

GRASSLAND BYPASS PROJECT

QUARTERLY DATA REPORT

October, November and December 2011

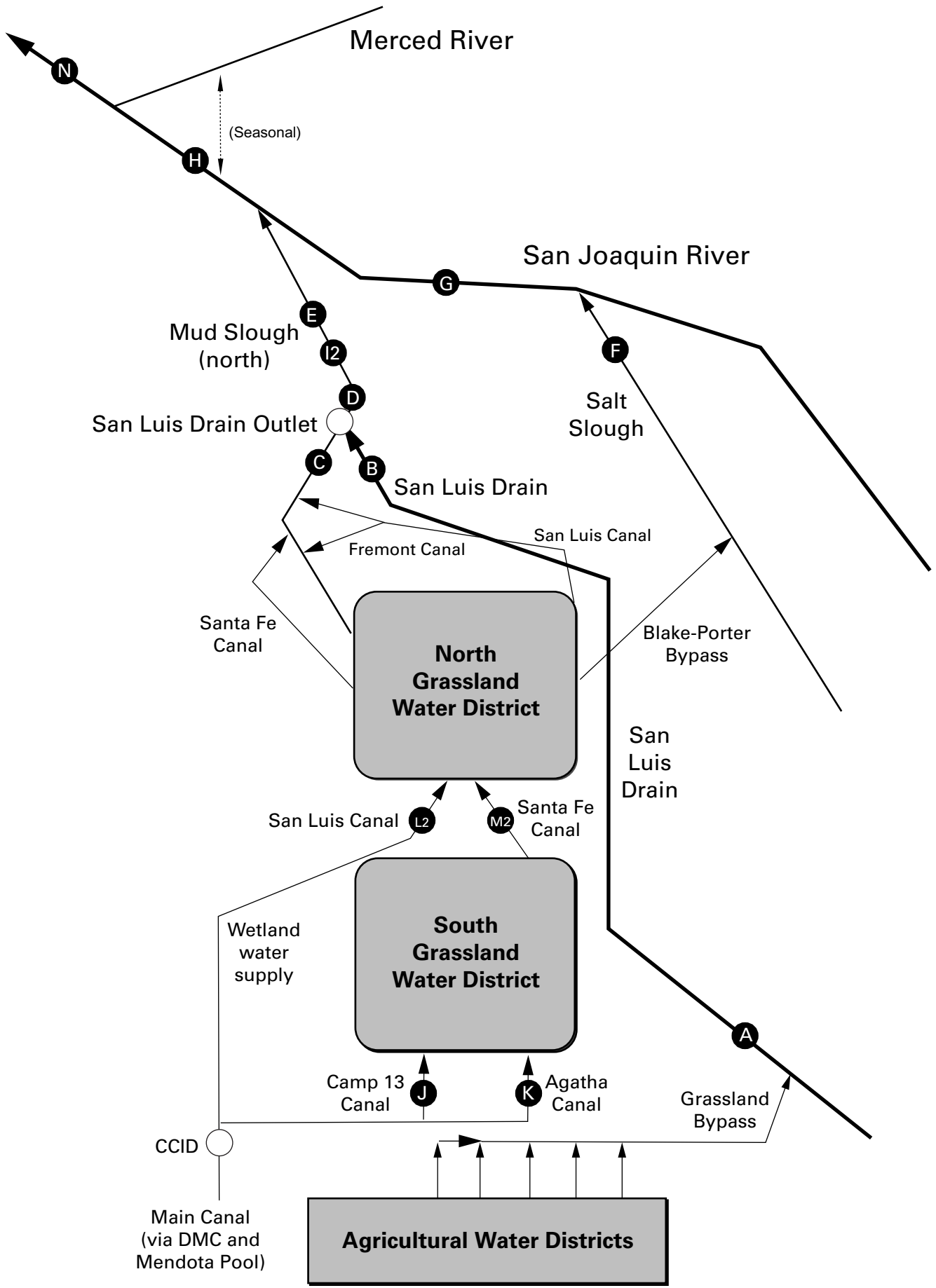
August 2012

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





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 2011.

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	6	5,480	1	5,200	20	5,800
Day 2	7	5,670	2	5,460	17	6,240
Day 3	8	5,810	3	5,580	12	6,240
Day 4	10	5,850	5	5,290	11	6,270
Day 5	13	6,080	6	5,130	10	6,130
Day 6	20	5,480	7	5,080	8	6,120
Day 7	15	5,410	8	5,340	13	6,030
Day 8	12	5,480	11	5,200	16	6,050
Day 9	10	5,520	16	5,190	12	5,950
Day 10	9	5,320	19	5,030	13	6,220
Day 11	10	5,530	14	5,030	19	6,000
Day 12	10	5,930	13	5,230	21	6,270
Day 13	8	6,290	13	5,510	20	6,380
Day 14	9	6,200	8	5,730	14	6,520
Day 15	10	6,180	9	5,760	9	6,300
Day 16	14	6,040	11	5,390	18	6,510
Day 17	14	5,960	10	5,620	12	6,740
Day 18	13	6,110	9	5,780	17	6,430
Day 19	15	6,200	10	5,630	12	6,560
Day 20	15	6,120	15	5,570	10	6,510
Day 21	14	5,960	17	5,670	11	6,270
Day 22	6	6,260	13	5,330	11	6,070
Day 23	5	6,080	11	5,310	11	6,070
Day 24	5	5,970	10	5,680	10	6,070
Day 25	8	5,930	11	5,440	10	5,890
Day 26	10	5,290	10	5,340	14	5,460
Day 27	16	5,200	11	5,620	10	5,780
Day 28	9	4,890	11	5,830	10	6,030
Day 29	7	4,820	10	5,600	10	6,700
Day 30	4	5,370	14	5,600	13	6,510
Day 31	5	5,200	.	.	15	5,990
Mean	10	5,730	10	5,440	13	6,200

PRELIMINARY RESULTS

Table 2a. Continuous water monitoring at Stations B and B2 (San Luis Drain Terminus), October 2011.

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-01-2011	10	21.0	7.0	2,710	15.0	0.8
Oct-02-2011	11	20.5	7.1	2,610	16.0	0.9
Oct-03-2011	11	17.9	8.0	2,720	17.0	1.0
Oct-04-2011	12	19.0	7.8	2,870	16.0	1.1
Oct-05-2011	16	15.1	7.1	2,800	14.0	1.2
Oct-06-2011	18	12.5	6.7	2,710	16.0	1.6
Oct-07-2011	23	15.2	6.4	2,640	18.0	2.2
Oct-08-2011	21	17.2	7.6	2,620	11.0	1.2
Oct-09-2011	17	18.6	8.5	2,690	12.0	1.1
Oct-10-2011	15	19.4	8.5	2,860	18.0	1.4
Oct-11-2011	13	21.9	9.6	3,150	20.0	1.4
Oct-12-2011	14	20.2	8.8	3,360	24.0	1.9
Oct-13-2011	15	20.9	9.6	3,240	18.0	1.5
Oct-14-2011	14	22.6	8.7	3,220	17.0	1.2
Oct-15-2011	14	23.2	8.2	3,120	16.0	1.2
Oct-16-2011	15	20.5	8.6	3,100	14.0	1.1
Oct-17-2011	18	21.3	8.1	3,040	12.0	1.1
Oct-18-2011	19	22.1	8.6	2,960	12.0	1.2
Oct-19-2011	18	19.1	8.9	3,190	15.0	1.5
Oct-20-2011	20	19.9	8.7	3,180	13.0	1.4
Oct-21-2011	20	18.7	10.0	3,260	14.0	1.5
Oct-22-2011	21	20.1	10.0	3,330	25.0	2.8
Oct-23-2011	15	20.4	10.0	3,260	26.0	2.1
Oct-24-2011	13	20.6	10.0	3,190	22.0	1.5
Oct-25-2011	12	16.9	10.0	3,270	23.0	1.5
Oct-26-2011	14	16.4	11.0	3,260	19.0	1.4
Oct-27-2011	17	14.9	10.0	3,110	17.0	1.5
Oct-28-2011	22	15.6	9.7	3,090	20.0	2.4
Oct-29-2011	17	15.8	8.3	2,980	15.0	1.4
Oct-30-2011	15	16.6	7.6	2,610	12.0	1.0
Oct-31-2011	13	17.5	7.7	2,580	9.8	0.7
Mean	16	18.8	8.6	2,990	16.7	1.4
Total Acre-feet	980					
Total (lbs)						44

Load Limitation for October (lbs)	328
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PRELIMINARY RESULTS

Table 2a. Continuous water monitoring at Stations B and B2 (San Luis Drain Terminus), November 2011.

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-01-2011	11	17.0	9.5	2,600	10.0	0.6
Nov-02-2011	11	14.4	9.0	2,740	11.0	0.7
Nov-03-2011	10	13.1	9.0	2,590	13.0	0.7
Nov-04-2011	10	10.5	8.8	2,640	17.0	0.9
Nov-05-2011	13	9.6	7.9	2,650	14.0	1.0
Nov-06-2011	17	11.2	7.3	2,340	10.0	0.9
Nov-07-2011	16	10.4	6.5	2,160	8.1	0.7
Nov-08-2011	16	9.7	6.4	2,110	11.0	0.9
Nov-09-2011	16	10.3	5.6	2,160	9.4	0.8
Nov-10-2011	22	10.3	6.3	2,030	9.6	1.1
Nov-11-2011	25	11.4	6.8	2,350	13.0	1.8
Nov-12-2011	21	11.5	7.4	2,370	15.0	1.7
Nov-13-2011	18	13.8	7.7	2,570	17.0	1.7
Nov-14-2011	19	12.7	8.1	2,650	23.0	2.4
Nov-15-2011	15	12.3	6.7	2,780	32.0	2.6
Nov-16-2011	15	13.3	7.8	2,800	31.0	2.5
Nov-17-2011	16	13.0	7.3	2,750	25.0	2.1
Nov-18-2011	16	12.4	6.6	2,600	24.0	2.1
Nov-19-2011	15	11.4	6.9	2,620	27.0	2.2
Nov-20-2011	17	10.4	6.9	2,760	25.0	2.3
Nov-21-2011	19	8.8	6.4	2,570	21.0	2.1
Nov-22-2011	23	9.1	6.3	2,590	19.0	2.3
Nov-23-2011	19	8.6	6.5	2,600	22.0	2.3
Nov-24-2011	17	11.2	6.8	2,650	19.0	1.7
Nov-25-2011	15	11.8	6.6	2,730	21.0	1.7
Nov-26-2011	17	10.3	7.4	2,790	22.0	2.0
Nov-27-2011	16	9.0	7.9	2,920	23.0	1.9
Nov-28-2011	17	9.3	7.4	2,970	20.0	1.9
Nov-29-2011	18	9.2	6.7	2,710	20.0	2.0
Nov-30-2011	15	12.1	6.8	2,600	21.0	1.7
Mean	16	11.3	7.2	2,580	18.4	1.6
Total Acre-feet	980					
Total (lbs)						49

Load Limitation for November 2011 (lbs)	328
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PRELIMINARY RESULTS

Table 2a. Continuous water monitoring at Stations B and B2 (San Luis Drain Terminus), December 2011.

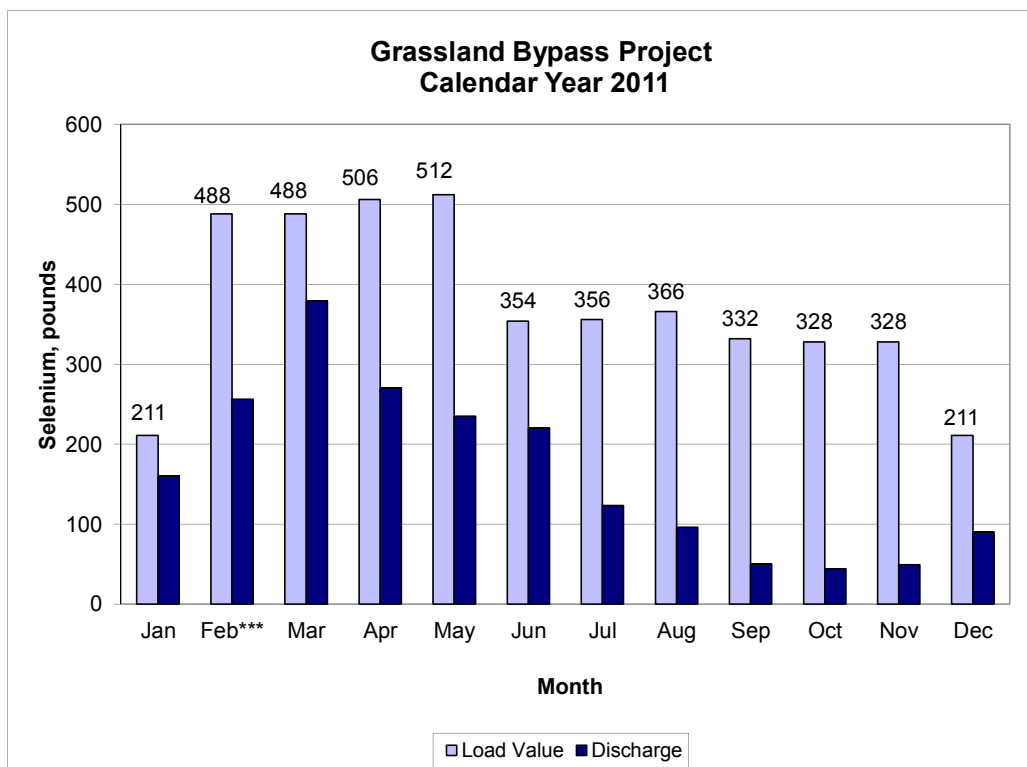
See Table 34 for explanation of footnotes and agency abbreviations.

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-01-2011	12	13.3	7.5	2,720	24.0	1.6
Dec-02-2011	24	10.0	NA	2,650	23.0	3.0
Dec-03-2011	22	8.0	NA	2,610	22.0	2.6
Dec-04-2011	20	5.4	8.5	2,860	20.0	2.1
Dec-05-2011	17	4.9	8.0	2,840	20.0	1.8
Dec-06-2011	14	6.0	7.8	2,760	19.0	1.5
Dec-07-2011	13	6.1	8.4	2,720	20.0	1.4
Dec-08-2011	18	5.9	NA	2,810	24.8	2.4
Dec-09-2011	22	6.2	8.3	3,040	26.0	3.0
Dec-10-2011	17	5.4	8.1	2,890	29.0	2.7
Dec-11-2011	17	7.8	7.7	2,870	30.0	2.8
Dec-12-2011	24	7.4	7.4	2,830	29.0	3.8
Dec-13-2011	26	8.0	8.0	3,080	34.0	4.9
Dec-14-2011	27	6.8	7.6	2,940	28.0	4.0
Dec-15-2011	20	6.9	8.7	3,080	33.0	3.5
Dec-16-2011	16	5.2	8.4	3,150	42.0	3.5
Dec-17-2011	23	3.2	8.6	3,250	44.0	5.4
Dec-18-2011	18	4.1	9.0	3,180	40.0	4.0
Dec-19-2011	23	5.8	8.8	3,220	34.0	4.1
Dec-20-2011	17	3.8	7.5	3,040	27.0	2.5
Dec-21-2011	15	4.3	8.7	3,000	35.6	3.0
Dec-22-2011	15	5.9	8.5	3,240	35.4	2.9
Dec-23-2011	16	3.0	9.1	3,080	36.7	3.1
Dec-24-2011	16	3.9	7.6	3,180	38.5	3.3
Dec-25-2011	14	4.0	8.7	2,910	35.4	2.7
Dec-26-2011	15	4.7	8.2	2,980	31.8	2.5
Dec-27-2011	18	6.1	8.6	2,850	30.8	3.0
Dec-28-2011	15	7.1	8.8	2,760	29.4	2.4
Dec-29-2011	14	9.2	7.7	2,790	29.2	2.3
Dec-30-2011	15	9.2	7.4	2,770	26.8	2.2
Dec-31-2011	16	8.3	6.9	2,670	26.3	2.3
Mean	18	6.3	8.2	2,930	29.8	2.9
Total Acre-feet	1,110					
Total (lbs)						90

Load Limitation for December 2011 (lbs)	211
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PRELIMINARY RESULTS

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



***Data failed QA. Total Se load is estimate.

PRELIMINARY RESULTS

PRELIMINARY RESULTS

**Table 3. Continuous water monitoring at Station D
(Mud Slough North downstream of drainage discharges), October 2011.**

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-01-2011	74	22.5	1,190
Oct-02-2011	84	22.2	1,090
Oct-03-2011	83	20.9	1,170
Oct-04-2011	90	20.1	1,210
Oct-05-2011	117	18.9	1,130
Oct-06-2011	146	17.5	1,040
Oct-07-2011	135	17.4	1,270
Oct-08-2011	132	18.1	1,240
Oct-09-2011	159	19.2	998
Oct-10-2011	151	19.8	1,040
Oct-11-2011	145	20.8	1,060
Oct-12-2011	164	20.8	1,060
Oct-13-2011	166	21.0	1,080
Oct-14-2011	140	21.5	1,180
Oct-15-2011	118	22.3	1,310
Oct-16-2011	121	22.1	1,360
Oct-17-2011	132	21.7	1,340
Oct-18-2011	135	21.9	1,350
Oct-19-2011	131	21.6	1,380
Oct-20-2011	135	20.9	1,460
Oct-21-2011	124	20.6	1,570
Oct-22-2011	133	20.5	1,540
Oct-23-2011	128	20.6	1,410
Oct-24-2011	131	20.8	1,300
Oct-25-2011	133	19.5	1,280
Oct-26-2011	133	16.9	1,370
Oct-27-2011	137	16.1	1,430
Oct-28-2011	140	16.5	1,560
Oct-29-2011	134	16.7	1,490
Oct-30-2011	130	16.9	1,400
Oct-31-2011	133	17.4	1,310
Mean	129	19.8	1,280

PRELIMINARY RESULTS

**Table 3. Continuous water monitoring at Station D
(Mud Slough North downstream of drainage discharges), November 2011.**

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-01-2011	135	16.4	1,310
Nov-02-2011	134	14.9	1,330
Nov-03-2011	139	14.8	1,260
Nov-04-2011	141	14.3	1,270
Nov-05-2011	145	13.1	1,310
Nov-06-2011	157	13.1	1,290
Nov-07-2011	166	13.1	1,250
Nov-08-2011	168	13.0	1,270
Nov-09-2011	162	13.1	1,320
Nov-10-2011	156	13.1	1,410
Nov-11-2011	171	13.0	1,470
Nov-12-2011	180	12.7	1,370
Nov-13-2011	181	13.2	1,370
Nov-14-2011	180	13.9	1,410
Nov-15-2011	173	14.0	1,390
Nov-16-2011	180	14.1	1,360
Nov-17-2011	185	14.2	1,390
Nov-18-2011	185	14.3	1,370
Nov-19-2011	179	13.7	1,390
Nov-20-2011	173	12.8	1,490
Nov-21-2011	174	12.3	1,480
Nov-22-2011	173	12.1	1,560
Nov-23-2011	173	11.9	1,510
Nov-24-2011	171	12.0	1,500
Nov-25-2011	157	12.4	1,550
Nov-26-2011	156	12.6	1,590
Nov-27-2011	160	12.1	1,570
Nov-28-2011	161	12.1	1,630
Nov-29-2011	155	11.5	1,660
Nov-30-2011	144	11.4	1,660
-	-	-	-
Mean	164	13.2	1,420

PRELIMINARY RESULTS

**Table 3. Continuous water monitoring at Station D
(Mud Slough North downstream of drainage discharges), December 2011.**

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-01-2011	134	9.4	1,710
Dec-02-2011	134	8.8	1,910
Dec-03-2011	131	8.5	1,870
Dec-04-2011	119	8.3	1,990
Dec-05-2011	109	8.2	2,050
Dec-06-2011	107	8.3	2,050
Dec-07-2011	108	8.4	2,010
Dec-08-2011	113	8.5	2,100
Dec-09-2011	117	8.5	2,210
Dec-10-2011	113	8.4	2,100
Dec-11-2011	109	8.8	2,140
Dec-12-2011	110	9.5	2,300
Dec-13-2011	113	9.3	2,420
Dec-14-2011	119	9.2	2,250
Dec-15-2011	107	9.3	2,290
Dec-16-2011	107	8.8	2,170
Dec-17-2011	118	8.3	2,270
Dec-18-2011	130	7.8	2,010
Dec-19-2011	132	8.2	2,140
Dec-20-2011	129	8.0	1,990
Dec-21-2011	126	7.7	1,980
Dec-22-2011	127	7.3	2,010
Dec-23-2011	124	6.9	2,040
Dec-24-2011	121	6.7	2,120
Dec-25-2011	120	6.7	2,040
Dec-26-2011	119	7.0	2,080
Dec-27-2011	117	7.5	2,190
Dec-28-2011	115	7.9	2,090
Dec-29-2011	117	8.7	2,050
Dec-30-2011	125	9.3	1,960
Dec-31-2011	127	9.7	1,970
Mean	119	8.3	2,080

PRELIMINARY RESULTS

Table 4. Continuous water monitoring at Station F (Salt Slough at Highway 165), October 2011.

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-01-2011	114	21.4	932
Oct-02-2011	126	20.8	843
Oct-03-2011	129	19.9	857
Oct-04-2011	128	19.2	876
Oct-05-2011	140	18.2	861
Oct-06-2011	160	NA	NA
Oct-07-2011	193	NA	NA
Oct-08-2011	217	NA	NA
Oct-09-2011	212	NA	NA
Oct-10-2011	196	NA	NA
Oct-11-2011	177	NA	NA
Oct-12-2011	155	NA	NA
Oct-13-2011	138	19.5	962
Oct-14-2011	133	19.7	933
Oct-15-2011	131	20.3	955
Oct-16-2011	121	20.6	1,010
Oct-17-2011	115	20.5	1,010
Oct-18-2011	117	20.4	1,000
Oct-19-2011	125	20.1	941
Oct-20-2011	117	19.5	956
Oct-21-2011	129	19.1	913
Oct-22-2011	161	19.1	885
Oct-23-2011	180	19.2	871
Oct-24-2011	189	19.4	829
Oct-25-2011	193	18.9	824
Oct-26-2011	199	17.2	815
Oct-27-2011	204	15.9	806
Oct-28-2011	195	15.5	819
Oct-29-2011	196	15.5	839
Oct-30-2011	197	15.6	839
Oct-31-2011	213	15.8	851
Mean	161	18.8	890

PRELIMINARY RESULTS

Table 4. Continuous water monitoring at Station F (Salt Slough at Highway 165), November 2011.

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-01-2011	228	15.6	834
Nov-02-2011	230	14.8	830
Nov-03-2011	222	14.1	844
Nov-04-2011	218	13.6	872
Nov-05-2011	204	12.7	892
Nov-06-2011	206	12.5	891
Nov-07-2011	200	12.2	912
Nov-08-2011	209	12.0	912
Nov-09-2011	216	11.7	912
Nov-10-2011	224	11.6	880
Nov-11-2011	232	11.8	879
Nov-12-2011	235	12.0	874
Nov-13-2011	239	12.2	894
Nov-14-2011	253	12.6	889
Nov-15-2011	256	12.7	873
Nov-16-2011	258	12.9	873
Nov-17-2011	263	12.9	872
Nov-18-2011	265	13.1	883
Nov-19-2011	246	12.9	928
Nov-20-2011	226	12.4	1,010
Nov-21-2011	203	11.9	1,100
Nov-22-2011	187	11.6	1,150
Nov-23-2011	174	11.2	1,180
Nov-24-2011	159	11.4	1,250
Nov-25-2011	144	11.7	1,300
Nov-26-2011	139	12.0	1,350
Nov-27-2011	116	11.9	1,440
Nov-28-2011	103	12.1	1,570
Nov-29-2011	99	12.0	1,640
Nov-30-2011	92	11.8	1,630
.	.	.	.
Mean	202	12.5	1,050

PRELIMINARY RESULTS

Table 4. Continuous water monitoring at Station F (Salt Slough at Highway 165), December 2011.

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-01-2011	e92	10.4	1,680
Dec-02-2011	e90	9.7	1,680
Dec-03-2011	84	9.1	1,720
Dec-04-2011	81	8.8	1,760
Dec-05-2011	74	8.5	1,840
Dec-06-2011	e75	8.5	1,880
Dec-07-2011	e77	8.5	1,900
Dec-08-2011	69	8.5	1,850
Dec-09-2011	73	8.6	1,910
Dec-10-2011	65	8.5	1,900
Dec-11-2011	67	8.9	2,000
Dec-12-2011	60	9.6	1,980
Dec-13-2011	63	9.8	1,940
Dec-14-2011	56	9.6	1,920
Dec-15-2011	56	9.8	1,970
Dec-16-2011	57	9.5	2,000
Dec-17-2011	54	9.1	2,010
Dec-18-2011	56	8.7	2,070
Dec-19-2011	51	8.9	2,040
Dec-20-2011	49	8.9	2,000
Dec-21-2011	54	8.8	2,050
Dec-22-2011	48	8.3	2,080
Dec-23-2011	47	7.9	2,090
Dec-24-2011	48	7.7	2,110
Dec-25-2011	49	7.5	2,100
Dec-26-2011	50	7.7	2,060
Dec-27-2011	51	8.2	2,060
Dec-28-2011	51	8.6	2,080
Dec-29-2011	51	9.2	2,090
Dec-30-2011	51	9.9	2,100
Dec-31-2011	51	10.3	2,110
Mean	58	8.9	1,970

PRELIMINARY RESULTS

Table 5. Continuous water monitoring at Station N (San Joaquin River at Crow's Landing), October 2011.

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-01-2011	1,140	20.8	0.28	465	0.6
Oct-02-2011	1,200	20.6	0.25	430	0.6
Oct-03-2011	1,270	19.8	0.22	391	< 0.4
Oct-04-2011	1,290	19.1	0.21	377	< 0.4
Oct-05-2011	1,400	18.6	0.22	391	< 0.4
Oct-06-2011	1,550	17.3	0.21	383	< 0.4
Oct-07-2011	1,620	16.7	0.21	367	0.5
Oct-08-2011	1,690	17.0	0.20	372	0.4
Oct-09-2011	1,710	17.5	0.22	374	0.6
Oct-10-2011	1,740	17.9	0.20	367	0.4
Oct-11-2011	1,700	18.8	0.22	419	0.4
Oct-12-2011	1,720	19.1	0.21	398	< 0.4
Oct-13-2011	1,760	18.9	0.19	376	< 0.4
Oct-14-2011	1,730	18.8	0.21	391	0.4
Oct-15-2011	1,720	19.2	0.21	409	0.4
Oct-16-2011	1,710	19.4	0.22	428	0.4
Oct-17-2011	1,740	19.3	0.22	429	0.7
Oct-18-2011	1,660	19.1	0.22	435	< 0.4
Oct-19-2011	1,610	18.8	0.24	457	< 0.4
Oct-20-2011	1,640	18.5	0.24	467	< 0.4
Oct-21-2011	1,610	18.2	0.25	477	< 0.4
Oct-22-2011	1,640	17.9	0.25	491	< 0.4
Oct-23-2011	1,630	17.9	0.26	502	0.5
Oct-24-2011	1,690	18.0	0.25	514	< 0.4
Oct-25-2011	1,660	17.6	0.24	510	< 0.4
Oct-26-2011	1,660	16.0	0.23	503	< 0.4
Oct-27-2011	1,640	15.3	0.24	507	< 0.4
Oct-28-2011	1,710	15.2	0.23	512	< 0.4
Oct-29-2011	1,770	15.2	0.25	511	< 0.4
Oct-30-2011	1,750	15.2	0.25	516	< 0.4
Oct-31-2011	1,770	15.4	0.2	519	< 0.4
Mean	1,617	18.0	0.2	440	0.5

PRELIMINARY RESULTS

Table 5. Continuous water monitoring at Station N (San Joaquin River at Crow's Landing), November 2011.

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-01-2011	1,760	15.1	0.21	515	< 0.4
Nov-02-2011	1,380	14.2	0.26	515	< 0.4
Nov-03-2011	1,220	14.5	0.34	537	< 0.4
Nov-04-2011	1,150	14.4	0.35	569	0.4
Nov-05-2011	1,100	13.4	0.36	601	0.4
Nov-06-2011	1,080	13.3	0.38	627	0.4
Nov-07-2011	1,030	13.1	0.42	652	0.5
Nov-08-2011	1,020	12.7	0.43	680	0.5
Nov-09-2011	1,000	12.5	0.44	702	0.4
Nov-10-2011	1,030	12.4	0.44	723	0.4
Nov-11-2011	1,050	12.2	0.42	737	0.4
Nov-12-2011	1,050	12.3	0.46	744	0.5
Nov-13-2011	1,050	12.8	0.48	751	0.6
Nov-14-2011	1,040	13.3	0.47	760	0.5
Nov-15-2011	1,030	13.3	0.50	772	0.6
Nov-16-2011	1,030	13.3	0.50	783	0.6
Nov-17-2011	1,030	13.4	0.51	794	0.6
Nov-18-2011	1,080	13.4	0.50	792	0.6
Nov-19-2011	1,190	13.1	0.47	766	0.5
Nov-20-2011	1,270	12.8	0.41	698	0.5
Nov-21-2011	1,210	12.2	0.47	738	0.5
Nov-22-2011	1,120	11.8	0.52	779	0.5
Nov-23-2011	1,080	11.6	0.54	818	0.6
Nov-24-2011	1,050	11.6	0.55	852	0.5
Nov-25-2011	1,030	11.9	0.54	860	0.5
Nov-26-2011	987	12.1	0.54	901	0.5
Nov-27-2011	975	11.9	0.58	915	0.5
Nov-28-2011	957	12.1	0.57	932	< 0.4
Nov-29-2011	933	11.8	0.60	962	0.5
Nov-30-2011	870	11.9	0.60	1,040	0.5
.
Mean	1,093	12.8	0.5	750	0.5

PRELIMINARY RESULTS

Table 5. Continuous water monitoring at Station N (San Joaquin River at Crow's Landing), December 2011.

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-01-2011	795	10.6	0.63	1,140	0.6
Dec-02-2011	752	9.8	0.64	1,180	0.5
Dec-03-2011	744	9.5	0.66	1,220	0.6
Dec-04-2011	721	9.1	0.72	1,220	0.7
Dec-05-2011	690	8.7	0.73	1,260	0.7
Dec-06-2011	651	8.6	0.72	1,290	0.6
Dec-07-2011	639	8.7	0.74	1,300	0.6
Dec-08-2011	631	8.7	0.72	1,300	0.7
Dec-09-2011	627	8.6	0.71	1,300	0.8
Dec-10-2011	625	8.5	0.78	1,340	0.9
Dec-11-2011	636	8.6	0.78	1,310	1.1
Dec-12-2011	637	9.3	0.74	1,290	1.0
Dec-13-2011	624	9.2	0.73	1,320	1.0
Dec-14-2011	619	9.2	0.81	1,370	1.3
Dec-15-2011	621	9.3	0.87	1,380	1.6
Dec-16-2011	611	9.1	0.79	1,380	1.2
Dec-17-2011	609	8.8	0.78	1,360	1.0
Dec-18-2011	622	8.3	0.79	1,360	1.3
Dec-19-2011	633	8.5	0.80	1,320	1.5
Dec-20-2011	641	8.5	0.82	1,340	1.4
Dec-21-2011	640	8.2	0.82	1,330	1.2
Dec-22-2011	632	7.8	0.77	1,330	0.9
Dec-23-2011	612	7.4	0.79	1,350	1.0
Dec-24-2011	622	7.2	0.80	1,360	1.1
Dec-25-2011	635	7.1	0.79	1,370	1.1
Dec-26-2011	643	7.2	0.77	1,370	1.2
Dec-27-2011	630	7.6	0.75	1,370	0.8
Dec-28-2011	601	8.2	0.82	1,420	1.0
Dec-29-2011	614	8.7	0.86	1,440	1.0
Dec-30-2011	660	9.1	0.77	1,360	0.7
Dec-31-2011	680	9.5	0.7	1,310	0.7
Mean	650	8.6	0.8	1,320	1.0

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
UNITS	cfs	mg/L	µS/cm	µg/L	mg/L
Oct-03-2011	8	89	5,510	29	13.0
Oct-10-2011	9	118	5,920	31	12.0
Oct-17-2011	14	110	6,020	32	12.0
Oct-24-2011	5	73	5,140	21	11.0
Oct-31-2011	5	72	5,450	23	10.0
Nov-07-2011	8	53	5,290	39	9.3
Nov-14-2011	8	NA	5,620	35	9.6
Nov-15-2011	9	<10	NA	NA	NA
Nov-21-2011	17	76	5,600	29	9.7
Nov-28-2011	11	51	5,880	36	12.0
Dec-05-2011	10	<10	5,930	44	11.0
Dec-12-2011	21	88	6,360	45	13.0
Dec-19-2011	12	<10	5,910	45	11.0
Dec-26-2011	14	NA	5,950	45	12.0
Dec-27-2011	10	12	NA	NA	NA

Note: Water samples are collected by Panoche Drainage District; analysis conducted by CVRWQCB through June 2011, and by Reclamation after July 2011.

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-06-2011	18	62	17.0	7.9	3,900	14	6.6
Oct-13-2011	15	58	21.5	8.3	4,670	19	10.0
Oct-20-2011	20	50	21.7	8.1	4,530	15	7.6
Oct-27-2011	17	103	17.2	8.5	4,800	18	9.1
Nov-03-2011	10	66	14.4	8.2	4,120	13	9.1
Nov-10-2011	22	43	11.2	8.0	3,430	9	5.2
Nov-15-2011	15	18	13.2	7.7	4,390	32	6.6
Nov-22-2011	23	73	12.0	7.6	4,120	20	6.4
Dec-01-2011	12	17	9.3	7.9	4,580	24	7.3
Dec-08-2011	18	21	7.8	7.7	4,670	21	9.2
Dec-13-2011	26	20	9.6	6.9	5,190	35	9.1
Dec-20-2011	17	18	7.8	8.2	4,620	25	7.9
Dec-29-2011	14	22	8.5	7.6	4,670	30	7.8

Note: CVRWQCB will end sampling at this site in July 2011; Reclamation will collect samples here.

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-06-2011	128	.	15.7	8.0	643	< 0.4	0.4
Oct-13-2011	151	.	20.2	8.5	714	< 0.4	0.5
Oct-20-2011	115	.	20.0	8.0	880	< 0.4	0.7
Oct-27-2011	120	.	15.2	8.4	948	< 0.4	0.7
Nov-03-2011	129	.	14.3	8.4	996	< 0.4	0.9
Nov-10-2011	134	.	11.4	8.1	1,060	< 0.4	0.8
Nov-15-2011	158	.	12.5	8.0	1,080	< 0.4	0.8
Nov-22-2011	150	.	11.2	8.1	1,120	< 0.4	0.8
Dec-01-2011	122	.	9.8	8.1	1,340	< 0.4	1.0
Dec-08-2011	95	.	7.0	8.2	1,510	< 0.4	1.1
Dec-13-2011	87	.	8.6	7.9	1,550	< 0.4	1.2
Dec-20-2011	122	.	7.2	8.2	1,440	< 0.4	1.0
Dec-29-2011	86	.	8.3	8.0	1,600	< 0.4	1.2

Note: CVRWQCB will end sampling at this site in July 2011; Reclamation will collect samples here.

** 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	pH	Specific Conductance	Selenium (total)	Boron
DATA SOURCE	USGS	USBR	USBR	USBR	USBR	USBR
UNITS	cfs	°C	.	µS/cm	µg/L	mg/L
Oct-06-2011	146	16.1	7.6	1,070	1.8	1.0
Oct-13-2011	166	20.7	7.8	1,060	1.5	1.2
Oct-20-2011	135	20.6	7.8	1,480	2.2	1.8
Oct-27-2011	137	15.4	7.8	1,440	2.3	1.6
Nov-03-2011	139	14.9	7.8	1,250	1.0	1.3
Nov-10-2011	156	11.5	8.1	1,380	1.2	1.4
Nov-15-2011	173	12.5	8.0	1,410	2.9	1.3
Nov-22-2011	173	11.3	7.9	1,560	2.6	1.4
Dec-01-2011	134	9.5	8.1	1,680	1.5	1.5
Dec-08-2011	113	7.6	7.9	2,120	3.9	2.3
Dec-13-2011	113	8.6	7.9	2,420	6.9	3.0
Dec-20-2011	129	7.3	8.0	2,010	4.3	2.0
Dec-29-2011	117	8.5	8.0	2,080	3.8	2.0

Note: CVRWQCB ended sampling at this site in July 2011; Reclamation collected and analyzed samples here after July 2011

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		Turbidity	pH	Specific Conductance	Selenium (total)	Boron
DATA SOURCE		USBR	USBR	USBR	USBR	USBR
UNITS		NTU	.	µS/cm	µg/L	mg/L
Oct-04-2011	.	NA	NA	NA	NA	NA
Oct-13-2011	.	21	7.7	2,120	5.5	1.8
Oct-20-2011	.	31	7.6	3,160	3.7	2.8
Oct-27-2011	.	27	7.7	1,890	2.4	1.8
Nov-03-2011	.	23	7.8	1,310	1.1	1.3
Nov-10-2011	.	16	8.0	1,450	1.3	1.4
Nov-15-2011	.	20	7.9	1,500	2.7	1.4
Nov-22-2011	.	16	8.2	1,630	2.7	1.4
Dec-01-2011	.	26	8.1	1,830	1.6	1.6
Dec-08-2011	.	16	7.9	2,200	3.7	2.2
Dec-13-2011	.	10	7.7	2,640	6.6	3.1
Dec-20-2011	.	10	7.9	2,100	4.5	2.1
Dec-29-2011	.	25	7.9	2,170	3.9	2.1

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-06-2011	160	16.5	6.9	846	< 0.4	0.4
Oct-13-2011	138	19.3	7.1	979	< 0.4	0.4
Oct-20-2011	117	18.8	7.2	965	0.4	0.5
Oct-27-2011	204	16.6	7.2	827	0.5	0.5
Nov-03-2011	222	14.0	7.3	851	0.5	0.6
Nov-10-2011	224	10.4	8.0	900	0.4	0.6
Nov-15-2011	256	12.1	7.8	890	< 0.4	0.5
Nov-22-2011	188	NA	NA	NA	NA	NA
Dec-01-2011	e92	NA	NA	NA	NA	NA
Dec-08-2011	69	NA	NA	NA	NA	NA
Dec-13-2011	63	NA	NA	NA	NA	NA
Dec-20-2011	49	NA	NA	NA	NA	NA
Dec-29-2011	51	NA	NA	NA	NA	NA

Note: CVRWQCB ended sampling at this site in July 2011; Reclamation collected and analyzed samples here after July 2011

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-06-2011	268	16.2	7.7	699	< 0.4	0.3
Oct-13-2011	277	19.9	7.8	718	< 0.4	0.4
Oct-20-2011	222	20.0	7.7	912	0.4	0.4
Oct-27-2011	272	15.5	7.8	778	0.4	0.4
Nov-03-2011	288	14.3	7.9	846	0.4	0.5
Nov-10-2011	411	10.8	8.1	716	< 0.4	0.3
Nov-15-2011	425	11.8	8.1	866	0.4	0.4
Nov-22-2011	439	11.0	8.0	908	< 0.4	0.5
Dec-01-2011	227	10.7	8.0	1,680	< 0.4	0.7
Dec-08-2011	171	7.1	7.9	2,040	< 0.4	0.8
Dec-13-2011	152	8.6	7.9	2,130	< 0.4	0.8
Dec-20-2011	NA	7.4	7.9	2,280	< 0.4	0.7
Dec-29-2011	97	8.0	7.9	2,530	< 0.4	0.9

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	SMDMWA ^{††}	.	.	Panoche DD	Panoche DD	Panoche DD
UNITS	cfs	.	.	µS/cm	µg/L	mg/L
Oct-03-2011	170	.	.	331	0.6	0.1
Oct-10-2011	130	.	.	333	0.7	0.2
Oct-17-2011	105	.	.	254	0.5	0.1
Oct-24-2011	75	.	.	237	0.9	0.1
Oct-31-2011	40	.	.	248	0.6	0.1
Nov-07-2011	40	.	.	399	1.0	0.2
Nov-14-2011	40	.	.	374	0.4	0.1
Nov-21-2011	10	.	.	323	0.5	0.2
Dec-05-2011	30	.	.	344	< 0.4	0.2
Dec-12-2011	30	.	.	518	0.5	0.2
Dec-19-2011	30	.	.	463	< 0.4	0.2
Dec-27-2011	30	.	.	736	0.9	0.5 U

Note: CVRWQCB ended sampling at this site in July 2011; Reclamation collected and analyzed samples here after July 2011

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	SMDMWA ^{††}	.	.	Panoche DD	Panoche DD	Panoche DD
UNITS	cfs	.	.	µS/cm	µg/L	mg/L
Oct-03-2011	160	.	.	343	0.5	0.1
Oct-10-2011	120	.	.	329	0.4	0.2
Oct-17-2011	90	.	.	237	< 0.4	0.1
Oct-24-2011	80	.	.	253	0.6	0.2
Oct-31-2011	80	.	.	258	0.5	0.2
Nov-07-2011	80	.	.	313	0.6	0.2
Nov-14-2011	80	.	.	368	0.4	0.2
Nov-21-2011	0	.	.	325	0.5	0.2
Nov-28-2011	0	.	.	618	< 0.4	0.8 U
Dec-05-2011	50	.	.	449	0.9	0.3
Dec-12-2011	50	.	.	421	0.9	0.3
Dec-19-2011	50	.	.	547	2.9 U	0.4 U
Dec-27-2011	50	.	.	522	1.8 U	0.3

Note: CVRWQCB ended sampling at this site in July 2011; Reclamation collected and analyzed samples here after July 2011

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-03-2011	NA	.	.	415	0.5	0.2
Oct-10-2011	NA	.	.	293	0.6	0.1
Oct-17-2011	NA	.	.	463	0.6	0.3
Oct-24-2011	NA	.	.	778	1.2	0.8
Oct-31-2011	NA	.	.	666	0.9	0.6
Nov-07-2011	NA	.	.	726	0.8	0.6
Nov-14-2011	NA	.	.	532	0.7	0.4
Nov-21-2011	NA	.	.	738	0.5	0.8
Nov-28-2011	NA	.	.	669	0.6	0.5
Dec-05-2011	NA	.	.	1,280	1.1	1.3 U
Dec-12-2011	NA	.	.	1,330	1.2	1.5 U
Dec-19-2011	NA	.	.	1,630	2.0 U	1.7 U
Dec-27-2011	NA	.	.	1,390	1.1	1.4 U

Note: CVRWQCB ended sampling at this site in July 2011; Reclamation collected and analyzed samples here after July 2011

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-03-2011	NA	.	.	436	0.5	0.2
Oct-10-2011	NA	.	.	266	< 0.4	0.1
Oct-17-2011	NA	.	.	540	0.6	0.5
Oct-24-2011	NA	.	.	593	0.7	0.7
Oct-31-2011	NA	.	.	679	0.7	0.7
Nov-07-2011	NA	.	.	695	0.7	0.7
Nov-14-2011	NA	.	.	533	0.6	0.4
Nov-21-2011	NA	.	.	849	0.6	0.9
Nov-28-2011	NA	.	.	1,160	0.7	1.3
Dec-05-2011	NA	.	.	1,290	0.8	1.6
Dec-12-2011	NA	.	.	1,190	0.8	1.3
Dec-19-2011	NA	.	.	1,240	0.9	1.3
Dec-27-2011	NA	.	.	1,290	1.1	1.4

Note: CVRWQCB ended sampling at this site in July 2011; Reclamation collected and analyzed samples here after July 2011

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-05-2011	.	.	.	934	0.7	0.6
Oct-12-2011	.	.	.	811	0.7	0.5
Oct-19-2011	.	.	.	1,010	0.7	0.7
Oct-26-2011	.	.	.	1,090	1.0	0.8
Nov-02-2011	.	.	.	701	0.5	0.4
Nov-09-2011	.	.	.	887	<0.4	0.6
Nov-16-2011	.	.	.	946	0.7	0.6
Nov-23-2011	.	.	.	1,030	0.7	0.7
Nov-30-2011	.	.	.	1,660	1.0	1.0
Dec-07-2011	.	.	.	945	0.5	0.6
Dec-21-2011	.	.	.	2,190	1.7	1.4
Dec-28-2011	.	.	.	2,310	1.8	1.4

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-05-2011	1,310	.	.	941	0.9	0.6
Oct-12-2011	1,750	.	.	811	0.9	0.5
Oct-19-2011	1,580	.	.	1,030	0.6	0.7
Oct-26-2011	1,620	.	.	1,020	1.0	0.7
Nov-02-2011	1,180	.	.	708	0.5	0.4
Nov-09-2011	1,010	.	.	892	<0.4	0.5
Nov-16-2011	1,080	.	.	942	0.6	0.6
Nov-23-2011	1,130	.	.	1,030	0.8	0.7
Nov-30-2011	874	.	.	1,650	0.8	1.0
Dec-07-2011	676	.	.	944	0.5	0.6
Dec-21-2011	688	.	.	2,180	1.6	1.4
Dec-28-2011	654	.	.	2,310	1.7	1.4

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-06-2011	1,550	15.9	7.9	351	< 0.4	0.2
Oct-13-2011	1,760	18.3	7.9	346	< 0.4	0.2
Oct-20-2011	1,640	17.8	8.1	405	< 0.4	0.2
Oct-27-2011	1,640	14.6	7.8	410	0.4	0.2
Nov-03-2011	1,220	14.3	7.7	656	< 0.4	0.4
Nov-10-2011	1,030	11.3	8.1	753	0.6	0.4
Nov-15-2011	1,030	12.5	8.0	826	0.6	0.5
Nov-22-2011	1,120	11.0	7.8	781	0.6	0.5
Dec-01-2011	795	10.2	8.0	1,150	0.4	0.6
Dec-08-2011	631	7.9	7.9	1,280	0.7	0.7
Dec-13-2011	624	8.7	7.9	1,320	1.1	0.8
Dec-20-2011	641	7.9	8.1	1,330	1.5	0.9
Dec-29-2011	614	8.1	8.1	1,400	1.0	0.8

Note: CVRWQCB ended sampling at this site in July 2011; Reclamation collected and analyzed samples here after July 2011

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-03-2011	.	.	.	347	0.5	0.1
Oct-10-2011	.	.	.	310	< 0.4	0.2
Oct-17-2011	.	.	.	241	0.4	0.1
Oct-24-2011	.	.	.	242	0.7	0.2
Oct-31-2011	.	.	.	331	0.4	0.2
Nov-07-2011	.	.	.	401	0.7	0.2
Nov-14-2011	.	.	.	411	0.6	0.2
Nov-21-2011	.	.	.	249	< 0.4	0.1
Nov-28-2011	.	.	.	431	1.1	0.2
Dec-05-2011	.	.	.	381	1.3 U	0.2
Dec-12-2011	.	.	.	545	1.6 U	0.4 U
Dec-19-2011	.	.	.	522	2.5 U	0.4 U
Dec-27-2011	.	.	.	491	1.9 U	0.3

U = results are determined to be an outlier at the time of data validation

Table 21. Summary of fathead minnow (*Pimephales promelas*) larvae survival in 7-day tests using water samples collected from January 2011 to December 2011. 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-2011	88	95	100	98	90	100
Feb-2011	93	95	100	100	93	100
Mar-2011	100	100	98	88	98	100
Apr-2011	93	95	88	60	63†	93
May-2011	95	83	95	78	80	95
Jun-2011	95	98	98	93	93	95
Jul-2011	33*	100	95	100	98	90
Aug-2011	90	88	95	93	70	90
Sep-2011	79*	88	90	95	95	95
Oct-2011	90	98	98	100	98	100
Nov-2011	100	93	98	93	100	100
Dec-2011	100	98	98	95	95	98

Table 22. Summary of fathead minnow (*Pimephales promelas*) larvae growth in 7-day tests using water samples collected from January 2011 to December 2011. 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-2011	0.37	0.38	0.41	0.38	0.35	0.38
Feb-2011	0.46	0.34*	0.44	0.42	0.40	0.32
Mar-2011	0.36	0.40	0.37	0.38	0.37	0.35
Apr-2011	0.37	0.40	0.40	0.33	0.22	0.29
May-2011	0.48	0.48	0.50	0.40	0.38	0.43
Jun-2011	0.36	0.34	0.36	0.36	0.33	0.33
Jul-2011	0.06*	0.26	0.25	0.28	0.27	0.26
Aug-2011	0.26	0.25	0.26	0.28	0.25	0.29
Sep-2011	0.28	0.30	0.33	0.34	0.32	0.32
Oct-2011	0.45	0.34	0.41	0.42	0.37	0.38
Nov-2011	0.50	0.47	0.47	0.46	0.48	0.44
Dec-2011	0.42	0.38	0.44	0.39	0.37	0.36

Table 23. Summary of *Daphnia magna* survival in 7-day tests using water samples collected from January 2011 to December 2011. 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-2011	100	90	90	100	90	90
Feb-2011	90	90	100	90	100	90
Mar-2011	90	80	90	80	80	90
Apr-2011	100	100	80	100	100	100
May-2011	70	80	70	60	10†	80
Jun-2011	100	100	100	80	90	90
Jul-2011	90	80	100	90	100	100
Aug-2011	90	90	90	100	90	90
Sep-2011	100	90	70	100	90	90
Oct-2011	90	60	100	90	100	100
Nov-2011	100	100	100	100	100	100
Dec-2011	90	80	80	70	80	90

PRELIMINARY RESULTS

Table 24. Summary of *Daphnia magna* reproduction in 7-day tests using water samples collected from January 2011 to December 2011. 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-2011	40.8	35.9	37.4	42.7	31.6	38.5
Feb-2011	25.7	26.4	24.4	26.8	25.5	22.1
Mar-2011	53.1	39.1	59.1	41.3	29.8	49.9
Apr-2011	28.6	23.1	25.4	29.9	28.6	29.2
May-2011	44.8	36.6	45.7	24.8	22.9	37.9
Jun-2011	66.0	58.0	62.8	38.9*	50.3	42.2
Jul-2011	31.7	43.8	40.9	21.7	30.5	25.3
Aug-2011	38.1	32.8	40.4	31.4	31.0	34.3
Sep-2011	41.3	33.1	37.2	35.0	28.4	29.6
Oct-2011	26.9	13.2*	29.9	20.8	24.2	27.1
Nov-2011	51.9	46.8	48.1	39.3	44.6	27.0
Dec-2011	24.3	32.1	36.7	24.0	28.0	34.1

Table 25. Summary of *Selenastrum capricornutum* growth in 4-day tests using water samples collected from January 2011 to December 2011. 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-2011	23.5	30.2	33.0	30.9	24.5	28.7
Feb-2011	20.9*	31.3	30.3	25.4	26.9	27.6
Mar-2011	2.9*	18.0	9.8*	10.3*	21.5	19.6
Apr-2011	22.3	33.6	33.2	30.4	20.5	21.2
May-2011	23.7	27.7	22.9	24.5	10.0	23.6
Jun-2011	20.4	31.2	29.1	32.4	23.8	19.9
Jul-2011	20.8	26.0	18.2	20.3	22.8	19.1
Aug-2011	20.4*	23.5	23.2	24.3	27.4	19.0
Sep-2011	7.1*	24.9	3.3*	29.2	17.8	2.0††††
Oct-2011	20.1	26.6	33.3	25.9	22.9	18.8
Nov-2011	14.7*	32.5	30.7	26.7	22.2	26.3
Dec-2011	17.4	36.6	36.0	35.6	25.1	2.9††††

PRELIMINARY RESULTS

Table 26. Summary of selenium concentrations in grab water samples collected at study stations for use in laboratory toxicity tests, October 2011 to December 2011.

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-17-2011	12	<0.4	1.9	0.4	<0.4
Oct-19-2011	15	<0.4	1.7	<0.4	<0.4
Oct-21-2011	13	<0.4	1.9	<0.4	<0.4
Nov-14-2011	23	<0.4	1.9	<0.4	<0.4
Nov-16-2011	30	<0.4	2.8	<0.4	<0.4
Nov-28-2011	25	<0.4	2.4	<0.4	<0.4
Dec-12-2011	29	< 0.4	6.2	< 0.4	< 0.4
Dec-14-2011	27	< 0.4	7.1	< 0.4	< 0.4
Dec-16-2011	42	< 0.4	5.8	< 0.4	< 0.4

Table 27. Summary of total suspended solids concentrations in grab water samples collected at study stations for use in laboratory toxicity tests, October 2011 to December 2011.

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-17-2011	56	14	26	128	9
Oct-19-2011	45	24	28	90	11
Oct-21-2011	80	37	49	69	11
Nov-14-2011	30	31	31	161	4
Nov-16-2011	43	20	44	169	10
Nov-28-2011	35	33	27	33	9
Dec-12-2011	17	23	19	19	5
Dec-14-2011	39	21	24	30	4
Dec-16-2011	30	23	21	29	5

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-2010	14	870	5,102	3,776	4,470
Aug-2010	15	930	5,216	3,860	4,880
Sep-2010	12	700	4,399	3,255	3,100
Oct-2010	11	680	3,694	2,733	2,520
Nov-2010	18	1,070	4,063	3,007	4,380
Dec-2010	29	1,810	4,254	3,148	7,750
Jan-2011	26	1,600	4,790	3,545	7,710
Feb-2011	39	2,190	5,140	3,804	11,330
Mar-2011	49	3,010	4,940	3,685	15,090
Apr-2011	34	2,000	5,580	4,129	11,230
May-2011	27	1,680	5,140	3,804	8,690
Jun-2011	27	1,610	5,240	3,878	8,490
Jul-2011	16	980	5,790	4,285	5,710
Aug-2011	17	1,050	5,490	4,063	5,800
Sep-2011	14	830	4,950	3,663	4,130
Oct-2011	16	980	2,996	2,217	2,950
Nov-2011	17	980	2,566	1,899	2,530
Dec-2011	18	1,110	2,934	2,172	3,280

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

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

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-2010	29	1,760	3,420	2,360	5,650
Aug-2010	38	2,330	3,020	2,084	6,600
Sep-2010	43	2,580	2,320	1,601	5,620
Oct-2010	105	6,450	1,470	1,014	8,900
Nov-2010	136	8,110	1,800	1,242	13,700
Dec-2010	205	12,630	1,920	1,325	22,760
Jan-2011	221	13,580	2,040	1,408	26,000
Feb-2011	220	12,240	2,250	1,553	25,840
Mar-2011	272	16,720	2,160	1,490	33,890
Apr-2011	154	9,190	2,820	1,946	24,320
May-2011	97	5,980	2,660	1,835	14,930
Jun-2011	85	5,040	2,370	1,635	11,210
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

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

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

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-2010	140	8,600	1,020	694	8,110
Aug-2010	147	9,060	888	604	7,440
Sep-2010	97	5,790	1,100	748	5,890
Oct-2010	118	7,230	1,230	836	8,220
Nov-2010	160	9,520	1,300	884	11,450
Dec-2010	125	7,670	1,380	938	9,790
Jan-2011	161	9,920	1,620	1,102	14,860
Feb-2011	235	13,040	1,350	918	16,280
Mar-2011	433	26,640	1,250	850	30,800
Apr-2011	245	14,590	1,270	864	17,140
May-2011	200	12,300	983	668	11,180
Jun-2011	205	12,210	965	656	10,900
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

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

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 to date	205	148,080	1,094	740	149,030

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-2010	242	14,910	967	658	13,330
Aug-2010	208	12,760	874	594	10,310
Sep-2010	248	14,760	648	441	8,850
Oct-2010	207	12,730	897	610	10,560
Nov-2010	256	15,240	1,220	830	17,190
Dec-2010	850	52,290	570	388	27,560
Jan-2011	4,740	291,320	181	123	48,760
Feb-2011	1,020	56,880	809	550	42,560
Mar-2011	3,990	245,580	297	202	67,450
Apr-2011	9,630	573,190	130	88	68,910
May-2011	3,410	209,770	159	108	30,850
Jun-2011	2,600	154,670	119	81	17,020
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

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

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 to date	2,464	1,786,170	463	320	777,340

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-2010	550	33,910	1,066	661	30,470
Aug-2010	520	32,060	973	603	26,310
Sep-2010	940	55,700	565	350	26,530
Oct-2010	820	50,370	741	459	31,470
Nov-2010	830	49,380	971	602	40,420
Dec-2010	2,070	123,110	772	479	80,170
Jan-2011	6,020	370,000	334	207	104,200
Feb-2011	4,590	254,880	381	236	81,880
Mar-2011	7,320	449,980	345	214	130,900
Apr-2011	14,160	842,590	205	127	145,650
May-2011	6,780	376,550	184	114	58,420
Jun-2011	4,300	256,030	265	164	57,210
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

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

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	490	353,040	1,270	660	316,760
CY 2010	1,017	735,030	919	570	569,800
CY 2011 to date	4,519	3,259,660	421	260	1,152,620

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

PRELIMINARY RESULTS

Table 33. Summary of sediment monitoring results from August 2009 to November 2011. Concentrations in µg/g dry weight.

See Table 34 for explanation of footnotes and agency abbreviations.										
Station Code Station Name	PARAMETER DEPTH SOURCE UNITS	Selenium			Organic Carbon			Percent Moisture		
		0-3 cm	3-8 cm	Whole Core	0-3 cm	3-8 cm	Whole Core	0-3 cm	3-8 cm	Whole Core
		USBR	USBR	USBR	USBR	USBR	USBR	USBR	USBR	USBR
		µg/g (dry)	µg/g (dry)	µg/g (dry)	%	%	%	%	%	%
Station C: Mud Slough North upstream of drainage discharges	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
	Mar-16-2010	<0.10	<0.10	<0.10	0.16	0.25	0.38	28.10	28.30	34.00
	Jun-10-2010	<0.27	<0.27	<0.30	0.24	0.39	0.45	25.60	26.20	32.50
	Sep-23-2010	<0.11	<0.13	<0.15	0.62	0.24	0.57	16.40	18.00	31.30
	Dec-07-2010	<0.15	0.19	0.29	0.28	0.76	0.44	31.30	39.60	28.90
	Mar-08-2011	<0.14	<0.15	0.30	0.31	0.19	0.81	32.20	36.70	25.90
	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	<0.13	NA	NA	0.38	NA	NA	27.50
Station D: Mud Slough North downstream of drainage discharges	Sep-03-2009	P	P	P	0.22	0.14	0.16	27.70	19.00	20.00
	Nov-12-2009	P	P	P	0.17	0.17	0.19	25.10	23.20	24.90
	Mar-16-2010	0.10	0.17	0.14	0.20	0.15	0.06	19.00	24.00	16.90
	Jun-10-2010	<0.27	<0.26	<0.28	0.18	0.19	0.18	26.20	20.60	26.50
	Sep-23-2010	0.15	0.14	0.17	0.22	0.15	0.13	19.50	17.90	17.20
	Dec-07-2010	0.28	0.30	0.32	0.06	0.11	0.08	19.10	18.90	26.90
	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
	Sep-01-2011	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Nov-08-2011	NA	NA	0.14	NA	NA	0.04	NA	NA	27.00
Station E: Mud Slough at Highway 140	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
	Mar-16-2010	0.54	1.34	1.59	0.37	0.48	0.56	33.20	24.20	36.40
	Sep-23-2010	0.73	0.30	0.73	0.19	0.07	0.24	24.10	25.50	24.00
	Dec-07-2010	**1.83	1.89	1.44	0.45	0.57	0.31	36.20	40.60	37.40
	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
Station F: Salt Slough at Highway 165	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
	Mar-16-2010	<0.10	<0.10	0.22	0.42	0.47	0.51	25.80	25.00	23.20
	Jun-10-2010	0.34	0.51	0.31	0.08	0.06	0.36	28.10	27.40	30.10
	Sep-23-2010	0.67	0.40	0.40	0.33	0.24	0.09	27.60	21.20	20.10
	Dec-07-2010	0.15	0.26	<0.41	0.25	**0.64	**0.86	28.40	32.20	53.40
	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	30.80
Station I2: Mud Slough: Seasonal backwater tributary	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
	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
	Mar-16-2010	8.41	3.60	3.49	3.65	2.33	2.18	61.30	50.90	54.00
	Jun-10-2010	4.28	4.92	4.44	2.20	2.10	2.00	56.10	59.10	59.40
	Sep-23-2010	7.78	7.74	4.42	4.40	4.40	3.50	59.60	59.30	52.30
	Dec-07-2010	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

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 (10^6 cell/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