43	4,260
May-20-2001	48	3,630
May-21-2001	51	2,760
May-22-2001	48	3,260
May-23-2001	48	4,020
May-24-2001	53	4,080
May-25-2001	52	4,030
May-26-2001	45	4,150
May-27-2001	45	4,500
May-28-2001	45	4,280
May-29-2001	48	4,340
May-30-2001	51	4,200
May-31-2001	51	4,250
Mean	42	4,320

**Table 2. Continuous water monitoring at Station B (discharge from San Luis Drain), May 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
May-01-2001	33	23.9	8.1	5,250	82.0	14.6
May-02-2001	30	19.9	8.1	5,480	91.5	14.8
May-03-2001	34	19.0	7.9	5,250	84.6	15.5
May-04-2001	31	20.5	7.6	4,980	79.3	13.3
May-05-2001	32	22.2	7.5	4,980	75.3	13.0
May-06-2001	35	23.5	8.0	5,140	76.2	14.4
May-07-2001	35	24.8	8.2	5,150	71.9	13.6
May-08-2001	38	26.8	8.5	5,320	75.2	15.4
May-09-2001	33	28.0	7.6	4,870	71.6	12.7
May-10-2001	35	28.0	7.6	4,900	66.0	12.5
May-11-2001	35	28.3	7.8	5,100	68.2	12.9
May-12-2001	36	27.5	7.2	4,870	62.3	12.1
May-13-2001	38	25.7	7.9	5,110	67.5	13.8
May-14-2001	43	24.6	7.7	4,960	65.0	15.1
May-15-2001	42	24.2	7.5	4,830	61.2	13.9
May-16-2001	40	24.5	7.9	4,730	56.5	12.2
May-17-2001	40	24.5	7.3	4,540	53.3	11.5
May-18-2001	40	24.9	7.4	4,600	51.6	11.1
May-19-2001	40	NA	7.4	4,620	53.8	11.6
May-20-2001	40	25.0	7.2	4,540	51.2	11.0
May-21-2001	46	25.6	6.8	4,230	44.7	11.1
May-22-2001	49	26.7	7.0	4,440	50.6	13.4
May-23-2001	46	26.8	7.3	4,470	50.1	12.4
May-24-2001	45	26.4	7.4	4,360	47.0	11.4
May-25-2001	50	26.2	7.3	4,630	56.4	15.2
May-26-2001	49	26.2	6.8	4,200	53.3	14.1
May-27-2001	42	25.4	6.5	4,260	57.3	13.0
May-28-2001	42	24.5	6.3	4,230	53.2	12.1
May-29-2001	42	23.8	6.4	4,260	51.3	11.6
May-30-2001	46	24.2	6.9	4,360	53.3	13.2
May-31-2001	50	26.0	7.6	4,590	56.7	15.3
Mean	40	24.9	7.4	4,750	62.5	
<b>Total</b>						<b>408</b>

<b>Load Limitation for May 2001</b>	<b>(lbs)</b>	<b>566</b>
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**Table 3. Continuous water monitoring at Station D  
(Mud Slough North downstream of drainage discharges), May 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
May-01-2001	69 e	NA	NA
May-02-2001	68 e	NA	NA
May-03-2001	67 e	NA	NA
May-04-2001	65 e	NA	NA
May-05-2001	66 e	NA	NA
May-06-2001	68 e	NA	NA
May-07-2001	67 e	NA	NA
May-08-2001	69 e	NA	NA
May-09-2001	66 e	NA	NA
May-10-2001	67 e	NA	NA
May-11-2001	61	NA	NA
May-12-2001	71	25.0	3,070
May-13-2001	76	23.4	2,960
May-14-2001	94	22.9	2,730
May-15-2001	113	22.9	2,280
May-16-2001	98	23.2	2,440
May-17-2001	76	23.3	2,670
May-18-2001	63	23.8	2,920
May-19-2001	58	24.3	3,070
May-20-2001	63	24.7	2,760
May-21-2001	72	25.3	2,400
May-22-2001	70	26.1	2,380
May-23-2001	73	26.0	2,310
May-24-2001	69	25.6	2,100
May-25-2001	67	25.5	2,110
May-26-2001	63	25.4	2,100
May-27-2001	71	24.5	1,890
May-28-2001	88	24.0	2,040
May-29-2001	90	23.7	2,030
May-30-2001	86	24.2	2,140
May-31-2001	81	26.1	2,350

**Table 4. Continuous water monitoring at Station F (Salt Slough at Highway 165), May 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
May-01-2001	185	21.5	1,290
May-02-2001	138	17.8	1,460
May-03-2001	120	17.2	1,660
May-04-2001	138	19.7	1,460
May-05-2001	134	21.4	1,440
May-06-2001	140	22.4	1,400
May-07-2001	138	23.8	1,390
May-08-2001	121	25.4	1,540
May-09-2001	145	26.1	1,440
May-10-2001	186	25.4	1,230
May-11-2001	178	25.9	1,290
May-12-2001	175	24.7	1,320
May-13-2001	165	22.4	1,330
May-14-2001	166	22.0	1,310
May-15-2001	206	22.2	1,110
May-16-2001	222	23.1	1,060
May-17-2001	222	23.3	1,040
May-18-2001	217	23.7	1,140
May-19-2001	199	NA	1,230
May-20-2001	162	NA	1,240
May-21-2001	125	NA	1,370
May-22-2001	117	NA	NA
May-23-2001	116	NA	NA
May-24-2001	132	NA	NA
May-25-2001	144	25.3	1,380
May-26-2001	168	25.3	1,310
May-27-2001	159	24.4	1,290
May-28-2001	147	23.1	1,340
May-29-2001	139	22.8	1,370
May-30-2001	135	24.5	1,380
May-31-2001	113	27.2	1,440

**Table 5. Continuous water monitoring at Station N (San Joaquin River at Crow's Landing), May 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
May-01-2001	1,210	NA	950	2.7
May-02-2001	1,180	NA	919	2.3
May-03-2001	1,100	NA	960	2.2
May-04-2001	1,050	NA	1,080	3.3
May-05-2001	1,020 e	NA	1,130	3.5
May-06-2001	1,030 e	NA	1,060	3.1
May-07-2001	1,100 e	NA	1,040	3.1
May-08-2001	1,260 e	NA	909	2.8
May-09-2001	1,350 e	NA	785	2.5
May-10-2001	1,560 e	NA	697	2.5
May-11-2001	1,650 e	NA	570	1.8
May-12-2001	1,680 e	NA	539	1.9
May-13-2001	1,710 e	NA	568	2.1
May-14-2001	1,760 e	NA	532	1.8
May-15-2001	1,770 e	NA	568	2.2
May-16-2001	1,800 e	NA	530	2.0
May-17-2001	1,780 e	NA	534	2.0
May-18-2001	1,600 e	NA	593	1.8
May-19-2001	1,290 e	NA	672	1.6
May-20-2001	1,070 e	NA	895	2.6
May-21-2001	980 e	NA	994	2.5
May-22-2001	800 e	NA	1,100	2.7
May-23-2001	730 e	NA	1,210	2.8
May-24-2001	657	25.0	1,270	3.5
May-25-2001	662	24.9	1,240	3.3
May-26-2001	655	24.6	1,240	3.7
May-27-2001	646	23.6	1,220	4.0
May-28-2001	679	22.8	1,190	3.8
May-29-2001	660	23.4	1,100	3.5
May-30-2001	638	24.3	1,130	3.2
May-31-2001	621	26.2	1,150	3.4



**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
Mar-07-2001	83	.	.	5,110	NA	Selenium and boron analyses		
Mar-14-2001	58	.	.	5,620	84	from weekly grab		
Mar-21-2001	46	.	.	5,410	77	discontinued 2/1/00.		
Mar-28-2001	53	.	.	5,380	91	.	.	.
Apr-04-2001	40	.	.	5,820	59	.	.	.
Apr-11-2001	39	.	.	5,610	75	.	.	.
Apr-18-2001	33	.	.	5,710	62	.	.	.
Apr-25-2001	34	.	.	5,560	71	.	.	.
May-02-2001	35	.	.	4,910	P	.	.	.
May-09-2001	37	.	.	4,980	P	.	.	.
May-16-2001	42	.	.	4,690	P	.	.	.
May-23-2001	48	.	.	4,230	P	.	.	.
May-30-2001	51	.	.	4,230	P	.	.	.

**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
Mar-06-2001	81	.	.	5,080	.	85.6	.	7.6
Mar-13-2001	61	.	.	NA	.	89.0	.	8.3
Mar-20-2001	57	.	.	5,720	.	93.7	.	9.0
Mar-27-2001	51	.	.	5,560	.	76.4	.	8.8
Apr-03-2001	37	.	.	5,810	.	92.8	.	8.7
Apr-10-2001	38	.	.	5,320	.	80.1	.	8.0
Apr-17-2001	35	.	.	5,560	.	88.8	.	7.7
Apr-24-2001	35	.	.	5,360	.	74.3	.	7.6
May-01-2001	33	.	.	5,080	.	69.3	.	7.4
May-08-2001	33	.	.	NA	.	70.5	.	8.0
May-15-2001	43	.	.	NA	.	62.0	.	7.5
May-22-2001	48	.	.	NA	.	50.5	.	7.1
May-29-2001	48	.	.	4,370	.	53.4	.	6.9

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
Mar-01-2001	63	12.1	7.4	4,700	37	73.5	Selenium	7.1
Mar-08-2001	82	16.1	7.1	4,580	35	69.1	(dissolved)	6.5
Mar-15-2001	58	17.2	8.3	5,410	33	88.4	analyses	8.3
Mar-22-2001	46	20.4	8.5	5,730	54	93.9	discontinued	9.6
Mar-29-2001	52	20.3	8.3	5,200	47	72.2	1/15/2000.	7.5
Apr-05-2001	39	17.0	8.1	5,670	33	79.8	.	8.7
Apr-12-2001	38	14.0	7.4	4,810	38	75.5	.	7.4
Apr-19-2001	32	17.5	8.3	5,660	56	94.2	.	8.1
Apr-26-2001	32	21.3	8.3	5,280	37	79.4	.	6.8
May-03-2001	34	18.1	7.7	5,210	38	76.3	.	7.5
May-10-2001	35	24.3	8.1	4,840	49	71.1	.	7.6
May-17-2001	40	25.1	7.8	4,360	55	46.7	.	7.0
May-24-2001	45	26.5	7.8	4,240	42	46.5	.	6.7
May-31-2001	50	26.1	7.6	4,470	44	53.4	.	6.8

**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
Mar-01-2001	165	12.1	7.8	1,950	1.3	1.8
Mar-08-2001	359	16.6	7.7	1,780	1.0	1.8
Mar-15-2001	274	17.5	7.9	1,970	1.3	1.9
Mar-22-2001	86	20.8	7.9	2,140	1.2	2.1
Mar-29-2001	45	20.4	8.1	2,720	0.8	2.3
Apr-05-2001	40	18.0	8.5	2,360	0.9	2.2
Apr-12-2001	57	14.8	8.0	1,860	2.2	1.9
Apr-19-2001	25	18.3	8.3	2,450	0.8	2.1
Apr-26-2001	40	23.8	8.0	3,460	0.7	2.6
May-03-2001	33	16.6	8.0	1,860	1.3	1.5
May-10-2001	32	23.3	7.8	1,550	<0.4	1.2
May-17-2001	36	26.5	7.4	1,500	0.9	1.1
May-24-2001	24	26.6	7.6	1,930	0.8	1.4
May-31-2001	31	29.1	8.1	1,580	0.9	1.2

++ 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
Mar-01-2001	228	12.4	7.3	3,000	25.2	3.7
Mar-08-2001	441	16.5	7.6	2,420	17.0	2.9
Mar-15-2001	332	17.1	7.9	2,750	18.9	3.3
Mar-22-2001	132	20.6	8.1	3,600	33.8	4.8
Mar-29-2001	97	20.0	8.3	4,150	40.0	5.2
Apr-05-2001	79 e	17.5	8.4	3,760	34.1	4.8
Apr-12-2001	95	15.8	8.0	3,310	33.3	4.4
Apr-19-2001	57	17.8	8.3	4,420	42.3	5.7
Apr-26-2001	72 e	23.4	8.2	4,960	50.8	6.0
May-03-2001	67 e	17.0	8.1	3,980	39.9	5.2
May-10-2001	67 e	23.2	7.8	3,350	29.2	4.6
May-17-2001	76	24.4	7.1	3,200	28.2	4.3
May-24-2001	69	28.3	6.9	3,450	28.6	5.0
May-31-2001	81	26.0	8.0	3,400	34.1	4.6

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
Mar-01-2001	357	11.3	7.3	1,570	2.1	0.8
Mar-08-2001	714	14.9	7.0	1,340	0.9	0.8
Mar-15-2001	428	16.6	7.4	1,620	1.9	1.1
Mar-22-2001	259	19.2	7.6	1,930	1.7	1.5
Mar-29-2001	312	19.4	8.1	1,550	1.1	0.9
Apr-05-2001	286	15.8	7.7	1,740	1.4	1.2
Apr-12-2001	273	13.2	7.2	1,590	1.7	1.1
Apr-19-2001	153	16.8	7.8	1,890	1.0	0.9
Apr-26-2001	210	22.8	6.8	1,390	1.3	0.6
May-03-2001	120	15.4	7.8	1,880	1.1	0.8
May-10-2001	186	22.9	7.8	1,270	0.9	0.6
May-17-2001	222	23.1	7.8	1,020	1.0	0.5
May-24-2001	132	23.5	6.6	1,320	0.8	0.5
May-31-2001	113	25.6	7.8	1,310	0.8	0.5

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
Mar-01-2001	.	12.7	7.0	1,170	1.6	0.6
Mar-08-2001	.	13.9	7.6	550	<0.4	0.3
Mar-15-2001	.	15.8	7.5	1,360	1.6	0.1
Mar-22-2001	.	19.3	7.7	1,840	1.2	1.2
Mar-29-2001	.	19.1	8.1	1,700	1.0	0.9
Apr-05-2001	.	15.7	8.0	1,850	1.1	1.1
Apr-12-2001	.	13.2	6.9	1,490	1.3	0.9
Apr-19-2001	.	16.8	7.8	2,090	0.8	0.8
Apr-26-2001	.	21.7	7.4	1,240	0.9	0.4
May-03-2001	.	17.5	7.0	2,120	0.9	0.7
May-10-2001	.	23.7	7.6	1,610	0.7	0.6
May-17-2001	.	22.4	7.0	1,200	1.0	0.5
May-24-2001	.	26.8	6.8	1,730	0.6	0.6
May-31-2001	.	27.5	7.6	1,690	0.7	0.5

**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
Mar-06-2001	.	.	.	1,360	4.3	1.1
Mar-13-2001	.	.	.	1,690	5.7	1.4
Mar-20-2001	.	.	.	2,210	8.1	1.9
Mar-27-2001	.	.	.	2,140	7.1	1.8
Apr-03-2001	.	.	.	2,430	9.6	1.9
Apr-11-2001	.	.	.	1,890	6.0	1.5
Apr-17-2001	.	.	.	2,290	8.7	1.6
Apr-24-2001	.	.	.	1,340	5.3	1.0
May-04-2001	.	.	.	2,770	10.5	1.9
May-08-2001	.	.	.	2,350	8.0	1.7
May-15-2001	.	.	.	1,610	6.2	1.3
May-22-2001	.	.	.	2,210	6.7	1.8
May-29-2001	.	.	.	2,000	7.9	1.6

**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
Mar-07-2001	5	.	.	690	3.3	0.5
Mar-14-2001	5	.	.	793	5.1	0.6
Mar-21-2001	5	.	.	890	5.4	0.8
Mar-28-2001	5	.	.	680	2.6	0.6
Apr-04-2001	7	.	.	1,040	3.1	0.7
Apr-11-2001	7	.	.	523	2.1	0.4
Apr-18-2001	7	.	.	674	2.5	0.5
Apr-25-2001	7	.	.	656	2.1	0.5
May-02-2001	15	.	.	680	2.4	0.5
May-09-2001	55	.	.	666	2.3	0.5
May-16-2001	30	.	.	629	1.4	0.4
May-23-2001	10	.	.	628	1.5	0.4
May-30-2001	10	.	.	631	1.7	0.4

**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
Mar-07-2001	40	.	.	996	7.6	0.9
Mar-14-2001	10	.	.	1,030	4.2	1.1
Mar-21-2001	10	.	.	1,500	6.4	2.2
Mar-28-2001	10	.	.	1,490	2.4	2.6
Apr-04-2001	10	.	.	1,540	2.8	2.2
Apr-11-2001	10	.	.	1,070	2.5	1.1
Apr-18-2001	10	.	.	970	3.3	0.7
Apr-25-2001	25	.	.	567	1.8	0.3
May-02-2001	35	.	.	614	2.1	0.3
May-09-2001	50	.	.	584	1.9	0.3
May-16-2001	65	.	.	532	1.1	0.2
May-23-2001	30	.	.	561	1.1	0.3
May-30-2001	40	.	.	579	1.2	0.3

**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
Mar-07-2001	80	.	.	1,390	2.4	1.4
Mar-14-2001	40	.	.	1,140	3.6	1.1
Mar-21-2001	40	.	.	1,060	4.9	0.9
Mar-28-2001	40	.	.	976	2.6	0.9
Apr-04-2001	44	.	.	1,090	5.8	0.8
Apr-11-2001	46	.	.	1,170	6.7	1.0
Apr-18-2001	26	.	.	1,100	3.0	0.9
Apr-25-2001	25	.	.	1,080	2.6	1.1
May-02-2001	40	.	.	781	1.9	0.6
May-09-2001	70	.	.	810	2.2	0.6
May-16-2001	80	.	.	787	1.4	0.6
May-23-2001	60	.	.	728	1.3	0.5
May-30-2001	60	.	.	748	1.6	0.5

**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
Mar-07-2001	125	.	.	1,590	1.6	2.0
Mar-14-2001	149	.	.	1,590	2.2	1.8
Mar-21-2001	73	.	.	2,000	2.2	2.4
Mar-28-2001	47	.	.	1,960	1.8	2.4
Apr-04-2001	23	.	.	2,320	4.2	3.2
Apr-11-2001	100	.	.	1,600	2.0	2.0
Apr-18-2001	48	.	.	1,630	2.3	1.6
Apr-25-2001	49	.	.	1,340	2.3	1.5
May-02-2001	24	.	.	1,010	2.3	0.9
May-09-2001	12	.	.	1,280	2.2	1.1
May-16-2001	105	.	.	836	1.4	0.5
May-23-2001	36	.	.	1,050	1.4	0.8
May-30-2001	70	.	.	922	1.4	0.5

**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
Mar-01-2001	1,530	13.0	7.7	1,260	4.9	0.9
Mar-08-2001	2,990	15.1	7.8	727	2.3	0.6
Mar-15-2001	1,660	15.8	7.7	1,450	4.6	1.2
Mar-22-2001	1,100	19.4	7.7	1,830	4.9	1.6
Mar-29-2001	980	22.2	6.9	1,600	4.3	1.2
Apr-05-2001	841	15.0	8.0	1,750	4.5	1.4
Apr-12-2001	967	15.2	6.8	1,330	4.0	1.0
Apr-19-2001	856	17.3	7.9	1,260	3.7	0.8
Apr-26-2001	2,010	22.3	8.0	591	1.6	0.3
May-03-2001	1,100	18.1	7.2	992	2.5	0.6
May-10-2001	1,560 e	21.1	7.7	653	1.6	0.4
May-17-2001	1,780 e	19.6	6.9	542	1.6	0.4
May-24-2001	657	26.2	7.8	1,280	3.5	0.9
May-31-2001	621	28.4	7.4	1,150	3.3	0.7

Table 18. Summary of fathead minnow (*Pimephales promelas*) larvae survival in 7-day tests using water samples collected from June 2000 to May 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	%	%	%	%	%	%
Jun-2000	90	85	95	95	88	100
Jul-2000	98	100	90	98	100	100
Aug-2000	100	97	88	80	100	100
Sep-2000	100	100	93	98	98	98
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

Table 19. Summary of fathead minnow (*Pimephales promelas*) larvae growth in 7-day tests using water samples collected from June 2000 to May 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
Jun-2000	0.48	0.42	0.56	0.48	0.46	0.54
Jul-2000	0.68	0.60	0.58	0.62	0.62	0.69
Aug-2000	0.50	0.40	0.49	0.44	0.56	0.64
Sep-2000	0.42	0.34	0.34	0.41	0.37	0.34
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

Table 20. Summary of *Daphnia magna* survival in 7-day tests using water samples collected from June 2000 to May 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	%	%	%	%	%	%
Jun-2000	80	100	100	90	100	90
Jul-2000	100	100	100	100	90	90
Aug-2000	90	100	90	100	90	90
Sep-2000	90	90	90	100	100	100
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



**Table 21. Summary of *Daphnia magna* reproduction in 7-day tests using water samples collected from June 2000 to May 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
Jun-2000	21.5	29.1	35.0	22.1	15.5	16.6
Jul-2000	27.3	36.8	31.4	17.0	8.8	28.6
Aug-2000	20.9	18.2	21.5	26.8	16.3	14.5
Sep-2000	42.4	38.9	39.9	41.6	48.7	31.8
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

**Table 22. Summary of *Selenastrum capricornutum* growth in 4-day tests using water samples collected from June 2000 to May 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
Jun-2000	19.7	24.3	21.7	21.4	19.9	11.9
Jul-2000	13.7	16.3	13.5	11.3	12.1	13.3
Aug-2000	19.8	25.1	24.8	33.3	13.4	23.0
Sep-2000	9.4	11.5	10.8	13.7	10.8	9.6
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>5</sup>	18.4	13.1	19.6	15.5	14.5

**Table 23. Summary of selenium concentrations in grab water samples collected at study stations for use in laboratory toxicity tests, March 2001 to May 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
Mar-12-2001	88	2.9	18	1.2	1.0
Mar-14-2001	85	1.3	20	1.3	1.0
Mar-16-2001	93	1.0	22	1.2	0.5
Apr-09-2001	77	1.5	50	1.7	1.5**
Apr-11-2001	74	1.7	32	1.5	<0.4
Apr-13-2001	79	1.7	37	1.5	0.5
May-14-2001	65	0.7	32	0.8	<0.4
May-16-2001	47	0.4	22	1.0	<0.4
May-18-2001	52	0.5	35	0.6	<0.4

**Table 24. Summary of sulfate concentrations in grab water samples collected at study stations for use in laboratory toxicity tests, March 2001 to May 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
Mar-12-2001	1,720	555	599	263	90
Mar-14-2001	1,640	307	576	274	98
Mar-16-2001	1,780	326	635	286	59
Apr-09-2001	1,910	465	1,300	247	122**
Apr-11-2001	1,890	346	1,030	250	44
Apr-13-2001	2,000	366	1,050	263	34
May-14-2001	1,580	204	898	162	40
May-16-2001	1,450	191	709	132	41
May-18-2001	1,450	324	1,120	148	40

**Table 25. Summary of total suspended solids concentrations in grab water samples collected from March 2001 to May 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
Mar-12-2001	NA	296	106	46	20
Mar-14-2001	55	229	135	33	5
Mar-16-2001	74	139	100	76	14
Apr-09-2001	53	74	57	102	4
Apr-11-2001	51	104	94	60	NA
Apr-13-2001	49	90	88	118	26
May-14-2001	70	50	67	99	1
May-16-2001	75	51	86	212	ND
May-18-2001	120	148	184	353	11

**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 <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.
5	Based on definitive bioassay, NOEC is 50 percent