GRASSLAND BYPASS PROJECT

MONTHLY DATA REPORT

February 2002

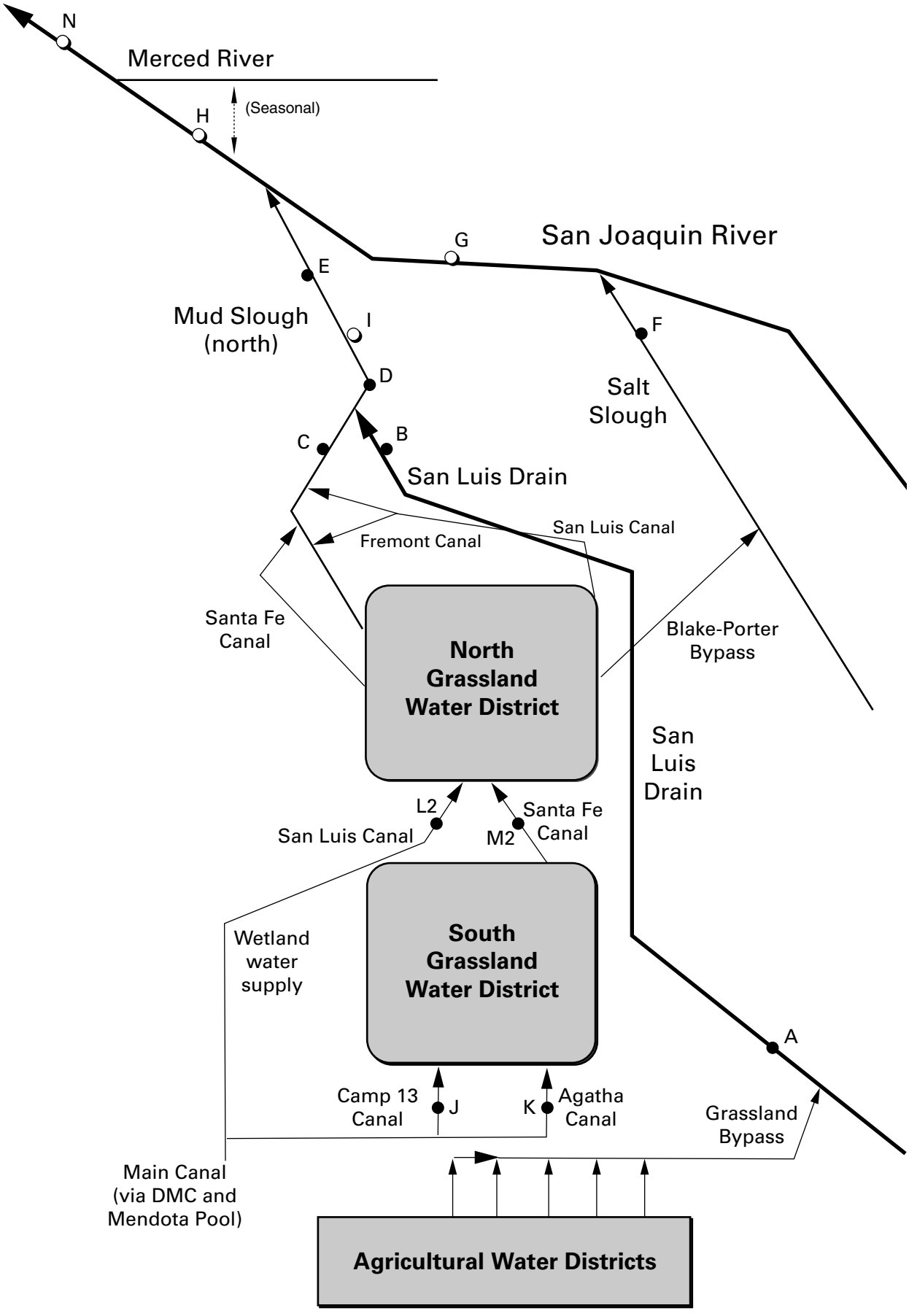
May 2, 2002

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


N
Merced River
(Seasonal)
H
G
San Joaquin River
E
Mud Slough
(north)
I
F
D
Salt
Slough
C
B
San Luis Drain
San Luis Canal
Fremont Canal
Santa Fe
Canal
North
Grassland
Water District
Blake-Porter
Bypass
San
Luis
Drain
L2
San Luis Canal
M2
Santa Fe
Canal
Wetland
water
supply
South
Grassland
Water District
A
Camp 13
Canal
J
K
Agatha
Canal
Grassland
Bypass
Main Canal
(via DMC and
Mendota Pool)
Agricultural Water Districts

GRASSLAND BYPASS PROJECT

MONTHLY DATA REPORT

LIST OF TABLES FOR MONTHLY REPORT

Table 1. Continuous water monitoring at Station A (inflow to San Luis Drain), February 2002.

See Table 26 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow	Specific Conductance
DATA SOURCE	SLDMWA	SLDMWA
UNITS	cfs	µS/cm
Feb-01-2002	34	4,280
Feb-02-2002	35	4,120
Feb-03-2002	38	4,100
Feb-04-2002	38	4,180
Feb-05-2002	37	4,220
Feb-06-2002	38	3,830
Feb-07-2002	42	4,160
Feb-08-2002	47	4,100
Feb-09-2002	47	4,160
Feb-10-2002	47	4,060
Feb-11-2002	48	4,170
Feb-12-2002	46	4,320
Feb-13-2002	48	4,320
Feb-14-2002	51	4,230
Feb-15-2002	46	4,360
Feb-16-2002	45	4,470
Feb-17-2002	49	4,620
Feb-18-2002	48	4,480
Feb-19-2002	45	4,780
Feb-20-2002	48	4,790
Feb-21-2002	49	4,780
Feb-22-2002	49	4,800
Feb-23-2002	52	4,750
Feb-24-2002	51	4,640
Feb-25-2002	54	4,750
Feb-26-2002	57	4,490
Feb-27-2002	59	4,450
Feb-28-2002	60	4,600
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Mean	47	4,390

PRELIMINARY RESULTS

Table 2. Continuous water monitoring at Station B (discharge from San Luis Drain), February 2002.

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
Feb-01-2002	33	8.3	P	4,960	68.0	12.1
Feb-02-2002	40	8.7	P	5,120	73.7	15.9
Feb-03-2002	40	9.1	P	4,940	70.4	15.2
Feb-04-2002	42	9.5	P	4,920	84.2	19.1
Feb-05-2002	42	9.8	P	4,340	66.2	15.0
Feb-06-2002	41	10.2	P	4,180	58.3	12.9
Feb-07-2002	42	11.1	P	4,250	57.8	13.1
Feb-08-2002	49	11.9	P	4,240	53.8	14.2
Feb-09-2002	51	11.7	P	4,360	56.8	15.6
Feb-10-2002	50	12.3	P	4,490	60.1	16.2
Feb-11-2002	51	13.0	P	4,250	57.9	15.9
Feb-12-2002	51	13.0	P	4,360	59.3	16.3
Feb-13-2002	49	12.7	P	4,460	62.7	16.6
Feb-14-2002	51	12.9	P	4,530	59.8	16.4
Feb-15-2002	53	13.0	P	4,530	58.4	16.7
Feb-16-2002	50	13.0	P	4,790	63.6	17.2
Feb-17-2002	50	12.9	P	4,570	58.6	15.8
Feb-18-2002	52	13.4	P	4,590	60.8	17.1
Feb-19-2002	51	13.6	P	4,700	64.3	17.7
Feb-20-2002	49	14.3	P	4,930	68.4	18.1
Feb-21-2002	51	15.1	P	4,950	71.4	19.6
Feb-22-2002	52	15.6	P	4,990	71.2	20.0
Feb-23-2002	52	15.9	P	5,030	72.0	20.2
Feb-24-2002	55	15.6	P	5,020	69.4	20.6
Feb-25-2002	54	15.9	P	5,080	70.2	20.4
Feb-26-2002	56	16.3	P	5,080	69.7	21.1
Feb-27-2002	59	16.6	P	4,860	67.1	21.4
Feb-28-2002	61	16.7	P	5,050	69.9	23.0
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Mean	49	12.9	P	4,700	65.1	
Total						**483**

Load Limitation for February 2002	**(lbs)**	**619**

Table 3. Continuous water monitoring at Station D (Mud Slough North downstream of drainage discharges), February 2002.

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
Feb-01-2002	127	7.8	2,780
Feb-02-2002	129	8.5	2,920
Feb-03-2002	143	9.0	2,800
Feb-04-2002	146	9.5	2,770
Feb-05-2002	148	9.8	2,700
Feb-06-2002	154	10.0	2,570
Feb-07-2002	160	11.3	2,530
Feb-08-2002	163	12.0	2,570
Feb-09-2002	164	11.2	2,700
Feb-10-2002	158	11.7	2,760
Feb-11-2002	156	12.3	2,710
Feb-12-2002	152	12.7	2,780
Feb-13-2002	148	12.4	2,830
Feb-14-2002	148	12.5	2,860
Feb-15-2002	149	12.7	2,890
Feb-16-2002	147	12.9	2,890
Feb-17-2002	146	12.6	2,890
Feb-18-2002	146	12.8	2,890
Feb-19-2002	148	13.1	2,930
Feb-20-2002	143	14.1	2,970
Feb-21-2002	146	14.9	3,000
Feb-22-2002	154	15.2	2,960
Feb-23-2002	151	15.2	3,010
Feb-24-2002	153	14.6	3,030
Feb-25-2002	151	15.0	3,040
Feb-26-2002	145	15.5	3,170
Feb-27-2002	143	16.2	3,240
Feb-28-2002	156	16.2	3,140
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Table 4. Continuous water monitoring at Station F (Salt Slough at Highway 165), February 2002.

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
Feb-01-2002	137	8.1	1,740
Feb-02-2002	135	8.7	1,740
Feb-03-2002	134	9.2	1,680
Feb-04-2002	141	9.5	1,550
Feb-05-2002	150	9.7	1,500
Feb-06-2002	144	10.0	1,570
Feb-07-2002	149	11.3	1,550
Feb-08-2002	171	12.2	1,480
Feb-09-2002	187	11.6	1,420
Feb-10-2002	186	11.8	1,500
Feb-11-2002	177	12.3	1,530
Feb-12-2002	154	12.5	1,570
Feb-13-2002	157	12.3	1,630
Feb-14-2002	160	12.4	1,670
Feb-15-2002	168	12.7	1,620
Feb-16-2002	171	12.9	1,640
Feb-17-2002	178	13.1	1,610
Feb-18-2002	209	12.7	1,450
Feb-19-2002	237	12.9	1,350
Feb-20-2002	239	13.9	1,370
Feb-21-2002	237	15.0	1,380
Feb-22-2002	228	15.0	1,500
Feb-23-2002	230	15.1	1,450
Feb-24-2002	226	14.5	1,470
Feb-25-2002	220	14.8	1,500
Feb-26-2002	216	15.1	1,550
Feb-27-2002	209	15.7	1,590
Feb-28-2002	216	15.8	1,540
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Table 5. Continuous water monitoring at Station N (San Joaquin River at Crow's Landing), February 2002.

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
Feb-01-2002	739	NA	1,570	P
Feb-02-2002	736	NA	1,540	P
Feb-03-2002	730	NA	1,570	P
Feb-04-2002	767	NA	1,530	P
Feb-05-2002	766	NA	1,560	P
Feb-06-2002	787	NA	1,570	P
Feb-07-2002	818	NA	1,470	P
Feb-08-2002	793	NA	NA	P
Feb-09-2002	797	NA	1,500	P
Feb-10-2002	823	NA	1,500	P
Feb-11-2002	829	NA	1,500	P
Feb-12-2002	806	NA	1,540	P
Feb-13-2002	782	NA	1,570	P
Feb-14-2002	752	NA	1,590	P
Feb-15-2002	746	NA	NA	P
Feb-16-2002	756	NA	NA	P
Feb-17-2002	763	NA	NA	P
Feb-18-2002	781	NA	NA	P
Feb-19-2002	805	NA	NA	P
Feb-20-2002	865	NA	NA	P
Feb-21-2002	874	NA	NA	P
Feb-22-2002	856	NA	1,490	P
Feb-23-2002	859	NA	1,510	P
Feb-24-2002	857	NA	1,550	P
Feb-25-2002	839	NA	1,590	P
Feb-26-2002	815	NA	1,640	P
Feb-27-2002	806	NA	1,670	P
Feb-28-2002	798	NA	1,710	P
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PRELIMINARY RESULTS

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	.	.	.
DATA SOURCE	SLDMWA	.	.	CVRWQCB	CVRWQCB	.	.	.
UNITS	cfs	.	.	µS/cm	mg/L	.	.	.
Dec-05-2001	12	.	.	4,960	23	.	.	.
Dec-12-2001	12	.	.	5,410	24	.	.	.
Dec-19-2001	11	.	.	4,880	49	.	.	.
Dec-27-2001	10	.	.	5,050	33	.	.	.
Jan-02-2002	18	.	.	4,760	P	.	.	.
Jan-09-2002	20	.	.	5,190	P	.	.	.
Jan-16-2002	23	.	.	5,260	P	.	.	.
Jan-23-2002	20	.	.	5,430	P	.	.	.
Jan-30-2002	23	.	.	5,010	P	.	.	.
Feb-06-2002	38	.	.	4,620	72	.	.	.
Feb-13-2002	48	.	.	4,960	110	.	.	.
Feb-20-2002	48	.	.	5,110	110	.	.	.
Feb-27-2002	59	.	.	4,750	140	.	.	.

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
Dec-04-2001	14	.	.	4,990	.	71.3	.	P
Dec-11-2001	12	.	.	5,160	.	72.6	.	P
Dec-18-2001	11	.	.	5,080	.	NA	.	P
Dec-25-2001	10	.	.	5,060	.	78.9	.	P
Jan-01-2002	16	.	.	4,800	.	72.0	.	P
Jan-08-2002	18	.	.	4,870	.	57.0	.	P
Jan-15-2002	22	.	.	5,140	.	76.2	.	P
Jan-22-2002	21	.	.	5,360	.	80.0	.	P
Jan-29-2002	27	.	.	5,440	.	80.8	.	P
Feb-05-2002	37	.	.	4,560	.	70.0	.	P
Feb-12-2002	46	.	.	4,640	.	62.4	.	P
Feb-19-2002	45	.	.	4,900	.	67.7	.	P
Feb-26-2002	57	.	.	NA	.	65.7	.	P

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

See Table 26 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow	Temperature	pH	Specific Conductance	Total Suspended Solids	Selenium (total)	.	Boron
DATA SOURCE	USGS	CVRWQCB	CVRWQCB	CVRWQCB	CVRWQCB	CVRWQCB	.	CVRWQCB
UNITS	cfs	°C		µS/cm	mg/L	µg/L	.	mg/L
Dec-06-2001	20	10.2	7.8	4,320	37	52.0	.	P
Dec-13-2001	19	9.3	8.1	4,710	50	46.0	.	P
Dec-20-2001	16	9.1	8.1	4,590	43	60.7	.	P
Dec-27-2001	15	10.1	7.9	4,170	36	NA	.	P
Jan-03-2002	29	12.9	7.9	4,210	50	50.2	.	P
Jan-10-2002	26	12.0	7.7	4,260	52	39.6	.	P
Jan-17-2002	29	8.3	8.0	4,550	38	50.8	.	P
Jan-24-2002	25	8.2	8.1	4,970	26	64.2	.	P
Jan-31-2002	28	7.7	8.1	4,680	22	60.8	.	P
Feb-07-2002	42	10.3	8.1	4,290	P	56.6	.	P
Feb-14-2002	51	12.0	8.3	4,580	P	57.6	.	P
Feb-21-2002	51	14.4	7.8	4,950	P	71.5	.	P
Feb-28-2002	61	15.6	8.3	5,090	P	69.2	.	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
Dec-06-2001	146	9.9	7.9	1,590	<0.4	P
Dec-13-2001	82	8.8	8.0	2,110	<0.4	P
Dec-20-2001	94	9.7	8.1	1,960	<0.4	P
Dec-27-2001	107	10.3	7.9	1,920	<0.4	P
Jan-03-2002	189	12.9	7.7	1,700	0.6	P
Jan-10-2002	155	11.7	7.9	1,880	<0.4	P
Jan-17-2002	103	6.6	7.9	2,090	0.5	P
Jan-24-2002	75	8.2	7.9	2,300	<0.4	P
Jan-31-2002	98	7.0	8.2	2,240	<0.4	P
Feb-07-2002	118	10.6	8.1	2,080	0.8	P
Feb-14-2002	97	11.5	7.9	2,250	0.6	P
Feb-21-2002	95	14.7	7.8	2,240	0.8	P
Feb-28-2002	95	15.9	7.9	2,160	0.5	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
Dec-06-2001	166	9.8	7.8	1,920	6.3	P
Dec-13-2001	101	8.9	8.0	2,740	8.9	P
Dec-20-2001	110	9.4	8.0	2,520	10.0	P
Dec-27-2001	122	10.3	7.9	2,270	6.7	P
Jan-03-2002	218	12.8	7.8	2,080	6.0	P
Jan-10-2002	181	11.7	7.8	2,260	5.8	P
Jan-17-2002	132	6.9	7.9	2,650	10.2	P
Jan-24-2002	100	8.2	8.0	3,030	13.8	P
Jan-31-2002	126	6.9	8.0	2,870	12.0	P
Feb-07-2002	160	10.5	8.1	2,690	15.5	P
Feb-14-2002	148	11.6	8.0	3,040	18.1	P
Feb-21-2002	146	14.6	7.6	3,210	22.4	P
Feb-28-2002	156	15.6	8.0	3,260	24.6	P

Table 10. Weekly water quality monitoring at Station I2 .

See Table 26 for explanation of footnotes and agency abbreviations.

PARAMETER		pH	Specific Conductance	Turbidity	Selenium	Boron
DATA SOURCE		USBR	USBR	USBR	USBR	USBR
UNITS			µS/cm	NTU	µg/L	mg/L
Dec-04-2001	.	7.8	2,060	15.8	7.2	1.9
Dec-10-2001	.	7.9	2,790	18.0	6.7	2.3
Dec-18-2001	.	7.9	2,960	15.0	9.3	2.7
Dec-21-2001	.	8.0	2,940	20.5	8.9	2.5
Jan-03-2002	.	7.7	2,100	27.6	6.4	1.9
Jan-09-2002	.	7.8	2,350	14.4	7.2	2.1
Jan-16-2002	.	7.6	3,080	13.3	6.9	2.5
Jan-23-2002	.	8.1	3,670	14.1	13.2	2.9
Jan-29-2002	.	7.9	3,270	14.1	13.2	2.9
Feb-05-2002	.	8.1	3,040	20.5	17.4	3.0
Feb-12-2002	.	7.9	3,130	27.3	17.9	3.0
Feb-20-2002	.	8.2	3,880	27.2	14.6	3.6
Feb-26-2002	.	8.0	3,750	35.8	19.6	3.8

Table 11. Weekly water quality monitoring at Station F (Salt Slough at Lander Avenue).

See Table 26 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow	Temperature	pH	Specific Conductance	Selenium (total)	Boron
DATA SOURCE	USGS	CVRWQCB	CVRWQCB	CVRWQCB	CVRWQCB	CVRWQCB
UNITS	cfs	°C		µS/cm	µg/L	mg/L
Dec-06-2001	224	9.9	7.7	1,480	0.5	P
Dec-13-2001	131	9.4	7.7	2,020	0.5	P
Dec-20-2001	73	10.8	7.8	2,420	<0.4	P
Dec-27-2001	66	10.7	7.7	2,470	<0.4	P
Jan-03-2002	142	12.9	7.6	2,020	0.5	P
Jan-10-2002	135	12.2	7.5	2,010	<0.4	P
Jan-17-2002	110	7.8	7.6	2,200	0.7	P
Jan-24-2002	112	8.8	7.5	2,010	1.1	P
Jan-31-2002	130	8.2	7.8	1,870	<0.4	P
Feb-07-2002	149	10.5	7.8	1,550	1.0	P
Feb-14-2002	160	11.3	7.5	1,670	0.8	P
Feb-21-2002	237	14.6	7.7	1,330	1.0	P
Feb-28-2002	216	17.1	7.9	1,550	0.7	P

Table 12. Weekly water quality monitoring at Station J (Camp 13 Ditch).

See Table 26 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow	.	.	Specific Conductance	Selenium (total)	Boron
DATA SOURCE	SLDMWA††	.	.	CVRWQCB	CVRWQCB	CVRWQCB
UNITS	cfs	.	.	µS/cm	µg/L	mg/L
Dec-05-2001	10	.	.	641	0.6	P
Dec-12-2001	10	.	.	685	0.7	P
Dec-19-2001	10	.	.	757	0.8	P
Dec-27-2001	10	.	.	629	0.8	P
Jan-02-2002	10	.	.	607	0.9	P
Jan-09-2002	10	.	.	532	<0.4	P
Jan-16-2002	10	.	.	648	1.5	P
Jan-23-2002	10	.	.	782	3.6	P
Jan-30-2002	10	.	.	711	2.5	P
Feb-06-2002	10	.	.	729	1.9	P
Feb-13-2002	10	.	.	779	3.5	P
Feb-20-2002	10	.	.	647	2.4	P
Feb-27-2002	10	.	.	738	2.2	P

Table 13. Weekly water quality monitoring at Station K (Agatha Canal).

See Table 26 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow	.	.	Specific Conductance	Selenium (total)	Boron
DATA SOURCE	SLDMWA††	.	.	CVRWQCB	CVRWQCB	CVRWQCB
UNITS	cfs	.	.	µS/cm	µg/L	mg/L
Dec-05-2001	35	.	.	788	0.6	P
Dec-12-2001	35	.	.	843	0.5	P
Dec-19-2001	35	.	.	711	<0.4	P
Dec-27-2001	35	.	.	988	0.4	P
Jan-02-2002	35	.	.	884	1.4	P
Jan-09-2002	35	.	.	632	<0.4	P
Jan-16-2002	35	.	.	586	0.8	P
Jan-23-2002	35	.	.	820	3.2	P
Jan-30-2002	35	.	.	615	1.2	P
Feb-06-2002	35	.	.	813	2.5	P
Feb-13-2002	35	.	.	765	2.2	P
Feb-20-2002	35	.	.	999	5.5	P
Feb-27-2002	35	.	.	742	1.4	P

Table 14. Weekly water quality monitoring at Station L2 (San Luis Canal at splits).

See Table 26 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow	.	.	Specific Conductance	Selenium (total)	Boron
DATA SOURCE	SLDMWA††	.	.	CVRWQCB	CVRWQCB	CVRWQCB
UNITS	cfs	.	.	µS/cm	µg/L	mg/L
Dec-05-2001	6	.	.	782	0.7	P
Dec-12-2001	0	.	.	1,560	1.5	P
Dec-19-2001	0	.	.	2,040	2.5	P
Dec-27-2001	22	.	.	1,650	1.7	P
Jan-02-2002	35	.	.	291	<0.4	P
Jan-09-2002	6	.	.	2,020	2.1	P
Jan-16-2002	0	.	.	1,750	2.4	P
Jan-23-2002	0	.	.	1,780	2.2	P
Jan-30-2002	0	.	.	2,240	3.0	P
Feb-06-2002	20	.	.	889	2.5	P
Feb-13-2002	20	.	.	915	3.0	P
Feb-20-2002	20	.	.	1,170	2.4	P
Feb-27-2002	20	.	.	932	1.8	P

Table 15. Weekly water quality monitoring at Station M2 (Santa Fe Canal at weir).

See Table 26 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow	.	.	Specific Conductance	Selenium (total)	Boron
DATA SOURCE	SLDMWA††	.	.	CVRWQCB	CVRWQCB	CVRWQCB
UNITS	cfs	.	.	µS/cm	µg/L	mg/L
Dec-05-2001	171	.	.	1,320	0.5	P
Dec-12-2001	108	.	.	1,410	0.4	P
Dec-19-2001	94	.	.	1,500	<0.4	P
Dec-27-2001	79	.	.	1,420	0.5	P
Jan-02-2002	128	.	.	1,470	0.7	P
Jan-09-2002	123	.	.	1,510	0.9	P
Jan-16-2002	101	.	.	1,590	1.4	P
Jan-23-2002	96	.	.	1,620	2.6	P
Jan-30-2002	102	.	.	1,570	2.3	P
Feb-06-2002	98	.	.	1,490	1.8	P
Feb-13-2002	85	.	.	1,790	1.5	P
Feb-20-2002	99	.	.	1,540	1.9	P
Feb-27-2002	97	.	.	1,510	1.3	P

Table 16. Weekly water quality monitoring at Station G (San Joaquin River at Fremont Ford).

See Table 26 for explanation of footnotes and agency abbreviations.

PARAMETER	.	Temperature	pH	Specific Conductance	Selenium (total)	Boron
DATA SOURCE	.	CVRWQCB	CVRWQCB	CVRWQCB	CVRWQCB	CVRWQCB
UNITS	.	°C		µS/cm	µg/L	mg/L
Dec-06-2001	.	10.2	7.4	1,320	<0.4	P
Dec-13-2001	.	8.6	7.7	2,110	0.5	P
Dec-20-2001	.	9.7	7.8	2,690	<0.4	P
Dec-27-2001	.	10.6	7.7	2,430	<0.4	P
Jan-03-2002	.	12.7	7.6	583	0.5	P
Jan-10-2002	.	11.7	8.0	1,000	<0.4	P
Jan-17-2002	.	8.0	7.6	1,540	0.5	P
Jan-24-2002	.	7.7	7.3	1,890	0.8	P
Jan-31-2002	.	7.0	7.7	1,760	<0.4	P
Feb-07-2002	.	10.5	7.4	1,760	0.7	P
Feb-14-2002	.	11.5	7.8	1,740	0.6	P
Feb-21-2002	.	14.3	7.3	1,390	0.8	P
Feb-28-2002	.	16.8	7.8	1,650	0.6	P

Table 17. Weekly water quality monitoring at Station H (San Joaquin River at Hills Ferry).
(Collected data intended for use with biological monitoring.)

See Table 26 for explanation of footnotes and agency abbreviations.

PARAMETER	.	.	.	Specific Conductance	Selenium (total)	Boron
DATA SOURCE	.	.	.	SLDMWA	SLDMWA	SLDMWA
UNITS	.	.	.	µS/cm	µg/L	mg/L
Dec-04-2001	.	.	.	1,740	2.7	1.2
Dec-11-2001	.	.	.	1,880	2.7	1.3
Dec-18-2001	.	.	.	2,640	3.7	1.7
Dec-28-2001	.	.	.	2,350	2.6	1.5
Jan-03-2002	.	.	.	950	2.0	0.6
Jan-08-2002	.	.	.	1,140	2.7	0.8
Jan-15-2001	.	.	.	1,890	2.6	1.3
Jan-22-2002	.	.	.	2,440	4.7	1.6
Jan-29-2002	.	.	.	2,660	4.5	1.6
Feb-05-2002	.	.	.	2,390	8.9	P
Feb-12-2002	.	.	.	2,250	6.4	1.6
Feb-19-2002	.	.	.	2,090	6.1	1.5

Table 18. Weekly water quality monitoring at Station N (San Joaquin River at Crow's Landing).

See Table 26 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow	Temperature	pH	Specific Conductance	Selenium (total)	Boron
DATA SOURCE	USGS	CVRWQCB	CVRWQCB	CVRWQCB	CVRWQCB	CVRWQCB
UNITS	cfs	°C		µS/cm	µg/L	mg/L
Dec-06-2001	1,170	10.5	7.8	1,010	1.2	P
Dec-13-2001	918	9.7	7.6	1,170	1.2	P
Dec-20-2001	745	9.7	7.9	1,240	1.6	P
Dec-27-2001	783	10.5	7.8	1,180	1.2	P
Jan-03-2002	2,020	13.0	7.7	650	1.0	P
Jan-10-2002	1340	12.5	8.0	1,020	1.1	P
Jan-17-2002	878	8.7	7.8	1,420	1.8	P
Jan-24-2002	727	7.6	7.8	1,640	2.7	P
Jan-31-2002	732	7.2	8.4	1,560	2.6	P
Feb-07-2002	818	10.6	8.0	1,440	3.5	P
Feb-14-2002	752	12.0	7.9	1,640	4.4	P
Feb-21-2002	874	14.3	7.8	1,500	3.5	P
Feb-28-2002	798	15.6	7.9	1,700	4.8	P

Table 19. Summary of fathead minnow (*Pimephales promelas*) larvae survival in 7-day tests using water samples collected from March 2001 to February 2002. 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	%	%	%	%	%	%
Mar-2001	100	93	93	90	95	100
Apr-2001	100	100	95	93	95	100
May-2001	88	97	90	90	90	100
Jun-2001	88	98	98	98	98	100
Jul-2001	90	93	98	100	93	98
Aug-2001	95	95	98	95	98	98
Sep-2001	98	100	90	100	100	98
Oct-2001	100	98	100	100	100	100
Nov-2001	98	83ε	60*	88	100	100
Dec-2001	98	55*	68*	90	98	100
Jan-2002	83	95	98	100	100	98
Feb-2002	93	90	93	95	93	100

Table 20. Summary of fathead minnow (*Pimephales promelas*) larvae growth in 7-day tests using water samples collected from March 2001 to February 2002. 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
Mar-2001	0.61	0.66	0.67	0.63	0.64	0.60
Apr-2001	0.64	0.72	0.71	0.73	0.67	0.57
May-2001	0.45	0.45	0.46	0.43	0.45	0.46
Jun-2001	0.61*	0.83	0.85	0.85	0.74	0.65
Jul-2001	0.42	0.39	0.48	0.47	0.45	0.44
Aug-2001	0.43	0.44	0.35	0.38	0.36	0.36
Sep-2001	0.43	0.43	0.44	0.42	0.34	0.36
Oct-2001	0.63	0.71	0.78	0.65	0.66	0.58
Nov-2001	0.70	0.49	0.49	0.59	0.67	0.52
Dec-2001	0.48	0.34*	0.41	0.55	0.47	0.50
Jan-2002	0.39	0.41	0.44	0.51	0.44	0.40
Feb-2002	0.55	0.47	0.58	0.55	0.52	0.42

Table 21. Summary of *Daphnia magna* survival in 7-day tests using water samples collected from March 2001 to February 2002. 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	%	%	%	%	%	%
Mar-2001	100	100	90	90	90	90
Apr-2001	100	100	100	100	89	89
May-2001	0‡‡	100	100	100	70	100
Jun-2001	50*	70*	70*	90	100	100
Jul-2001	100	100	60*	80	90	90
Aug-2001	50*	100	30*	100	90	90
Sep-2001	80	100	90	100	90	80
Oct-2001	90	100	90	90	70*†	90
Nov-2001	100	89	90	100	80	90
Dec-2001	90	100	90	90	100	100
Jan-2002	100	90	80	100	100	67†
Feb-2002	100	80	90	90	100	100

Table 22. Summary of *Daphnia magna* reproduction in 7-day tests using water samples collected from March 2001 to February 2002. 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
Mar-2001	11.7	21.9	19.3	15.6	13.4	17.8
Apr-2001	30.7	28.6	36.5	26.2	24.9	24.8
May-2001	0‡‡	25.0	27.5	23.3	13.1	25.2
Jun-2001	18.9*	28.3*	27.6*	47.9	44.5	36.4
Jul-2001	25.3	28.5	16.8	17.7	26.2	15.9
Aug-2001	11.7*	42.9	15.5*	52.5	27.1	36.3
Sep-2001	27.7	31.5	32.5	31.5	25.6	20.7
Oct-2001	39.5	39.1	29.8	35.3	21.1	31.7
Nov-2001	27.4	28.2	34.2	33.4	25.4	29.6
Dec-2001	41.3	45.9	43.3	42.4	45.1	36.7
Jan-2002	29.4	29.3	23.6	30.5	30.1	11.9
Feb-2002	42.8(*)	37.7	42.0	40.6	47.4	32.4

(*) Although reproduction values were less at Stations C, D, and F, they were not statistically different from the DMC water. This was due to the increased survival rate at Sation B.

Table 23. Summary of *Selenastrum capricornutum* growth in 4-day tests using water samples collected from March 2001 to February 2002. 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
Mar-2001	18.9	24.6	20.0	21.7	18.4	23.5
Apr-2001	9.9	10.5	10.2	5.8*	10.7	20.2
May-2001	10.1*❖	18.4	13.1	19.6	15.5	14.5
Jun-2001	4.2*	12.9*	10.3*	14.7*	21.8	16.4
Jul-2001	8.3	8.5	8.5	9.4	8.0	9.1
Aug-2001	10.4*	12.4	3.0*	15.6	13.8	10.0
Sep-2001	6.5*	13.0	11.3	12.3	10.8	9.6
Oct-2001	9.1	10.7	11.3	11.4	10.3	9.3
Nov-2001	6.0*	11.1	11.0	10.0	9.2 ‡‡‡	6.4 ‡‡‡
Dec-2001	7.5*	9.4	9.6	9.3	8.9 ‡‡‡	9.1 ‡‡‡
Jan-2002	6.32*‡‡‡	19.2	17.4	24.7	15.1	10.1
Feb-2002	8.7*	17.3	14.9*	12.7*	18.2	12.6

Table 24. Summary of selenium concentrations in grab water samples collected at study stations for use in laboratory toxicity tests, December 2001 to February 2002.

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
Dec-10-2001	55	<0.4	8.2	<0.4	<0.4
Dec-12-2001	45	<0.4	7.4	<0.4	<0.4
Dec-14-2001	47	<0.4	8.4	<0.4	<0.4
Jan-28-2002	61	<0.4	13	<0.4	<0.4
Jan-30-2002	56	<0.4	14	0.8	<0.4
Feb-01-2002	66	<0.4	13	0.5	<0.4
Feb-18-2002	61	0.7	20	0.9	1.3
Feb-20-2002	65	0.7	20	1.0	1.2
Feb-22-2002	70	0.8	22	0.9	1.0

Table 25. Summary of total suspended solids concentrations in grab water samples collected from December 2001 to February 2002.

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
Dec-10-2001	32	18	15	49	74
Dec-12-2001	40	8	13	48	25
Dec-14-2001	58	23	43	57	12
Jan-28-2002	55	23	26	74	52
Jan-30-2002	58	22	26	43	40
Feb-01-2002	74	19	28	101	29
Feb-18-2002	52	36	73	101	29
Feb-20-2002	34	48	40	81	40
Feb-22-2002	74	54	47	120	50

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 (10^6cell/mL) acceptability criteria.
‡	Control value exceeds suggested maximum variance (20%) acceptability criteria.
‡‡	Fungal growth observed on test organisms.
‡‡‡	Failed cell density requirement of 1E6 cells.
#	New testing laboratory with reporting limit of 0.4 µg/L as of June 1998.
❖	Based on definitive bioassay, NOEC is 50 percent

ε EPA Station C split sample results significantly different. See Table 19.

LOCATION	Station B	Station C	Station D	Station F	Delta Mendota Canal	Laboratory Control
DATA SOURCE	EPA	EPA	EPA	EPA	EPA	EPA
UNITS	%	%	%	%	%	%
Nov-2001	100	**58**	64	90	100	100