

GRASSLAND BYPASS PROJECT

MONTHLY DATA REPORT

January 2000

April 13, 2000

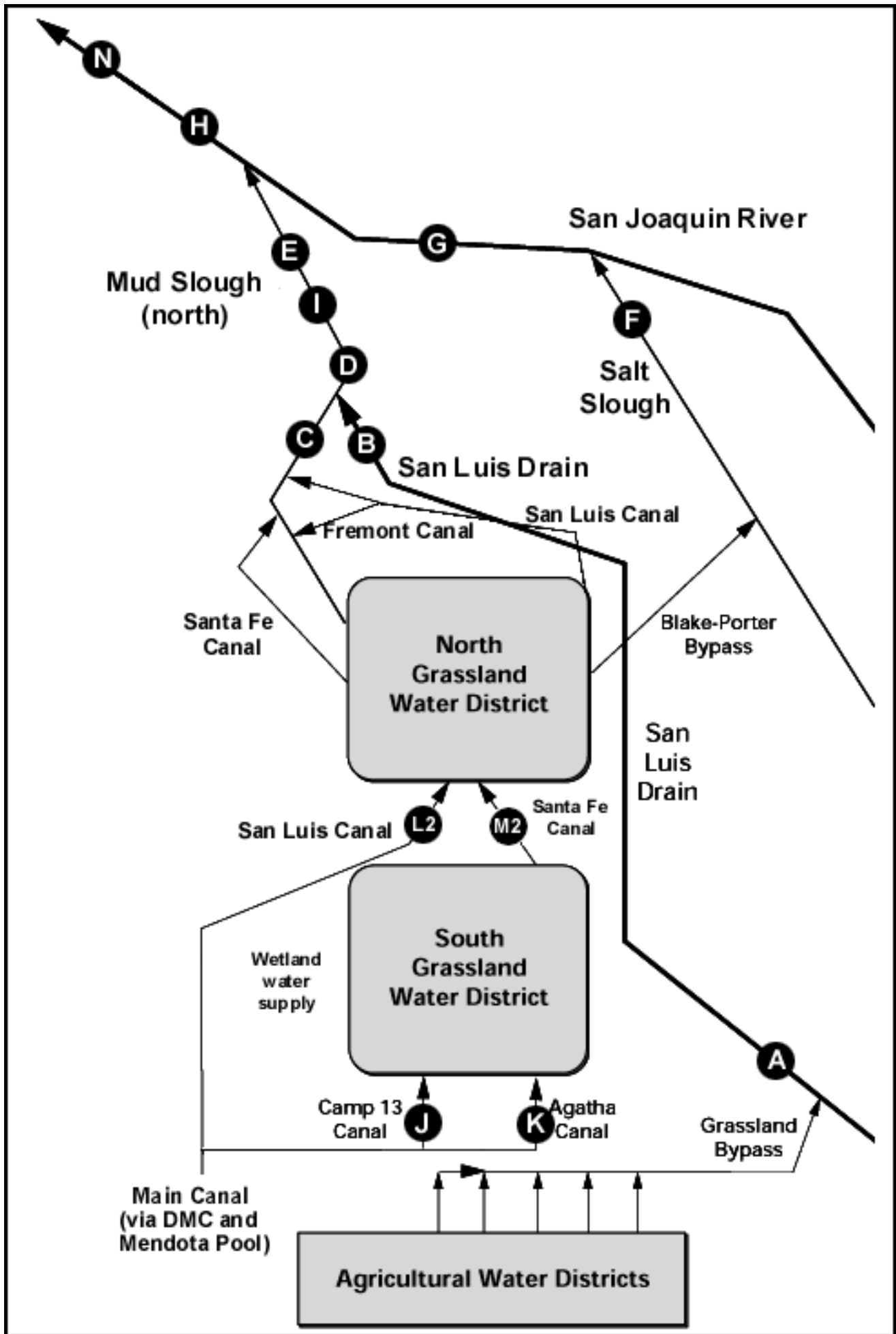
Preliminary Results

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





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MONTHLY DATA REPORT

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Table 1. Continuous water monitoring at Station A (inflow to San Luis Drain), January 2000.

See Table 26 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow	Specific Conductance
DATA SOURCE	SLDMWA	SLDMWA
UNITS	cfs	µS/cm
Jan-01-2000	15	5,040
Jan-02-2000	15	5,090
Jan-03-2000	14	4,920
Jan-04-2000	13	4,850
Jan-05-2000	13	4,860
Jan-06-2000	13	4,920
Jan-07-2000	13	4,860
Jan-08-2000	13	5,080
Jan-09-2000	13	5,070
Jan-10-2000	13	5,050
Jan-11-2000	16	4,730
Jan-12-2000	15	5,140
Jan-13-2000	14	5,080
Jan-14-2000	15	5,140
Jan-15-2000	15	5,150
Jan-16-2000	16	5,140
Jan-17-2000	17	5,120
Jan-18-2000	26	4,350
Jan-19-2000	32	3,190
Jan-20-2000	22	4,450
Jan-21-2000	21	4,680
Jan-22-2000	20	4,750
Jan-23-2000	25	4,620
Jan-24-2000	37	4,060
Jan-25-2000	41	4,100
Jan-26-2000	34	4,130
Jan-27-2000	28	4,680
Jan-28-2000	28	4,850
Jan-29-2000	28	4,850
Jan-30-2000	31	4,820
Jan-31-2000	31	4,820
Mean	21	4,760

Table 2. Continuous water monitoring at Station B (discharge from San Luis Drain), January 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
Jan-01-2000	23	8.9	7.4	4,930	74.1	9.2
Jan-02-2000	21	8.7	7.4	4,770	65.1	7.4
Jan-03-2000	21	8.5	7.4	4,800	68.5	7.8
Jan-04-2000	21	8.5	7.2	4,700	64.9	7.4
Jan-05-2000	20	8.8	6.9	4,490	48.5	5.2
Jan-06-2000	21	8.3	7.0	4,600	58.4	6.6
Jan-07-2000	20	8.4	7.2	4,660	68.1	7.3
Jan-08-2000	20	8.5	7.0	4,670	69.1	7.5
Jan-09-2000	20	8.8	6.8	4,660	68.7	7.4
Jan-10-2000	20	9.1	6.8	4,580	63.2	6.8
Jan-11-2000	20	9.6	6.9	4,590	64.7	7.0
Jan-12-2000	23	10.3	6.6	4,400	57.3	7.1
Jan-13-2000	22	10.5	6.6	4,360	49.7	5.9
Jan-14-2000	21	10.6	7.0	4,460	61.2	6.9
Jan-15-2000	22	11.1	6.9	4,430	61.5	7.3
Jan-16-2000	23	11.3	7.0	4,560	67.5	8.4
Jan-17-2000	24	11.4	7.2	4,640	71.3	9.2
Jan-18-2000	27	12.3	6.7	4,420	60.5	8.8
Jan-19-2000	35	13.3	7.3	4,640	66.9	12.6
Jan-20-2000	39	13.8	7.4	4,710	69.8	14.7
Jan-21-2000	31	13.6	7.8	4,840	69.7	11.7
Jan-22-2000	29	13.8	7.9	4,860	73.3	11.5
Jan-23-2000	31	13.4	7.0	4,460	71.8	12.0
Jan-24-2000	37	13.2	4.6	3,260	47.5	9.5
Jan-25-2000	47	13.8	5.4	3,760	48.8	12.4
Jan-26-2000	49	13.5	6.4	4,380	55.3	14.6
Jan-27-2000	40	13.3	6.7	4,550	61.6	13.3
Jan-28-2000	34	12.8	6.1	4,190	58.2	10.7
Jan-29-2000	34	12.6	6.0	4,100	54.8	10.0
Jan-30-2000	34	12.4	6.2	4,170	56.1	10.3
Jan-31-2000	36	12.1	5.9	4,140	43.2	8.4
Mean	28	11.1	6.8	4,480	61.9	
Total						285

Load Limitation for January 2000	lbs	479
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**Table 3. Continuous water monitoring at Station D
(Mud Slough North downstream of drainage discharges), January 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
Jan-01-2000	171	8.7	1,940
Jan-02-2000	176	8.4	1,880
Jan-03-2000	181	8.2	1,850
Jan-04-2000	185	8.1	1,840
Jan-05-2000	170	8.7	1,950
Jan-06-2000	165	7.8	1,970
Jan-07-2000	163	8.2	1,950
Jan-08-2000	155	8.2	2,010
Jan-09-2000	150	8.7	2,020
Jan-10-2000	147	9.2	1,980
Jan-11-2000	147	10.1	2,010
Jan-12-2000	150	11.1	1,980
Jan-13-2000	148	10.8	1,990
Jan-14-2000	142	10.9	2,000
Jan-15-2000	141	11.4	2,020
Jan-16-2000	140	11.5	1,980
Jan-17-2000	140	11.5	1,970
Jan-18-2000	154	12.7	1,860
Jan-19-2000	166	13.6	1,870
Jan-20-2000	181	14.0	1,880
Jan-21-2000	175	13.4	1,830
Jan-22-2000	177	13.4	1,900
Jan-23-2000	197	12.9	NP
Jan-24-2000	241	12.9	NP
Jan-25-2000	304	13.9	1,760
Jan-26-2000	338	13.6	1,860
Jan-27-2000	324	13.2	1,820
Jan-28-2000	308	12.4	1,730
Jan-29-2000	296	12.0	1,760
Jan-30-2000	287	12.0	1,810
Jan-31-2000	294	11.9	1,800

Table 4. Continuous water monitoring at Station F (Salt Slough at Highway 165), January 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
Jan-01-2000	172	9.7	1,990
Jan-02-2000	98	9.0	2,140
Jan-03-2000	91	8.9	2,150
Jan-04-2000	75	8.8	2,140
Jan-05-2000	72	9.5	2,130
Jan-06-2000	69	8.6	2,090
Jan-07-2000	76	8.9	2,040
Jan-08-2000	78	8.8	2,070
Jan-09-2000	81	9.3	2,100
Jan-10-2000	81	9.7	2,150
Jan-11-2000	81	10.4	2,170
Jan-12-2000	82	11.6	2,150
Jan-13-2000	84	11.3	2,150
Jan-14-2000	84	11.3	2,170
Jan-15-2000	88	11.7	2,150
Jan-16-2000	91	11.9	2,160
Jan-17-2000	91	12.1	2,200
Jan-18-2000	97	13.3	2,190
Jan-19-2000	103	14.2	2,150
Jan-20-2000	114	14.2	2,080
Jan-21-2000	121	13.6	2,050
Jan-22-2000	120	13.6	2,070
Jan-23-2000	121	12.9	2,110
Jan-24-2000	152	13.0	2,020
Jan-25-2000	205	13.8	1,830
Jan-26-2000	247	13.3	1,820
Jan-27-2000	237	12.9	1,910
Jan-28-2000	198	12.1	2,010
Jan-29-2000	182	11.8	2,050
Jan-30-2000	177	11.9	2,020
Jan-31-2000	169	12.0	2,060

Table 5. Continuous water monitoring at Station N (San Joaquin River at Crow's Landing), January 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
Jan-01-2000	674	8.7	1,460	2.4
Jan-02-2000	701	8.2	1,380	2.2
Jan-03-2000	694	8.0	1,390	2.4
Jan-04-2000	674	8.0	1,410	2.2
Jan-05-2000	663	8.6	1,440	2.3
Jan-06-2000	639	8.4	1,430	2.3
Jan-07-2000	616	8.2	1,500	2.2
Jan-08-2000	630	8.2	1,470	2.3
Jan-09-2000	676	8.4	1,440	2.5
Jan-10-2000	674	8.8	1,440	2.5
Jan-11-2000	656	9.3	1,460	2.6
Jan-12-2000	641	10.4	1,500	2.2
Jan-13-2000	629	10.6	1,520	2.4
Jan-14-2000	642	10.6	1,490	2.1
Jan-15-2000	659	11.0	1,460	2.0
Jan-16-2000	698	11.3	1,430	2.0
Jan-17-2000	734	11.5	1,390	1.9
Jan-18-2000	800	12.0	1,360	2.1
Jan-19-2000	797	13.3	1,360	2.3
Jan-20-2000	852	13.7	1,350	2.2
Jan-21-2000	862	13.3	1,390	3.1
Jan-22-2000	862	13.2	1,370	2.9
Jan-23-2000	904	13.0	1,360	2.7
Jan-24-2000	1,040	12.8	1,280	2.5
Jan-25-2000	1,190	13.5	1,240	2.3
Jan-26-2000	1,340	13.4	1,220	1.8
Jan-27-2000	1,720	13.0	1,080	1.7
Jan-28-2000	1,830	12.2	920	1.9
Jan-29-2000	1,720	11.7	989	1.7
Jan-30-2000	1,530	11.9	1,110	1.7
Jan-31-2000	1,390	11.6	1,200	1.7

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
Nov-03-1999	24	.	.	4,900	72	62.2	61.1	7.7
Nov-11-1999	22	.	.	4,140	73	49.3	50.9	6.7
Nov-17-1999	21	.	.	5,080	74	59.2	57.5	8.7
Nov-22-1999	17	.	.	4,650	27	50.0	49.0	7.4
Dec-01-1999	22	.	.	4,290	61	54.6	55.2	7.0
Dec-08-1999	15	.	.	4,530	21	47.2	46.9	7.4
Dec-15-1999	14	.	.	5,170	13	95.5	95.1	7.3
Dec-20-1999	15	.	.	5,290	18	98.7	96.3	8.1
Dec-27-1999	14	.	.	5,260	19	103	104	8.2
Jan-05-2000	13	.	.	4,940	11	82.3	78.2	8.1
Jan-12-2000	15	.	.	5,270	54	96.7	94.0	8.6
Jan-19-2000	32	.	.	3,330	130	67.3	72.7	4.5
Jan-26-2000	34	.	.	4,140	72	49.3	P	6.0

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	Total Suspended Solids	Selenium (total)	Selenium (dissolved)	Boron
DATA SOURCE	USGS	.	.	CVRWQCB	CVRWQCB	CVRWQCB	CVRWQCB	CVRWQCB
UNITS	cfs	.	.	µS/cm	mg/L	µg/L	µg/L	mg/L
Nov-02-1999	24	.	.	5,220	.	65.0	.	7.9
Nov-09-1999	25	.	.	4,470	.	58.1	.	6.9
Nov-17-1999	21	.	.	4,560	.	55.2	.	7.5
Nov-23-1999	16	.	.	4,490	.	52.3	.	7.3
Nov-28-1999	24	.	.	4,540	.	51.2	.	7.5
Dec-07-1999	17	.	.	4,500	.	65.2	.	7.2
Dec-14-1999	16	.	.	5,010	.	91.3	.	7.6
Dec-19-1999	16	.	.	5,320	.	101	.	8.0
Dec-26-1999	13	.	.	5,380	.	104	.	8.1
Jan-04-2000	13	.	.	5,020	.	91.5	.	8.1
Jan-11-2000	16	.	.	5,090	.	93.3	.	8.1
Jan-18-2000	26	.	.	5,020	.	92.1	.	8.1
Jan-25-2000	41	.	.	4,520	.	74.3	.	6.9

Table 7. Weekly water quality monitoring at Station B (discharge from San Luis Drain).

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
Nov-04-1999	22	20.2	7.7	4,710	46	34.3	33.4	7.1
Nov-11-1999	30	16.4	NA	4,030	45	34.6	35.0	6.4
Nov-18-1999	29	16.8	7.9	4,260	46	32.9	32.4	7.1
Nov-23-1999	25	12.0	7.9	4,540	36	39.8	39.2	7.6
Dec-02-1999	27	13.5	7.9	4,060	54	40.9	40.1	6.8
Dec-09-1999	22	9.1	7.9	4,540	50	67.1	65.3	7.1
Dec-16-1999	21	8.6	7.6	4,410	50	51.7	51.8	6.8
Dec-21-1999	21	9.7	7.4	4,400	48	49.1	54.4	7.0
Dec-28-1999	22	9.2	6.9	4,880	53	74.2	78.5	7.1
Jan-06-2000	21	7.5	7.3	4,560	48	58.9	59.3	7.1
Jan-13-2000	22	10.0	7.9	4,480	72	52.5	50.4	6.9
Jan-20-2000	39	13.5	7.5	4,750	89	74.3	P	7.4
Jan-27-2000	40	13.3	7.7	4,610	48	70.3	P	6.6

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
Nov-04-1999	151	19.3	8.1	1,060	0.5	0.8
Nov-11-1999	139	16.1	NA	1,080	<0.4	0.8
Nov-18-1999	133	15.7	7.7	1,210	0.6	1.0
Nov-23-1999	117	11.4	7.8	1,300	<0.4	1.0
Dec-02-1999	99	11.7	7.6	1,410	<0.4	1.1
Dec-09-1999	94	8.4	7.7	1,600	<0.4	1.2
Dec-16-1999	91	9.2	7.8	1,640	<0.4	1.2
Dec-21-1999	100	10.4	7.9	1,620	<0.4	1.3
Dec-28-1999	102	9.8	7.9	1,670	<0.4	1.2
Jan-06-2000	144	7.5	8.1	1,610	<0.4	1.2
Jan-13-2000	126	11.3	8.0	1,680	<0.4	1.3
Jan-20-2000	142	13.8	7.9	1,680	0.4	1.3
Jan-27-2000	248	12.8	6.7	1,530	<0.4	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
Nov-04-1999	173	18.5	8.0	1,480	4.3	1.5
Nov-11-1999	169	16.4	NA	1,680	7.0	1.8
Nov-18-1999	162	16.4	7.8	1,780	6.5	2.1
Nov-23-1999	142	11.5	7.4	1,870	5.1	2.0
Dec-02-1999	126	11.5	7.8	2,010	6.6	2.3
Dec-09-1999	116	8.7	7.9	2,220	10.7	2.3
Dec-16-1999	112	9.6	7.9	2,250	9.2	2.2
Dec-21-1999	121	10.0	7.8	2,250	13.3	2.4
Dec-28-1999	124	9.6	7.8	2,320	13.5	2.3
Jan-06-2000	165	7.5	8.0	2,070	6.7	2.0
Jan-13-2000	148	10.8	8.0	2,180	6.5	2.2
Jan-20-2000	181	13.8	7.9	2,420	14.3	2.6
Jan-27-2000	324	12.8	7.5	1,990	9.2	2.0

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
Nov-04-1999	164	25.7	7.9	1,350	0.8	0.7
Nov-11-1999	245	14.9	NA	1,190	1.0	0.7
Nov-18-1999	142	15.0	7.7	1,470	0.8	0.9
Nov-23-1999	132	10.3	7.6	1,460	0.5	0.8
Dec-02-1999	135	10.9	7.6	1,600	0.6	0.9
Dec-09-1999	117	9.5	7.7	1,730	0.9	1.0
Dec-16-1999	96	7.7	7.6	1,840	1.1	1.0
Dec-21-1999	88	9.8	7.7	2,000	0.8	1.1
Dec-28-1999	70	8.2	7.7	2,330	0.5	1.2
Jan-06-2000	69	7.2	7.7	2,170	0.5	1.2
Jan-13-2000	84	10.3	7.9	2,270	<0.4	1.3
Jan-20-2000	114	13.9	7.7	2,140	0.5	1.3
Jan-27-2000	237	12.5	7.4	1,950	1.0	1.4

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
Nov-04-1999	.	17.6	7.3	1,500	0.7	0.8
Nov-11-1999	.	14.3	NA	1,200	1.0	0.7
Nov-18-1999	.	14.4	7.8	1,610	0.7	0.9
Nov-23-1999	.	9.8	7.7	1,660	0.4	0.8
Dec-02-1999	.	10.6	7.7	1,710	0.6	0.9
Dec-09-1999	.	10.3	7.6	1,790	0.9	0.9
Dec-16-1999	.	6.9	7.7	1,960	0.7	1.0
Dec-21-1999	.	8.6	7.2	2,090	0.9	1.0
Dec-28-1999	.	7.2	7.1	2,560	0.4	1.1
Jan-06-2000	.	6.1	7.8	2,360	<0.4	1.0
Jan-13-2000	.	9.3	7.2	2,460	<0.4	1.2
Jan-20-2000	.	13.7	7.1	2,300	0.6	1.1
Jan-27-2000	.	12.3	6.9	764	0.5	0.4

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
Nov-03-1999	25	.	.	605	1.6	0.4
Nov-11-1999	25	.	.	626	1.8	0.4
Nov-17-1999	15	.	.	556	1.3	0.3
Nov-22-1999	15	.	.	669	1.2	0.4
Dec-01-1999	15	.	.	515	<0.4	0.2
Dec-08-1999	0	.	.	2,360	2.2	3.5
Dec-15-1999	15	.	.	640	0.5	0.2
Dec-20-1999	15	.	.	725	0.6	0.3
Dec-27-1999	21	.	.	816	0.9	0.3
Jan-05-2000	15	.	.	544	<0.4	0.2
Jan-12-2000	10	.	.	938	1.2	0.6
Jan-19-2000	10	.	.	608	0.5	0.3
Jan-26-2000	2	.	.	883	1.6	0.7

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
Nov-03-1999	20	.	.	572	1.3	0.3
Nov-11-1999	20	.	.	627	1.8	0.4
Nov-17-1999	10	.	.	551	1.2	0.3
Nov-22-1999	10	.	.	640	1.1	0.4
Dec-01-1999	10	.	.	576	0.6	0.3
Dec-08-1999	0	.	.	802	0.5	0.7
Dec-15-1999	15	.	.	1,330	0.7	1.5
Dec-20-1999	35	.	.	715	1.0	0.4
Dec-27-1999	45	.	.	874	1.0	0.5
Jan-05-2000	55	.	.	572	<0.4	0.2
Jan-12-2000	25	.	.	628	0.5	0.3
Jan-19-2000	25	.	.	811	0.7	0.4
Jan-26-2000	10	.	.	729	1.2	0.5

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
Nov-03-1999	70	.	.	711	1.5	NA
Nov-11-1999	10	.	.	715	1.1	0.5
Nov-17-1999	10	.	.	884	1.6	0.7
Nov-22-1999	10	.	.	1,070	1.6	1.0
Dec-01-1999	40	.	.	872	0.8	0.7
Dec-08-1999	40	.	.	829	1.3	0.7
Dec-15-1999	55	.	.	798	1.8	0.6
Dec-20-1999	60	.	.	690	0.5	0.3
Dec-27-1999	65	.	.	898	0.8	0.4
Jan-05-2000	80	.	.	511	<0.4	0.2
Jan-12-2000	50	.	.	935	1.0	0.6
Jan-19-2000	40	.	.	824	0.8	0.6
Jan-26-2000	25	.	.	1,200	1.3	0.8

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
Nov-03-1999	59	.	.	906	0.8	0.8
Nov-11-1999	113	.	.	969	0.7	0.9
Nov-17-1999	101	.	.	1,160	0.9	1.3
Nov-22-1999	104	.	.	1,200	0.8	1.3
Dec-01-1999	80	.	.	1,140	0.7	1.2
Dec-08-1999	15	.	.	1,700	1.3	1.9
Dec-15-1999	0	.	.	2,380	1.1	2.7
Dec-20-1999	29	.	.	2,120	0.8	2.4
Dec-27-1999	43	.	.	1,820	0.9	1.9
Jan-05-2000	52	.	.	1,450	0.5	1.4
Jan-12-2000	55	.	.	1,900	0.5	2.1
Jan-19-2000	67	.	.	1,640	0.6	2.0
Jan-26-2000	122	.	.	1,930	0.8	2.5

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
Nov-04-1999	914	19.2	7.1	961	1.6	0.7
Nov-11-1999	932	17.0	7.3	1,010	1.7	0.7
Nov-18-1999	873	14.0	7.9	1,150	2.0	0.8
Nov-23-1999	729	10.0	7.6	1,220	1.4	0.8
Dec-02-1999	748	12.0	7.6	1,260	1.7	0.9
Dec-09-1999	686	9.2	7.9	1,290	1.7	0.8
Dec-16-1999	630	7.1	7.7	1,370	2.3	0.9
Dec-21-1999	626	8.6	7.7	1,420	2.6	0.9
Dec-28-1999	577	7.4	7.8	1,510	3.0	0.9
Jan-06-2000	639	7.0	7.7	1,480	2.1	0.9
Jan-13-2000	629	11.5	8.0	1,540	2.1	1.0
Jan-20-2000	852	13.6	7.1	1,320	2.2	0.8
Jan-27-2000	1,720	13.2	7.4	1,060	1.8	0.7

Table 18. Summary of fathead minnow (*Pimephales promelas*) larvae survival in 7-day tests using water samples collected from February 1999 to January 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	%	%	%	%	%	%
Feb-99	98	65	90	78	48 †	83
Mar-99	75	58	88	85	65 †	100
Apr-99	93	88	100	83	73 †	100
May-99	98	90	93	88	50 †	98
Jun-99	98	93	100	98	70 †	100
Jul-99	93	100	90	93	98	100
Aug-99	93	100	89	68	98	100
Sep-99	95	85	93	53	93	98
Oct-99	100	98	90	70*	98	100
Nov-99	98	38*	60*	50*	87	95
Dec-99	100	73*	73*	70*	100	100
Jan-00	98	33*	48*	85	83	100

Table 19. Summary of fathead minnow (*Pimephales promelas*) larvae growth in 7-day tests using water samples collected from February 1999 to January 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
Feb-99	0.64	0.43	0.50	0.47	0.30	0.50
Mar-99	0.45	0.37	0.55	0.54	0.38	0.56
Apr-99	0.66	0.61	0.78	0.57	0.48	0.72
May-99	0.78	0.76	0.74	0.61	0.39	0.71
Jun-99	0.67	0.68	0.72	0.67	0.43	0.72
Jul-99	0.72	0.77	0.69	0.67	0.68	0.63
Aug-99	0.60	0.70	0.54	0.44*	0.65	0.63
Sep-99	0.65	0.49	0.54	0.35	0.59	0.58
Oct-99	0.70	0.62	0.58	0.51	0.63	0.65
Nov-99	0.58	0.20*	0.35*	0.29*	0.51	0.52
Dec-99	0.67	0.47*	0.49	0.50*	0.68	0.61
Jan-00	0.68	0.23*	0.37	0.59	0.53	0.64

Table 20. Summary of *Daphnia magna* survival in 7-day tests using water samples collected from February 1999 to January 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	%	%	%	%	%	%
Feb-99	100	100	90	90	80	90
Mar-99	100	90	90	100	80	90
Apr-99	90	100	100	100	100	100
May-99	100	90	90	100	100	100
Jun-99	100	80	90	100	90	90
Jul-99	90	100	80	90	50 †	90
Aug-99	100	100	100	100	90	80
Sep-99	100	100	100	80	100	80
Oct-99	100	100	100	100	100	80
Nov-99	100	100	100	100	90	100
Dec-99	90	100	100	100	90	90
Jan-00	100	100	100	100	100	100

Table 21. Summary of *Daphnia magna* reproduction in 7-day tests using water samples collected from February 1999 to January 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
Feb-99	25.4	24.0	31.7	21.1	23.8	20.3
Mar-99	65.4	69.6	70.9	57.4	45.1	52.7
Apr-99	17.1	24.4	20.6	21.6	19.9	13.8
May-99	31.6	36.0	33.8	37.4	30.8	39.2
Jun-99	23.8	24.0	21.2	18.5	8.6 †††	10.3
Jul-99	31.1	35.9	32.6	27.2	12.8	15.7
Aug-99	19.9	23.2	24.3	19.9	11.4	12.3
Sep-99	29.2	37.7	36.1	28.4	17.9	14.6
Oct-99	31.7	25.7	28.4	22.2	22.8	16.8
Nov-99	16.2	11.7	10.1	14.8	5.3	7.3
Dec-99	34.9	32.0	43.0	37.7	31.2	40.9
Jan-00	18.9	22.3	23.0	24.9	15.0	14.0

Table 22. Summary of *Selenastrum capricornutum* growth in 4-day tests using water samples collected from February 1999 to January 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
Feb-99	16.0*	33.5	24.1*	15.7*	31.5	27.1
Mar-99	14.5	11.8*	15.5	17.6	17.1	22.9
Apr-99	17.6	14.4*	15.8	23.0	19.6	22.6 ‡
May-99	12.0	13.3	11.8	8.5	11.5 ‡	14.7 ‡
Jun-99	9.3	10.1	9.4	11.1	7.4 ††††	11.6
Jul-99	9.1	10.5	9.9	11.2	7.5 ††††	11.9
Aug-99	9.2*	10.0	10.2	11.9	13.3 ‡	14.9 ‡
Sep-99	9.8	11.1	10.8	10.2	14.1	23.5
Oct-99	9.8	10.7	9.0*	11.4	11.8	12.7
Nov-99	9.9*	12.8	11.4*	12.9	14.3	15.3
Dec-99	12.0*	22.7	20.9	20.4	18.8	23.4
Jan-00	2.3*	6.5	7.5	7.3	6.9 ††††	8.2 ††††

Table 23. Summary of selenium concentrations in grab water samples collected at study stations for use in laboratory toxicity tests, November 1999 to January 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
Nov-08-1999	55	0.4	8.1	1.0	0.5
Nov-10-1999	58	0.5	7.5	1.1	<0.4
Nov-12-1999	36	0.6	5.4	1.0	<0.4
Dec-13-1999	54	0.8	9.0	1.0	0.5
Dec-15-1999	40	0.7	9.7	0.9	0.6
Dec-17-1999	72	<0.4	10.0	0.9	0.7
Jan-03-2000	77	0.8	7.8	0.6	<0.4
Jan-05-2000	55	0.4	6.7	0.9	<0.4
Jan-07-2000	76	0.5	8.4	0.8	<0.4

Table 24. Summary of sulfate concentrations in grab water samples collected at study stations for use in laboratory toxicity tests, November 1999 to January 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
Nov-08-1999	1,370	107	345	172	61
Nov-10-1999	1,130	111	324	164	23
Nov-12-1999	1,230	108	272	170	22
Dec-13-1999	1,380	203	395	278	64
Dec-15-1999	1,350	222	461	274	30
Dec-17-1999	1,490	216	436	287	80
Jan-03-2000	1,520	182	326	324	51
Jan-05-2000	1,400	206	336	312	25
Jan-07-2000	1,430	205	381	322	25

Table 25. Summary of total suspended solids concentrations in grab water samples collected from November 1999 to January 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
Nov-08-1999	56	27	26	126	15
Nov-10-1999	35	14	21	48	11
Nov-12-1999	42	35	29	45	6
Dec-13-1999	43	35	19	41	19
Dec-15-1999	31	11	15	23	<1
Dec-17-1999	40	14	18	27	<1
Jan-03-2000	36	19	41	24	12
Jan-05-2000	25	13	17	31	4
Jan-07-2000	34	17	21	34	7

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
.	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 ⁶ cell/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.