GRASSLAND BYPASS PROJECT

MONTHLY DATA REPORT

May 2000

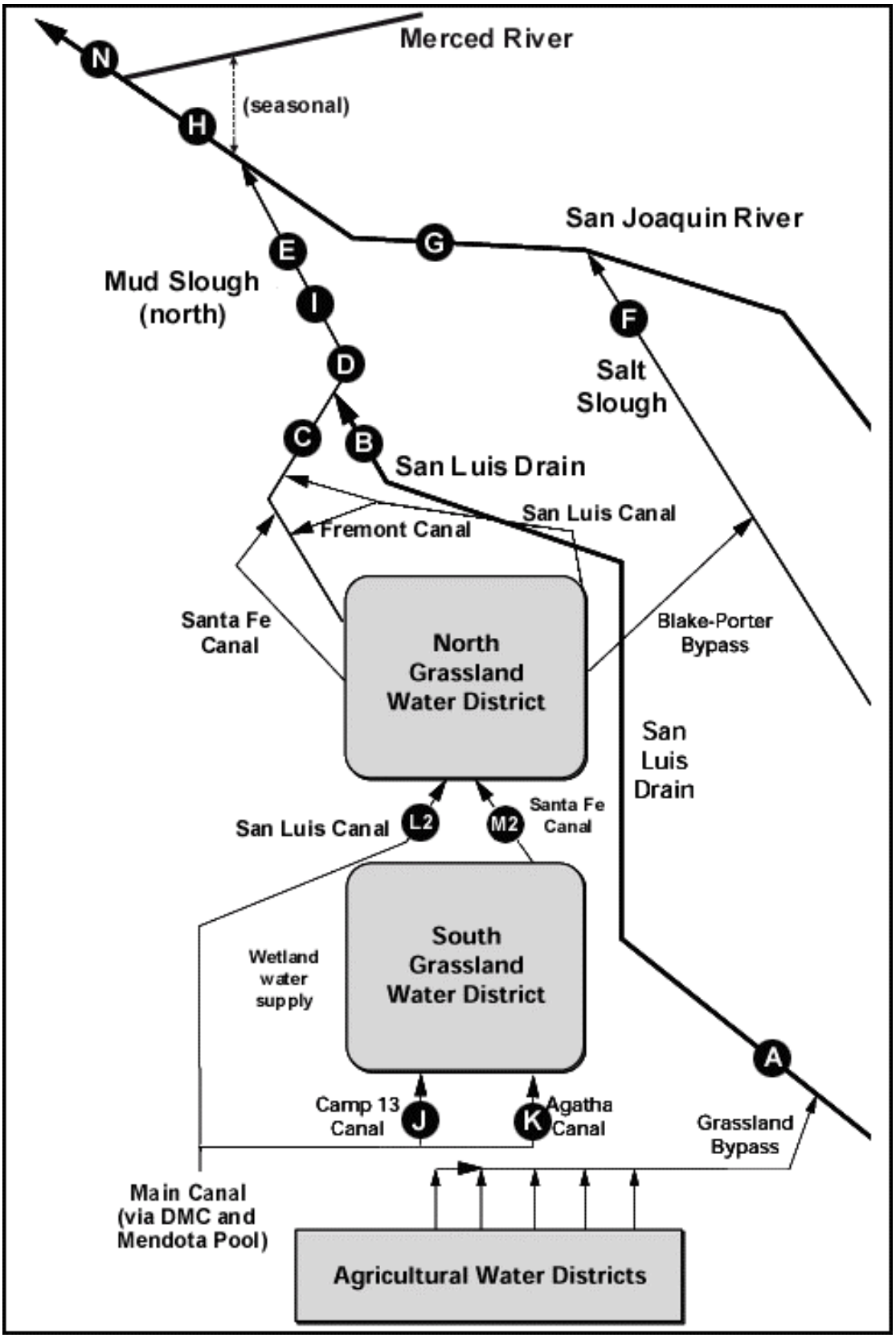
July 31, 2000

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


Merced River
(seasonal)
San Joaquin River
Mud Slough
(north)
Salt
Slough
San Luis Drain
San Luis Canal
Fremont Canal
Santa Fe
Canal
North
Grassland
Water District
Blake-Porter
Bypass
San
Luis
Drain
San Luis Canal
Santa Fe
Canal
South
Grassland
Water District
Wetland
water
supply
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GRASSLAND BYPASS PROJECT

MONTHLY DATA REPORT

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Table 1. Continuous water monitoring at Station A (inflow to San Luis Drain), May 2000. Flow data reported by SLDMWA since October 1, 1999.

See Table 26 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow	Specific Conductance
DATA SOURCE	SLDMWA	SLDMWA
UNITS	cfs	µS/cm
May-01-2000	41	4,990
May-02-2000	41	4,960
May-03-2000	44	4,780
May-04-2000	46	4,340
May-05-2000	47	4,190
May-06-2000	46	3,880
May-07-2000	52	3,740
May-08-2000	57	3,600
May-09-2000	56	3,780
May-10-2000	54	3,980
May-11-2000	52	3,910
May-12-2000	47	3,680
May-13-2000	42	3,660
May-14-2000	42	3,760
May-15-2000	41	3,980
May-16-2000	41	4,080
May-17-2000	40	4,190
May-18-2000	43	3,970
May-19-2000	38	3,990
May-20-2000	37	4,380
May-21-2000	39	4,260
May-22-2000	41	3,980
May-23-2000	40	4,180
May-24-2000	48	4,410
May-25-2000	51	4,260
May-26-2000	52	4,190
May-27-2000	56	4,440
May-28-2000	58	4,440
May-29-2000	65	4,190
May-30-2000	57	4,280
May-31-2000	51	4,410
Mean	47	4,160

Table 2. Continuous water monitoring at Station B (discharge from San Luis Drain), May 2000.

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-01-2000	40	21.8	8.6	5,600	83.3	18.0
May-02-2000	41	22.4	8.6	5,540	81.2	18.0
May-03-2000	40	23.1	8.4	5,240	77.1	16.6
May-04-2000	45	23.5	8.2	5,400	82.2	20.0
May-05-2000	45	23.4	8.4	5,450	82.7	20.1
May-06-2000	47	21.7	8.5	5,400	79.2	20.1
May-07-2000	48	20.0	8.1	5,100	74.2	19.2
May-08-2000	54	20.3	7.6	4,700	58.5	17.0
May-09-2000	59	21.2	6.7	4,290	49.8	15.8
May-10-2000	56	20.5	6.8	4,100	48.8	14.7
May-11-2000	54	19.4	6.9	3,950	49.1	14.3
May-12-2000	53	19.2	6.6	4,100	50.6	14.5
May-13-2000	47	20.0	6.6	4,290	61.7	15.6
May-14-2000	42	19.6	6.6	4,510	67.0	15.2
May-15-2000	41	19.7	6.4	4,280	54.8	12.1
May-16-2000	40	19.5	6.3	4,110	48.0	10.4
May-17-2000	39	19.5	6.5	4,020	40.4	8.5
May-18-2000	41	20.6	6.6	4,070	41.5	9.2
May-19-2000	42	22.3	7.0	4,360	47.4	10.7
May-20-2000	38	23.9	7.2	4,430	42.9	8.8
May-21-2000	37	25.5	7.3	4,530	48.0	9.6
May-22-2000	39	27.1	7.3	4,420	43.7	9.2
May-23-2000	39	27.2	6.8	4,160	37.2	7.8
May-24-2000	39	26.3	7.3	4,570	43.0	9.0
May-25-2000	46	24.4	7.8	4,700	46.3	11.5
May-26-2000	50	23.5	7.4	4,370	45.3	12.2
May-27-2000	52	23.8	7.3	4,370	42.4	11.9
May-28-2000	52	24.7	7.4	4,520	50.8	14.2
May-29-2000	57	24.8	7.4	4,280	45.8	14.1
May-30-2000	61	24.4	7.4	4,410	43.9	14.4
May-31-2000	53	22.8	7.6	4,500	49.1	14.0
Mean	46	22.5	7.3	4,570	55.4	
Total						**427**

Load Limitation for May 2000	**(lbs)**	**599**

Table 3. Continuous water monitoring at Station D (Mud Slough North downstream of drainage discharges), May 2000.

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-01-2000	54	21.4	4,640
May-02-2000	53	22.1	4,710
May-03-2000	51	22.6	4,500
May-04-2000	55	23.0	4,480
May-05-2000	61	22.9	4,210
May-06-2000	73	20.9	3,730
May-07-2000	79	19.2	3,450
May-08-2000	91	20.1	3,130
May-09-2000	96	20.7	3,000
May-10-2000	88	19.9	3,120
May-11-2000	96	18.6	2,850
May-12-2000	106	19.0	2,560
May-13-2000	107	20.3	2,400
May-14-2000	101	19.7	1,930
May-15-2000	90	19.7	1,310
May-16-2000	94	19.2	1,690
May-17-2000	103	19.3	1,620
May-18-2000	109	20.9	1,380
May-19-2000	95	22.6	1,630
May-20-2000	85	24.2	1,640
May-21-2000	82	25.8	2,090
May-22-2000	81	26.9	2,790
May-23-2000	80	26.3	2,690
May-24-2000	85	25.8	2,700
May-25-2000	89	24.1	3,050
May-26-2000	103	23.6	2,770
May-27-2000	110	24.0	2,710
May-28-2000	103	24.5	3,040
May-29-2000	99	24.4	3,050
May-30-2000	100	23.9	3,210
May-31-2000	106	22.3	3,010

Table 4. Continuous water monitoring at Station F (Salt Slough at Highway 165), May 2000.

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-01-2000	186	21.7	1,440
May-02-2000	188	22.3	1,440
May-03-2000	217	22.6	1,330
May-04-2000	223	22.8	1,280
May-05-2000	215	22.0	1,330
May-06-2000	222	20.0	1,290
May-07-2000	248	18.5	1,160
May-08-2000	267	19.6	1,090
May-09-2000	272	21.0	1,050
May-10-2000	268	19.9	1,060
May-11-2000	272	18.1	1,070
May-12-2000	249	18.1	1,130
May-13-2000	226	19.9	1,250
May-14-2000	209	19.5	1,320
May-15-2000	207	19.7	1,280
May-16-2000	195	19.3	1,300
May-17-2000	172	18.8	1,390
May-18-2000	164	20.9	1,420
May-19-2000	177	23.2	1,240
May-20-2000	160	24.8	1,300
May-21-2000	179	26.1	1,230
May-22-2000	184	27.0	1,150
May-23-2000	153	26.4	1,150
May-24-2000	136	24.9	1,210
May-25-2000	115	22.7	1,240
May-26-2000	115	22.8	1,300
May-27-2000	151	24.1	1,100
May-28-2000	153	24.8	1,110
May-29-2000	156	24.4	1,110
May-30-2000	147	23.2	1,090
May-31-2000	145	21.9	1,120

Table 5. Continuous water monitoring at Station N (San Joaquin River at Crow's Landing), May 2000.

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-01-2000	2,420	17.6	506	1.8
May-02-2000	2,300	18.3	517	1.7
May-03-2000	1,870	NA	656	2.3
May-04-2000	1,770	NA	788	2.6
May-05-2000	1,640	NA	820	2.6
May-06-2000	1,520	NA	877	3.0
May-07-2000	1,560	NA	904	3.4
May-08-2000	1,690	NA	795	2.9
May-09-2000	1,740	NA	741	2.6
May-10-2000	1,730	NA	759	2.6
May-11-2000	1,720	NA	766	2.4
May-12-2000	1,720	NA	736	2.3
May-13-2000	1,720	NA	688	2.3
May-14-2000	1,440	NA	753	2.4
May-15-2000	1,250	NA	926	2.7
May-16-2000	1,230	NA	959	2.9
May-17-2000	1,190	18.7	938	2.5
May-18-2000	1,170	20.0	910	2.1
May-19-2000	1,150	21.5	967	1.8
May-20-2000	1,190	23.1	942	1.6
May-21-2000	1,120	24.6	989	1.9
May-22-2000	1,100	25.6	1,050	1.8
May-23-2000	1,070	25.9	996	1.9
May-24-2000	1,030	24.9	989	1.8
May-25-2000	986	24.2	1,050	1.7
May-26-2000	940	23.8	1,120	2.2
May-27-2000	955	23.9	1,150	2.7
May-28-2000	915	24.1	1,110	2.3
May-29-2000	868	23.5	1,180	3.3
May-30-2000	817	22.9	1,210	3.5
May-31-2000	774	22.0	1,230	3.2

PRELIMINARY RESULTS

Table 6a. Weekly water quality monitoring at Station A (inflow to San Luis Drain), taken from grab samples. Flow data reported by SLDMWA since October 1, 1999.

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-01-2000	74	.	.	4,750	290	Selenium and boron analyses		
Mar-08-2000	60	.	.	5,160	160	from weekly grab		
Mar-15-2000	48	.	.	5,670	90	discontinued 2/1/00.		
Mar-22-2000	45	.	.	5,530	50	.	.	.
Mar-29-2000	42	.	.	5,290	NA	.	.	.
Apr-05-2000	46	.	.	4,700	82	.	.	.
Apr-12-2000	36	.	.	5,640	82	.	.	.
Apr-19-2000	70	.	.	4,060	250	.	.	.
Apr-26-2000	40	.	.	5,420	120	.	.	.
May-03-2000	44	.	.	5,380	130	.	.	.
May-10-2000	54	.	.	4,290	150	.	.	.
May-17-2000	40	.	.	4,500	85	.	.	.
May-24-2000	48	.	.	4,310	240	.	.	.
May-31-2000	51	.	.	4,320	220	.	.	.

Table 6b. Weekly water quality monitoring at Station A (inflow to San Luis Drain), taken from composite samples. Flow data reported by SLDMWA since October 1, 1999.

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-07-2000	66	.	.	4,910	.	79.6	.	6.9
Mar-14-2000	49	.	.	5,520	.	94.9	.	8.4
Mar-21-2000	49	.	.	5,750	.	99.0	.	8.5
Mar-28-2000	46	.	.	5,410	.	91.4	.	8.1
Apr-04-2000	43	.	.	NA	.	81.2	.	7.5
Apr-11-2000	37	.	.	5,110	.	78.8	.	8.0
Apr-18-2000	74	.	.	5,040	.	82.1	.	7.7
Apr-25-2000	42	.	.	5,280	.	79.2	.	7.9
May-02-2000	41	.	.	5,260	.	85.2	.	8.6
May-09-2000	56	.	.	4,110	.	52.3	.	6.8
May-16-2000	41	.	.	4,370	.	46.6	.	6.9
May-23-2000	40	.	.	4,230	.	42.9	.	7.6
May-30-2000	57	.	.	4,280	.	47.1	.	7.0

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
Mar-02-2000	75	13.0	7.7	4,980	74	80.8	Selenium	7.6
Mar-09-2000	62	12.7	7.8	4,990	50	78.9	(dissolved)	7.0
Mar-15-2000	49	18.9	NA	5,450	66	96.0	analyses	8.2
Mar-23-2000	46	15.1	8.0	5,600	37	94.6	discontinued	8.3
Mar-30-2000	41	16.9	8.1	5,540	NA	99.3	1/15/2000.	8.2
Apr-06-2000	46	20.2	8.4	4,870	59	74.3	.	7.3
Apr-13-2000	37 e	20.5	8.3	4,700	56	60.8	.	7.5
Apr-20-2000	72 e	17.7	7.7	5,010	90	82.1	.	7.6
Apr-27-2000	41	23.1	NA	5,460	71	75.9	.	8.4
May-04-2000	45	22.1	8.3	5,400	P	94.8	.	8.4
May-11-2000	54	18.5	8.2	4,000	42	47.5	.	6.3
May-18-2000	41	19.9	8.2	3,810	P	34.0	.	6.2
May-25-2000	46	21.4	8.2	4,690	31	48.3	.	8.1

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-02-2000	281	12.3	8.0	1,620	0.8	1.4
Mar-09-2000	160	12.8	8.1	1,990	0.7	1.8
Mar-15-2000	199	19.0	NA	1,760	0.8	1.6
Mar-23-2000	87	15.0	7.7	2,120	1.0	1.9
Mar-30-2000	65	16.6	8.2	2,400	<0.4	2.1
Apr-06-2000	67	21.1	8.3	2,240	1.1	2.1
Apr-13-2000	33	21.6	8.1	2,580	0.8	2.3
Apr-20-2000	70	18.9	8.2	1,660	1.4	1.6
Apr-27-2000	22	23.8	NA	2,160	1.2	1.6
May-04-2000	10	22.9	8.0	2,620	1.2	2.2
May-11-2000	45	18.8	8.0	1,530	2.4	1.2
May-18-2000	63	22.3	7.9	1,250	0.9	1.0
May-25-2000	43	22.8	8.0	1,650	1.0	1.5

++ 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-02-2000	356	12.7	7.9	2,520	14.6	3.0
Mar-09-2000	222	12.7	8.0	3,000	23.2	3.4
Mar-15-2000	248	19.1	NA	2,600	18.9	3.1
Mar-23-2000	133	14.9	7.4	3,380	30.9	4.2
Mar-30-2000	106	15.9	8.3	3,880	46.6	4.7
Apr-06-2000	113	20.4	8.3	3,350	27.9	4.1
Apr-13-2000	70	21.1	8.2	3,820	31.1	5.0
Apr-20-2000	142	18.4	7.9	3,360	38.6	4.6
Apr-27-2000	63	22.2	NA	4,530	53.5	6.1
May-04-2000	55	22.7	8.2	4,910	66.0	7.4
May-11-2000	92	19.3	8.2	3,160	30.2	4.4
May-18-2000	104	20.3	8.1	2,290	13.7	2.9
May-25-2000	89	21.1	8.2	3,220	20.6	4.8

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-02-2000	392	13.0	7.4	1,670	1.6	1.1
Mar-09-2000	429	13.9	7.6	1,600	1.1	1.1
Mar-15-2000	353	18.8	NA	1,690	1.7	1.1
Mar-23-2000	357	15.5	7.4	1,510	1.1	1.2
Mar-30-2000	324	15.4	7.9	1,310	0.5	0.9
Apr-06-2000	250	18.1	7.4	1,380	1.0	0.7
Apr-13-2000	140	19.2	7.6	1,790	0.7	0.9
Apr-20-2000	552	16.8	7.9	1,030	1.0	0.6
Apr-27-2000	183	20.2	NA	1,650	0.9	0.7
May-04-2000	220	20.4	7.6	1,320	1.4	0.7
May-11-2000	267	16.4	7.6	1,210	1.3	0.6
May-18-2000	164	19.1	7.9	1,580	0.7	0.8
May-25-2000	115	20.9	7.5	1,540	1.0	0.8

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-02-2000	.	12.6	7.4	432	0.7	0.2
Mar-09-2000	.	13.5	7.6	518	0.5	0.2
Mar-15-2000	.	18.8	NA	665	0.5	0.3
Mar-23-2000	.	15.8	7.8	1,030	0.9	0.6
Mar-30-2000	.	15.1	7.4	1,500	0.9	0.9
Apr-06-2000	.	18.5	7.7	1,630	0.6	0.7
Apr-13-2000	.	19.4	7.6	2,180	0.5	0.8
Apr-20-2000	.	16.8	7.9	783	0.8	0.4
Apr-27-2000	.	19.1	NA	1,070	0.6	0.4
May-04-2000	.	22.8	7.8	1,480	1.0	0.6
May-11-2000	.	15.7	7.7	1,190	1.6	0.5
May-18-2000	.	18.6	7.9	1,550	0.6	0.6
May-25-2000	.	23.6	7.9	1,500	0.5	0.6

Table 12. Weekly water quality monitoring at Station H (San Joaquin River at Hills Ferry).

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
.	.	.	.	.	.	.
.	Data no longer collected regularly for this station. Contact CVRWQCB for details.					

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††	.	.	CVRWQCB	CVRWQCB	CVRWQCB
UNITS	cfs	.	.	µS/cm	µg/L	mg/L
Mar-01-2000	3	.	.	1,030	2.6	1.1
Mar-08-2000	5	.	.	585	1.4	0.7
Mar-15-2000	5	.	.	731	1.9	1.0
Mar-22-2000	5	.	.	344	0.6	0.4
Mar-29-2000	5	.	.	336	0.5	0.4
Apr-05-2000	5	.	.	737	2.3	0.7
Apr-12-2000	10	.	.	696	1.9	0.5
Apr-19-2000	10	.	.	517	2.0	0.5
Apr-26-2000	5	.	.	693	2.0	0.5
May-03-2000	15	.	.	785	1.8	0.7
May-10-2000	25	.	.	543	1.5	0.3
May-17-2000	45	.	.	533	1.5	0.3
May-24-2000	10	.	.	734	1.9	0.7
May-31-2000	10	.	.	661	1.5	0.5

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††	.	.	CVRWQCB	CVRWQCB	CVRWQCB
UNITS	cfs	.	.	µS/cm	µg/L	mg/L
Mar-01-2000	15	.	.	491	1.9	0.5
Mar-08-2000	5	.	.	302	0.9	0.3
Mar-15-2000	5	.	.	781	1.8	1.0
Mar-22-2000	5	.	.	569	0.5	0.8
Mar-29-2000	7	.	.	187	0.5	0.2
Apr-05-2000	7	.	.	439	2.2	0.4
Apr-12-2000	15	.	.	599	1.0	0.4
Apr-19-2000	10	.	.	584	1.8	0.5
Apr-26-2000	10	.	.	601	2.3	0.4
May-03-2000	45	.	.	527	1.5	0.3
May-10-2000	55	.	.	544	1.7	0.3
May-17-2000	55	.	.	512	1.2	0.2
May-24-2000	40	.	.	545	1.3	0.3
May-31-2000	30	.	.	545	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††	.	.	CVRWQCB	CVRWQCB	CVRWQCB
UNITS	cfs	.	.	µS/cm	µg/L	mg/L
Mar-01-2000	30	.	.	1,010	3.5	0.9
Mar-08-2000	30	.	.	814	1.6	0.9
Mar-15-2000	30	.	.	606	2.1	0.6
Mar-22-2000	30	.	.	647	1.1	0.7
Mar-29-2000	30	.	.	394	0.6	0.4
Apr-05-2000	30	.	.	873	2.7	0.9
Apr-12-2000	30	.	.	812	1.3	0.7
Apr-19-2000	40	.	.	664	1.8	0.5
Apr-26-2000	40	.	.	648	2.4	0.5
May-03-2000	100	.	.	782	1.7	0.6
May-10-2000	100	.	.	831	2.0	0.7
May-17-2000	60	.	.	800	1.5	0.7
May-24-2000	60	.	.	831	1.5	0.7
May-31-2000	60	.	.	866	1.5	0.7

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††	.	.	CVRWQCB	CVRWQCB	CVRWQCB
UNITS	cfs	.	.	µS/cm	µg/L	mg/L
Mar-01-2000	109	.	.	2,410	2.4	3.0
Mar-08-2000	109	.	.	2,320	1.3	2.7
Mar-15-2000	108	.	.	2,230	1.2	2.7
Mar-22-2000	94	.	.	2,470	1.1	3.9
Mar-29-2000	106	.	.	1,860	0.5	2.8
Apr-05-2000	62	.	.	2,220	1.2	3.3
Apr-12-2000	32	.	.	942	1.4	1.0
Apr-19-2000	100	.	.	1,290	2.3	1.5
Apr-26-2000	41	.	.	1,740	2.0	1.8
May-03-2000	10	.	.	1,150	2.3	1.0
May-10-2000	36	.	.	1,020	2.1	0.9
May-17-2000	13	.	.	1,170	1.5	1.1
May-24-2000	52	.	.	1,020	1.5	1.0
May-31-2000	27	.	.	1,060	1.8	1.0

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-02-2000	6,570	12.5	7.6	421	1.3	0.3
Mar-09-2000	6,200	11.2	7.6	446	1.5	0.3
Mar-16-2000	4,840	15.2	NA	498	1.2	0.3
Mar-23-2000	3,250	15.7	8.0	695	2.2	0.5
Mar-30-2000	1,500	17.3	7.5	1,260	3.6	0.9
Apr-06-2000	1,040	15.3	7.8	1,380	3.3	1.0
Apr-13-2000	805	21.5	7.7	1,510	3.2	1.0
Apr-20-2000	2,600	16.2	8.0	679	2.8	0.4
Apr-27-2000	2,630	20.9	NA	503	1.7	0.3
May-04-2000	1,770	26.6	7.8	777	2.5	0.5
May-11-2000	1,720	17.6	7.8	775	2.9	0.5
May-18-2000	1,160	22.6	7.3	946	2.1	0.6
May-25-2000	986	24.0	7.7	1,060	1.6	0.7

Table 18. Summary of fathead minnow (*Pimephales promelas*) larvae survival in 7-day tests using water samples collected from June 1999 to May 2000. 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-1999	98	93	100	98	70 †	100
Jul-1999	93	100	90	93	98	100
Aug-1999	93	100	89	68	98	100
Sep-1999	95	85	93	53	93	98
Oct-1999	100	98	90	70*	98	100
Nov-1999	98	38*	60*	50*	87	95
Dec-1999	100	73*	73*	70*	100	100
Jan-2000	98	33*	48*	85	83	100
Feb-2000	95	85	65*	75*	95	98
Mar-2000	100	100	100	85	93	100
Apr-2000	95	93	95	98	83	100
May-2000	93	93	98	100	93	100

Table 19. Summary of fathead minnow (*Pimephales promelas*) larvae growth in 7-day tests using water samples collected from June 1999 to May 2000. 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-1999	0.67	0.68	0.72	0.67	0.43	0.72
Jul-1999	0.72	0.77	0.69	0.67	0.68	0.63
Aug-1999	0.60	0.70	0.54	0.44*	0.65	0.63
Sep-1999	0.65	0.49	0.54	0.35	0.59	0.58
Oct-1999	0.70	0.62	0.58	0.51	0.63	0.65
Nov-1999	0.58	0.20*	0.35*	0.29*	0.51	0.52
Dec-1999	0.67	0.47*	0.49	0.50*	0.68	0.61
Jan-2000	0.68	0.23*	0.37	0.59	0.53	0.64
Feb-2000	0.71	0.60	0.54	0.51*	0.68	0.65
Mar-2000	0.66	0.64	0.62	0.62	0.53	0.60
Apr-2000	0.66	0.65	0.69	0.53	0.51	0.82
May-2000	0.27	0.28	0.36	0.35	0.27	0.33

Table 20. Summary of *Daphnia magna* survival in 7-day tests using water samples collected from June 1999 to May 2000. 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-1999	100	80	90	100	90	90
Jul-1999	90	100	80	90	50 †	90
Aug-1999	100	100	100	100	90	80
Sep-1999	100	100	100	80	100	80
Oct-1999	100	100	100	100	100	80
Nov-1999	100	100	100	100	90	100
Dec-1999	90	100	100	100	90	90
Jan-2000	100	100	100	100	100	100
Feb-2000	90	90	70	70	80	100
Mar-2000	90	90	90	90	90	100
Apr-2000	80	100	90	90	80	100
May-2000	100	100	100	100	100	90

Table 21. Summary of *Daphnia magna* reproduction in 7-day tests using water samples collected from June 1999 to May 2000. 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-1999	23.8	24.0	21.2	18.5	8.6 †††	10.3
Jul-1999	31.1	35.9	32.6	27.2	12.8	15.7
Aug-1999	19.9	23.2	24.3	19.9	11.4	12.3
Sep-1999	29.2	37.7	36.1	28.4	17.9	14.6
Oct-1999	31.7	25.7	28.4	22.2	22.8	16.8
Nov-1999	16.2	11.7	10.1	14.8	5.3 †††	7.3 †††
Dec-1999	34.9	32.0	43.0	37.7	31.2	40.9
Jan-2000	18.9	22.3	23.0	24.9	15.0	14.0
Feb-2000	37.1	29.0	24.5	22.7	22.5	32.1
Mar-2000	10.6	10.6	13.0	10.6	6.2	12.7
Apr-2000	14.5	17.3	11.2	10.5	9.7 †††	11.6
May-2000	13.4	18.5	12.5	9.7	11.4	17.7

Table 22. Summary of *Selenastrum capricornutum* growth in 4-day tests using water samples collected from June 1999 to May 2000. Each value is the mean of 4 replicates.

See Table 26 for explanation of footnotes and agency abbreviations.

LOCATION	Station B	Station C	Station D	Station F	Delta Mendota Canal	Laboratory Control
DATA SOURCE	SLDMWA	SLDMWA	SLDMWA	SLDMWA	SLDMWA	SLDMWA
UNITS	10^5 cells/mL	10^5 cells/mL	10^5 cells/mL	10^5 cells/mL	10^5 cells/mL	10^5 cells/mL
Jun-1999	9.3	10.1	9.4	11.1	7.4 ††††	11.6
Jul-1999	9.1	10.5	9.9	11.2	7.5 ††††	11.9
Aug-1999	9.2*	10.0	10.2	11.9	13.3 ‡	14.9 ‡
Sep-1999	9.8	11.1	10.8	10.2	14.1	23.5
Oct-1999	9.8	10.7	9.0*	11.4	11.8	12.7
Nov-1999	9.9*	12.8	11.4*	12.9	14.3	15.3
Dec-1999	12.0*	22.7	20.9	20.4	18.8	23.4
Jan-2000	2.3*	6.5	7.5	7.3	6.9 ††††	8.2 ††††
Feb-2000	5.8*	9.4	9.8	6.7*	10.0	10.2 ‡
Mar-2000	7.1	9.7	8.0	8.1	8.3 ††††, ‡	11.4 ††††
Apr-2000	18.7	19.9	21.5	22.4	10.0 ‡	12.2 ‡
May-2000	16.2	16.3	17.3	16.5	15.2	17.2

Table 23. Summary of selenium concentrations in grab water samples collected at study stations for use in laboratory toxicity tests, March 2000 to May 2000.

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-06-2000	81	1.2	24	1.1	0.6
Mar-08-2000	90	0.6	27	1.1	0.6
Mar-10-2000	79	0.8	23	1.2	0.8
Apr-03-2000	87	1.8	36	2.2	<0.4
Apr-05-2000	74	1.7	39	1.1	0.8
Apr-07-2000	80	1.3	31	1.7	0.9
May-01-2000	85	1.6	55	1.6	0.6
May-03-2000	74	1.6	55	1.3	<0.4
May-05-2000	78	1.0	60	1.2	0.6

Table 24. Summary of sulfate concentrations in grab water samples collected at study stations for use in laboratory toxicity tests, March 2000 to May 2000.

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-06-2000	1,600	296	711	277	47
Mar-08-2000	1,710	311	771	262	37
Mar-10-2000	1,600	312	702	266	51
Apr-03-2000	1,740	358	979	198	32
Apr-05-2000	1,630	384	1,030	189	31
Apr-07-2000	NP	NP	NP	NP	NP
May-01-2000	1,990	480	1,560	239	39
May-03-2000	1,730	502	1,560	197	38
May-05-2000	1,850	373	1,530	203	40

Table 25. Summary of total suspended solids concentrations in grab water samples collected from March 2000 to May 2000.

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-06-2000	NT	NT	27	58	NT
Mar-08-2000	NT	NT	41	29	5
Mar-10-2000	NT	47	43	50	16
Apr-03-2000	5	9	5	7	2
Apr-05-2000	14	13	10	19	4
Apr-07-2000	5	14	9	11	5
May-01-2000	104	88	162	191	NA
May-03-2000	100	45	193	34	NA
May-05-2000	76	174	133	119	NA

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
(4)	In situ cages could not be deployed due to wet weather conditions.
(5)	Baseline results for 3/96 are for 14-day old larvae. There was no survival for the 24-hour old larvae.
(6)	Windmill station was dry due to water drainage. Use of plastic screened beakers for Station F during 8/96 with use of 4-day old larvae resulted in 0/39. Apparent cause of mortality was elevated temperature and sediment which was found in all cages and beakers.
(7)	Heavy silt accumulation was noted in Stations D and F cages and light silt accumulation was observed in both the Windmill Station and Station B.
(8)	Moderate silt accumulation was noted in Stations B and F cages and light silt accumulation was observed in Station D.
(9)	No test deployment was done at the Windmill Station due to extreme conditions (stagnant & pH>9.0). At Station B, replicate A was retrieved with no cork and replicate C lost its cork during retrieval. There were no surviving fish for a growth determination for Station F cages.
*	Significantly reduced from Delta Mendota Canal ($p<0.05$)
†	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 (10^6cell/mL) acceptability criteria.
‡	Control value exceeds suggested maximum variance (20%) acceptability criteria.
#	New testing laboratory with reporting limit of 0.4 µg/L as of June 1998.