GRASSLAND BYPASS PROJECT

QUARTERLY DATA REPORT

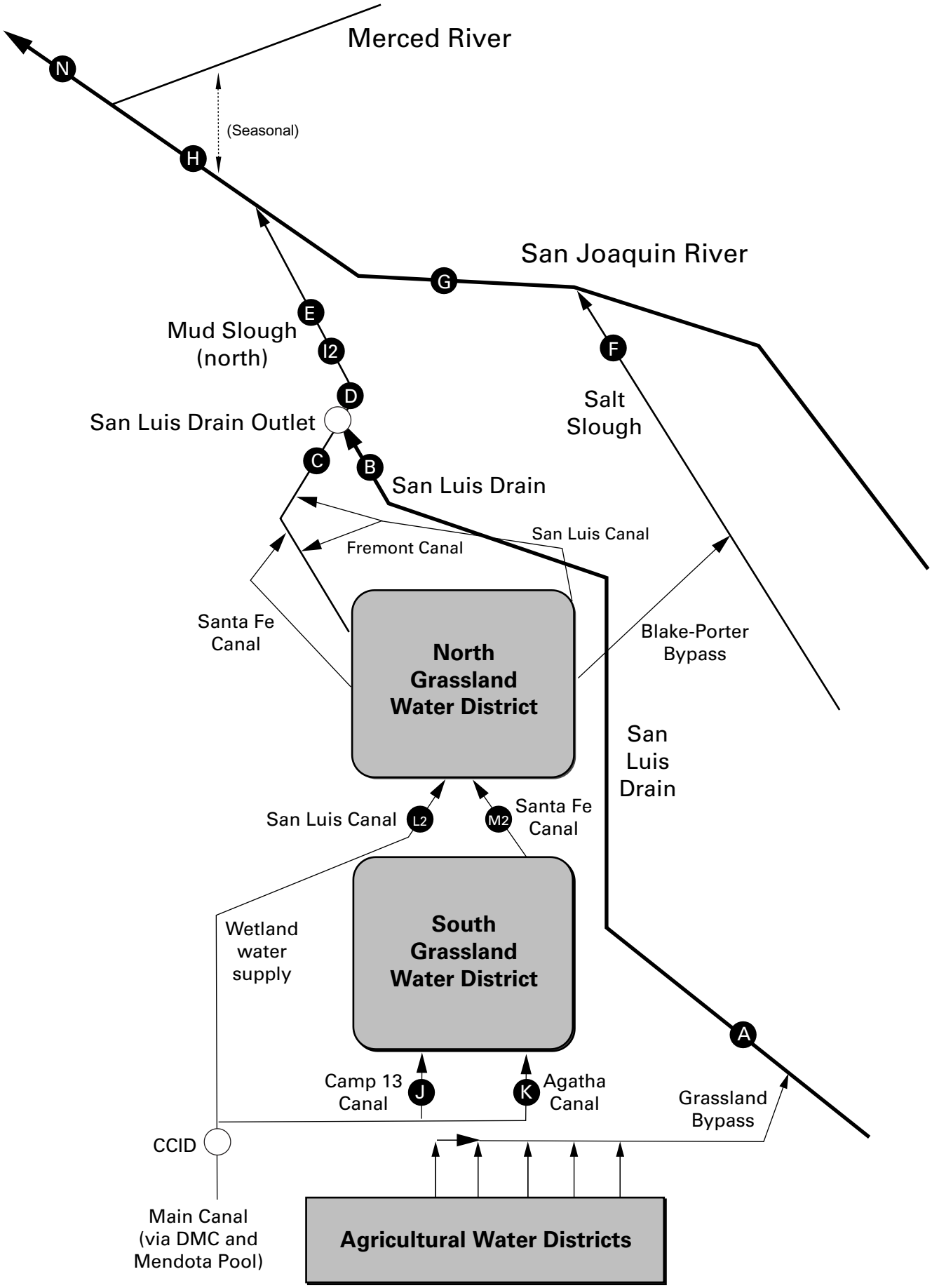
October, November and December 2009

August 2010

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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(Seasonal)
H
San Joaquin River
G
E
Mud Slough
(north)
I2
F
D
Salt
Slough
San Luis Drain Outlet
C
B
San Luis Drain
San Luis Canal
Fremont Canal
Santa Fe
Canal
Blake-Porter
Bypass
North
Grassland
Water District
San
Luis
Drain
San Luis Canal
L2
M2
Santa Fe
Canal
Wetland
water
supply
South
Grassland
Water District
A
Camp 13
Canal
J
K
Agatha
Canal
Grassland
Bypass
CCID
Main Canal
(via DMC and
Mendota Pool)
Agricultural Water Districts

GRASSLAND BYPASS PROJECT

QUARTERLY DATA REPORT

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PRELIMINARY RESULTS

Table 1. Continuous water monitoring at Station A (inflow to San Luis Drain), October, November, December 2009.

See Table 33 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow	Specific Conductance	Flow	Specific Conductance	Flow	Specific Conductance
DATA SOURCE	SLDMWA	SLDMWA	SLDMWA	SLDMWA	SLDMWA	SLDMWA
UNITS	cfs	µS/cm	cfs	µS/cm	cfs	µS/cm
Month	October	October	November	November	December	December
Day 1	8	3,810	14	3,710	13	3,710
Day 2	5	3,950	20	3,910	15	3,900
Day 3	6	3,850	23	3,640	14	3,770
Day 4	4	3,890	20	3,520	14	3,810
Day 5	4	3,860	15	3,510	12	3,970
Day 6	5	4,000	13	3,670	12	4,090
Day 7	6	4,010	14	3,800	17	4,220
Day 8	7	4,000	17	3,450	18	4,580
Day 9	12	3,300	17	3,240	17	4,460
Day 10	10	2,440	17	3,230	15	4,260
Day 11	10	2,560	18	3,600	19	4,170
Day 12	9	3,210	21	3,180	23	4,230
Day 13	9	3,030	20	3,310	26	4,010
Day 14	14	3,600	19	3,200	23	4,030
Day 15	10	3,860	18	3,410	19	4,230
Day 16	10	3,780	17	3,760	17	4,130
Day 17	10	3,930	18	3,600	17	4,160
Day 18	11	3,790	15	3,730	17	4,240
Day 19	11	3,740	13	3,950	17	4,350
Day 20	15	3,670	13	3,970	16	4,260
Day 21	19	3,870	13	3,970	16	4,270
Day 22	19	3,620	14	3,820	14	4,250
Day 23	20	3,580	16	3,790	14	4,450
Day 24	22	3,500	14	3,920	22	4,470
Day 25	23	3,580	11	3,830	20	4,170
Day 26	19	3,920	12	3,880	20	4,320
Day 27	16	3,910	16	3,890	19	4,530
Day 28	15	3,960	17	3,980	18	4,660
Day 29	13	4,050	15	3,950	13	4,470
Day 30	12	3,860	16	3,690	13	4,390
Day 31	13	3,830	.	.	15	4,240
Mean	12	3,640	13	3,690	10	3,700

PRELIMINARY RESULTS

Table 2a. Continuous water monitoring at Stations B and B2 (San Luis Drain Terminus), October 2009.

See Table 33 for explanation of footnotes and agency abbreviations.

PARAMETER	San Luis Drain Outlet Flow	Temperature	Boron	Specific Conductance	Selenium (total)	Selenium (total) Load
DATA SOURCE	SLDMWA♦	SLDMWA	CVRWQCB	SLDMWA	CVRWQCB	Computed
UNITS	cfs	°C	mg/L	µS/cm	µg/L	lbs
Oct-01-2009	12	18.9	6.9	4,250	16.3	1.0
Oct-02-2009	10	18.6	6.6	3,930	14.5	0.8
Oct-03-2009	9	19.0	6.1	3,820	12.1	0.6
Oct-04-2009	8	18.2	6.6	3,600	10.5	0.4
Oct-05-2009	8	17.9	7.2	3,530	11.9	0.5
Oct-06-2009	7	17.5	6.9	3,740	12.1	0.5
Oct-07-2009	8	17.7	7.0	3,860	12.2	0.5
Oct-08-2009	8	18.2	6.6	3,660	11.8	0.5
Oct-09-2009	9	18.6	6.8	3,630	10.5	0.5
Oct-10-2009	13	18.9	6.8	3,550	11.7	0.8
Oct-11-2009	13	19.3	7.0	3,650	12.8	0.9
Oct-12-2009	13	18.9	7.0	3,840	11.9	0.8
Oct-13-2009	18	17.0	6.6	3,660	10.3	1.0
Oct-14-2009	16	17.2	6.6	3,410	9.4	0.8
Oct-15-2009	17	19.2	7.4	3,640	12.0	1.1
Oct-16-2009	15	21.0	5.6	3,870	11.2	0.9
Oct-17-2009	15	21.5	4.3	3,020	9.2	0.7
Oct-18-2009	15	22.1	4.6	2,810	11.9	0.9
Oct-19-2009	15	21.1	5.0	3,270	13.6	1.1
Oct-20-2009	15	19.9	5.7	3,220	16.5	1.4
Oct-21-2009	19	19.1	6.4	3,810	21.6	2.2
Oct-22-2009	22	19.5	6.7	3,890	16.3	1.9
Oct-23-2009	23	19.8	6.8	3,920	16.0	2.0
Oct-24-2009	24	20.0	6.9	3,890	19.4	2.5
Oct-25-2009	25	19.8	6.9	3,970	26.9	3.7
Oct-26-2009	27	19.5	6.9	4,320	31.6	4.5
Oct-27-2009	19	16.7	6.5	4,140	28.2	2.9
Oct-28-2009	20	12.4	6.8	4,200	34.4	3.6
Oct-29-2009	21	11.5	6.6	4,150	31.2	3.6
Oct-30-2009	18	12.3	6.7	4,200	31.4	3.1
Oct-31-2009	17	13.2	6.6	4,270	30.5	2.7
Mean	15	18.2	6.5	3,770	17.1	1.6
Total Acre-feet	**940**					
Total (lbs)						**48**

Load Limitation for October 2009 (lbs)	**246**

PRELIMINARY RESULTS

Table 2a. Continuous water monitoring at Stations B and B2 (San Luis Drain Terminus), November 2009.

See Table 33 for explanation of footnotes and agency abbreviations.

PARAMETER	San Luis Drain Outlet Flow	Temperature	Boron	Specific Conductance	Selenium (total)	Selenium (total) Load
DATA SOURCE	SLDMWA♦	SLDMWA	CVRWQCB	SLDMWA	CVRWQCB	Computed
UNITS	cfs	°C	mg/L	µS/cm	µg/L	lbs
Nov-01-2009	17	14.6	6.9	4,440	37.0	3.4
Nov-02-2009	18	15.7	7.0	4,360	32.6	3.2
Nov-03-2009	22	16.7	6.9	4,380	31.3	3.7
Nov-04-2009	25	17.4	7.0	4,400	28.7	3.8
Nov-05-2009	22	17.5	6.6	4,230	26.9	3.2
Nov-06-2009	18	17.4	6.7	4,150	28.6	2.8
Nov-07-2009	15	17.5	7.5	4,320	30.9	2.6
Nov-08-2009	17	15.9	6.6	4,440	32.8	3.0
Nov-09-2009	19	14.8	5.8	4,180	27.8	2.9
Nov-10-2009	20	14.7	5.9	4,020	27.6	3.0
Nov-11-2009	20	14.7	5.6	3,950	28.0	3.1
Nov-12-2009	21	14.4	6.2	4,040	31.3	3.6
Nov-13-2009	23	13.4	6.2	4,220	30.9	3.9
Nov-14-2009	23	12.8	5.5	3,760	26.3	3.3
Nov-15-2009	22	12.5	5.6	3,670	28.3	3.4
Nov-16-2009	21	12.4	6.0	3,920	30.8	3.5
Nov-17-2009	20	12.4	5.4	3,820	28.1	3.0
Nov-18-2009	20	12.6	5.7	3,610	26.2	2.8
Nov-19-2009	19	11.8	5.6	3,720	27.9	2.9
Nov-20-2009	17	11.6	5.5	3,510	26.9	2.4
Nov-21-2009	16	11.6	5.6	3,800	30.8	2.7
Nov-22-2009	17	11.5	6.2	4,060	33.8	3.0
Nov-23-2009	17	11.7	6.0	4,110	32.0	2.9
Nov-24-2009	19	11.6	6.0	3,810	31.1	3.2
Nov-25-2009	18	11.7	6.1	4,230	30.6	3.0
Nov-26-2009	15	11.8	5.9	4,220	32.9	2.7
Nov-27-2009	16	12.1	5.8	4,330	32.8	2.8
Nov-28-2009	17	11.0	5.7	4,120	29.2	2.7
Nov-29-2009	22	10.2	6.0	4,080	26.7	3.1
Nov-30-2009	19	10.1	5.8	4,290	28.7	2.9
.	.	.	.	.	.	.
Mean	19	13.5	6.1	4,070	29.9	3.1
Total Acre-feet	**1,150**					
Total (lbs)						**93**

Load Limitation for November 2009 (lbs)	**179**

PRELIMINARY RESULTS

Table 2a. Continuous water monitoring at Stations B and B2 (San Luis Drain Terminus), December 2009.

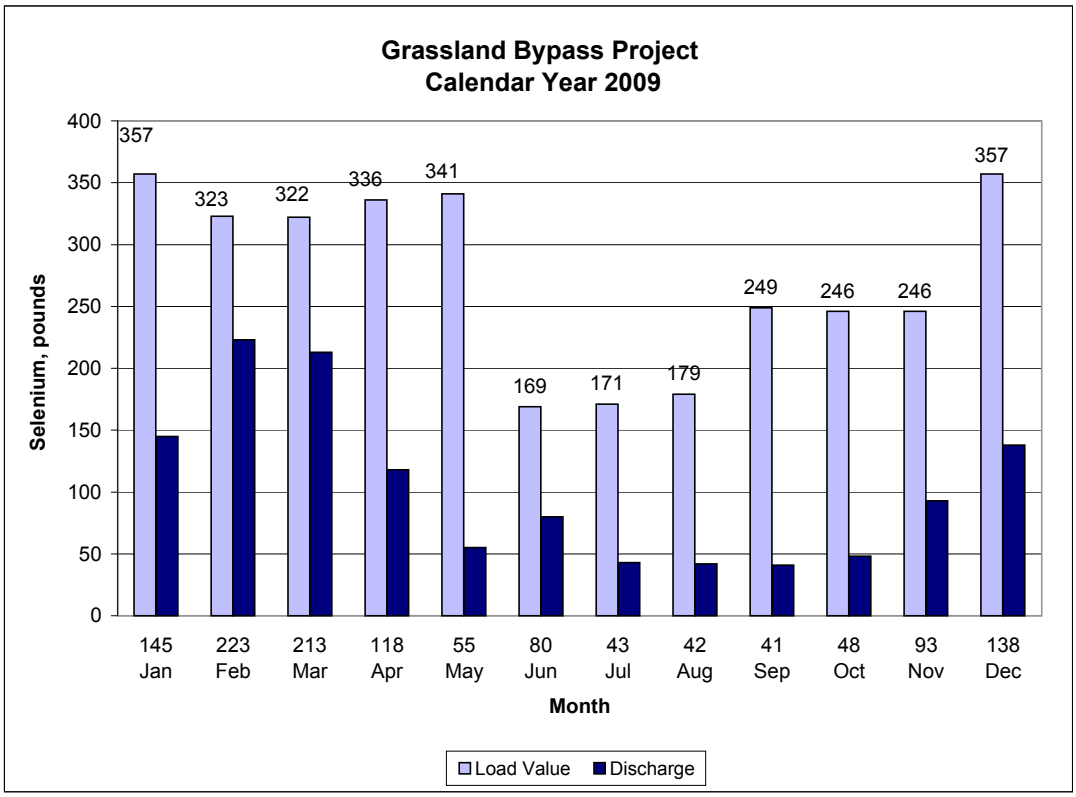
See Table 33 for explanation of footnotes and agency abbreviations.

PARAMETER	San Luis Drain Outlet Flow	Temperature	Boron	Specific Conductance	Selenium (total)	Selenium (total) Load
DATA SOURCE	SLDMWA♦	SLDMWA	CVRWQCB	SLDMWA	CVRWQCB	Computed
UNITS	cfs	°C	mg/L	µS/cm	µg/L	lbs
Dec-01-2009	19	10.4	5.4	4,080	28.5	2.9
Dec-02-2009	16	10.5	6.2	4,190	41.6	3.7
Dec-03-2009	18	10.3	6.5	4,320	48.3	4.6
Dec-04-2009	18	10.2	6.7	4,430	41.2	4.0
Dec-05-2009	17	10.3	5.8	4,370	42.8	3.9
Dec-06-2009	16	8.8	5.8	4,140	40.0	3.5
Dec-07-2009	16	8.2	5.9	4,050	33.7	3.0
Dec-08-2009	21	7.1	7.2	4,170	32.0	3.6
Dec-09-2009	22	7.0	6.1	4,090	39.8	4.7
Dec-10-2009	21	7.5	5.9	4,170	36.4	4.1
Dec-11-2009	20	8.2	6.5	4,260	28.8	3.1
Dec-12-2009	23	9.0	7.0	4,420	34.7	4.3
Dec-13-2009	29	10.3	7.4	4,870	41.8	6.5
Dec-14-2009	29	10.6	7.1	4,790	40.6	6.4
Dec-15-2009	27	11.3	7.0	4,510	36.7	5.3
Dec-16-2009	23	11.4	7.4	4,800	43.0	5.4
Dec-17-2009	21	11.3	7.3	4,680	42.0	4.8
Dec-18-2009	21	11.5	7.3	4,680	38.9	4.5
Dec-19-2009	21	11.7	7.3	4,560	40.2	4.6
Dec-20-2009	21	11.6	7.7	4,670	38.2	4.4
Dec-21-2009	20	11.4	7.3	4,600	35.6	3.9
Dec-22-2009	18	10.5	7.5	4,630	40.4	3.9
Dec-23-2009	19	8.5	7.5	4,690	38.7	3.9
Dec-24-2009	19	8.0	7.8	4,840	36.7	3.7
Dec-25-2009	24	8.1	7.9	4,790	37.7	5.0
Dec-26-2009	24	8.1	7.9	4,680	36.6	4.7
Dec-27-2009	24	8.7	7.6	4,600	36.3	4.7
Dec-28-2009	23	9.0	8.4	4,770	40.5	5.0
Dec-29-2009	22	9.5	8.2	5,060	55.8	6.5
Dec-30-2009	18	10.2	7.7	4,700	52.9	5.1
Dec-31-2009	16	10.5	8.1	4,700	52.3	4.6
Mean	21	9.7	7.0	4,530	39.8	4.5
Total Acre-feet	**1,280**					
Total (lbs)						**138**

Load Limitation for December 2009 (lbs)	**357**

PRELIMINARY RESULTS

Figure 2b. Monthly selenium discharges from the terminus of the San Luis Drain into Mud Slough compared to load values.



PRELIMINARY RESULTS

Table 3. Continuous water monitoring at Station D (Mud Slough North downstream of drainage discharges), October 2009.

See Table 33 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow	Temperature	Specific Conductance
DATA SOURCE	USGS	USGS	USGS
UNITS	cfs	°C	µS/cm
Oct-01-2009	39	18.2	2,100
Oct-02-2009	36	18.7	2,070
Oct-03-2009	40	19.1	1,740
Oct-04-2009	48	17.6	1,480
Oct-05-2009	48	16.9	1,530
Oct-06-2009	46	17.0	1,590
Oct-07-2009	47	17.6	1,650
Oct-08-2009	57	18.0	1,480
Oct-09-2009	61	18.3	1,510
Oct-10-2009	75	18.8	1,520
Oct-11-2009	75	18.9	1,560
Oct-12-2009	84	17.9	1,530
Oct-13-2009	137	16.3	1,350
Oct-14-2009	253	17.2	1,080
Oct-15-2009	310	20.1	1,100
Oct-16-2009	279	21.3	1,140
Oct-17-2009	280	21.8	1,110
Oct-18-2009	284	22.2	1,110
Oct-19-2009	249	20.3	1,210
Oct-20-2009	193	18.6	1,300
Oct-21-2009	176	18.5	1,360
Oct-22-2009	164	18.9	1,530
Oct-23-2009	148	19.3	1,660
Oct-24-2009	138	19.6	1,740
Oct-25-2009	295	19.2	1,350
Oct-26-2009	214	19.0	1,810
Oct-27-2009	130	16.3	1,880
Oct-28-2009	131	11.8	1,720
Oct-29-2009	130	11.3	1,810
Oct-30-2009	99	12.7	2,010
Oct-31-2009	90	14.2	2,100
Mean	141	17.9	1,550

PRELIMINARY RESULTS

Table 3. Continuous water monitoring at Station D (Mud Slough North downstream of drainage discharges), November 2009.

See Table 33 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow	Temperature	Specific Conductance
DATA SOURCE	USGS	USGS	USGS
UNITS	cfs	°C	µS/cm
Nov-01-2009	80	15.6	2,350
Nov-02-2009	79	16.6	2,380
Nov-03-2009	83	17.2	2,470
Nov-04-2009	85	17.4	2,570
Nov-05-2009	82	17.0	2,470
Nov-06-2009	76	17.2	2,440
Nov-07-2009	70	16.9	2,510
Nov-08-2009	68	14.9	2,660
Nov-09-2009	70	14.0	2,660
Nov-10-2009	74	14.3	2,560
Nov-11-2009	72	14.3	2,590
Nov-12-2009	70	14.0	2,710
Nov-13-2009	69	13.0	2,840
Nov-14-2009	68	12.6	2,710
Nov-15-2009	76	12.3	2,470
Nov-16-2009	75	12.2	2,550
Nov-17-2009	76	12.3	2,480
Nov-18-2009	76	12.6	2,470
Nov-19-2009	73	11.6	2,530
Nov-20-2009	82	11.5	2,280
Nov-21-2009	78	11.5	2,430
Nov-22-2009	81	11.6	2,450
Nov-23-2009	76	11.8	2,600
Nov-24-2009	74	11.5	2,630
Nov-25-2009	71	11.7	2,800
Nov-26-2009	65	11.9	2,810
Nov-27-2009	66	12.2	2,860
Nov-28-2009	74	10.9	2,770
Nov-29-2009	75	10.1	2,850
Nov-30-2009	73	10.1	2,860
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Mean	75	13.4	2,590

PRELIMINARY RESULTS

Table 3. Continuous water monitoring at Station D (Mud Slough North downstream of drainage discharges), December 2009.

See Table 33 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow	Temperature	Specific Conductance
DATA SOURCE	USGS	USGS	USGS
UNITS	cfs	°C	µS/cm
Dec-01-2009	75	10.5	2,750
Dec-02-2009	74	10.4	2,740
Dec-03-2009	72	10.3	2,870
Dec-04-2009	70	10.2	2,940
Dec-05-2009	79	10.3	2,750
Dec-06-2009	73	8.5	2,800
Dec-07-2009	80	8.1	2,660
Dec-08-2009	96	7.0	2,530
Dec-09-2009	96	6.9	2,560
Dec-10-2009	97	7.7	2,520
Dec-11-2009	101	8.7	2,530
Dec-12-2009	138	9.6	2,360
Dec-13-2009	199	10.3	2,140
Dec-14-2009	214	10.8	2,120
Dec-15-2009	194	11.2	2,110
Dec-16-2009	177	11.1	2,130
Dec-17-2009	162	11.1	2,180
Dec-18-2009	155	11.4	2,240
Dec-19-2009	154	11.3	2,210
Dec-20-2009	142	10.9	2,310
Dec-21-2009	134	11.0	2,310
Dec-22-2009	119	10.3	2,380
Dec-23-2009	102	8.3	2,530
Dec-24-2009	93	8.0	2,680
Dec-25-2009	93	8.1	2,850
Dec-26-2009	94	8.2	2,830
Dec-27-2009	99	9.2	2,740
Dec-28-2009	100	9.7	2,720
Dec-29-2009	99	10.1	2,800
Dec-30-2009	94	10.9	2,650
Dec-31-2009	94	10.9	2,580
Mean	115	9.7	2,530

PRELIMINARY RESULTS

Table 4. Continuous water monitoring at Station F (Salt Slough at Highway 165), October 2009.

See Table 33 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow	Temperature	Specific Conductance
DATA SOURCE	USGS	USGS	USGS
UNITS	cfs	°C	µS/cm
Oct-01-2009	50	17.5	1,500
Oct-02-2009	57	18.2	1,440
Oct-03-2009	59	18.6	1,390
Oct-04-2009	66	16.8	1,340
Oct-05-2009	70	16.2	1,280
Oct-06-2009	65	16.3	1,300
Oct-07-2009	75	16.9	1,260
Oct-08-2009	73	17.4	1,260
Oct-09-2009	66	17.7	1,300
Oct-10-2009	63	18.1	1,310
Oct-11-2009	69	18.1	1,280
Oct-12-2009	77	17.2	1,260
Oct-13-2009	96	16.0	1,170
Oct-14-2009	141	17.2	1,130
Oct-15-2009	186	19.1	1,030
Oct-16-2009	189	20.2	1,020
Oct-17-2009	170	20.6	1,150
Oct-18-2009	145	20.9	1,280
Oct-19-2009	133	19.3	1,230
Oct-20-2009	135	18.1	1,210
Oct-21-2009	120	17.7	1,230
Oct-22-2009	107	18.0	1,310
Oct-23-2009	94	18.4	1,340
Oct-24-2009	106	18.7	1,310
Oct-25-2009	115	18.4	1,180
Oct-26-2009	124	18.3	1,150
Oct-27-2009	132	16.0	1,120
Oct-28-2009	125	12.4	1,220
Oct-29-2009	117	11.8	1,250
Oct-30-2009	109	12.8	1,320
Oct-31-2009	113	13.7	1,330
Mean	105	17.3	1,250

PRELIMINARY RESULTS

Table 4. Continuous water monitoring at Station F (Salt Slough at Highway 165), November 2009.

See Table 33 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow	Temperature	Specific Conductance
DATA SOURCE	USGS	USGS	USGS
UNITS	cfs	°C	µS/cm
Nov-01-2009	112	14.8	1,310
Nov-02-2009	120	15.7	1,290
Nov-03-2009	118	16.2	1,290
Nov-04-2009	124	16.4	1,270
Nov-05-2009	115	16.2	1,350
Nov-06-2009	109	16.4	1,370
Nov-07-2009	108	16.3	1,370
Nov-08-2009	109	14.5	1,380
Nov-09-2009	120	13.5	1,310
Nov-10-2009	124	13.5	1,290
Nov-11-2009	124	13.4	1,310
Nov-12-2009	124	13.2	1,360
Nov-13-2009	127	12.3	1,370
Nov-14-2009	129	11.9	1,360
Nov-15-2009	124	11.7	1,390
Nov-16-2009	133	11.3	1,330
Nov-17-2009	143	11.2	1,240
Nov-18-2009	136	11.8	1,290
Nov-19-2009	117	11.1	1,390
Nov-20-2009	115	10.9	1,460
Nov-21-2009	116	11.0	1,470
Nov-22-2009	121	11.1	1,420
Nov-23-2009	126	11.2	1,390
Nov-24-2009	131	10.9	1,380
Nov-25-2009	128	11.0	1,330
Nov-26-2009	133	11.1	1,270
Nov-27-2009	136	11.2	1,190
Nov-28-2009	143	10.6	1,240
Nov-29-2009	137	10.1	1,360
Nov-30-2009	126	9.9	1,460
.	.	.	.
Mean	124	12.7	1,340

PRELIMINARY RESULTS

Table 4. Continuous water monitoring at Station F (Salt Slough at Highway 165), December 2009.

See Table 33 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow	Temperature	Specific Conductance
DATA SOURCE	USGS	USGS	USGS
UNITS	cfs	°C	µS/cm
Dec-01-2009	110	10.2	1,570
Dec-02-2009	98	10.2	1,640
Dec-03-2009	97	9.9	1,630
Dec-04-2009	96	9.9	1,560
Dec-05-2009	86	9.9	1,530
Dec-06-2009	80	8.5	1,570
Dec-07-2009	77	8.4	1,670
Dec-08-2009	71	7.5	1,720
Dec-09-2009	70	7.6	1,750
Dec-10-2009	70	8.6	1,800
Dec-11-2009	69	9.8	1,830
Dec-12-2009	72	10.8	1,820
Dec-13-2009	87	11.3	1,780
Dec-14-2009	101	11.2	1,610
Dec-15-2009	122	11.2	1,500
Dec-16-2009	134	10.9	1,480
Dec-17-2009	130	10.9	1,610
Dec-18-2009	113	11.3	1,680
Dec-19-2009	100	11.5	1,770
Dec-20-2009	91	11.2	1,760
Dec-21-2009	90	11.2	1,720
Dec-22-2009	85	10.4	1,770
Dec-23-2009	67	8.6	1,920
Dec-24-2009	52	8.8	1,990
Dec-25-2009	63	9.0	1,980
Dec-26-2009	52	8.9	2,120
Dec-27-2009	42	10.8	2,120
Dec-28-2009	43	11.0	2,130
Dec-29-2009	55	11.2	2,170
Dec-30-2009	57	11.9	2,220
Dec-31-2009	58	11.7	2,220
Mean	82	10.1	1,790

PRELIMINARY RESULTS

Table 5. Continuous water monitoring at Station N (San Joaquin River at Crow's Landing), October 2009.

See Table 33 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
Oct-01-2009	272	18.0	1,160	0.9
Oct-02-2009	282	18.6	1,240	0.9
Oct-03-2009	290	19.1	1,180	1.0
Oct-04-2009	291	18.0	1,130	0.9
Oct-05-2009	300	17.5	1,140	0.7
Oct-06-2009	310	17.1	1,050	0.6
Oct-07-2009	297	17.7	1,050	0.4
Oct-08-2009	305	17.9	1,130	0.4
Oct-09-2009	321	17.8	1,040	0.6
Oct-10-2009	326	18.0	1,050	0.5
Oct-11-2009	377	18.0	1,000	0.5
Oct-12-2009	395	17.3	990	0.5
Oct-13-2009	431	16.1	1,010	0.5
Oct-14-2009	600	16.5	890	0.6
Oct-15-2009	712	19.3	830	0.7
Oct-16-2009	828	20.3	740	0.7
Oct-17-2009	853	20.7	820	0.6
Oct-18-2009	879	20.9	840	0.5
Oct-19-2009	850	19.9	870	<0.4
Oct-20-2009	844	18.6	920	0.6
Oct-21-2009	787	18.1	920	0.6
Oct-22-2009	737	18.3	970	0.7
Oct-23-2009	749	18.6	1,000	0.9
Oct-24-2009	866	18.7	790	0.6
Oct-25-2009	886	18.0	730	0.6
Oct-26-2009	988	17.7	720	0.6
Oct-27-2009	1,070	16.5	700	0.9
Oct-28-2009	1,020	13.3	700	1.0
Oct-29-2009	987	12.6	630	0.8
Oct-30-2009	992	12.9	630	1.0
Oct-31-2009	950	13.5	640	1.0
Mean	639	17.6	920	0.7

PRELIMINARY RESULTS

Table 5. Continuous water monitoring at Station N (San Joaquin River at Crow's Landing), November 2009.

See Table 33 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
Nov-01-2009	867	14.4	710	0.9
Nov-02-2009	807	15.2	770	0.8
Nov-03-2009	766	15.7	780	1.1
Nov-04-2009	705	16.1	900	1.1
Nov-05-2009	709	16.0	870	1.2
Nov-06-2009	666	16.2	910	1.2
Nov-07-2009	612	16.4	980	1.1
Nov-08-2009	593	14.8	1,000	1.0
Nov-09-2009	570	13.6	1,040	1.0
Nov-10-2009	563	13.8	1,060	1.2
Nov-11-2009	542	13.9	1,090	1.2
Nov-12-2009	533	13.8	1,090	1.2
Nov-13-2009	527	12.8	1,120	1.2
Nov-14-2009	529	12.4	1,180	1.4
Nov-15-2009	533	11.9	980	1.7
Nov-16-2009	536	11.7	1,150	1.2
Nov-17-2009	533	11.7	1,180	1.4
Nov-18-2009	544	12.1	1,110	1.3
Nov-19-2009	543	11.4	1,090	1.2
Nov-20-2009	530	11.1	1,160	1.1
Nov-21-2009	524	11.1	1,160	1.2
Nov-22-2009	525	11.3	1,180	1.2
Nov-23-2009	528	11.3	1,180	1.3
Nov-24-2009	524	10.9	1,170	1.5
Nov-25-2009	521	10.9	1,210	1.4
Nov-26-2009	513	10.9	1,230	1.3
Nov-27-2009	511	11.2	1,230	1.3
Nov-28-2009	523	10.4	1,220	1.4
Nov-29-2009	520	9.6	1,230	1.4
Nov-30-2009	510	9.8	1,280	1.3
.	.	.	.	.
Mean	580	12.7	1,080	1.3

PRELIMINARY RESULTS

Table 5. Continuous water monitoring at Station N (San Joaquin River at Crow's Landing), December 2009.

See Table 33 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
Dec-01-2009	517	9.9	1,280	1.4
Dec-02-2009	570	9.7	1,240	1.3
Dec-03-2009	594	9.5	1,240	1.0
Dec-04-2009	572	9.3	1,150	1.2
Dec-05-2009	539	9.3	1,190	2.1
Dec-06-2009	513	8.0	1,220	1.9
Dec-07-2009	498	7.7	1,270	1.9
Dec-08-2009	489	7.1	1,320	1.7
Dec-09-2009	494	6.8	1,320	1.5
Dec-10-2009	489	7.3	1,330	1.6
Dec-11-2009	484	8.3	1,360	2.0
Dec-12-2009	502	9.4	1,380	1.8
Dec-13-2009	551	10.1	1,310	1.4
Dec-14-2009	602	10.4	1,310	1.9
Dec-15-2009	664	10.4	1,310	2.1
Dec-16-2009	695	10.7	NA	NA
Dec-17-2009	695	10.8	NA	NA
Dec-18-2009	690	10.9	NA	NA
Dec-19-2009	651	11.0	NA	NA
Dec-20-2009	618	10.8	NA	NA
Dec-21-2009	589	10.9	NA	NA
Dec-22-2009	576	10.4	1,440	2.0
Dec-23-2009	555	8.6	1,410	1.6
Dec-24-2009	523	8.1	1,450	1.6
Dec-25-2009	504	8.1	1,500	1.9
Dec-26-2009	505	8.0	1,530	2.1
Dec-27-2009	504	8.8	1,520	2.5
Dec-28-2009	485	9.6	1,530	2.2
Dec-29-2009	477	9.9	1,550	2.3
Dec-30-2009	477	10.8	1,580	2.0
Dec-31-2009	474	10.9	1,550	2.5
Mean	551	9.4	1,370	1.8

PRELIMINARY RESULTS

Table 6a. Weekly water quality monitoring at Station A (inflow to San Luis Drain), taken from grab samples.

See Table 33 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	.	.	.
Oct-05-2009	4	.	.	4,640	19	.	.	.
Oct-12-2009	9	.	.	4,090	64	.	.	.
Oct-19-2009	11	.	.	4,360	81	.	.	.
Oct-26-2009	19	.	.	4,880	193	.	.	.
Nov-02-2009	20	.	.	4,830	188	.	.	.
Nov-09-2009	17	.	.	4,240	62	.	.	.
Nov-16-2009	17	.	.	4,420	NA	.	.	.
Nov-23-2009	16	.	.	4,410	110			
Nov-30-2009	16	.	.	4,190	43	.	.	.
Dec-07-2009	17	.	.	4,990	117	.	.	.
Dec-14-2009	23	.	.	4,660	210	.	.	.
Dec-21-2009	16	.	.	5,030	73	.	.	.
Dec-28-2009	18	.	.	5,490	162			

Table 6b. Weekly water quality monitoring at Station A (inflow to San Luis Drain), taken from composite samples.

See Table 33 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
Oct-04-2009	4	.	.	4,700	.	21.7	.	8.8
Oct-11-2009	10	.	.	4,180	.	21.6	.	8.5
Oct-18-2009	11	.	.	4,360	.	28.9	.	8.2
Oct-25-2009	23	.	.	4,380	.	35.4	.	7.8
Nov-01-2009	14	.	.	4,530	.	38.9	.	8.4
Nov-08-2009	17	.	.	4,250	.	37.6	.	7.4
Nov-15-2009	18	.	.	4,030	.	41.4	.	6.9
Nov-22-2009	14	.	.	4,430	.	41.9	.	7.1
Nov-29-2009	15	.	.	4,610	.	51.5	.	7.2
Dec-06-2009	12	.	.	4,920	.	48.1	.	8.2
Dec-13-2009	26	.	.	4,940	.	50.0	.	8.6
Dec-20-2009	16	.	.	5,010	.	45.8	.	9.0
Dec-27-2009	19	.	.	5,140	.	60.8	.	9.0

PRELIMINARY RESULTS

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

See Table 33 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
Oct-06-2009	7	15.9	8.3	3,710	30	12.2	6.5
Oct-13-2009	18	16.7	8.5	3,530	45	10.2	6.8
Oct-20-2009	15	18.6	8.2	3,390	41	16.6	5.5
Oct-27-2009	19	17.2	7.2	3,930	74	27.9	6.4
Nov-03-2009	22	15.9	8.2	4,270	42	29.6	6.8
Nov-10-2009	20	13.8	8.1	3,870	48	29.0	6.0
Nov-17-2009	20	11.5	8.0	3,750	30	30.4	5.9
Nov-24-2009	19	10.6	7.8	3,900	NA	30.5	6.2
Dec-01-2009	19	9.6	7.7	3,840	24	26.7	5.5
Dec-08-2009	21	6.2	7.5	4,210	20	33.6	7.1
Dec-15-2009	27	10.6	7.3	4,370	37	38.2	7.1
Dec-22-2009	18	10.3	7.7	4,400	31	37.4	7.3
Dec-29-2009	22	8.6	6.6	4,580	35	58.2	7.5

Table 8. Weekly water quality monitoring at Station C (Mud Slough North upstream of drainage discharges).

See Table 33 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
Oct-06-2009	39	14.5	7.6	1,130	.	<0.4	0.6
Oct-13-2009	119	15.7	7.7	1,010	.	0.7	0.7
Oct-20-2009	178	17.1	7.5	1,040	.	<0.4	0.7
Oct-27-2009	111	15.9	7.2	1,340	.	0.6	0.9
Nov-03-2009	61	16.0	7.9	1,660	.	0.4	1.3
Nov-10-2009	54	13.2	7.9	1,830	.	0.6	1.4
Nov-17-2009	56	10.8	7.7	1,890	.	<0.4	1.4
Nov-24-2009	55	10.2	7.9	2,110	.	<0.4	1.7
Dec-01-2009	56	9.0	7.9	1,630	.	<0.4	1.6
Dec-08-2009	75	5.8	7.9	2,020	.	<0.4	1.5
Dec-15-2009	167	10.5	7.8	1,770	.	<0.4	1.3
Dec-22-2009	101	9.7	7.8	1,890	.	0.5	1.5
Dec-29-2009	77	9.2	7.0	2,160	.	<0.4	1.6

++ Calculated flow value. Flow at Station C = flow at Station D - flow at Station B.

PRELIMINARY RESULTS

Table 9. Weekly water quality monitoring at Station D (Mud Slough North downstream of drainage discharges).

See Table 33 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
Oct-06-2009	46	14.8	7.7	1,550	1.9	1.5
Oct-13-2009	137	16.1	7.7	1,470	2.2	1.6
Oct-20-2009	193	17.5	7.5	1,280	2.0	1.2
Oct-27-2009	130	16.2	7.1	1,750	4.9	1.8
Nov-03-2009	83	15.7	7.8	2,490	9.1	2.8
Nov-10-2009	74	13.3	7.9	2,520	8.0	2.8
Nov-17-2009	76	11.0	7.8	2,470	8.6	2.6
Nov-24-2009	74	10.3	7.9	2,560	7.9	2.9
Dec-01-2009	75	9.4	7.8	2,800	8.6	2.7
Dec-08-2009	96	5.9	7.8	2,460	6.9	2.5
Dec-15-2009	194	10.5	7.8	2,110	5.8	2.1
Dec-22-2009	119	9.9	7.8	2,420	6.7	2.6
Dec-29-2009	99	9.1	6.7	2,950	12.9	3.2

Table 10. Weekly water quality monitoring at Station I2 (Mud Slough backwater downstream of Station D).

See Table 33 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
Oct-07-2009	.	7.8	1,740	21	2.1	2.0
Oct-22-2009	.	7.6	1,580	26	2.3	1.9
Oct-27-2009	.	8.3	1,950	42	4.6	2.1
Nov-03-2009	.	8.4	2,540	25	8.2	3.0
Nov-12-2009	.	6.5	2,690	24	9.3	3.4
Nov-24-2009	.	8.3	2,670	11	7.4	2.9
Dec-01-2009	.	8.4	2,880	16	7.8	3.1
Dec-08-2009	.	NA	2,490	14	7.7	2.7
Dec-15-2009	.	8.4	2,160	13	6.6	2.4
Dec-21-2009	.	7.8	2,420	NA	6.4	2.5

PRELIMINARY RESULTS

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

See Table 33 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
Oct-06-2009	65	13.7	7.9	1,060	<0.4	0.6
Oct-13-2009	96	15.8	7.9	420	0.7	0.6
Oct-20-2009	135	16.9	7.6	1,260	0.4	0.6
Oct-27-2009	136	16.3	7.1	1,190	0.5	0.6
Nov-03-2009	118	14.5	6.9	1,340	<0.4	0.7
Nov-10-2009	124	12.4	7.6	1,270	0.4	0.6
Nov-17-2009	143	10.1	7.8	1,200	<0.4	0.6
Nov-24-2009	131	10.0	7.7	1,380	<0.4	0.7
Dec-01-2009	110	8.8	7.6	1,660	<0.4	0.8
Dec-08-2009	71	6.1	7.2	1,840	<0.4	0.9
Dec-15-2009	122	10.4	7.4	1,520	<0.4	1.0
Dec-22-2009	85	10.2	7.5	1,880	0.6	1.2
Dec-29-2009	55	10.0	6.8	2,170	<0.4	1.1

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

See Table 33 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
Oct-05-2009	210	.	.	620	0.7	0.2
Oct-12-2009	135	.	.	600	<0.4	0.2
Oct-19-2009	135	.	.	640	<0.4	0.3
Oct-26-2009	85	.	.	530	0.6	0.3
Nov-02-2009	85	.	.	510	0.4	0.2
Nov-09-2009	85	.	.	520	0.8	0.3
Nov-16-2009	30	.	.	630	0.5	0.3
Nov-23-2009	10	.	.	560	0.5	0.3
Nov-30-2009	10	.	.	710	0.4	0.3
Dec-07-2009	5	.	.	660	0.7	0.3
Dec-14-2009	5	.	.	600	0.6	0.3
Dec-21-2009	5	.	.	620	<0.4	0.2
Dec-28-2009	5	.	.	730	2.2	0.4

PRELIMINARY RESULTS

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

See Table 33 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
Oct-05-2009	175	.	.	590	0.6	0.3
Oct-12-2009	85	.	.	600	0.5	0.2
Oct-19-2009	70	.	.	610	<0.4	0.2
Oct-26-2009	70	.	.	540	0.4	0.3
Nov-02-2009	70	.	.	510	0.6	0.3
Nov-09-2009	70	.	.	510	0.8	0.3
Nov-16-2009	60	.	.	510	<0.4	0.3
Nov-23-2009	50	.	.	530	<0.4	0.3
Nov-30-2009	50	.	.	510	<0.4	0.2
Dec-07-2009	30	.	.	620	1.3	0.4
Dec-14-2009	30	.	.	730	0.4	0.5
Dec-21-2009	30	.	.	740	0.6	0.5
Dec-28-2009	30	.	.	700	0.5	0.3

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

See Table 33 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
Oct-05-2009	NA	.	.	610	0.5	0.3
Oct-12-2009	NA	.	.	610	0.4	0.2
Oct-19-2009	NA	.	.	680	0.5	0.4
Oct-26-2009	NA	.	.	810	0.7	0.6
Nov-02-2009	NA	.	.	890	0.6	0.7
Nov-09-2009	NA	.	.	560	0.7	0.3
Nov-16-2009	NA	.	.	640	0.6	0.4
Nov-23-2009	NA	.	.	1,440	0.8	1.5
Nov-30-2009	NA	.	.	730	0.8	0.8
Dec-07-2009	NA			1,550	1.1	2.2
Dec-14-2009	NA	.	.	560	<0.4	0.3
Dec-21-2009	NA	.	.	1,260	0.6	1.2
Dec-28-2009	NA	.	.	670	0.6	0.6

PRELIMINARY RESULTS

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

See Table 33 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
Oct-05-2009	NA	.	.	730	0.7	0.4
Oct-12-2009	NA	.	.	730	0.5	0.4
Oct-19-2009	NA	.	.	780	0.5	0.5
Oct-26-2009	NA	.	.	790	0.5	0.6
Nov-02-2009	NA	.	.	860	0.5	0.7
Nov-09-2009	NA	.	.	910	0.6	0.7
Nov-16-2009	NA	.	.	830	0.4	0.7
Nov-23-2009	NA	.	.	1,070	<0.4	1.0
Nov-30-2009	NA	.	.	1,250	<0.4	1.2
Dec-07-2009	NA	.	.	1,300	0.7	1.5
Dec-14-2009	NA	.	.	1,030	0.5	0.7
Dec-21-2009	NA	.	.	1,400	0.5	1.5
Dec-28-2009	NA	.	.	1,540	0.5	1.5

Table 16. Weekly water quality monitoring at Central California Irrigation District Main Canal at Russell Avenue (MER510).

See Table 33 for explanation of footnotes and agency abbreviations.

PARAMETER	.	.	.	Specific Conductance	Selenium (total)	Boron
DATA SOURCE	.	.	.	CVRWQCB	CVRWQCB	CVRWQCB
UNITS	.	.	.	µS/cm	µg/L	mg/L
Oct-05-2009	.	.	.	570	0.6	0.2
Oct-12-2009	.	.	.	600	<0.4	0.2
Oct-19-2009	.	.	.	560	0.4	0.2
Oct-26-2009	.	.	.	540	<0.4	0.3
Nov-02-2009	.	.	.	500	0.4	0.2
Nov-09-2009	.	.	.	480	0.7	0.2
Nov-16-2009	.	.	.	660	1.0	0.4
Nov-23-2009	.	.	.	600	0.7	0.3
Nov-30-2009	.	.	.	680	<0.4	0.3
Dec-07-2009				660	0.5	0.3
Dec-14-2009	.	.	.	720	<0.4	0.3
Dec-21-2009	.	.	.	680	0.8	0.4
Dec-28-2009	.	.	.	630	0.4	0.4

PRELIMINARY RESULTS

Table 17. Weekly water quality monitoring at Station G (San Joaquin River at Fremont Ford).

See Table 33 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
Oct-06-2009	71	14.2	7.8	1,410	<0.4	0.6
Oct-13-2009	100	15.6	7.3	1,430	0.5	0.7
Oct-20-2009	184	17.3	7.8	1,300	<0.4	0.6
Oct-27-2009	180	15.8	7.7	1,360	<0.4	0.6
Nov-03-2009	176	15.4	7.9	1,340	<0.4	0.6
Nov-10-2009	154	12.8	7.5	1,330	0.7	0.6
Nov-17-2009	166	10.3	7.8	1,090	<0.4	0.6
Nov-24-2009	157	9.9	7.7	1,490	<0.4	0.8
Dec-01-2009	219	8.9	7.4	1,460	<0.4	0.6
Dec-08-2009	112	5.9	7.9	2,040	<0.4	0.9
Dec-15-2009	193	10.0	7.3	1,490	<0.4	0.8
Dec-22-2009	132	9.9	7.1	1,960	<0.4	1.0
Dec-29-2009	80	9.5	6.9	2,390	<0.4	0.8

Table 18. Weekly water quality monitoring at Station H (San Joaquin River at Hills Ferry).

(Collected data intended for use with biological monitoring.)

See Table 33 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
Oct-06-2009	.	.	.	1,920	20.6	1.5
Oct-21-2009	.	.	.	2,810	32.2	1.9
Oct-27-2009	.	.	.	1,610	2.6	1.2
Nov-04-2009	.	.	.	1,720	9.7	2.0
Nov-10-2009	.	.	.	2,200	16.8	2.6
Nov-18-2009	.	.	.	2,020	23.0	1.5
Nov-25-2009	.	.	.	1,420	11.4	1.2
Dec-02-2009	.	.	.	1,640	10.2	1.9
Dec-09-2009	.	.	.	1,630	16.6	1.4
Dec-22-2009	.	.	.	1,740	17.5	1.5

Outside of normal range.

PRELIMINARY RESULTS

Table 19. Weekly water quality monitoring at Station N (San Joaquin River at Crow's Landing).

See Table 33 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
Oct-06-2009	310	15.5	7.8	1,040	0.6	0.5
Oct-13-2009	431	16.2	7.7	1,000	0.8	0.6
Oct-20-2009	844	18.0	7.7	910	0.5	0.6
Oct-27-2009	1,070	16.5	7.7	740	1.1	0.5
Nov-03-2009	766	15.0	7.8	790	1.1	0.5
Nov-10-2009	563	13.1	7.7	1,050	1.6	0.7
Nov-17-2009	533	10.9	7.8	1,180	1.4	0.8
Nov-24-2009	524	10.4	7.9	1,210	1.2	0.8
Dec-01-2009	517	9.4	7.7	1,280	1.2	0.8
Dec-08-2009	489	6.5	8.0	1,360	1.8	0.8
Dec-15-2009	664	10.1	7.8	1,300	2.0	1.0
Dec-22-2009	576	10.0	7.8	1,420	1.8	1.0
Dec-29-2009	477	9.4	7.2	1,570	2.0	1.0

Table 20. Summary of fathead minnow (*Pimephales promelas*) larvae survival in 7-day tests using water samples collected from January 2009 to December 2009. Each value is the mean of 4 replicates with 10 fish in each replicate.

See Table 33 for explanation of footnotes and agency abbreviations.

LOCATION	Station B	Station C	Station D	Station F	Canal	Control
DATA SOURCE	SLDMWA	SLDMWA	SLDMWA	SLDMWA	SLDMWA	SLDMWA
UNITS	%	%	%	%	%	%
Jan-2009	95	95	93	93	93	95
Feb-2009	98	95	100	98	100	95
Mar-2009	98	100	100	100	98	95
Apr-2009	100	93	95	95	73	98
May-2009	98	98	98	100	93	95
Jun-2009	95	95	95	93	93	95
Jul-2009	95	98	93	98	98	100
Aug-2009	98	98	88	93	100	100
Sep-2009	100	98	98	100	100	98
Oct-2009	100	100	95	95	95	100
Nov-2009	100	93	90	83	95	100
Dec-2009	98	88	93	98	100	98

Table 21. Summary of fathead minnow (*Pimephales promelas*) larvae growth in 7-day tests using water samples collected from January 2009 to December 2009. Each value is the mean of 4 replicates with 10 fish in each replicate.

See Table 33 for explanation of footnotes and agency abbreviations.

LOCATION	Station B	Station C	Station D	Station F	Canal	Control
DATA SOURCE	SLDMWA	SLDMWA	SLDMWA	SLDMWA	SLDMWA	SLDMWA
UNITS	mg	mg	mg	mg	mg	mg
Jan-2009	0.35	0.37	0.36	0.33	0.30	0.36
Feb-2009	0.51	0.53	0.49	0.46	0.50	0.35
Mar-2009	0.50	0.50	0.45	0.50	0.44	0.44
Apr-2009	0.33	0.43	0.35	0.40	0.30	0.38
May-2009	0.48	0.41	0.41	0.42	0.42	0.42
Jun-2009	0.42	0.40	0.46	0.44	0.43	0.45
Jul-2009	0.46	0.49	0.50	0.52	0.44	0.47
Aug-2009	0.42	0.40	0.41	0.38	0.43	0.52
Sep-2009	0.43	0.41	0.42	0.45	0.39	0.43
Oct-2009	0.51	0.52	0.49	0.50	0.41	0.44
Nov-2009	0.38	0.40	0.37	0.38	0.36	0.43
Dec-2009	0.50	0.48	0.52	0.49	0.46	0.47

Table 22. Summary of *Daphnia magna* survival in 7-day tests using water samples collected from January 2009 to December 2009. Each value is the mean of 10 replicates with 1 animal in each replicate.

See Table 33 for explanation of footnotes and agency abbreviations.

LOCATION	Station B	Station C	Station D	Station F	Canal	Control
DATA SOURCE	SLDMWA	SLDMWA	SLDMWA	SLDMWA	SLDMWA	SLDMWA
UNITS	%	%	%	%	%	%
Jan-2009	90	100	100	100	100	100
Feb-2009	100	80	90	70	90	80
Mar-2009	100	100	100	100	90	90
Apr-2009	100	100	80	90	90	100
May-2009	80	100	90	100	100	100
Jun-2009	100	0*	30*	90	100	100
Jul-2009	90	70	100	100	90	90
Aug-2009	100	100	100	100	100	100
Sep-2009	100	100	80	90	100	100
Oct-2009	80	90	100	90	90	100
Nov-2009	90	80	90	90	70†	70†
Dec-2009	90	90	90	100	100	80

PRELIMINARY RESULTS

Table 23. Summary of *Daphnia magna* reproduction in 7-day tests using water samples collected from January 2009 to December 2009. Each value is the mean of 10 replicates with 1 animal in each replicate.

See Table 33 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
Jan-2009	19.7	22.4	21.0	24.1	19.0	19.3
Feb-2009	24.0	19.1	23.9	19.0	21.9	18.9
Mar-2009	43.9	34.5	41.2	35.6	37.5	27.2
Apr-2009	45.4	52.3	23.1	30.2	30.2	31.6
May-2009	22.1	31.8	36.3	29.3	29.9	23.6
Jun-2009	42.9	4.8*	13.6*	35.9	28.2	28.6
Jul-2009	34.2	21.6	38.5	32.1	26.4	22.4
Aug-2009	42.6	40.9	38.5	37.8	30.6	24.7
Sep-2009	34.8	43.3	26.8	25.1	28.7	22.7
Oct-2009	36.7	32.8	42.2	33.5	31.1	28.8
Nov-2009	38.5	21.3	29.1	21.8	16.4	18.6
Dec-2009	30.2	30.7	35.4	35.2	39.7	30.9

Table 24. Summary of *Selenastrum capricornutum* growth in 4-day tests using water samples collected from January 2009 to December 2009. Each value is the mean of 4 replicates.

See Table 33 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
Jan-2009	2.5*	27.9	20.2	25.1	3.2††††	22.6
Feb-2009	14.4*	36.5	42.9	33.8	34.9	29.4
Mar-2009	12.9*	32.9	31.3	34.0	27.4	29.9
Apr-2009	20.9*	22.2	27.0	24.3	25.0	19.3
May-2009	21.6	33.2	25.2	11.4*	21.4	22.8
Jun-2009	19.8	20.2	24.4	21.7	20.1	17.0
Jul-2009	22.5	28.4	28.2	26.8	22.9	19.7
Aug-2009	21.7	26.4	24.6	26.6	22.0	23.0
Sep-2009	31.6	32.6	25.6	28.9	27.6	22.3
Oct-2009	35.3	30.5	32.2	26.8	20.4	19.2
Nov-2009	20.6*	39.0	35.8	33.5	26.2	28.1
Dec-2009	6.8*	28.5	21.7	26.7	20.9	24.1

PRELIMINARY RESULTS

Table 25. Summary of selenium concentrations in grab water samples collected at study stations for use in laboratory toxicity tests, October 2009 to December 2009.

See Table 33 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
Oct-05-2009	10	<0.4	1.9	<0.4	<0.4
Oct-07-2009	12	<0.4	2.1	<0.4	<0.4
Oct-09-2009	11	<0.4	2.0	<0.4	<0.4
Nov-02-2009	32	<0.4	7.8	<0.4	<0.4
Nov-04-2009	26	<0.4	11	<0.4	<0.4
Nov-06-2009	28	<0.4	8.0	<0.4	<0.4
Dec-14-2009	42	<0.4	6.4	<0.4	<0.4
Dec-16-2009	42	<0.4	6.6	<0.4	<0.4
Dec-18-2009	38	<0.4	6.4	<0.4	<0.4

Table 26. Summary of total suspended solids concentrations in grab water samples collected at study stations for use in laboratory toxicity tests, October 2009 to December 2009.

See Table 33 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
Oct-05-2009	32	82	54	34	8
Oct-07-2009	20	56	48	39	12
Oct-09-2009	31	77	56	30	10
Nov-02-2009	42	18	42	45	4
Nov-04-2009	35	38	53	43	9
Nov-06-2009	34	44	63	59	13
Dec-14-2009	29	32	43	28	1
Dec-16-2009	29	28	36	37	2
Dec-18-2009	26	22	34	3	<1

PRELIMINARY RESULTS

Table 27. Monthly Flow and Salinity of Water at San Luis Drain, Station B.

See Table 33 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow at Station B		Salinity at Station B		
	Mean daily	Total	FW EC	TDS	Salt load
UNITS	cfs	acre-feet	µS/cm	mg/L	tons
Jan-2008	27	1,660	4,443	3,288	7,420
Feb-2008	32	1,850	4,462	3,302	8,310
Mar-2008	29	1,780	3,882	2,873	6,950
Apr-2008	26	1,540	4,276	3,164	6,630
May-2008	29	1,760	4,461	3,301	7,900
Jun-2008	21	1,260	4,361	3,227	5,530
Jul-2008	16	980	4,120	3,049	4,060
Aug-2008	11	690	4,110	3,041	2,850
Sep-2008	12	690	3,809	2,819	2,650
Oct-2008	17	1,020	3,488	2,581	3,580
Nov-2008	21	1,270	3,536	2,617	4,520
Dec-2008	22	1,320	4,045	2,993	5,370
Jan-2009	21	1,270	4,160	3,078	5,320
Feb-2009	32	1,800	4,200	3,108	7,610
Mar-2009	29	1,780	4,180	3,093	7,490
Apr-2009	19	1,110	4,690	3,471	5,240
May-2009	13	770	4,560	3,374	3,530
Jun-2009	15	910	4,650	3,441	4,260
Jul-2009	11	650	4,455	3,300	2,920
Aug-2009	11	660	4,394	3,250	2,920
Sep-2009	10	590	4,660	3,450	2,770
Oct-2009	15	940	3,809	2,820	3,610
Nov-2009	19	1,150	4,069	3,010	4,710
Dec-2009	21	1,280	4,546	3,360	5,850

Note: EC to TDS conversion = 0.74

Water Year Averages and Totals

PARAMETER	Mean daily flow	Total flow	FW EC	TDS	Salt load
UNITS	cfs	acre-feet	µS/cm	mg/L	tons
WY 1997	52	37,560	4,257	3,150	160,910
WY 1998	64	45,950	4,438	3,280	204,970
WY 1999	45	32,310	4,650	3,440	151,160
WY 2000	43	31,260	4,301	3,180	135,190
WY 2001	39	28,250	4,191	3,100	119,100
WY 2002	39	28,400	4,069	3,010	116,260
WY 2003	38	27,270	4,319	3,200	118,680
WY 2004	38	27,700	4,173	3,090	116,410
WY 2005	42	30,160	4,315	3,190	130,850
WY 2006	36	25,970	4,605	3,410	120,440
WY 2007	26	18,540	4,235	3,130	78,920
WY 2008	22	15,670	4,161	3,080	65,640
WY 2009	18	13,160	4,254	3,060	54,770

Calendar Year Totals

PARAMETER	Mean daily flow	Total flow	FW EC	TDS	Salt load
UNITS	cfs	acre-feet	µS/cm	mg/L	tons
CY 1997	52	37,490	4,354	3,220	164,180
CY 1998	64	46,240	4,563	3,380	212,560
CY 1999	45	32,250	4,532	3,360	147,370
CY 2000	42	30,210	4,189	3,100	127,370
CY 2001	39	28,010	4,200	3,110	118,470
CY 2002	39	28,460	4,155	3,070	118,830
CY 2003	38	27,550	4,282	3,170	118,770
CY 2004	39	28,290	4,129	3,060	117,730
CY 2005	41	29,610	4,420	3,270	131,680
CY 2006	36	25,890	4,589	3,395	119,540
CY 2007	25	17,990	4,137	3,061	74,890
CY 2008	22	15,860	4,096	3,030	65,360
CY 2009	18	12,920	4,367	3,115	54,730

Note: All totals and averages calculated from USGS preliminary data.

PRELIMINARY RESULTS

Table 28. Monthly Flow and Salinity of Water at Mud Slough, Station D.

See Table 33 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow at Station D		Salinity at Station D		
	Mean daily	Total	FW EC	TDS	Salt load
UNITS	cfs	acre-feet	µS/cm	mg/L	tons
Jan-2008	169	10,410	1,590	1,097	15,530
Feb-2008	148	8,500	1,790	1,235	14,280
Mar-2008	125	7,690	1,830	1,263	13,210
Apr-2008	71	4,200	2,420	1,670	9,540
May-2008	50	3,060	2,640	1,822	7,580
Jun-2008	29	1,720	2,400	1,656	3,870
Jul-2008	18	1,090	2,630	1,815	2,690
Aug-2008	14	890	2,530	1,746	2,110
Sep-2008	20	1,160	1,670	1,152	1,820
Oct-2008	106	6,540	1,040	718	6,380
Nov-2008	86	5,100	1,520	1,049	7,270
Dec-2008	106	6,520	1,640	1,132	10,030
Jan-2009	90	5,530	2,590	1,787	13,440
Feb-2009	133	7,380	2,620	1,808	18,140
Mar-2009	157	9,630	2,620	1,808	23,680
Apr-2009	51	3,030	3,410	2,353	9,700
May-2009	32	1,950	3,120	2,153	5,710
Jun-2009	29	1,750	3,380	2,332	5,550
Jul-2009	17	1,060	3,880	2,677	3,860
Aug-2009	18	1,090	3,430	2,367	3,510
Sep-2009	28	1,660	2,430	1,677	3,790
Oct-2009	141	8,640	1,425	980	11,520
Nov-2009	75	4,440	2,584	1,780	10,750
Dec-2009	115	7,080	2,451	1,690	16,270

Note: EC to TDS conversion = 0.69

Water Year Averages and Totals

PARAMETER	Mean daily flow	Total flow	FW EC	TDS	Salt load
UNITS	cfs	acre-feet	µS/cm	mg/L	tons
WY 1997	181	130,930	2,390	1,650	293,810
WY 1998	257	182,580	2,600	1,790	444,470
WY 1999	141	101,360	2,582	1,780	245,370
WY 2000	131	94,440	2,496	1,720	220,910
WY 2001	129	92,870	2,737	1,890	238,710
WY 2002	104	75,280	2,809	1,940	198,620
WY 2003	122	88,200	2,688	1,860	223,110
WY 2004	120	87,190	2,704	1,870	221,740
WY 2005	154	110,600	2,535	1,750	263,230
WY 2006	160	116,100	2,273	1,570	247,900
WY 2007	100	72,200	2,541	1,750	171,840
WY 2008	85	61,680	2,044	1,410	118,280
WY 2009	69	49,600	2,809	1,780	120,070

Calendar Year Totals

PARAMETER	Mean daily flow	Total flow	FW EC	TDS	Salt load
UNITS	cfs	acre-feet	µS/cm	mg/L	tons
CY 1997	174	125,450	2,471	1,700	290,040
CY 1998	258	183,320	2,559	1,770	441,290
CY 1999	137	98,740	2,588	1,790	240,370
CY 2000	133	96,070	2,467	1,700	222,110
CY 2001	123	88,890	2,768	1,910	230,900
CY 2002	111	80,260	2,827	1,950	212,850
CY 2003	119	85,750	2,621	1,810	211,080
CY 2004	121	87,960	2,738	1,890	226,090
CY 2005	160	115,030	2,513	1,730	270,640
CY 2006	160	115,820	2,241	1,546	243,490
CY 2007	86	61,940	2,611	1,801	151,730
CY 2008	80	58,150	1,999	1,380	109,140
CY 2009	72	52,020	2,828	1,817	128,520

Note: All totals and averages calculated from USGS preliminary data.

PRELIMINARY RESULTS

Table 29. Monthly Flow and Salinity of Water at Salt Slough, Station F.

See Table 33 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow at Station F		Salinity at Station F		
	Mean daily	Total	FW EC	TDS	Salt load
UNITS	cfs	acre-feet	µS/cm	mg/L	tons
Jan-2008	170	10,460	1,080	734	10,450
Feb-2008	188	10,800	1,090	741	10,890
Mar-2008	228	14,030	660	449	8,560
Apr-2008	135	8,050	1,040	707	7,740
May-2008	117	7,200	990	673	6,590
Jun-2008	107	6,370	880	598	5,180
Jul-2008	103	6,310	840	571	4,900
Aug-2008	72	4,430	820	558	3,360
Sep-2008	45	2,680	950	646	2,350
Oct-2008	48	2,980	1,160	789	3,200
Nov-2008	103	6,100	1,070	728	6,040
Dec-2008	51	3,110	1,340	911	3,850
Jan-2009	41	2,530	2,190	1,489	5,120
Feb-2009	131	7,290	1,770	1,204	11,930
Mar-2009	163	10,020	1,890	1,285	17,510
Apr-2009	104	6,170	1,730	1,176	9,870
May-2009	96	5,920	1,480	1,006	8,100
Jun-2009	101	6,010	1,300	884	7,230
Jul-2009	119	7,310	1,077	740	7,360
Aug-2009	99	6,100	1,068	740	6,140
Sep-2009	66	3,900	1,208	830	4,400
Oct-2009	105	6,440	1,225	850	7,440
Nov-2009	124	7,390	1,339	920	9,250
Dec-2009	82	5,030	1,741	1,200	8,210

Note: EC to TDS conversion = 0.68

Water Year Averages and Totals

PARAMETER	Mean daily flow	Total flow	FW EC	TDS	Salt load
UNITS	cfs	acre-feet	µS/cm	mg/L	tons
WY 1997	216	156,080	1,294	880	186,800
WY 1998	273	196,090	1,387	940	250,680
WY 1999	210	151,770	1,192	810	167,190
WY 2000	195	141,050	1,314	890	170,730
WY 2001	185	133,880	1,340	910	165,690
WY 2002	145	104,880	1,445	980	139,780
WY 2003	177	127,940	1,334	910	158,340
WY 2004	170	123,330	1,296	880	147,600
WY 2005	215	155,280	1,267	860	181,620
WY 2006	234	168,800	1,189	810	185,950
WY 2007	154	111,370	1,272	870	131,770
WY 2008	125	90,930	1,099	750	92,750
WY 2009	94	67,810	1,574	910	83,920

Calendar Year Totals

PARAMETER	Mean daily flow	Total flow	FW EC	TDS	Salt load
UNITS	cfs	acre-feet	µS/cm	mg/L	tons
CY 1997	205	147,940	1,355	920	185,100
CY 1998	281	201,370	1,292	880	241,000
CY 1999	204	147,380	1,255	850	170,370
CY 2000	194	140,370	1,284	870	166,090
CY 2001	181	131,100	1,399	950	169,380
CY 2002	161	116,600	1,403	950	150,650
CY 2003	163	117,730	1,342	910	145,700
CY 2004	170	123,500	1,285	870	146,130
CY 2005	224	161,730	1,261	860	189,160
CY 2006	232	167,460	1,163	793	180,680
CY 2007	142	102,810	1,336	909	127,130
CY 2008	120	86,890	1,046	710	83,900
CY 2009	100	72,460	1,518	922	90,830

Note: All totals and averages calculated from USGS preliminary data.

PRELIMINARY RESULTS

Table 30. Monthly Flow and Salinity of Water at San Joaquin River at Fremont Ford, Station G.

See Table 33 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow at Station N		Salinity at Station N		
	Mean daily	Total	FW EC	TDS	Salt load
UNITS	cfs	acre-feet	µS/cm	mg/L	tons
Jan-2008	489	30,070	580	394	16,130
Feb-2008	640	36,840	570	388	19,420
Mar-2008	337	20,740	1,100	748	21,100
Apr-2008	167	9,910	1,370	932	12,560
May-2008	139	8,560	1,220	830	9,660
Jun-2008	119	7,080	1,090	741	7,140
Jul-2008	92	5,630	940	639	4,890
Aug-2008	83	5,090	940	639	4,420
Sep-2008	48	2,830	1,220	830	3,190
Oct-2008	43	2,660	2,030	1,380	4,990
Nov-2008	106	6,300	1,730	1,176	10,080
Dec-2008	73	4,460	2,570	1,748	10,600
Jan-2009	84	5,180	2,150	1,462	10,300
Feb-2009	261	14,490	1,320	898	17,690
Mar-2009	283	17,390	1,590	1,081	25,570
Apr-2009	153	9,130	2,080	1,414	17,560
May-2009	123	7,580	1,690	1,149	11,850
Jun-2009	127	7,540	1,420	966	9,900
Jul-2009	119	7,340	1,239	840	8,390
Aug-2009	105	6,440	1,257	850	7,440
Sep-2009	73	4,340	1,640	1,120	6,610
Oct-2009	135	8,300	1,426	970	10,950
Nov-2009	165	9,830	1,416	960	12,830
Dec-2009	146	8,960	1,733	1,180	14,380

Note: EC to TDS conversion = 0.62

Water Year Averages and Totals

PARAMETER	Mean daily flow	Total flow	FW EC	TDS	Salt load
UNITS	cfs	acre-feet	µS/cm	mg/L	tons
WY 1997	na	na	1,387	940	na
WY 1998	na	na	1,281	870	na
WY 1999	na	na	1,433	980	na
WY 2000	na	na	1,525	1,040	na
WY 2001	na	na	1,761	1,200	na
WY 2002	na	na	1,546	970	na
WY 2003	215	156,100	1,542	1,010	214,420
WY 2004	223	161,760	1,554	1,020	224,390
WY 2005	889	642,060	1,034	610	532,650
WY 2006	2,670	1,931,210	863	530	1,392,020
WY 2007	217	156,740	1,382	890	189,720
WY 2008	206	148,330	1,611	1,100	221,900
WY 2009	130	93,520	1,710	990	125,920

Calendar Year Totals

PARAMETER	Mean daily flow	Total flow	FW EC	TDS	Salt load
UNITS	cfs	acre-feet	µS/cm	mg/L	tons
CY 1997	na	na	1,466	1,000	na
CY 1998	na	na	1,221	830	na
CY 1999	na	na	1,463	1,000	na
CY 2000	na	na	1,517	1,030	na
CY 2001	na	na	1,857	1,230	na
CY 2002	225	163,110	1,531	980	217,390
CY 2003	194	140,470	1,572	1,040	198,680
CY 2004	238	172,020	1,513	980	229,270
CY 2005	897	647,690	992	590	519,710
CY 2006	2,671	1,931,950	838	518	1,361,900
CY 2007	193	139,080	1,523	993	187,760
CY 2008	197	141,790	1,649	1,120	215,970
CY 2009	142	102,110	1,646	976	135,510

Note: All totals and averages calculated from USGS preliminary data.

PRELIMINARY RESULTS

Table 31. Monthly Flow and Salinity of Water at San Joaquin River at Crow's Landing, Station N.

See Table 33 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow at Station N		Salinity at Station N		
	Mean daily	Total	FW EC	TDS	Salt load
UNITS	cfs	acre-feet	µS/cm	mg/L	tons
Jan-2008	1,410	86,440	537	333	39,140
Feb-2008	1,490	85,840	565	350	40,890
Mar-2008	1,040	64,130	889	551	48,070
Apr-2008	780	46,630	933	578	36,680
May-2008	1,100	67,510	452	280	25,730
Jun-2008	380	22,670	870	539	16,630
Jul-2008	300	18,300	804	498	12,410
Aug-2008	400	24,700	604	374	12,580
Sep-2008	340	20,480	635	394	10,970
Oct-2008	430	26,480	896	556	20,010
Nov-2008	520	30,940	1,055	654	27,530
Dec-2008	500	30,570	1,235	766	31,830
Jan-2009	500	30,610	1,380	856	35,620
Feb-2009	780	43,120	1,300	806	47,270
Mar-2009	840	51,450	1,410	874	61,170
Apr-2009	490	29,110	1,600	992	39,270
May-2009	480	29,690	1,110	688	27,790
Jun-2009	360	21,640	1,250	775	22,810
Jul-2009	240	14,710	1,391	862	17,250
Aug-2009	220	13,760	1,308	811	15,180
Sep-2009	250	14,590	1,236	766	15,210
Oct-2009	640	39,260	880	546	29,130
Nov-2009	580	34,530	1,040	645	30,290
Dec-2009	550	33,910	1,333	827	38,120

Note: EC to TDS conversion = 0.62

Water Year Averages and Totals

PARAMETER	Mean daily flow	Total flow	FW EC	TDS	Salt load
UNITS	cfs	acre-feet	µS/cm	mg/L	tons
WY 1997	5,407	3,844,610	820	510	2,666,620
WY 1998	6,869	4,904,910	601	370	2,468,150
WY 1999	1,412	1,015,480	902	560	773,390
WY 2000	1,423	1,027,440	976	610	852,360
WY 2001	903	653,430	1,162	720	639,840
WY 2002	738	533,960	1,202	750	544,640
WY 2003	753	546,130	1,244	770	571,910
WY 2004	764	554,550	1,226	760	573,180
WY 2005	2,381	1,721,000	722	450	1,053,250
WY 2006	4,748	3,437,650	569	350	1,636,320
WY 2007	838	607,180	1,103	680	561,520
WY 2008	802	580,500	1,059	660	521,060
WY 2009	467	336,670	1,266	690	315,930

Calendar Year Totals

PARAMETER	Mean daily flow	Total flow	FW EC	TDS	Salt load
UNITS	cfs	acre-feet	µS/cm	mg/L	tons
CY 1997	5,063	3,590,680	975	600	2,929,990
CY 1998	7,086	5,064,330	453	280	1,928,500
CY 1999	1,207	864,600	1,017	630	740,790
CY 2000	1,466	1,059,180	905	560	806,670
CY 2001	882	638,210	1,174	730	633,610
CY 2002	723	523,240	1,235	770	547,940
CY 2003	718	521,480	1,258	780	553,190
CY 2004	790	573,270	1,213	750	584,740
CY 2005	2,428	1,755,440	697	430	1,026,580
CY 2006	4,798	3,473,920	567	352	1,661,630
CY 2007	740	535,270	1,099	682	496,160
CY 2008	753	545,170	1,088	670	496,760
CY 2009	489	353,040	1,264	660	316,720

Note: All totals and averages calculated from USGS preliminary data.

PRELIMINARY RESULTS

Table 32. Summary of sediment monitoring results from September 2007 to December 2009. Concentrations in µg/g dry weight.

See Table 33 for explanation of footnotes and agency abbreviations.

Station Code	PARAMETER	Selenium			Organic Carbon			Percent Moisture		
Station Name	DEPTH	0-3 cm	3-8 cm	Whole Core	0-3 cm	3-8 cm	Whole Core	0-3 cm	3-8 cm	Whole Core
	SOURCE	USBR	USBR	USBR	USBR	USBR	USBR	USBR	USBR	USBR
	UNITS	µg/g (dry)	µg/g (dry)	µg/g (dry)	%	%	%	%	%	%
Station C:	Sep-04-2007	0.10	0.10	0.10	0.14	0.14	0.23	18.60	19.50	19.30
Mud Slough North	Nov-05-2007	0.20	0.10	0.10	0.62	0.46	0.53	38.40	28.80	22.50
upstream of	Mar-03-2008	<0.10	0.10	<0.10	0.13	0.16	0.08	27.30	26.50	23.80
drainage discharges	Jun-03-2008	<0.1	<0.1	0.10	0.25	0.13	0.19	21.00	19.90	26.00
	Sep-09-2008	0.10	0.10	0.10	0.24	0.33	0.55	16.20	45.40	34.40
	Nov-04-2008	0.10	0.20	0.10	0.41	0.30	0.35	28.30	27.20	26.50
	Mar-10-2009	0.10	0.10	0.10	0.66	0.71	0.53	38.90	36.30	35.90
	Jun-03-2009	<0.10	<0.10	0.20	0.15	0.22	0.08	31.70	23.70	24.60
	Aug-31-2009	<0.10	<0.10	<0.10	0.13	0.16	0.29	27.80	25.90	26.30
	Nov-12-2009	<0.10	0.11	<0.10	0.13	0.20	0.24	35.00	30.60	22.80
Station D:	Sep-05-2007	0.30	0.20	0.20	0.28	0.20	0.23	n/a	n/a	n/a
Mud Slough North	Nov-05-2007	0.30	0.20	0.20	0.05	0.23	0.23	26.80	26.10	26.20
downstream of	Mar-03-2008	0.10	0.20	0.10	0.26	0.16	0.09	23.30	22.50	20.80
drainage discharges	Jun-03-2008	0.10	0.10	0.10	0.15	0.16	0.25	76.50	19.90	21.60
	Sep-09-2008	0.20	0.20	0.20	0.14	0.17	0.16	27.20	22.10	23.30
	Nov-04-2008	0.30	0.20	0.10	0.28	0.24	0.17	31.10	26.10	19.60
	Mar-10-2009	0.20	0.20	0.10	0.15	0.20	0.14	25.80	25.90	23.90
	Jun-03-2009	0.10	0.10	0.10	0.17	0.01	0.13	20.90	24.00	27.40
	Sep-03-2009	0.34	0.17	0.17	0.22	0.14	0.16	27.70	19.00	20.00
	Nov-12-2009	0.15	0.15	0.16	0.17	0.17	0.19	25.10	23.20	24.90
Station E:	Sep-04-2007	0.40	0.50	0.40	0.20	0.22	0.38	n/a	n/a	n/a
Mud Slough at Highway 140	Nov-05-2007	0.40	0.40	0.30	0.25	0.39	0.31	16.80	29.10	28.50
	Mar-03-2008	0.70	1.30	1.00	0.22	0.21	0.22	27.80	27.60	30.40
	Jun-03-2008	0.30	0.50	1.30	0.38	0.34	0.63	32.80	22.60	38.30
	Sep-09-2008	0.60	1.50	1.30	0.52	0.66	0.56	37.10	47.20	36.60
	Nov-04-2008	0.70	0.70	1.20	0.43	0.47	0.63	30.50	37.80	40.30
	Mar-10-2009	0.60	0.70	0.70	0.22	0.39	0.45	29.10	30.70	31.00
	Jun-03-2009	0.20	0.20	1.00	0.17	0.17	0.30	20.00	20.10	32.70
	Aug-31-2009	0.93	0.72	0.78	0.46	0.31	0.40	39.90	32.40	32.90
	Nov-12-2009	0.53	0.38	0.59	0.31	0.25	0.38	31.20	30.10	29.70
Station F:	Sep-05-2007	0.20	0.20	0.30	0.29	0.31	0.17	28.80	21.20	25.80
Salt Slough at Highway 165	Nov-05-2007	0.40	0.50	0.50	0.27	0.26	0.32	30.00	30.50	27.90
	Mar-04-2008	0.20	0.50	0.30	0.22	0.24	0.23	28.00	27.20	20.60
	Jun-03-2008	0.10	0.20	0.20	0.23	0.26	0.34	21.00	22.60	23.10
	Sep-09-2008	0.20	0.40	0.70	0.27	0.18	0.38	23.80	25.40	26.90
	Nov-04-2008	0.20	0.20	0.50	0.28	0.22	0.26	27.10	27.00	22.40
	Mar-10-2009	0.40	0.50	0.40	0.27	0.22	0.21	29.60	29.10	25.90
	Jun-03-2009	0.20	0.60	0.60	0.25	0.22	0.21	20.80	24.40	24.30
	Aug-31-2009	0.56	0.38	0.66	0.29	0.23	0.20	29.20	28.30	28.50
	Nov-12-2009	0.63	0.58	0.28	0.46	0.31	0.24	30.80	33.40	31.00
Station I2:	Sep-05-2007	7.00	7.90	5.30	2.14	2.55	2.92	n/a	n/a	n/a
Mud Slough:	Nov-05-2007	4.30	3.00	3.70	2.77	2.50	2.40	51.60	48.90	49.10
Seasonal backwater tributary	Mar-04-2008	6.30	6.70	3.00	1.98	2.20	1.59	67.10	56.60	55.20
	Jun-03-2008	4.10	5.00	3.50	2.67	2.73	1.98	40.30	43.30	42.00
	Sep-08-2008	**15	**11	5.60	1.75	1.82	2.19	4.18	13.10	26.80
	Nov-04-2008	4.80	3.70	3.00	2.59	2.23	2.33	51.10	50.90	49.40
	Mar-10-2009	5.50	6.20	2.60	2.71	3.05	2.11	50.40	52.80	49.60
	Jun-03-2009	7.20	8.00	8.80	1.78	1.95	2.28	35.70	41.50	47.40
	Sep-03-2009	5.90	4.86	3.11	2.22	2.21	1.82	4.05	16.30	21.80
	Nov-12-2009	4.08	3.58	1.96	1.88	2.02	1.54	47.10	42.10	41.20

Table 33. 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/Lab CI 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.
#	New testing laboratory with reporting limit of 0.4 µg/L as of June 1998.
❖	Based on definitive bioassay, NOEC is 50 percent
S	Source
EC	Electrical conductivity
FW	Flow-weighted average concentration
G	US Geological Survey published data
L	Lawrence Berkeley Laboratory 15 minute flow and EC data
TDS	Total dissolved solids