GRASSLAND BYPASS PROJECT

QUARTERLY DATA REPORT

October, November and December 2012

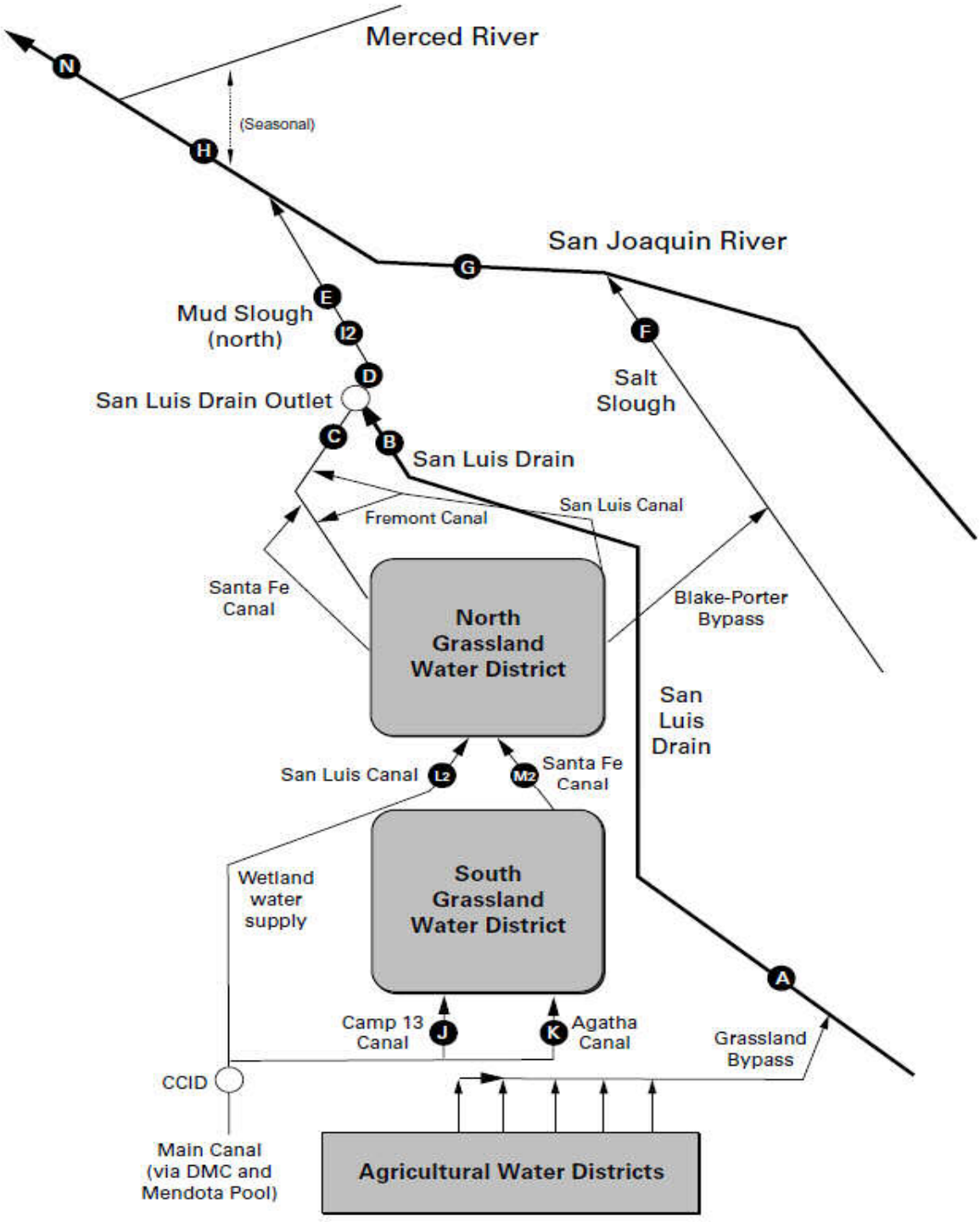
July 2013

A cooperative effort of:

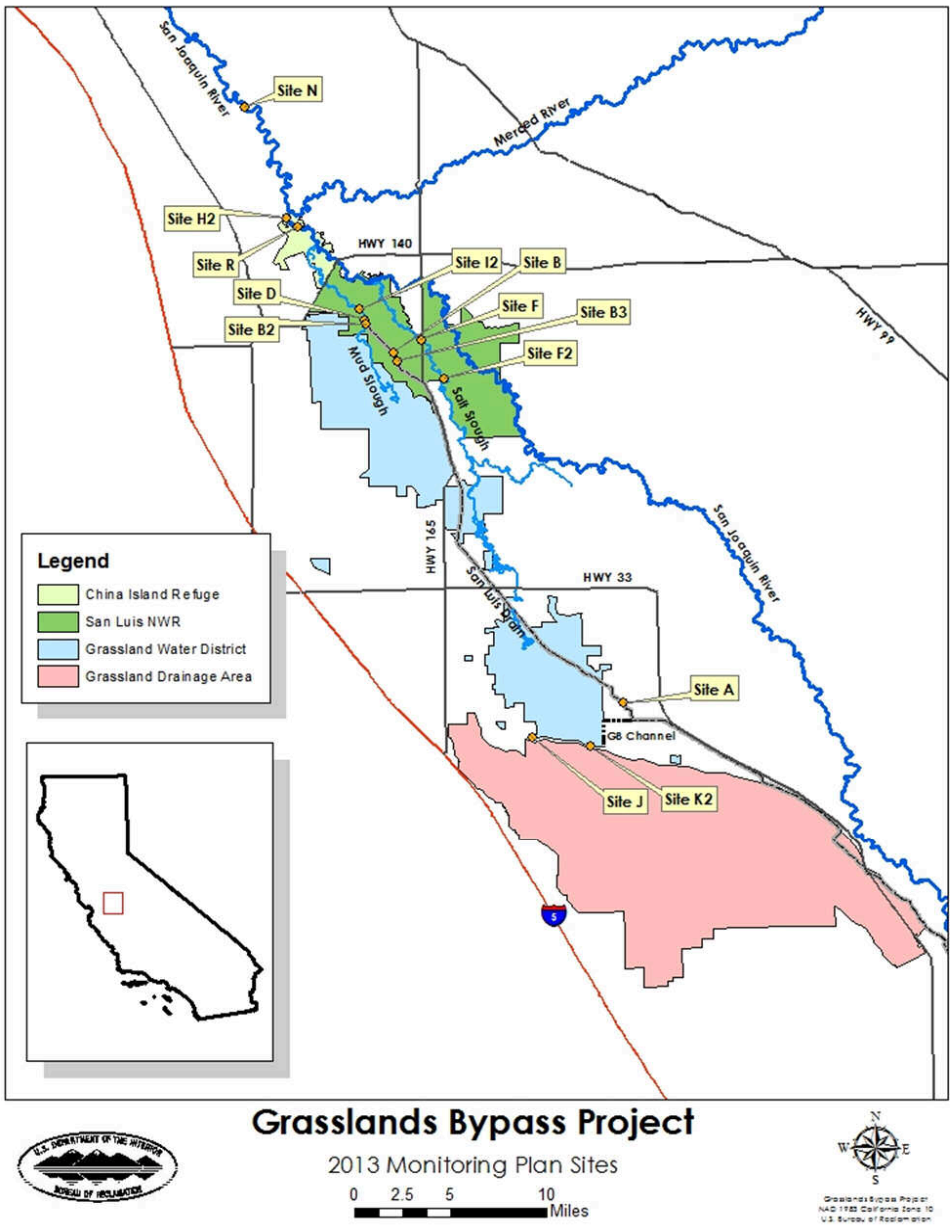
U.S. Bureau of Reclamation
Central Valley Regional Water Quality Control Board
U.S. Fish and Wildlife Service
California Department of Fish and Game
San Luis & Delta-Mendota Water Authority
U.S. Environmental Protection Agency
U.S. Geological Survey

compiled by San Francisco Estuary Institute

Map 1: Current Monitoring Plan for the Grasslands Bypass Project



Map 2: Proposed 2013 Monitoring Plan for the Grasslands Bypass Project



GRASSLAND BYPASS PROJECT

QUARTERLY DATA REPORT

LIST OF TABLES FOR QUARTERLY REPORT

PRELIMINARY RESULTS

Table 1. Continuous water monitoring at Station A (inflow to San Luis Drain), October, November, December 2012.

See Table 34 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	3,770	5	4,730	17	4,790
Day 2	1	4,330	5	4,240	21	4,580
Day 3	1	4,610	3	4,020	24	4,800
Day 4	1	4,590	0	4,190	21	5,060
Day 5	3	4,500	0	4,430	18	5,040
Day 6	5	4,490	0	4,310	17	5,190
Day 7	4	4,590	6	4,730	17	5,110
Day 8	4	4,570	5	4,690	16	5,030
Day 9	4	4,970	5	4,650	14	5,220
Day 10	2	5,340	9	4,290	12	5,270
Day 11	2	5,650	6	4,380	12	4,990
Day 12	3	5,400	5	4,460	13	4,770
Day 13	4	5,380	4	4,710	12	4,880
Day 14	2	5,580	4	4,840	8	4,970
Day 15	2	5,560	4	4,820	7	5,060
Day 16	3	5,460	4	4,730	7	5,110
Day 17	4	5,580	4	4,620	10	5,120
Day 18	4	5,750	8	4,630	14	5,330
Day 19	7	5,790	6	4,480	12	5,560
Day 20	6	5,130	4	4,480	8	5,650
Day 21	5	3,960	15	4,720	7	5,490
Day 22	5	3,720	23	4,640	9	5,460
Day 23	6	3,710	22	4,460	12	5,380
Day 24	9	4,130	14	4,540	15	5,400
Day 25	5	4,090	12	4,440	16	5,470
Day 26	3	4,630	11	4,410	20	5,400
Day 27	2	4,740	4	4,610	22	5,590
Day 28	2	5,170	2	4,900	15	5,500
Day 29	3	5,380	2	4,880	13	5,520
Day 30	5	5,170	3	4,660	14	5,580
Day 31	5	4,920	.	.	13	5,550
Mean	4	4,860	7	4,560	14	5,220

PRELIMINARY RESULTS

Table 2a. Continuous water monitoring at Stations B and B2 (San Luis Drain Terminus), October 2012.

See Table 34 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	USBR	SLDMWA	USBR	Computed
UNITS	cfs	°C	mg/L	µS/cm	µg/L	lbs
Oct-01-2012	11	25.4	6.6	3,700	5.6	0.3
Oct-02-2012	12	26.3	7.0	3,700	6.4	0.4
Oct-03-2012	9	25.4	7.0	3,990	5.7	0.3
Oct-04-2012	7	22.1	7.6	3,610	5.4	0.2
Oct-05-2012	7	19.4	7.2	3,760	6.0	0.2
Oct-06-2012	7	19.7	8.4	3,730	9.2	0.4
Oct-07-2012	10	20.0	7.1	4,090	10.0	0.5
Oct-08-2012	10	19.0	6.7	3,510	8.0	0.4
Oct-09-2012	10	18.4	6.4	3,360	8.5	0.4
Oct-10-2012	10	18.7	6.5	3,370	9.7	0.5
Oct-11-2012	9	15.2	6.0	3,370	9.4	0.5
Oct-12-2012	9	16.7	5.4	3,240	6.6	0.3
Oct-13-2012	10	17.4	4.8	2,940	4.9	0.3
Oct-14-2012	11	19.1	5.5	2,810	4.8	0.3
Oct-15-2012	11	20.8	6.1	3,070	4.7	0.3
Oct-16-2012	10	22.7	6.1	3,260	4.7	0.3
Oct-17-2012	11	21.7	5.9	3,200	4.6	0.3
Oct-18-2012	12	22.1	5.7	3,070	5.0	0.3
Oct-19-2012	12	21.6	5.6	3,120	4.7	0.3
Oct-20-2012	13	19.9	6.5	3,120	5.2	0.4
Oct-21-2012	13	16.5	7.0	3,450	5.6	0.4
Oct-22-2012	12	14.8	6.5	3,350	5.0	0.3
Oct-23-2012	12	14.4	6.3	3,130	4.9	0.3
Oct-24-2012	13	13.5	7.7	3,260	5.5	0.4
Oct-25-2012	15	16.7	8.2	3,590	6.1	0.5
Oct-26-2012	13	16.0	9.3	3,740	7.9	0.6
Oct-27-2012	11	16.7	9.8	4,210	8.3	0.5
Oct-28-2012	10	18.5	6.7	4,000	7.5	0.4
Oct-29-2012	10	19.0	5.4	3,870	9.0	0.5
Oct-30-2012	10	19.3	5.2	3,130	8.3	0.5
Oct-31-2012	12	16.5	5.6	2,880	9.3	0.6
Mean	11	19.2	6.7	3,440	6.7	0.4
Total Acre-feet	**660**					
Total (lbs)						**12**

Load Limitation for October 2012 (lbs)	**233**

PRELIMINARY RESULTS

Table 2a. Continuous water monitoring at Stations B and B2 (San Luis Drain Terminus), November 2012.

See Table 34 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	USBR	SLDMWA	USBR	Computed
UNITS	cfs	°C	mg/L	µS/cm	µg/L	lbs
Nov-01-2012	12	16.4	6.7	3,100	10.0	0.7
Nov-02-2012	13	15.8	6.0	3,280	9.4	0.6
Nov-03-2012	13	16.2	5.2	3,020	10.0	0.7
Nov-04-2012	12	17.4	5.0	2,980	10.0	0.7
Nov-05-2012	10	17.8	5.4	2,990	9.0	0.5
Nov-06-2012	9	18.4	6.2	3,150	8.8	0.4
Nov-07-2012	9	18.5	6.9	3,450	9.5	0.4
Nov-08-2012	11	14.8	7.0	3,600	9.0	0.6
Nov-09-2012	14	9.9	6.3	3,420	8.7	0.6
Nov-10-2012	13	8.8	6.0	3,220	9.2	0.6
Nov-11-2012	15	8.6	5.8	3,100	7.8	0.7
Nov-12-2012	14	9.4	4.4	2,750	5.1	0.4
Nov-13-2012	13	10.9	3.8	2,330	4.4	0.3
Nov-14-2012	12	11.6	6.3	2,840	9.3	0.6
Nov-15-2012	12	10.3	6.1	3,360	11.0	0.7
Nov-16-2012	12	12.7	6.4	3,340	11.0	0.7
Nov-17-2012	13	15.1	6.6	3,300	14.0	1.0
Nov-18-2012	13	15.0	5.7	3,430	13.0	0.9
Nov-19-2012	16	14.3	5.9	3,200	13.0	1.1
Nov-20-2012	15	14.0	6.0	3,220	12.0	1.0
Nov-21-2012	13	14.4	5.9	3,260	12.0	0.8
Nov-22-2012	21	12.4	5.9	3,360	12.0	1.4
Nov-23-2012	32	11.7	6.7	3,440	14.0	2.4
Nov-24-2012	31	12.5	7.0	3,560	14.0	2.4
Nov-25-2012	24	10.7	9.6	4,090	22.0	2.8
Nov-26-2012	21	10.6	9.2	4,630	26.0	2.9
Nov-27-2012	19	10.1	8.2	4,210	30.0	3.0
Nov-28-2012	15	12.2	8.2	3,990	32.0	2.5
Nov-29-2012	12	14.0	7.9	4,260	32.0	2.1
Nov-30-2012	12	15.7	7.2	4,040	28.0	1.8
.	.	.	.	.	.	.
Mean	15	13.3	6.5	3,400	13.9	1.2
Total Acre-feet	**890**					
Total (lbs)						**35**

Load Limitation for November 2012 (lbs)	**233**

PRELIMINARY RESULTS

Table 2a. Continuous water monitoring at Stations B and B2 (San Luis Drain Terminus), December 2012.

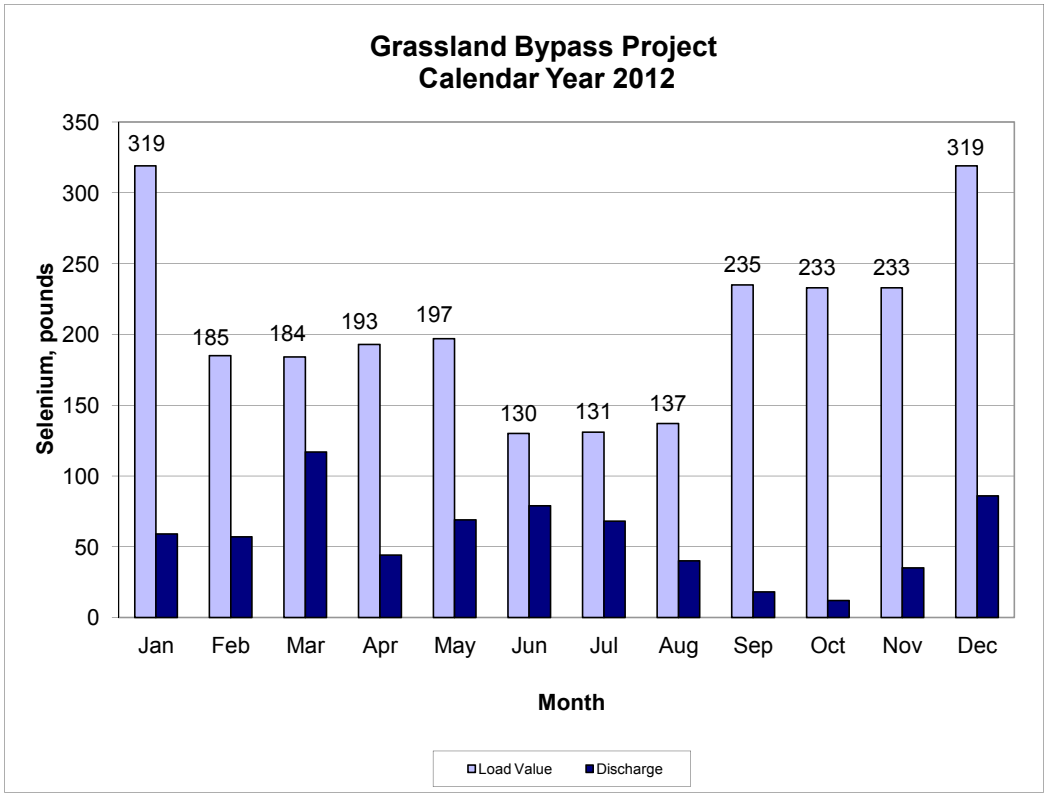
See Table 34 for explanation of footnotes and agency abbreviations.

PARAMETER	San Luis Drain Outlet Flow	Temperature	Boron	Specific Conductance	Selenium (total)	Selenium (total) Load
DATA SOURCE	SLDMWA♦	SLDMWA	USBR	SLDMWA	USBR	Computed
UNITS	cfs	°C	mg/L	µS/cm	µg/L	lbs
Dec-01-2012	13	15.1	6.8	3,830	27.0	1.9
Dec-02-2012	27	14.7	6.6	3,600	23.0	3.3
Dec-03-2012	32	13.3	5.6	3,330	17.0	3.0
Dec-04-2012	34	12.5	5.9	3,220	17.0	3.1
Dec-05-2012	29	14.4	8.6	4,330	28.0	4.4
Dec-06-2012	24	14.6	8.5	4,260	28.0	3.7
Dec-07-2012	24	12.7	8.7	4,390	26.0	3.3
Dec-08-2012	23	6.8	9.6	4,610	25.0	3.1
Dec-09-2012	22	9.9	9.5	4,530	23.0	2.8
Dec-10-2012	21	9.6	9.2	4,370	23.0	2.6
Dec-11-2012	19	8.8	9.2	4,480	23.0	2.3
Dec-12-2012	19	9.9	8.3	4,450	22.0	2.2
Dec-13-2012	18	7.4	8.1	4,260	20.0	2.0
Dec-14-2012	18	5.7	8.2	4,250	21.0	2.1
Dec-15-2012	16	6.1	8.2	4,200	20.0	1.7
Dec-16-2012	14	8.9	8.4	4,200	22.0	1.7
Dec-17-2012	14	11.9	7.7	4,120	23.0	1.8
Dec-18-2012	15	8.6	7.1	3,880	24.0	2.0
Dec-19-2012	19	5.4	7.7	3,780	23.0	2.3
Dec-20-2012	17	4.2	7.1	3,710	21.0	1.9
Dec-21-2012	14	6.9	7.2	3,560	24.0	1.8
Dec-22-2012	14	9.4	7.1	3,580	23.0	1.7
Dec-23-2012	17	9.4	7.5	3,570	25.0	2.3
Dec-24-2012	19	9.8	8.3	3,900	24.0	2.4
Dec-25-2012	22	6.4	8.6	3,960	24.0	2.8
Dec-26-2012	24	10.4	7.8	3,920	21.0	2.8
Dec-27-2012	26	8.3	7.8	3,950	27.0	3.7
Dec-28-2012	28	13.4	9.0	4,290	35.0	5.3
Dec-29-2012	23	7.1	9.2	4,550	38.0	4.6
Dec-30-2012	18	2.4	9.7	4,620	37.0	3.7
Dec-31-2012	20	4.4	9.8	4,600	36.0	3.9
Mean	21	9.3	8.0	4,070	24.8	2.8
Total Acre-feet	**1,280**					
Total (lbs)						**86**

Load Limitation for December 2012 (lbs)	**319**

PRELIMINARY RESULTS

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



PRELIMINARY RESULTS

PRELIMINARY RESULTS

Table 3. Continuous water monitoring at Station D (Mud Slough North downstream of drainage discharges), October 2012.

See Table 34 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow	Temperature	Specific Conductance
DATA SOURCE	USGS	USGS	USGS
UNITS	cfs	°C	µS/cm
Oct-01-2012	41	23.5	1,970
Oct-02-2012	44	23.6	1,940
Oct-03-2012	44	23.7	1,740
Oct-04-2012	43	22.8	1,620
Oct-05-2012	49	21.3	1,540
Oct-06-2012	49	20.8	1,620
Oct-07-2012	53	20.6	1,770
Oct-08-2012	72	20.5	1,470
Oct-09-2012	81	20.1	1,380
Oct-10-2012	73	19.9	1,480
Oct-11-2012	64	18.4	1,610
Oct-12-2012	77	17.9	1,470
Oct-13-2012	93	18.0	1,370
Oct-14-2012	96	18.9	1,360
Oct-15-2012	87	19.8	1,440
Oct-16-2012	94	20.6	1,430
Oct-17-2012	113	20.2	1,340
Oct-18-2012	127	20.0	1,310
Oct-19-2012	122	20.7	1,340
Oct-20-2012	108	20.8	1,480
Oct-21-2012	94	19.4	1,630
Oct-22-2012	97	17.9	1,580
Oct-23-2012	99	16.8	1,570
Oct-24-2012	93	15.9	1,680
Oct-25-2012	88	16.5	1,830
Oct-26-2012	85	15.6	1,840
Oct-27-2012	85	16.1	1,840
Oct-28-2012	88	17.0	1,730
Oct-29-2012	84	17.8	1,680
Oct-30-2012	83	18.4	1,670
Oct-31-2012	87	18.2	1,660
Mean	81	19.4	1,590

PRELIMINARY RESULTS

Table 3. Continuous water monitoring at Station D (Mud Slough North downstream of drainage discharges), November 2012.

See Table 34 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow	Temperature	Specific Conductance
DATA SOURCE	USGS	USGS	USGS
UNITS	cfs	°C	µS/cm
Nov-01-2012	116	17.9	1,540
Nov-02-2012	99	17.3	1,670
Nov-03-2012	99	17.2	1,650
Nov-04-2012	98	17.3	1,650
Nov-05-2012	97	17.6	1,620
Nov-06-2012	94	17.8	1,640
Nov-07-2012	95	18.0	1,680
Nov-08-2012	96	17.0	1,810
Nov-09-2012	98	15.2	1,870
Nov-10-2012	99	13.9	1,820
Nov-11-2012	99	12.9	1,870
Nov-12-2012	95	12.5	1,820
Nov-13-2012	92	12.4	1,750
Nov-14-2012	90	12.8	1,850
Nov-15-2012	88	12.8	1,940
Nov-16-2012	89	13.2	1,930
Nov-17-2012	98	14.0	1,840
Nov-18-2012	104	14.7	1,830
Nov-19-2012	116	14.6	1,760
Nov-20-2012	116	14.7	1,750
Nov-21-2012	107	15.0	1,800
Nov-22-2012	110	14.3	1,960
Nov-23-2012	121	13.7	2,110
Nov-24-2012	124	13.7	2,120
Nov-25-2012	116	13.4	2,130
Nov-26-2012	114	13.1	2,170
Nov-27-2012	113	12.9	2,050
Nov-28-2012	121	13.0	1,850
Nov-29-2012	126	13.1	1,800
Nov-30-2012	141	14.0	1,710
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Mean	106	14.7	1,830

PRELIMINARY RESULTS

Table 3. Continuous water monitoring at Station D (Mud Slough North downstream of drainage discharges), December 2012.

See Table 34 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow	Temperature	Specific Conductance
DATA SOURCE	USGS	USGS	USGS
UNITS	cfs	°C	µS/cm
Dec-01-2012	167	14.3	1,580
Dec-02-2012	198	14.7	1,650
Dec-03-2012	213	14.2	1,660
Dec-04-2012	230	14.1	1,660
Dec-05-2012	228	14.4	1,810
Dec-06-2012	227	14.6	1,740
Dec-07-2012	213	14.2	1,760
Dec-08-2012	199	12.6	1,840
Dec-09-2012	181	11.9	1,900
Dec-10-2012	170	11.6	1,910
Dec-11-2012	162	11.5	1,900
Dec-12-2012	164	11.6	1,870
Dec-13-2012	156	11.1	1,890
Dec-14-2012	142	9.9	1,970
Dec-15-2012	140	9.4	1,910
Dec-16-2012	137	9.6	1,930
Dec-17-2012	130	10.8	1,920
Dec-18-2012	139	10.8	1,860
Dec-19-2012	139	9.3	1,960
Dec-20-2012	130	8.2	2,010
Dec-21-2012	116	7.9	2,060
Dec-22-2012	118	8.8	2,020
Dec-23-2012	133	9.3	1,980
Dec-24-2012	175	10.0	1,900
Dec-25-2012	182	9.4	1,930
Dec-26-2012	199	9.5	1,880
Dec-27-2012	209	9.9	1,820
Dec-28-2012	207	9.1	1,960
Dec-29-2012	199	9.0	1,940
Dec-30-2012	186	8.6	1,950
Dec-31-2012	172	8.1	2,070
Mean	173	10.9	1,880

PRELIMINARY RESULTS

Table 4. Continuous water monitoring at Station F (Salt Slough at Highway 165), October 2012.

See Table 34 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow	Temperature	Specific Conductance
DATA SOURCE	USGS	USGS	USGS
UNITS	cfs	°C	µS/cm
Oct-01-2012	95	22.6	1,130
Oct-02-2012	98	22.7	1,140
Oct-03-2012	96	22.8	1,150
Oct-04-2012	83	22.2	1,200
Oct-05-2012	70	20.9	1,230
Oct-06-2012	67	20.1	1,220
Oct-07-2012	62	19.7	1,270
Oct-08-2012	73	19.5	1,320
Oct-09-2012	103	19.1	1,230
Oct-10-2012	110	18.8	1,180
Oct-11-2012	97	18.1	1,260
Oct-12-2012	104	17.5	1,220
Oct-13-2012	104	17.1	1,220
Oct-14-2012	94	17.5	1,270
Oct-15-2012	95	18.3	1,280
Oct-16-2012	101	19.3	1,260
Oct-17-2012	93	19.1	1,310
Oct-18-2012	98	19.1	1,300
Oct-19-2012	118	19.6	1,170
Oct-20-2012	131	19.8	1,180
Oct-21-2012	131	18.8	1,230
Oct-22-2012	112	17.3	1,320
Oct-23-2012	101	16.2	1,370
Oct-24-2012	112	15.1	1,310
Oct-25-2012	124	15.5	1,270
Oct-26-2012	118	15.3	1,360
Oct-27-2012	113	15.2	1,370
Oct-28-2012	104	15.6	1,430
Oct-29-2012	99	16.4	1,470
Oct-30-2012	97	17.0	1,460
Oct-31-2012	100	17.1	1,470
Mean	100	18.5	1,280

PRELIMINARY RESULTS

Table 4. Continuous water monitoring at Station F (Salt Slough at Highway 165), November 2012.

See Table 34 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow	Temperature	Specific Conductance
DATA SOURCE	USGS	USGS	USGS
UNITS	cfs	°C	µS/cm
Nov-01-2012	104	17.1	1,450
Nov-02-2012	109	16.6	1,430
Nov-03-2012	106	16.2	1,480
Nov-04-2012	103	16.1	1,490
Nov-05-2012	116	16.2	1,430
Nov-06-2012	124	16.4	1,360
Nov-07-2012	121	16.5	1,410
Nov-08-2012	117	16.1	1,420
Nov-09-2012	112	14.6	1,450
Nov-10-2012	108	13.2	1,470
Nov-11-2012	107	12.1	1,450
Nov-12-2012	110	11.5	1,400
Nov-13-2012	114	11.4	1,390
Nov-14-2012	113	11.5	1,400
Nov-15-2012	111	11.6	1,410
Nov-16-2012	113	12.1	1,390
Nov-17-2012	127	13.2	1,310
Nov-18-2012	151	13.7	1,210
Nov-19-2012	167	13.7	1,160
Nov-20-2012	173	13.5	1,190
Nov-21-2012	176	13.7	1,200
Nov-22-2012	171	13.4	1,230
Nov-23-2012	159	12.9	1,280
Nov-24-2012	149	12.5	1,280
Nov-25-2012	148	12.4	1,260
Nov-26-2012	148	12.1	1,270
Nov-27-2012	153	11.9	1,250
Nov-28-2012	154	12.2	1,290
Nov-29-2012	164	12.7	1,310
Nov-30-2012	190	13.5	1,270
.	.	.	.
Mean	134	13.7	1,340

PRELIMINARY RESULTS

Table 4. Continuous water monitoring at Station F (Salt Slough at Highway 165), December 2012.

See Table 34 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow	Temperature	Specific Conductance
DATA SOURCE	USGS	USGS	USGS
UNITS	cfs	°C	µS/cm
Dec-01-2012	204	14.0	1,280
Dec-02-2012	219	14.4	1,260
Dec-03-2012	245	14.0	1,230
Dec-04-2012	259	13.7	1,200
Dec-05-2012	254	14.0	1,240
Dec-06-2012	245	14.3	1,250
Dec-07-2012	234	14.0	1,280
Dec-08-2012	224	12.7	1,310
Dec-09-2012	210	12.0	1,320
Dec-10-2012	198	11.4	1,330
Dec-11-2012	192	11.1	1,340
Dec-12-2012	186	11.3	1,350
Dec-13-2012	168	11.0	1,420
Dec-14-2012	148	10.1	1,470
Dec-15-2012	137	9.5	1,500
Dec-16-2012	131	9.7	1,510
Dec-17-2012	e123	NA	NA
Dec-18-2012	e119	NA	NA
Dec-19-2012	e119	NA	NA
Dec-20-2012	e118	NA	NA
Dec-21-2012	e115	NA	NA
Dec-22-2012	e108	NA	NA
Dec-23-2012	e112	NA	NA
Dec-24-2012	e126	NA	NA
Dec-25-2012	e142	NA	NA
Dec-26-2012	e166	NA	NA
Dec-27-2012	177	9.9	1,500
Dec-28-2012	184	9.2	1,450
Dec-29-2012	191	9.0	1,470
Dec-30-2012	177	8.7	1,490
Dec-31-2012	163	8.1	1,530
Mean	197	11.5	1,370

PRELIMINARY RESULTS

Table 5. Continuous water monitoring at Station N (San Joaquin River at Crow's Landing), October 2012.

See Table 34 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow	Temperature	Boron	Specific Conductance	Selenium (total)
DATA SOURCE	USGS	USGS	USBR	USBR	USBR
UNITS	cfs	°C	mg/L	µS/cm	µg/L
Oct-01-2012	280	23.3	0.7	1,190	0.5
Oct-02-2012	286	23.3	0.6	1,180	0.5
Oct-03-2012	291	23.4	0.6	1,200	0.5
Oct-04-2012	300	22.8	0.6	1,220	0.7
Oct-05-2012	296	21.6	0.6	1,150	0.4
Oct-06-2012	304	20.3	0.5	1,110	< 0.4
Oct-07-2012	304	20.3	0.5	1,120	< 0.4
Oct-08-2012	308	20.2	0.6	1,170	0.4
Oct-09-2012	320	19.8	0.7	1,130	0.7
Oct-10-2012	339	19.8	0.6	1,120	0.6
Oct-11-2012	367	18.9	0.6	1,030	0.6
Oct-12-2012	375	18.2	0.5	1,010	0.5
Oct-13-2012	355	18.5	0.6	1,090	0.7
Oct-14-2012	364	19.2	0.6	1,100	0.5
Oct-15-2012	408	20.0	0.5	1,030	0.7
Oct-16-2012	406	20.8	0.5	991	< 0.4
Oct-17-2012	425	20.2	0.5	993	< 0.4
Oct-18-2012	485	19.8	0.5	864	< 0.4
Oct-19-2012	558	20.6	0.4	804	0.6
Oct-20-2012	911	19.9	0.3	600	0.5
Oct-21-2012	1,280	17.8	0.2	446	0.5
Oct-22-2012	1,190	16.8	0.2	452	< 0.4
Oct-23-2012	962	16.3	0.3	518	0.5
Oct-24-2012	851	15.7	0.3	577	0.9
Oct-25-2012	823	16.0	0.3	611	0.4
Oct-26-2012	764	15.6	0.4	645	0.5
Oct-27-2012	666	16.0	0.4	706	0.8
Oct-28-2012	588	16.9	0.5	790	0.4
Oct-29-2012	571	17.6	0.5	833	0.5
Oct-30-2012	564	18.0	0.5	841	0.6
Oct-31-2012	545	17.9	0.5	848	0.5
Mean	532	19.2	0.5	920	0.6
Total Acre-feet	32,700				

PRELIMINARY RESULTS

Table 5. Continuous water monitoring at Station N (San Joaquin River at Crow's Landing), November 2012.

See Table 34 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow	Temperature	Boron	Specific Conductance	Selenium (total)
DATA SOURCE	USGS	USGS	USBR	USBR	USBR
UNITS	cfs	°C	mg/L	µS/cm	µg/L
Nov-01-2012	530	17.7	0.5	869	0.8
Nov-02-2012	536	17.3	0.5	877	0.8
Nov-03-2012	539	17.3	0.6	896	0.6
Nov-04-2012	544	17.2	0.6	904	0.5
Nov-05-2012	549	17.4	0.6	926	0.5
Nov-06-2012	542	17.5	0.6	939	0.6
Nov-07-2012	545	17.6	0.5	942	0.5
Nov-08-2012	528	17.0	0.6	948	0.4
Nov-09-2012	516	15.7	0.6	973	0.4
Nov-10-2012	519	14.4	0.6	986	0.4
Nov-11-2012	523	13.3	0.6	984	0.5
Nov-12-2012	541	12.7	0.6	968	0.4
Nov-13-2012	551	12.5	0.6	955	< 0.4
Nov-14-2012	571	12.6	0.5	922	0.4
Nov-15-2012	575	12.4	0.5	878	< 0.4
Nov-16-2012	568	12.8	0.5	909	< 0.4
Nov-17-2012	572	13.9	0.5	924	< 0.4
Nov-18-2012	591	14.6	0.5	908	0.5
Nov-19-2012	610	14.7	0.5	885	0.9
Nov-20-2012	627	14.5	0.5	856	0.5
Nov-21-2012	634	14.8	0.6	858	0.6
Nov-22-2012	627	14.3	0.6	880	0.5
Nov-23-2012	620	13.5	0.6	911	0.6
Nov-24-2012	630	13.3	0.7	957	0.8
Nov-25-2012	622	13.1	0.7	1,000	1.0
Nov-26-2012	607	12.7	0.7	1,010	0.9
Nov-27-2012	602	12.5	0.8	1,010	0.9
Nov-28-2012	611	12.7	0.7	982	0.9
Nov-29-2012	626	13.0	0.7	949	0.9
Nov-30-2012	653	13.9	0.6	936	1.1
.	.	.	.	.	.
Mean	577	14.6	0.6	930	0.7
Total Acre-feet	34,332				

PRELIMINARY RESULTS

Table 5. Continuous water monitoring at Station N (San Joaquin River at Crow's Landing), December 2012.

See Table 34 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow	Temperature	Boron	Specific Conductance	Selenium (total)
DATA SOURCE	USGS	USGS	USBR	USBR	USBR
UNITS	cfs	°C	mg/L	µS/cm	µg/L
Dec-01-2012	691	14.2	0.6	922	0.8
Dec-02-2012	748	14.6	0.6	891	0.8
Dec-03-2012	807	14.1	0.6	909	1.2
Dec-04-2012	891	14.0	0.7	892	0.9
Dec-05-2012	934	14.2	0.7	896	0.9
Dec-06-2012	952	14.5	0.7	931	1.0
Dec-07-2012	935	14.2	0.7	939	1.2
Dec-08-2012	897	12.8	0.7	960	1.2
Dec-09-2012	856	12.1	0.8	992	1.2
Dec-10-2012	813	12.0	0.8	1,020	1.3
Dec-11-2012	770	11.9	0.8	1,040	1.0
Dec-12-2012	732	11.8	NA	1,060	NA
Dec-13-2012	712	11.3	NA	1,080	NA
Dec-14-2012	686	10.2	NA	1,110	NA
Dec-15-2012	654	9.7	NA	1,150	NA
Dec-16-2012	653	9.9	NA	1,180	NA
Dec-17-2012	656	10.9	NA	1,180	NA
Dec-18-2012	667	10.9	NA	1,180	NA
Dec-19-2012	656	9.5	NA	1,170	NA
Dec-20-2012	645	8.6	0.8	1,160	1.1
Dec-21-2012	635	8.2	NA	1,170	NA
Dec-22-2012	651	8.9	NA	1,180	NA
Dec-23-2012	671	9.6	NA	1,170	NA
Dec-24-2012	1,360	9.9	NA	878	NA
Dec-25-2012	1,560	9.4	NA	701	NA
Dec-26-2012	1,650	9.3	NA	587	NA
Dec-27-2012	1,740	9.5	NA	563	NA
Dec-28-2012	1,960	9.1	NA	556	NA
Dec-29-2012	1,960	8.9	NA	546	NA
Dec-30-2012	1,760	8.3	NA	663	NA
Dec-31-2012	1,500	7.9	NA	760	NA
Mean	990	11.0	0.7	950	1.1
Total Acre-feet	61,096				

No samples taken mid to late December due to auto sampler malfunction

PRELIMINARY RESULTS

Table 6a. Weekly water quality monitoring at Station A (inflow to San Luis Drain).

See Table 34 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow	Total Suspended Solids	Specific Conductance	Selenium (total)	Boron
DATA SOURCE	SLDMWA	Panoche DD	USBR	USBR	USBR
		Grab sample	Composite	Composite	Composite
UNITS	cfs	mg/L	µS/cm	µg/L	mg/L
Oct-01-2012	8.0	155	4,730	10	10.0
Oct-08-2012	3.5	145	6,070	12	13.0
Oct-15-2012	1.8	80	5,660	17	13.0
Oct-22-2012	5.4	138	4,990	25	9.5
Oct-29-2012	3.0	80	4,880	20	10.0
Nov-05-2012	0.0	40	4,830	27	9.7
Nov-12-2012	4.5	42	1,980	34	9.9
Nov-17-2012	4.5	96	4,770	34	9.5
Nov-26-2012	11	125	5,200	33	10.0
Dec-03-2012	24	145	5,530	30	11.0
Dec-10-2012	12	59	5,360	38	9.9
Dec-17-2012	10	88	5,920	41	12.0
Dec-24-2012	15	86	6,000	43	12.0
Dec-31-2012	13	NA	5,530	40	11.0

Note: Weekly results for specific conductance, selenium, and boron from composite of seven daily samples.

PRELIMINARY RESULTS

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

See Table 34 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow	Total Suspended Solids	Temperature	pH	Specific Conductance	Selenium (total)	Boron
DATA SOURCE	SLDMWA	Panoche DD	USBR	USBR	USBR	USBR	USBR
UNITS	cfs	mg/L	°C	.	µS/cm	µg/L	mg/L
Oct-02-2012	12	24	23.2	8.0	3,740	4.9	6.7
Oct-10-2012	10	25	19.4	8.5	3,600	10	6.6
Oct-16-2012	10	39	20.4	8.0	3,410	4.9	5.6
Oct-23-2012	12	48	16.3	8.2	3,330	4.9	6.0
Oct-30-2012	10	38	17.1	8.2	3,010	8.5	5.1
Nov-07-2012	9	34	19.6	8.2	3,760	10	6.9
Nov-15-2012	12	18	11.8	8.2	3,590	11	6.4
Nov-20-2012	15	25	14.0	7.9	3,430	11	6.0
Nov-26-2012	21	32	13.4	7.8	4,490	27	9.0
Dec-06-2012	24	87	14.4	7.6	4,560	27	8.8
Dec-13-2012	18	21	10.3	7.9	4,620	20	8.3
Dec-20-2012	17	43	8.6	7.9	4,990	22	7.2
Dec-27-2012	26	28	8.8	7.9	4,150	24	7.2

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

See Table 34 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow		Temperature	pH	Specific Conductance	Selenium (total)	Boron
DATA SOURCE	calculated ++		USBR	USBR	USBR	USBR	USBR
UNITS	cfs		°C	.	µS/cm	µg/L	mg/L
Oct-02-2012	31	.	21.8	7.8	1,140	<0.4	0.7
Oct-10-2012	63	.	18.2	7.8	1,110	0.5	0.6
Oct-16-2012	84	.	19.6	7.7	1,180	<0.4	0.6
Oct-23-2012	88	.	15.7	7.9	1,330	0.6	0.9
Oct-30-2012	73	.	16.9	7.9	1,480	<0.4	1.0
Nov-07-2012	86	.	18.6	7.9	1,550	<0.4	1.1
Nov-15-2012	76	.	11.5	8.0	1,680	<0.4	1.2
Nov-20-2012	101	.	14.2	8.0	1,510	0.7	1.1
Nov-26-2012	93	.	14.2	7.8	1,620	<0.4	1.1
Dec-06-2012	203	.	14.0	7.8	1,450	<0.4	1.1
Dec-13-2012	138	.	10.0	7.9	1,660	0.8	1.1
Dec-20-2012	113	.	8.4	8.1	1,020	<0.4	1.3
Dec-27-2012	185	.	8.7	8.0	1,440	0.4	1.1

++ 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 34 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow	Temperature	Turbidity	pH	Specific Conductance	Selenium (total)	Boron
DATA SOURCE	USGS	USBR	USBR	USBR	USBR	USBR	USBR
UNITS	cfs	°C	NTU	.	µS/cm	µg/L	mg/L
Oct-02-2012	43	22.4	29	7.7	1,790	1.2	2.0
Oct-10-2012	73	18.8	20	7.6	1,440	1.4	1.3
Oct-16-2012	94	19.9	11	7.5	1,460	0.8	1.2
Oct-23-2012	100	16.2	16	7.6	1,590	0.9	1.5
Oct-30-2012	83	17.0	17	7.6	1,730	1.4	1.6
Nov-07-2012	95	18.4	17	7.8	1,750	1.0	1.6
Nov-15-2012	88	11.5	14	7.8	2,000	1.6	1.8
Nov-20-2012	116	14.5	20	7.8	1,440	2.2	1.7
Nov-26-2012	114	12.8	16	7.9	2,240	4.4	2.7
Dec-06-2012	227	13.9	19	7.6	1,810	3.3	1.9
Dec-13-2012	156	10.1	14	7.7	1,950	2.5	2.0
Dec-20-2012	130	8.4	11	7.7	2,070	3.2	2.0
Dec-27-2012	209	8.7	18	7.8	1,830	3.1	1.8

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

See Table 34 for explanation of footnotes and agency abbreviations.

PARAMETER		Temperature	Turbidity	pH	Specific Conductance	Selenium (total)	Boron
DATA SOURCE		USBR	USBR	USBR	USBR	USBR	USBR
UNITS		°C	NTU	.	µS/cm	µg/L	mg/L
Oct-02-2012	No Flow in	NA	NA	NA	NA	NA	NA
Oct-10-2012	early October	19.1	14	7.6	1,440	1.3	1.2
Oct-16-2012	.	20.1	26	7.6	1,490	0.8	1.2
Oct-23-2012	.	16.0	6.5	7.6	1,610	0.8	1.6
Oct-30-2012	.	16.5	15	7.8	1,850	1.2	1.6
Nov-07-2012	.	17.5	7.3	7.7	2,900	2.0	2.3
Nov-15-2012	.	11.0	11	7.8	2,110	1.4	1.9
Nov-20-2012	.	14.0	16	7.8	1,820	2.2	1.7
Nov-26-2012	.	15.9	7.2	7.8	4,980	2.9	3.5
Dec-06-2012		NA	NA	NA	NA	NA	NA
Dec-13-2012	No Flow in	NA	NA	NA	NA	NA	NA
Dec-20-2012	December	NA	NA	NA	NA	NA	NA
Dec-27-2012	.	NA	NA	NA	NA	NA	NA

PRELIMINARY RESULTS

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

See Table 34 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow	Temperature	pH	Specific Conductance	Selenium (total)	Boron
DATA SOURCE	USGS	USBR	USBR	USBR	USBR	USBR
UNITS	cfs	°C	.	µS/cm	µg/L	mg/L
Oct-02-2012	98	21.2	7.3	1,150	<0.4	0.5
Oct-10-2012	110	17.5	7.4	1,160	0.6	0.5
Oct-16-2012	101	18.9	7.5	1,290	<0.4	0.5
Oct-23-2012	101	15.4	7.3	1440	<0.4	0.7
Oct-30-2012	97	16.2	7.5	1500	0.4	0.7
Nov-07-2012	121	16.2	7.3	1400	<0.4	0.7
Nov-15-2012	111	10.7	7.5	1,440	<0.4	0.7
Nov-20-2012	173	13.5	7.4	1,210	0.5	0.7
Nov-26-2012	148	11.8	7.6	1,310	<0.4	0.7
Dec-06-2012	245	14.6	7.3	1,340	<0.4	0.8
Dec-13-2012	168	10.0	7.3	1,500	0.5	1.0
Dec-20-2012	e118	11.5	7.2	1,580	<0.4	1.0
Dec-27-2012	177	8.9	7.3	1,550	0.5	0.8

PRELIMINARY RESULTS

Table 12. Weekly water quality monitoring at Station G (San Joaquin River at Fremont Ford).

See Table 34 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow	Temperature	pH	Specific Conductance	Selenium (total)	Boron
DATA SOURCE	USGS	USBR	USBR	USBR	USBR	USBR
UNITS	cfs	°C	.	µS/cm	µg/L	mg/L
Oct-02-2012	120	22.1	7.9	1,260	<0.4	0.4
Oct-10-2012	123	17.8	8.1	1,290	0.7	0.5
Oct-16-2012	115	19.8	7.9	1,440	<0.4	0.5
Oct-23-2012	129	16.4	7.9	1,550	<0.4	0.7
Oct-30-2012	114	16.6	7.9	1,740	<0.4	0.7
Nov-07-2012	162	17.5	8.0	1,510	<0.4	0.6
Nov-15-2012	129	10.7	7.9	1,570	<0.4	0.7
Nov-20-2012	205	14.0	8.0	1,170	0.8	0.6
Nov-26-2012	182	11.3	7.7	1,400	<0.4	0.7
Dec-06-2012	352	14.2	7.9	1,110	<0.4	0.7
Dec-13-2012	239	9.8	7.9	1,460	0.4	0.8
Dec-20-2012	197	8.5	7.6	1,670	<0.4	0.8
Dec-27-2012	1,070	8.6	8.3	468	<0.4	0.2

PRELIMINARY RESULTS

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

See Table 34 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow	.		Specific Conductance	Selenium (total)	Boron
DATA SOURCE	SLDMWA††	.		Panoche DD	Panoche DD	Panoche DD
UNITS	cfs	.		µS/cm	µg/L	mg/L
Oct-01-2012	105	.	.	681	0.6	0.2
Oct-08-2012	90	.	.	651	0.4	0.2
Oct-15-2012	60	.	.	577	0.6	0.2
Oct-22-2012	40	.	.	612	0.6	0.2
Oct-29-2012	40	.	.	618	0.6	0.2
Nov-05-2012	25	.	.	599	0.6	0.2
Nov-12-2012	25	.	.	634	0.9	0.3
Nov-19-2012	15	.	.	574	0.9	0.3
Nov-26-2012	10	.	.	500	0.5	0.2
Dec-03-2012	10	.	.	448	0.8	0.2
Dec-10-2012	10	.	.	612	1.3 U	0.4
Dec-17-2012	10	.	.	516	1.3	0.2
Dec-26-2012	10	.	.	354	0.6	0.2

Table 14. Weekly water quality monitoring at Station K (Agatha Canal).

See Table 34 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow	.	.	Specific Conductance	Selenium (total)	Boron
DATA SOURCE	SLDMWA††	.	.	Panoche DD	Panoche DD	Panoche DD
UNITS	cfs	.	.	µS/cm	µg/L	mg/L
Oct-01-2012	140	.	.	692	<0.4	0.2
Oct-08-2012	140	.	.	637	0.5	0.2
Oct-15-2012	110	.	.	575	0.6	0.2
Oct-22-2012	100	.	.	607	0.5	0.2
Oct-29-2012	100	.	.	659	0.5	0.3
Nov-05-2012	100	.	.	593	<0.4	0.2
Nov-12-2012	100	.	.	298	0.4	0.1
Nov-19-2012	85	.	.	538	0.8	0.3
Nov-26-2012	85	.	.	562	0.5	0.3
Dec-03-2012	85	.	.	457	0.6	0.2
Dec-10-2012	75	.	.	657	1.3	0.5 U
Dec-17-2012	75	.	.	529	1.1	0.3
Dec-26-2012	75	.	.	536	0.9	0.3

PRELIMINARY RESULTS

Table 15. Weekly water quality monitoring at Station L2 (San Luis Canal at splits).

See Table 34 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow	.	.	Specific Conductance	Selenium (total)	Boron
DATA SOURCE	SLDMWA††	.	.	Panoche DD	Panoche DD	Panoche DD
UNITS	cfs	.	.	µS/cm	µg/L	mg/L
Oct-01-2012	NA	.	.	838	0.5	0.4
Oct-08-2012	NA	.	.	742	0.7	0.3
Oct-15-2012	NA	.	.	643	0.6	0.2
Oct-22-2012	NA	.	.	1,150	1.1	1.0
Oct-29-2012	NA	.	.	1,050	0.8	0.9
Nov-05-2012	NA	.	.	784	0.6	0.6
Nov-12-2012	NA	.	.	733	0.6	0.5
Nov-19-2012	NA	.	.	611	0.7	0.5
Nov-26-2012	NA	.	.	825	1.1	0.6
Dec-03-2012	NA	.	.	697	0.8	0.5
Dec-10-2012	NA	.	.	680	1.0	0.7
Dec-17-2012	NA	.	.	741	0.9	0.5
Dec-26-2012	NA	.	.	158	<0.4	0.2

Table 16. Weekly water quality monitoring at Station M2 (Santa Fe Canal at weir).

See Table 34 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow	.	.	Specific Conductance	Selenium (total)	Boron
DATA SOURCE	SLDMWA††	.	.	Panoche DD	Panoche DD	Panoche DD
UNITS	cfs	.	.	µS/cm	µg/L	mg/L
Oct-01-2012	NA	.	.	849	0.8	0.4
Oct-08-2012	NA	.	.	748	0.7	0.3
Oct-15-2012	NA	.	.	678	0.6	0.3
Oct-22-2012	NA	.	.	962	0.7	0.7
Oct-29-2012	NA	.	.	972	0.6	0.8
Nov-05-2012	NA	.	.	944	<0.4	0.8
Nov-12-2012	NA	.	.	941	0.7	0.8
Nov-19-2012	NA	.	.	813	0.8	0.7
Nov-26-2012	NA	.	.	937	0.6	0.8
Dec-03-2012	NA	.	.	1,030	<0.4	1.0
Dec-10-2012	NA	.	.	1,080	0.6	1.2
Dec-17-2012	NA	.	.	1,030	0.8	1.0
Dec-26-2012	NA	.	.	1,330	0.5	1.4

PRELIMINARY RESULTS

Table 17. Weekly water quality monitoring at Station H1 (Above Newman WW (previously SJR at Hills Ferry)).

(Collected data intended for use with biological monitoring.)

See Table 34 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-03-2012	.	.	.	1,540	0.7	0.9
Oct-10-2012	.	.	.	1,350	1.2	0.9
Oct-17-2012	.	.	.	1,400	0.6	0.9
Oct-24-2012	.	.	.	1,600	0.5	1.0
Oct-31-2012	.	.	.	1,840	0.7	1.1
Nov-07-2012	.	.	.	1,670	0.7	1.0
Nov-14-2012	.	.	.	1,840	0.6	1.1
Nov-21-2012	.	.	.	1,810	0.5	1.1
Nov-28-2012	.	.	.	1,810	0.7	1.1
Dec-10-2012	.	.	.	1,690	1.4	1.3
Dec-19-2012	.	.	.	305	1.3	0.6
Dec-27-2012	.	.	.	60.1	0.5	0.1

Table 18. Weekly water quality monitoring at Station H2 (San Joaquin River at Hills Ferry).

(Collected data intended for use with biological monitoring.)

See Table 34 for explanation of footnotes and agency abbreviations.

PARAMETER	Flow	.	.	Specific Conductance	Selenium (total)	Boron
DATA SOURCE	USGS	.	.	SLDMWA	SLDMWA	SLDMWA
UNITS	cfs	.	.	µS/cm	µg/L	mg/L
Oct-03-2012	176	.	.	NA	NA	NA
Oct-10-2012	191	.	.	NA	NA	NA
Oct-17-2012	242	.	.	NA	NA	NA
Oct-24-2012	465	.	.	NA	NA	NA
Oct-31-2012	248	.	.	NA	NA	NA
Nov-07-2012	236	.	.	NA	NA	NA
Nov-14-2012	233	.	.	NA	NA	NA
Nov-21-2012	263	.	.	NA	NA	NA
Nov-28-2012	251	.	.	NA	NA	NA
Dec-10-2012	399	.	.	NA	NA	NA
Dec-19-2012	287	.	.	NA	NA	NA
Dec-27-2012	1,280	.	.	NA	NA	NA

In October of 2012 samples were collected upstream of Station H1.

Site name will be changed to Site R (SJR at China Island) under the 2013 Monitoring Plan.

PRELIMINARY RESULTS

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

See Table 34 for explanation of footnotes and agency abbreviations

PARAMETER	Flow	Temperature	pH	Specific Conductance	Selenium (total)	Boron
DATA SOURCE	USGS	USBR	USBR	USBR	USBR	USBR
UNITS	cfs	°C	.	µS/cm	µg/L	mg/L
Oct-02-2012	286	21.8	7.9	1,280	0.5	0.7
Oct-10-2012	339	18.3	7.9	1,220	0.7	0.6
Oct-16-2012	406	19.6	7.9	1,100	0.4	0.5
Oct-23-2012	962	15.4	8.0	556	<0.4	0.3
Oct-30-2012	564	16.4	7.9	939	0.4	0.5
Nov-07-2012	545	17.7	8.1	1,040	<0.4	0.5
Nov-15-2012	575	11.0	7.9	900	<0.4	0.5
Nov-20-2012	627	13.8	7.9	885	0.8	0.5
Nov-26-2012	607	11.6	7.5	1,070	0.7	0.7
Dec-06-2012	952	14.3	7.8	1,010	1.1	0.8
Dec-13-2012	712	10.2	7.9	1,170	0.8	0.9
Dec-20-2012	645	NA	NA	NA	1.0	0.8
Dec-27-2012	1,740	8.9	7.8	585	0.6	0.4

Table 20. Weekly water quality monitoring at Central California Irrigation District Main Canal at Russell Avenue (MER510).

See Table 34 for explanation of footnotes and agency abbreviations

PARAMETER	.	.	.	Specific Conductance	Selenium (total)	Boron
DATA SOURCE	.	.	.	USBR	USBR	USBR
UNITS	.	.	.	µS/cm	µg/L	mg/L
Oct-01-2012	.	.	.	719	<0.4	0.2
Oct-08-2012	.	.	.	587	0.5	0.2
Oct-15-2012	.	.	.	612	0.5	0.2
Oct-22-2012	.	.	.	606	0.5	0.2
Oct-29-2012	.	.	.	599	0.6	0.2
Nov-05-2012	.	.	.	516	<0.4	0.2
Nov-12-2012	.	.	.	300	<0.4	0.1
Nov-19-2012	.	.	.	404	0.9	0.2
Nov-26-2012	.	.	.	479	0.5	0.2
Dec-03-2012	.	.	.	469	0.7	0.3
Dec-10-2012	.	.	.	621	1.3 U	0.4 U
Dec-17-2012	.	.	.	490	1.0	0.2
Dec-26-2012	.	.	.	348	0.6	0.2

Table 21. Summary of fathead minnow (Pimephales promelas) larvae survival in 7-day tests using water samples collected from January 2012 to December 2012. Each value is the mean of 4 replicates with 10 fish in each replicate.

See Table 34 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-2012	85	75	78	80	78	85
Feb-2012	98	90	100	100	98	98
Mar-2013	98	98	100	98	95	95
Apr-2012	98	100	98	95	93	93
May-2012	98	88	98	88	90	95
Jun-2012	95	100	100	98	100	98
Jul-2012	68	90	98	98	95	98
Aug-2012	65	93	100	100	93	93
Sep-2012	98	100	100	95	98	93
Oct-2012	NA	NA	NA	NA	NA	NA
Nov-2012	100	93	100	95	98	100
Dec-2012	NA	NA	NA	NA	NA	NA

Table 22. Summary of fathead minnow (*Pimephales promelas*) larvae growth in 7-day tests using water samples collected from January 2012 to December 2012. Each value is the mean of 4 replicates with 10 fish in each replicate.

See Table 34 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-2012	0.37	0.33	0.33	0.33	0.34	0.35
Feb-2012	0.38	0.33	0.36	0.38	0.35	0.39
Mar-2012	0.56	0.46	0.45	0.44	0.41	0.49
Apr-2012	0.39	0.35	0.34	0.40	0.34	0.34
May-2012	0.32	0.32	0.36	0.34	0.30	0.31
Jun-2012	0.34	0.37	0.39	0.38	0.38	0.36
Jul-2012	0.27	0.33	0.39	0.37	0.34	0.36
Aug-2012	0.22	0.33	0.31	0.30	0.33	0.30
Sep-2012	0.33	0.27	0.31	0.32	0.32	0.34
Oct-2012	NA	NA	NA	NA	NA	NA
Nov-2012	0.29	0.33	0.34	0.33	0.28	0.35
Dec-2012	NA	NA	NA	NA	NA	NA

Table 23. Summary of *Daphnia magna* survival in 7-day tests using water samples collected from January 2012 to December 2012. Each value is the mean of 10 replicates with 1 animal in each replicate.

See Table 34 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-2012	90	100	100	90	100	100
Feb-2012	100	90	100	90	100	100
Mar-2012	100	100	80	80	90	90
Apr-2012	100	80	90	100	100	90
May-2012	90	90	80	90	100	100
Jun-2012	90	80	90	90	100	100
Jul-2012	90	20*	40*	100	100	100
Aug-2012	40*	100	100	100	100	100
Sep-2012	90	100	90	80	90	100
Oct-2012	NA	NA	NA	NA	NA	NA
Nov-2012	80	90	100	90	90	100
Dec-2012	NA	NA	NA	NA	NA	NA

PRELIMINARY RESULTS

Table 24. Summary of *Daphnia magna* reproduction in 7-day tests using water samples collected from January 2012 to December 2012. Each value is the mean of 10 replicates with 1 animal in each replicate.

See Table 34 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-2012	34.1	41.4	35.7	29.2	33.9	28.5
Feb-2012	58.0	48.9	63.8	54.9	58.6	52.0
Mar-2013	58.3	49.7	41.8	40.8	45.1	31.5
Apr-2012	35.4	30.0	33.7	27.7	31.4	25.4
May-2012	33.0*	39.7	40.2	42.2	47.2	38.9
Jun-2012	41.9	37.7	33.1	29.8	35.7	28.3
Jul-2012	56.3	24.1*	36.4	54.3	46.8	55.8
Aug-2012	10.2*	25.0	26.2	27.3	29.3	24.5
Sep-2012	28.2	26.2	34.6	18.2*	29.7	24.2
Oct-2012	NA	NA	NA	NA	NA	NA
Nov-2012	25.7	21.1	23.8	21.6	22.6	22.8
Dec-2012	NA	NA	NA	NA	NA	NA

Table 25. Summary of *Selenastrum capricornutum* growth in 4-day tests using water samples collected from January 2012 to December 2012. Each value is the mean of 4 replicates.

See Table 34 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-2012	25.1	33.6	37.5	32.9	27.8	28.5
Feb-2012	25.0	36.4	34.9	4.9*	29.8	23.5
Mar-2012	17.9*	27.6	17.8*	26.7	25.6	24.0
Apr-2012	22.2	30.9	27.5	24.4	23.4	23.5
May-2012	18.1	8.3*	20.2	21.1	19.5	16.7
Jun-2012	21.8	27.7	27.1	34.3	23.1	16.3‡
Jul-2012	23.8	22.8	23.3	26.2	25.8	27.2
Aug-2012	24.3	29.5	27.8	32.3	27.5	23.1
Sep-2012	13.7*	19.0	17.4	20.2	14.4	16.8
Oct-2012	NA	NA	NA	NA	NA	NA
Nov-2012	14.1*	25.4	24.7*	29.3	26.7	19.4
Dec-2012	NA	NA	NA	NA	NA	NA

PRELIMINARY RESULTS

Table 26. Summary of selenium concentrations in grab water samples collected at study stations for use in laboratory toxicity tests, October 2012 to December 2012.

See Table 34 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-17-2012	NA	NA	NA	NA	NA
Oct-19-2012	NA	NA	NA	NA	NA
Oct-21-2012	NA	NA	NA	NA	NA
Nov-26-2012	27	< 0.4	4.6	< 0.4	< 0.4
Nov-28-2012	30	< 0.4	3.9	< 0.4	< 0.4
Nov-30-2012	27	< 0.4	< 0.4	0.5	< 0.4
Dec-17-2012	NA	NA	NA	NA	NA
Dec-19-2012	NA	NA	NA	NA	NA
Dec-21-2012	NA	NA	NA	NA	NA

Table 27. Summary of total suspended solids concentrations in grab water samples collected at study stations for use in laboratory toxicity October 2012 to December 2012.

See Table 34 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-26-2012	NA	NA	NA	NA	NA
Oct-28-2012	NA	NA	NA	NA	NA
Oct-30-2012	NA	NA	NA	NA	NA
Nov-26-2012	36	12	22	42	2
Nov-28-2012	25	17	72	44	0
Nov-30-2012	41	21	NA	63	3
Dec-26-2012	NA	NA	NA	NA	NA
Dec-28-2012	NA	NA	NA	NA	NA
Dec-30-2012	NA	NA	NA	NA	NA

PRELIMINARY RESULTS

Table 28. Monthly Flow and Salinity of Water at San Luis Drain, Station B.

See Table 34 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
Jul-2011	16	980	4,333	3,206	4,270
Aug-2011	17	1,050	3,858	2,855	4,080
Sep-2011	14	830	3,402	2,517	2,840
Oct-2011	16	980	2,996	2,217	2,950
Nov-2011	16	980	2,566	1,899	2,530
Dec-2011	18	1,110	2,934	2,171	3,280
Jan-2012	15	950	2,672	1,977	2,550
Feb-2012	20	1,160	2,838	2,100	3,310
Mar-2012	24	1,460	3,663	2,711	5,380
Apr-2012	11	660	4,368	3,232	2,900
May-2012	11	660	4,774	3,533	3,170
Jun-2012	13	790	4,782	3,539	3,800
Jul-2012	13	790	4,936	3,653	3,920
Aug-2012	9	540	4,975	3,682	2,700
Sep-2012	7	410	4,657	3,446	1,920
Oct-2012	11	660	3,422	2,532	2,270
Nov-2012	15	890	3,454	2,556	3,090
Dec-2012	21	1,280	4,061	3,005	5,230

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	4,153	3,070	65,430
WY 2009	18	13,160	4,254	3,060	54,770
WY 2010	20	14,520	4,618	3,420	67,540
WY 2011	26	18,510	4,497	3,330	83,830
WY 2012	14	10,490	3,847	2,847	40,610
WY 2013 to date	16	2,830	3,646	2,698	10,380

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	4,129	3,056	74,770
CY 2008	22	15,860	4,096	3,030	65,360
CY 2009	18	12,920	4,367	3,115	54,730
CY 2010	20	14,710	4,580	3,390	67,820
CY 2011	25	18,020	4,200	3,110	76,220
CY 2012	14	10,250	4,050	2,997	40,240

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

PRELIMINARY RESULTS

Table 29. Monthly Flow and Salinity of Water at Mud Slough, Station D.

See Table 34 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
Jul-2011	42	2,590	3,660	2,525	8,900
Aug-2011	43	2,670	2,740	1,891	6,870
Sep-2011	40	2,380	2,170	1,497	4,850
Oct-2011	126	7,770	1,277	881	9,310
Nov-2011	163	9,720	1,426	984	13,010
Dec-2011	120	7,350	2,075	1,432	14,310
Jan-2012	125	7,680	2,091	1,443	15,070
Feb-2012	107	6,150	2,635	1,818	15,210
Mar-2012	132	8,120	2,816	1,943	21,450
Apr-2012	51	3,040	3,444	2,377	9,830
May-2012	34	2,100	2,979	2,055	5,870
Jun-2012	48	2,870	2,689	1,856	7,240
Jul-2012	39	2,400	3,391	2,340	7,640
Aug-2012	34	2,090	2,230	1,539	4,370
Sep-2012	27	1,630	2,314	1,597	3,540
Oct-2012	81	4,980	1,562	1,078	7,300
Nov-2012	106	6,290	1,841	1,270	10,870
Dec-2012	173	10,630	1,862	1,285	18,570

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	72,130	2,541	1,750	171,670
WY 2008	85	61,630	2,767	1,910	160,090
WY 2009	71	51,240	2,640	1,820	126,830
WY 2010	90	64,840	2,726	1,880	165,780
WY 2011	135	97,580	2,338	1,610	213,660
WY 2012	84	61,120	2,460	1,698	141,110
WY 2013 to date	120	21,900	1,755	1,211	36,070

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	75	54,260	2,760	1,775	130,990
CY 2010	90	64,740	2,665	1,840	162,010
CY 2011	139	100,510	2,291	1,580	215,980
CY 2012	80	57,980	2,501	1,726	136,070

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

PRELIMINARY RESULTS

Table 30. Monthly Flow and Salinity of Water at Salt Slough, Station F.

See Table 34 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
Jul-2011	146	8,990	794	540	6,600
Aug-2011	193	11,480	760	517	8,070
Sep-2011	136	7,830	894	608	6,470
Oct-2011	166	10,220	879	598	8,310
Nov-2011	208	12,400	989	672	11,340
Dec-2011	61	3,730	1,939	1,319	6,690
Jan-2012	69	4,220	1,803	1,226	7,040
Feb-2012	208	11,990	1,520	1,034	16,860
Mar-2012	192	11,790	1,828	1,243	19,930
Apr-2012	159	9,460	1,682	1,143	14,710
May-2012	116	7,160	1,221	830	8,080
Jun-2012	136	8,070	1,115	758	8,320
Jul-2012	133	8,160	914	622	6,900
Aug-2012	120	7,350	933	634	6,340
Sep-2012	76	4,520	1,101	749	4,600
Oct-2012	100	6,150	1,275	867	7,250
Nov-2012	134	7,970	1,328	903	9,790
Dec-2012	174	10,700	1,037	705	10,260

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	67,440	1,441	980	89,880
WY 2010	146	105,310	1,365	930	133,200
WY 2011	197	142,210	1,149	780	150,860
WY 2012	136	98,400	1,308	889	119,020
WY 2013 to date	136	24,820	1,213	825	27,850

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	72,120	1,468	893	87,580
CY 2010	150	108,300	1,362	930	136,980
CY 2011	205	148,080	1,094	740	149,030
CY 2012 to date	135	97,540	1,313	893	118,440

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 Fremont Ford, Station G.

See Table 34 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
Jul-2011	2,060	126,810	164	112	19,230
Aug-2011	386	23,760	656	446	14,410
Sep-2011	255	15,160	815	554	11,430
Oct-2011	263	16,180	759	516	11,360
Nov-2011	375	22,310	900	612	18,570
Dec-2011	146	9,000	1,959	1,332	16,300
Jan-2012	109	6,680	2,213	1,505	13,670
Feb-2012	246	14,150	1,991	1,354	26,060
Mar-2012	280	17,240	1,815	1,234	28,940
Apr-2012	286	17,020	1,466	997	23,070
May-2012	154	9,470	1,410	958	12,340
Jun-2012	147	8,770	1,331	905	10,800
Jul-2012	141	8,670	1,109	754	8,890
Aug-2012	122	7,480	1,078	733	7,460
Sep-2012	84	4,980	1,363	927	6,280
Oct-2012	115	7,090	1,443	981	9,460
Nov-2012	163	9,720	1,404	955	12,620
Dec-2012	407	25,010	889	605	20,560

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	129	92,850	1,727	1,170	147,740
WY 2010	395	286,220	1,003	680	264,700
WY 2011	2,449	1,775,650	501	340	821,060
WY 2012	196	94,460	1,459	992	127,430
WY 2013 to date	228	41,820	1,245	847	48,160

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	102,020	1,651	986	136,870
CY 2010	409	296,060	942	640	257,690
CY 2011	2,464	1,786,170	463	320	777,340
CY 2012	188	136,280	1,459	992	183,920

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

PRELIMINARY RESULTS

Table 32. Monthly Flow and Salinity of Water at San Joaquin River at Crow's Landing, Station N.

See Table 34 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
Jul-2011	4,090	251,350	260	161	55,100
Aug-2011	1,190	73,470	594	368	36,800
Sep-2011	1,070	61,340	547	339	28,290
Oct-2011	1,630	100,150	442	274	37,370
Nov-2011	1,120	66,770	738	457	41,540
Dec-2011	670	41,440	1,318	817	46,060
Jan-2012	590	36,280	1,466	909	44,840
Feb-2012	640	36,700	1,575	976	48,730
Mar-2012	800	49,010	1,636	1,014	67,610
Apr-2012	660	39,360	1,500	930	49,780
May-2012	840	51,890	724	449	31,670
Jun-2012	490	29,130	1,154	716	28,350
Jul-2012	370	22,640	1,237	767	23,610
Aug-2012	330	20,470	1,130	701	19,500
Sep-2012	300	17,690	1,127	699	16,810
Oct-2012	530	32,700	798	495	22,000
Nov-2012	580	34,330	931	577	26,950
Dec-2012	990	61,100	866	537	44,620

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	468	336,670	1,273	790	361,720
WY 2010	981	709,070	939	580	559,310
WY 2011	4,428	3,192,490	463	290	1,259,120
WY 2012	698	507,520	1,171	726	500,940
WY 2013 to date	700	128,130	865	536	93,450

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	723	523,470	1,106	685	466,770
CY 2009	494	356,380	1,278	793	380,300
CY 2010	1,135	822,330	874	542	585,580
CY 2011	4,398	3,173,980	469	291	831,800
CY 2012	593	431,300	1,179	731	424,470

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

PRELIMINARY RESULTS

Table 33. Summary of sediment monitoring results from September 2010 to December 2012. Concentrations in µg/g dry weight.

See Table 34 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:	Dec-07-2010	<0.15	0.19	0.29	0.28	0.76	0.44	31.30	39.60	28.90
Mud Slough North	Mar-08-2011	<0.14	<0.15	0.30	0.31	0.19	0.81	32.20	36.70	25.90
upstream of	Jun-01-2011	NA	NA	NA	NA	NA	NA	NA	NA	NA
drainage discharges	Sep-01-2011	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Nov-08-2011	NA	NA	<0.13	NA	NA	0.38	NA	NA	27.50
	Mar-28-2012	NA	NA	<0.15	NA	NA	0.26	NA	NA	29.10
	Jun-06-2012	NA	NA	<0.15	NA	NA	0.13	NA	NA	34.90
	Sep-01-2012	NA	NA	<0.15	NA	NA	<0.70	NA	NA	29.20
	Nov-01-2012	NA	NA	NA	NA	NA	NA	NA	NA	NA
Station D:	Dec-07-2010	0.28	0.30	0.32	0.06	0.11	0.08	19.10	18.90	26.90
Mud Slough North	Mar-08-2011	0.30	0.23	0.23	0.01	0.02	0.05	26.40	23.90	20.00
downstream of	Dec-07-2010	0.28	0.30	0.32	0.06	0.11	0.08	19.10	18.90	26.90
drainage discharges	Mar-08-2011	0.30	0.23	0.23	0.01	0.02	0.05	26.40	23.90	20.00
	Jun-01-2011	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Mar-28-2012	NA	NA	0.17	NA	NA	0.09	NA	NA	28.60
	Jun-06-2012	NA	NA	0.17	NA	NA	0.18	NA	NA	30.40
	Sep-01-2012	NA	NA	0.42	NA	NA	<0.68	NA	NA	25.90
	Nov-01-2012	NA	NA	NA	NA	NA	NA	NA	NA	NA
Station E:	Dec-07-2010	**1.83	1.89	1.44	0.45	0.57	0.31	36.20	40.60	37.40
Mud Slough at Highway 140	Mar-08-2011	1.90	1.90	0.69	0.84	0.77	0.72	43.40	50.20	37.00
	Jun-01-2011	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Sep-01-2011	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Nov-08-2011	NA	NA	0.30	NA	NA	0.55	NA	NA	28.60
	Mar-28-2012	NA	NA	0.24	NA	NA	0.06	NA	NA	21.80
	Jun-06-2012	NA	NA	0.44	NA	NA	0.60	NA	NA	26.00
	Sep-01-2012	NA	NA	0.83	NA	NA	<0.71	NA	NA	32.90
	Nov-01-2012	NA	NA	NA	NA	NA	NA	NA	NA	NA
Station F:	Dec-07-2010	0.15	0.26	<0.41	0.25	**0.64	**0.86	28.40	32.20	53.40
Salt Slough at Highway 165	Mar-08-2011	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Jun-01-2011	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Sep-01-2011	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Nov-08-2011	NA	NA	<0.14	NA	NA	0.10	NA	NA	28.60
	Mar-28-2012	NA	NA	<0.15	NA	NA	0.06	NA	NA	33.20
	Jun-06-2012	NA	NA	0.26	NA	NA	0.78	NA	NA	36.70
	Sep-01-2012	NA	NA	0.29	NA	NA	1.20	NA	NA	39.80
	Nov-01-2012	NA	NA	NA	NA	NA	NA	NA	NA	NA
Station I2:	Dec-07-2010	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mud Slough:	Mar-08-2011	0.46	0.38	0.32	0.52	0.51	0.30	31.80	28.40	27.40
Seasonal backwater tributary	Jun-01-2011	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Sep-01-2011	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Nov-08-2011	NA	NA	6.90	NA	NA	3.00	NA	NA	53.90
	Mar-28-2012	NA	NA	0.98	NA	NA	0.51	NA	NA	37.00
	Jun-06-2012	NA	NA	0.40	NA	NA	0.35	NA	NA	29.60
	Sep-01-2012	NA	NA	0.56	NA	NA	<0.68	NA	NA	26.20
	Nov-01-2012	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table 34. 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
T	Results obtained past the holding time