

GRASSLAND BYPASS PROJECT

MONTHLY DATA REPORT

April 2001

July 2, 2001

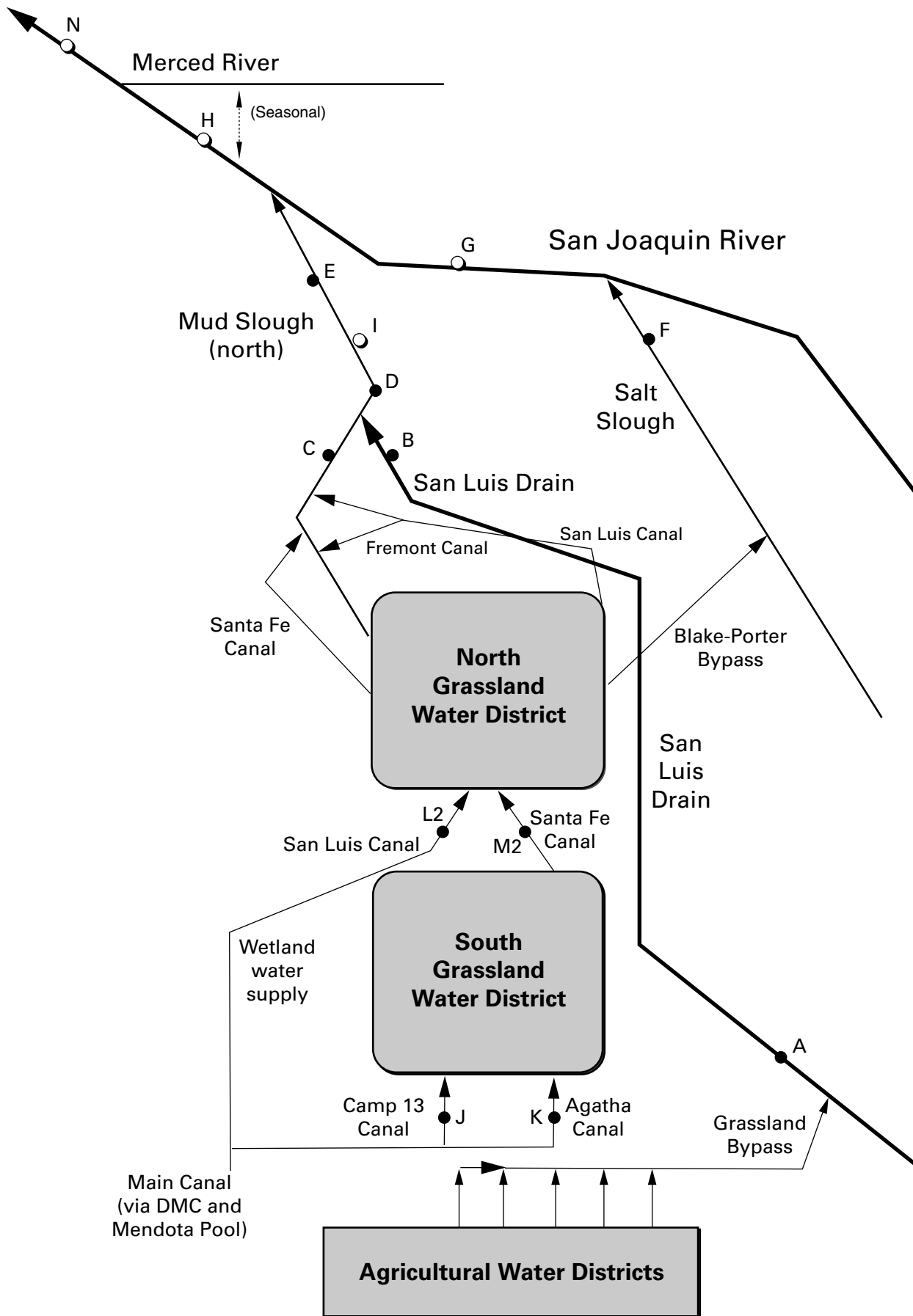
Preliminary Results

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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See Table 26 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow	Specific Conductance
DATA SOURCE	SLDMWA	SLDMWA
UNITS	cfs	µS/cm
Apr-01-2001	43	5,630
Apr-02-2001	41	5,760
Apr-03-2001	37	5,790
Apr-04-2001	40	5,610
Apr-05-2001	39	5,250
Apr-06-2001	35	5,180
Apr-07-2001	36	5,160
Apr-08-2001	36	5,060
Apr-09-2001	37	5,250
Apr-10-2001	38	5,240
Apr-11-2001	39	5,360
Apr-12-2001	39	5,420
Apr-13-2001	35	5,300
Apr-14-2001	34	5,450
Apr-15-2001	35	5,390
Apr-16-2001	36	5,280
Apr-17-2001	35	5,370
Apr-18-2001	33	5,430
Apr-19-2001	32	5,350
Apr-20-2001	34	5,040
Apr-21-2001	38	5,000
Apr-22-2001	38	4,960
Apr-23-2001	34	5,060
Apr-24-2001	35	4,250
Apr-25-2001	34	4,970
Apr-26-2001	39	4,690
Apr-27-2001	38	5,060
Apr-28-2001	37	4,970
Apr-29-2001	38	4,720
Apr-30-2001	36	4,450
.	.	.
Mean	37	5,180

Table 2. Continuous water monitoring at Station B (discharge from San Luis Drain), April 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
Apr-01-2001	41	20.8	7.8	5,220	89.0	19.7
Apr-02-2001	40	19.0	8.9	5,750	96.2	20.8
Apr-03-2001	41	17.3	8.8	5,740	82.9	18.3
Apr-04-2001	38	16.8	8.7	5,610	79.4	16.3
Apr-05-2001	39	16.9	8.4	5,600	86.0	18.1
Apr-06-2001	38	16.0	8.6	5,670	91.2	18.7
Apr-07-2001	35	15.0	8.4	5,700	96.1	18.1
Apr-08-2001	35	14.8	8.2	5,670	91.8	17.3
Apr-09-2001	35	15.1	7.7	5,230	80.6	15.2
Apr-10-2001	37	15.1	7.6	5,120	78.5	15.7
Apr-11-2001	37	15.5	7.9	5,100	64.4	12.9
Apr-12-2001	38	15.4	8.0	5,130	72.5	14.9
Apr-13-2001	37	16.4	7.8	5,390	86.3	17.2
Apr-14-2001	35	16.9	7.5	5,290	82.1	15.5
Apr-15-2001	34	17.8	7.9	5,510	77.8	14.3
Apr-16-2001	34	18.5	7.7	5,570	86.7	15.9
Apr-17-2001	34	19.3	7.5	5,470	87.6	16.1
Apr-18-2001	34	19.9	7.9	5,510	80.9	14.8
Apr-19-2001	32	19.5	8.2	5,640	83.9	14.5
Apr-20-2001	31	17.6	7.9	5,540	83.7	14.0
Apr-21-2001	33	16.9	7.9	5,440	79.8	14.2
Apr-22-2001	38	17.9	8.1	5,570	88.1	18.1
Apr-23-2001	37	19.1	7.9	5,580	81.4	16.2
Apr-24-2001	33	20.4	7.5	5,310	76.4	13.6
Apr-25-2001	34	22.4	7.5	5,030	71.2	13.1
Apr-26-2001	32	24.2	7.5	5,250	77.1	13.3
Apr-27-2001	37	24.6	7.8	5,320	76.9	15.3
Apr-28-2001	35	24.3	8.7	5,590	86.1	16.3
Apr-29-2001	34	23.5	8.6	5,550	89.6	16.4
Apr-30-2001	36	23.7	7.9	5,210	83.0	16.1
Mean	36	18.7	8.0	5,440	82.9	
Total						481

Load Limitation for April 2001	(lbs)	679
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**Table 3. Continuous water monitoring at Station D
(Mud Slough North downstream of drainage discharges), April 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
Apr-01-2001	73	20.3	4,410
Apr-02-2001	70	18.2	4,770
Apr-03-2001	78 e	NA	NA
Apr-04-2001	77 e	NA	NA
Apr-05-2001	79 e	NA	NA
Apr-06-2001	70 e	NA	NA
Apr-07-2001	65	14.9	4,180
Apr-08-2001	66	14.2	4,160
Apr-09-2001	68	14.7	3,880
Apr-10-2001	75	15.0	3,580
Apr-11-2001	89	15.6	NA
Apr-12-2001	95	15.6	3,070
Apr-13-2001	93	16.5	3,120
Apr-14-2001	91	16.9	3,130
Apr-15-2001	84	NA	NA
Apr-16-2001	77	NA	NA
Apr-17-2001	66	18.9	3,230
Apr-18-2001	57	19.0	4,820
Apr-19-2001	57	17.7	5,170
Apr-20-2001	58	15.1	4,780
Apr-21-2001	66	16.6	4,760
Apr-22-2001	76	NA	NA
Apr-23-2001	77 e	NA	NA
Apr-24-2001	73 e	NA	NA
Apr-25-2001	72 e	NA	NA
Apr-26-2001	72 e	NA	NA
Apr-27-2001	72 e	NA	NA
Apr-28-2001	71 e	NA	NA
Apr-29-2001	71 e	NA	NA
Apr-30-2001	70 e	NA	NA

Table 4. Continuous water monitoring at Station F (Salt Slough at Highway 165), April 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
Apr-01-2001	267	20.0	1,600
Apr-02-2001	277	17.5	1,570
Apr-03-2001	278	15.5	1,600
Apr-04-2001	288	15.3	1,640
Apr-05-2001	286	15.8	1,650
Apr-06-2001	256	15.2	1,630
Apr-07-2001	248	14.0	1,560
Apr-08-2001	268	13.8	1,410
Apr-09-2001	293	14.1	1,350
Apr-10-2001	312	14.6	1,310
Apr-11-2001	308	14.9	1,400
Apr-12-2001	273	14.8	1,470
Apr-13-2001	234	16.0	1,520
Apr-14-2001	202	16.5	1,630
Apr-15-2001	204	17.5	1,580
Apr-16-2001	209	18.6	1,510
Apr-17-2001	191	18.8	1,520
Apr-18-2001	168	19.3	1,620
Apr-19-2001	153	18.1	1,680
Apr-20-2001	197	15.3	1,470
Apr-21-2001	224	14.5	1,290
Apr-22-2001	235	16.3	1,170
Apr-23-2001	224	18.8	1,240
Apr-24-2001	213	21.0	1,280
Apr-25-2001	212	22.9	1,300
Apr-26-2001	210	23.7	1,280
Apr-27-2001	205	22.6	1,300
Apr-28-2001	202	21.3	1,300
Apr-29-2001	196	20.1	1,320
Apr-30-2001	202	20.7	1,280
.	.	.	.

Table 5. Continuous water monitoring at Station N (San Joaquin River at Crow's Landing), April 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
Apr-01-2001	835	20.2	1,840	5.7
Apr-02-2001	841	18.8	1,820	5.0
Apr-03-2001	850	17.0	1,680	5.2
Apr-04-2001	832	16.5	1,750	5.4
Apr-05-2001	841	16.7	1,770	5.1
Apr-06-2001	891	16.1	1,670	4.3
Apr-07-2001	900	15.0	1,580	4.9
Apr-08-2001	879	14.4	1,580	5.2
Apr-09-2001	957	14.6	1,490	4.5
Apr-10-2001	971	14.8	1,360	4.4
Apr-11-2001	968	16.0	1,290	3.6
Apr-12-2001	967	15.7	1,330	3.8
Apr-13-2001	947	16.4	1,340	3.5
Apr-14-2001	922	16.8	1,370	3.8
Apr-15-2001	916	17.7	1,410	3.8
Apr-16-2001	883	18.7	1,410	3.6
Apr-17-2001	825	19.2	1,420	3.6
Apr-18-2001	802	19.5	1,420	4.2
Apr-19-2001	856	18.6	1,320	3.8
Apr-20-2001	1,150	16.5	1,120	3.2
Apr-21-2001	1,580	14.9	846	1.9
Apr-22-2001	1,830	15.4	672	1.7
Apr-23-2001	2,070	16.8	667	1.6
Apr-24-2001	2,120	18.2	591	1.7
Apr-25-2001	2,050	19.6	584	1.5
Apr-26-2001	2,010	20.4	595	1.4
Apr-27-2001	1,900	20.1	599	1.4
Apr-28-2001	1,840	19.4	616	1.7
Apr-29-2001	1,490	18.8	736	1.8
Apr-30-2001	1,300	NA	878	2.4

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
Feb-07-2001	58	.	.	4,240	100	Selenium and boron analyses		
Feb-14-2001	61	.	.	4,620	NA	from weekly grab		
Feb-21-2001	57	.	.	4,760	130	discontinued 2/1/00.		
Feb-28-2001	63	.	.	4,930	93	.	.	.
Mar-07-2001	83	.	.	5,110	NA	.	.	.
Mar-14-2001	58	.	.	5,620	84	.	.	.
Mar-21-2001	46	.	.	5,410	77	.	.	.
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	.	.	.

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
Feb-06-2001	58	.	.	4,220	.	60.2	.	6.3
Feb-13-2001	61	.	.	4,490	.	NA	.	6.7
Feb-20-2001	60	.	.	4,710	.	74.9	.	7.2
Feb-27-2001	64	.	.	4,820	.	76.6	.	7.4
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

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
Feb-01-2001	37	8.4	7.3	4,340	43	70.4	Selenium	6.6
Feb-08-2001	58	12.2	8.1	4,180	26	57.2	(dissolved)	6.3
Feb-15-2001	61	10.8	8.1	4,370	32	65.6	analyses	6.2
Feb-22-2001	57	12.9	7.8	4,750	31	71.1	discontinued	6.5
Mar-01-2001	63	12.1	7.4	4,700	37	73.5	1/15/2000.	7.1
Mar-08-2001	82	16.1	7.1	4,580	35	69.1	.	6.5
Mar-15-2001	58	17.2	8.3	5,410	33	88.4	.	8.3
Mar-22-2001	46	20.4	8.5	5,730	54	93.9	.	9.6
Mar-29-2001	52	20.3	8.3	5,200	47	72.2	.	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

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
Feb-01-2001	170	8.6	7.3	1,730	0.5	1.5
Feb-08-2001	140	8.4	8.0	1,900	0.6	1.7
Feb-15-2001	174	11.6	8.2	1,850	0.6	1.6
Feb-22-2001	152	12.7	7.9	1,980	0.7	1.6
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

++ 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
Feb-01-2001	207	8.5	7.8	2,300	12.1	2.6
Feb-08-2001	198	9.1	8.1	2,660	17.0	3.1
Feb-15-2001	235	11.8	8.2	2,700	19.0	3.1
Feb-22-2001	209	12.3	8.0	2,920	21.4	3.2
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

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
Feb-01-2001	173	8.5	6.8	1,900	0.9	1.2
Feb-08-2001	199	8.6	7.8	1,680	0.8	0.9
Feb-15-2001	252	10.5	7.5	1,560	1.3	0.8
Feb-22-2001	236	17.0	7.6	1,600	0.9	0.7
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

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
Feb-01-2001	.	8.1	7.6	1,570	0.5	0.9
Feb-08-2001	.	8.9	7.6	1,720	0.7	0.9
Feb-15-2001	.	9.7	7.3	1,200	1.1	0.6
Feb-22-2001	.	14.6	7.8	1,620	0.7	0.6
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

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
Feb-06-2001	.	.	.	2,150	6.3	1.6
Feb-13-2001	.	.	.	1,790	6.6	1.4
Feb-20-2001	.	.	.	2,020	7.6	1.6
Feb-27-2001	.	.	.	1,350	4.9	1.0
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

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
Feb-07-2001	6	.	.	764	1.4	0.4
Feb-14-2001	5	.	.	715	1.8	0.4
Feb-21-2001	5	.	.	670	2.2	0.4
Feb-28-2001	5	.	.	588	2.3	0.4
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

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
Feb-07-2001	40	.	.	912	1.6	0.6
Feb-14-2001	40	.	.	964	2.9	0.7
Feb-21-2001	40	.	.	920	2.4	0.6
Feb-28-2001	40	.	.	815	3.3	0.6
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

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
Feb-07-2001	0	.	.	1,880	2.9	2.0
Feb-14-2001	0	.	.	2,270	3.9	2.8
Feb-21-2001	10	.	.	1,270	2.8	1.3
Feb-28-2001	10	.	.	1,360	2.8	1.2
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

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
Feb-07-2001	129	.	.	1,720	2.3	1.8
Feb-14-2001	125	.	.	1,590	2.0	1.5
Feb-21-2001	111	.	.	1,800	1.9	2.1
Feb-28-2001	134	.	.	1,590	2.2	1.7
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

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
Feb-01-2001	1,030	8.2	7.4	1,350	2.3	1.0
Feb-08-2001	875	10.6	7.6	1,560	3.8	1.2
Feb-15-2001	1,260	10.0	7.4	1,290	4.7	1.0
Feb-22-2001	983	11.9	7.8	1,550	4.8	1.1
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

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

Table 19. Summary of fathead minnow (*Pimephales promelas*) larvae growth in 7-day tests using water samples collected from May 2000 to April 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
May-2000	0.27	0.28	0.36	0.35	0.27	0.33
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

Table 20. Summary of *Daphnia magna* survival in 7-day tests using water samples collected from May 2000 to April 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	%	%	%	%	%	%
May-2000	100	100	100	100	100	90
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

Table 21. Summary of *Daphnia magna* reproduction in 7-day tests using water samples collected from May 2000 to April 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
May-2000	13.4	18.5	12.5	9.7	11.4	17.7
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

Table 22. Summary of *Selenastrum capricornutum* growth in 4-day tests using water samples collected from May 2000 to April 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 ⁵ cells/mL	10 ⁵ cells/mL	10 ⁵ cells/mL	10 ⁵ cells/mL	10 ⁵ cells/mL	10 ⁵ cells/mL
May-2000	16.2	16.3	17.3	16.5	15.2	17.2
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

Table 23. Summary of selenium concentrations in grab water samples collected at study stations for use in laboratory toxicity tests, February 2001 to April 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
Feb-12-2001	65	0.8	17	0.6	<0.4
Feb-14-2001	70	<0.4	20	0.8	<0.4
Feb-16-2001	68	<0.4	19	0.4	<0.4
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

Table 24. Summary of sulfate concentrations in grab water samples collected at study stations for use in laboratory toxicity tests, February 2001 to April 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
Feb-12-2001	1,340	276	553	199	60
Feb-14-2001	1,350	290	588	202	31
Feb-16-2001	1,360	299	595	220	33
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

Table 25. Summary of total suspended solids concentrations in grab water samples collected from February 2001 to April 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
Feb-12-2001	64	40	54	44	14
Feb-14-2001	71	47	36	52	20
Feb-16-2001	66	56	39	52	15
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

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 ($p < 0.05$)
†	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.
**	Sample re-analyzed and result confirmed.