



Figure 5-2. STA schematics showing configurations of the treatment cells, flow direction, dominant vegetation type, and locations of permitted inflow and outflow stations. The southern section of STA-2, Cell 2, is currently undergoing a vegetation conversion from emergent to SAV.

Table 5B-1. Summary of treatment performance of each STA and all STAs combined for Water Year 2013 (WY2013) (May 1, 2012–April 30, 2013) and the period of record (WY1994–WY2013) for each STA and all STAs combined.

Parameter	STA-1E	STA-1W	STA-2	STA-3/4 ^a	STA-5/6	All STAs
Effective Treatment Area (acres)	4,994	6,544	15,495	16,327	13,685	57,045
Adjusted Effective Treatment Area (acres) ^b	4,265	6,544	10,152	16,327	8,383	45,671
WY2013 Inflow						
Inflow Water Volume (ac-ft)	134,822	166,113	321,477	479,761	58,773	1,160,945
Inflow TP Load (mt)	34.4	50.1	42.1	62.1	9.5	198.3
Flow-weighted Mean Inflow TP (ppb)	207	245	106	105	131	138
Hydraulic Loading Rate (HLR) (cm/d)	2.6	2.1	2.6	2.5	0.6	2.1
TP Loading Rate (PLR) (g/m ² /yr)	2.0	1.9	1.0	0.9	0.3	1.1
WY2013 Outflow						
Outflow Water Volume (ac-ft)	141,185	194,829	327,430	500,655	42,847	1,206,946
Outflow TP Load (mt)	4.5	8.5	9.1	8.9	0.9	31.9
Flow-weighted Mean Outflow TP (ppb)	26	36	22	14	17	21
Hydraulic Residence Time (d)	5.7	24.1	16.4	21.2	47.8	--
TP Retained (mt)	29.8	41.6	33.0	53.3	8.6	166.2
TP Removal Rate (g/m ² /yr)	1.7	1.6	0.8	0.8	0.3	0.9
TP Load Retained (%)	87%	83%	78%	86%	90%	84%
Period of Record						
Start Date	Sep 2004	Oct 1993	Jun 1999	Oct 2003	Dec 1997	WY1994-WY2013
Inflow Water Volume (ac-ft)	782,893	3,423,046	3,085,727	4,199,322	1,972,996	13,463,984
Flow-weighted Mean Inflow TP [1 SD] ^c (ppb)	179 [54]	175 [56]	103 [38]	113 [29]	179 [59]	140[25]
TP Inflow Load (mt)	173.0	739.0	391.8	583.7	435.6	2323.2
TP Retained (mt)	124.5	521.5	301.9	493.1	286.0	1727.1
TP Load Retained (%)	72%	71%	77%	84%	66%	74%
Flow-weighted Mean Outflow TP [1 SD] (ppb)	52 [115]	50 [31]	22 [9]	17 [4]	74 [40]	37 [13]

^a Excludes outflow from G-388.

^b Adjusted effective treatment area is time and area-weighted to exclude cells that were temporarily off-line for plant rehabilitation, infrastructure repairs, Long-Term Plan enhancements, restrictions due nesting birds, or other reasons (refer to Table 5B-2).

^c SD =standard deviation

Table 5-1. STA performance for Water Year 2012 (WY2012) (May 1, 2011–April 30, 2012) and the period of record (POR) 1994–2012^a.

Parameter	STA-1E	STA-1W	STA-2	STA-3/4	STA-5	STA-6	All STAs
Effective Treatment Area (acres)	5,132	6,670	8,240	16,543	6,095	2,257	44,937
Adjusted Effective Treatment Area (acres) ^b	5,099	6,670	6,338	16,543	6,095	836	41,581
Inflow							
Total Inflow Volume (ac-ft)	85,533	96,847	195,651	269,737	47,508	17,055	712,331
Total Inflow TP Load (mt)	11.520	17.117	21.044	36.327	9.160	2.624	97.792
Flow-weighted Mean Inflow TP (ppb)	109	143	87	109	156	125	111
Hydraulic Loading Rate (HLR) (cm/d)	1.40	1.21	2.58	1.36	0.65	1.70	1.43
TP Loading Rate (PLR) (g/m ² /yr)	0.56	0.63	0.82	0.54	0.37	0.78	0.58
Outflow							
Total Outflow Volume (ac-ft)	76,208	94,011	217,570	291,838	41,779	9,061	730,468
Total Outflow TP Load (mt)	2.010	2.598	3.278	6.670	1.659	0.833	17.048
Flow-weighted Mean Outflow TP (ppb)	21	22	12	19	32	75	19
Hydraulic Residence Time (d)	15	41	19	31	46	3	
TP Retained (mt)	9.509	14.519	17.766	29.657	7.501	1.791	80.744
TP Removal Rate (g/m ² /yr)	0.46	0.54	0.69	0.44	0.30	0.53	0.48
Load Reduction (%)	83%	85%	84%	82%	82%	68%	83%
Period of Record Performance							
Start date	Sep-04	Oct-93	Jun-99	Oct-03	Oct-99	Oct-97	1994-2012
Inflow Volume (ac-ft)	648,071	3,256,934	2,764,250	3,719,561	1,226,542	687,681	12,303,039
TP Inflow to Date (ppb)	173	171	103	114	225	100	140
Standard Deviation TP Inflow (ppb)	57	54	39	31	56	39	26
TP Inflow Load to Date (mt)	139	689	350	522	341	85	2,125
TP Retained to Date (mt)	95	480	269	440	212	66	1,561
TP Outflow to Date (ppb)	57	51	22	18	93	34	37
Standard Deviation TP Outflow (ppb)	121	32	9	4	46	23	13

^aExcludes G-388 outflow data

^bAdjusted effective treatment areas excludes specific area where and time period when cells are temporarily offline for plant rehabilitation, infrastructure repairs, or Long-Term Plan enhancements (refer to **Table 5-2**)

^cData presented reflects current water year data added to that information presented in the 2012 SFER – Volume I – Chapter 5

STA-1E (Start-up 9/04, Permit issued 10/1/2005)

Water Year	Inflow Volume acre feet	Inflow Volume ha-m	Inflow TP Load mt	Inflow FWM TP ppb	Outflow Volume acre feet	Outflow Volume ha-m	Outflow TP load mt	Outflow FWM TP ppb	TP Retained mt	TP Retained %	Cumulative Retained mt
Hurricane response, start Sep. 2004 - April 2005	17,372	2,143	4.631	216.1	17,565	2,167	8.071	372.5	-3.4	-74.3%	-3.441
2006	45,754	5,644	10.524	186.5	40,572	5,004	7.295	145.8	3.2	30.7%	-0.211
2007	100,522	12,399	29.451	237.5	97,818	12,066	8.622	71.5	20.8	70.7%	20.618
2008	131,793	16,256	18.204	112.0	125,391	15,467	3.138	20.3	15.1	82.8%	35.684
2009	145,493	17,946	32.615	181.7	149,066	18,387	3.884	21.1	28.7	88.1%	64.415
2010	86,582	10,680	26.099	244.4	89,093	10,989	10.309	93.8	15.8	60.5%	80.205
2011	35,616	4,393	4.955	112.8	25,758	3,177	0.691	21.8	4.3	86.1%	84.469
Total	563,131	69,461	126.480	182.1	545,262	67,257	42.011	62.5	84.5	66.8%	84.469

STA-1W (ENR Start-up 10/93, Flow-through: 8/1994; STA-1W 2000)

*Inflow: G250 for Water Year 94 - 6/99, G302 for remainder Outflow = G-251 for Water Year 95-99, G-251 + G-310 for remainder.

Water Year	Inflow Volume acre feet	Inflow Volume ha-m	Inflow TP Load mt	Inflow FWM TP ppb	Outflow Volume acre feet	Outflow Volume ha-m	Outflow TP load mt	Outflow FWM TP ppb	TP Retained mt	TP Retained %	Cumulative Retained mt
1994*, partial, startup 10/93	0	0.000	0.000		1	0	0.000	20.0			
1995*, partial WY, flows start 5/94 - 7/94; start 8/94	92,364	11,393	15.453	135.6	95,333	11,759	2.718	23.1	12.7	82.4%	12.735
1996	182,670	22,532	24.464	108.6	172,414	21,267	5.079	23.9	19.4	79.2%	32.120
1997	118,780	14,651	14.391	98.2	119,198	14,703	2.750	18.7	11.6	80.9%	43.761
1998	80,304	9,905	11.536	116.5	80,986	9,989	2.125	21.3	9.4	81.6%	53.172
1999	88,532	10,920	11.096	101.6	86,376	10,654	2.045	19.2	9.1	81.6%	62.223
2000	125,862	15,525	22.477	144.8	121,229	14,953	3.753	25.1	18.7	83.3%	80.946
2001	93,819	11,572	17.113	147.9	90,517	11,165	4.319	38.7	12.8	74.8%	93.740
2002	278,857	34,396	51.767	150.5	267,624	33,011	12.200	37.0	39.6	76.4%	133.308
2003	591,845	73,003	112.172	153.7	595,999	73,515	39.234	53.4	72.9	65.0%	206.245
2004	292,690	36,103	50.907	141.0	297,603	36,709	17.073	46.5	33.8	66.5%	240.079
2005	341,094	42,073	103.872	246.9	383,365	47,287	46.489	98.3	57.4	55.2%	297.463
2006	142,678	17,599	37.415	212.6	137,890	17,009	19.265	113.3	18.2	48.5%	315.613
2007	121,698	15,011	41.511	276.5	126,246	15,572	18.493	118.8	23.0	55.5%	357.595
2008	116,291	14,344	26.574	185.3	117,002	14,432	7.611	52.7	19.0	71.4%	357.595
2009	164,425	20,281	49.917	246.1	187,208	23,092	8.208	35.5	41.7	83.6%	399.304
2010	202,243	24,946	57.635	231.0	221,086	27,271	10.976	40.2	46.7	81.0%	445.963
2011	125,933	15,534	23.461	151.0	126,881	15,651	3.990	25.5	19.5	83.0%	465.434
Total	3,160,086	389,791	671.761	172.3	3,226,957	398,039	206.327	51.8	465.4	69.3%	465.434

STA-2 Cells 1-3 Start-up 6/99; Flow-through: 10/2000; Cell 4 9/07

Water Year	Inflow Volume acre feet	Inflow Volume ha-m	Inflow TP Load mt	Inflow FWM TP ppb	Outflow Volume acre feet	Outflow Volume ha-m	Outflow TP load mt	Outflow FWM TP ppb	TP Retained mt	TP Retained %	Cumulative Retained mt
2000	3,838	473	0.133	28.0	0	0	0.000		0.1	100.0%	0.133
2001	17,273	2,131	0.595	27.9	0	0	0.000		0.6	100.0%	0.728
2002	213,378	26,320	19.667	74.7	240,685	29,688	4.871	16.4	14.8	75.2%	15.524

SFWMD Data File: STA-POR-WY2011 appended daily-annual 11-20-2011.xlsx

2003	279,706	34,501	21.384	62.0	308,297	38,028	6.757	17.8	14.6	68.4%	30.152
2004	256,876	31,685	24.324	76.8	284,780	35,127	5.036	14.3	19.3	79.3%	49.440
2005	315,951	38,972	49.033	125.8	371,023	45,765	9.228	20.2	39.8	81.2%	89.244
2006	291,618	35,971	43.609	121.2	322,303	39,755	8.238	20.7	35.4	81.1%	124.616
2007	220,969	27,256	44.358	162.7	217,572	26,837	11.008	41.0	33.4	75.2%	157.966
2008	203,945	25,156	26.821	106.6	227,003	28,000	6.089	21.7	20.7	77.3%	178.698
2009	250,136	30,854	37.594	121.8	291,408	35,945	6.503	18.1	31.1	82.7%	209.790
2010	344,073	42,441	45.435	107.1	371,342	45,804	16.804	36.7	28.6	63.0%	238.421
2011	170,838	21,073	15.248	72.4	159,914	19,725	3.049	15.5	12.2	80.0%	250.619
Total	2,568,599	316,832	328.200	103.6	2,794,328	344,675	77.581	22.5	250.6	76.4%	250.619

STA-3/4 (E and C FW start-up 10/03, W FW start-up 11/03)

Flow-through: E FW 1/04, W FW 6/04, C FW 9/04

Water Year	Inflow Volume acre feet	Inflow Volume ha-m	Inflow TP Load mt	Inflow FWM TP ppb	Outflow Volume acre feet	Outflow Volume ha-m	Outflow TP load mt	Outflow FWM TP ppb	TP Retained mt	TP Retained %	Cumulative Retained mt
2004* Partial WY, start 10/03	23,303	2,874	1.392	48.4	25,811	3,184	0.481	15.1	0.9	65.4%	0.910
2005	671,442	82,821	87.368	105.5	646,587	79,755	10.375	13.0	77.0	88.1%	77.904
2006	696,729	85,940	105.310	122.5	736,422	90,836	21.241	23.4	84.1	79.8%	161.973
2007	388,471	47,917	69.921	145.9	355,423	43,841	9.809	22.4	60.1	86.0%	222.085
2008	295,080	36,398	48.104	132.2	296,162	36,531	7.355	20.1	40.7	84.7%	262.834
2009	445,610	54,965	52.515	95.5	459,427	56,669	7.357	13.0	45.2	86.0%	307.992
2010	545,471	67,283	84.466	125.5	637,214	78,599	11.749	14.9	72.7	86.1%	380.709
2011	303,447	37,430	26.208	70.0	312,067	38,493	6.303	16.4	19.9	76.0%	400.615
Total	3,369,553	415,628	475.284	114.4	3,469,113	427,909	74.669	17.4	400.6	84.3%	400.615

STA-5 North & Central Flow-way (Start-up 12/30/98; Flow-through: 10/1999); Western Flow-way in WY2009

Water Year	Inflow Volume acre feet	Inflow Volume ha-m	Inflow TP Load mt	Inflow FWM TP ppb	Outflow Volume acre feet	Outflow Volume ha-m	Outflow TP load mt	Outflow FWM TP ppb	TP Retained mt	TP Retained %	Cumulative Retained mt
2000* Partial WY, start 9/99.	7,792	961	2.212	230.2	11,840	1,460	2.376	162.7	-0.2	-7.4%	-0.164
2001	50,111	6,181	15.575	252.0	39,976	4,931	4.898	99.3	10.7	68.6%	10.513
2002	158,672	19,572	48.918	249.9	126,180	15,564	12.872	82.7	36.0	73.7%	46.558
2003	170,176	20,991	57.198	272.5	160,518	19,800	26.456	133.6	30.7	53.7%	77.300
2004	152,984	18,870	47.849	253.6	136,466	16,833	16.407	97.5	31.4	65.7%	108.743
2005	119,665	14,760	24.406	165.3	121,427	14,978	12.220	81.6	12.2	49.9%	120.928
2006	214,621	26,473	52.293	197.5	200,872	24,777	23.643	95.4	28.6	54.8%	149.577
2007	58,690	7,239	21.682	299.5	54,163	6,681	12.858	192.5	8.8	40.7%	158.401
2008	13,921	1,717	1.970	114.7	7,073	872	0.835	95.7	1.1	57.6%	159.536
2009	99,235	12,241	31.122	254.2	106,216	13,102	7.315	55.8	23.8	76.5%	183.343
2010	109,788	13,542	23.954	176.9	96,629	11,919	6.107	51.2	17.8	74.5%	201.190
2011	26,609	3,282	5.258	160.2	24,319	3,000	1.420	47.3	3.8	73.0%	205.029
Total	1,182,264	145,830	332.436	228.0	1,085,681	133,917	127.407	95.1	205.0	61.7%	205.029

STA-6 Section 1 (Flow-through Date: 12/9/97) until WY2008, Section 1 & Section 2 WY2009

Water Year	Inflow Volume acre feet	Inflow Volume ha-m	Inflow TP Load mt	Inflow FWM TP ppb	Outflow Volume acre feet	Outflow Volume ha-m	Outflow TP load mt	Outflow FWM TP ppb	TP Retained mt	TP Retained %	Cumulative Retained mt
1998* Partial WY, start-up 10/97, flow-through 12/97	23,264	2,870	1.470	51.2	22537	2,780	0.441	15.9	1.0	70.0%	1.029
1999	40,120	4,949	3.052	61.7	24035	2,965	0.642	21.7	2.4	79.0%	3.440
2000	59,848	7,382	5.353	72.5	59261	7,310	1.087	14.9	4.3	79.7%	7.706
2001	39,395	4,859	6.821	140.4	26107	3,220	1.166	36.2	5.7	82.9%	13.361
2002	53,437	6,591	4.506	68.4	22,342	2,756	0.438	15.9	4.1	90.3%	17.429
2003	56,252	6,939	5.474	78.9	26,126	3,223	0.828	25.7	4.6	84.9%	22.075
2004	52,674	6,497	3.424	52.7	29,049	3,583	0.416	11.6	3.0	87.9%	25.083
2005	34,035	4,198	3.255	77.5	16,282	2,008	0.381	19.0	2.9	88.3%	27.957
2006	40,467	4,992	5.183	103.8	23,246	2,867	0.726	25.3	4.5	86.0%	32.415
2007	32,443	4,002	4.360	108.9	11,525	1,422	0.633	44.6	3.7	85.5%	36.141
2008	5,823	718	0.672	93.5	207	207	0.074	35.9	0.6	89.0%	36.739
2009	57,265	7,064	14.077	199.3	42,323	5,220	4.874	93.4	9.2	65.4%	45.942
2010	103,636	12,783	14.921	116.7	74,825	9,230	4.554	49.3	10.4	69.5%	56.308
2011	72,722	8,970	10.141	113.0	74,591	9,201	2.317	25.2	7.8	77.2%	64.132
Total	671,380	82,814	82.709	99.9	453,924	55,991	18.576	33.2	64.1	77.5%	64.132

Total of all STAs												
Operational STAs	WY May-Apr	Inflow Volume acre feet	Inflow Volume ha-m	Inflow TP Load mt	Inflow FWM TP ppb	Outflow Volume acre feet	Outflow Volume ha-m	Outflow TP load mt	Outflow FWM TP ppb	TP Retained mt	TP Retained %	Cumulative Retained mt
1994(ENR section of STA-1W)	1994	0	0	0.0		1	0	0.000	20.0			
1995 (ENR section of STA-1W)	1995	92,364	11,393	15.5	135.6	95,333	11,759	2.718	23.1	12.7	82.4%	12.735
1996 (ENR Section of STA-1W)	1996	182,670	22,532	24.5	108.6	172,414	21,267	5.079	23.9	19.4	79.2%	32.120
1997 (ENR Section of STA-1W)	1997	118,780	14,651	14.4	98.2	119,198	14,703	2.750	18.7	11.6	80.9%	43.761
1998 (ENR Section of STA-1W, STA-6)	1998	103,568	12,775	13.0	101.8	103,523	12,769	2.567	20.1	10.4	80.3%	54.201
1999 (ENR Section of STA-1W, STA-6)	1999	128,652	15,869	14.1	89.2	110,411	13,619	2.687	19.7	11.5	81.0%	65.662
2000 (STA-1W, STA-2, STA-5, STA-6)	2000	197,340	24,342	30.2	124.0	192,330	23,724	7.216	30.4	23.0	76.1%	88.621
2001 (STA-1W, STA-2, STA-5, STA-6)	2001	200,598	24,743	40.1	162.1	156,600	19,316	10.383	53.8	29.7	74.1%	118.342
2002 (STA-1W, STA-2, STA-5, STA-6)	2002	704,343	86,879	124.9	143.7	656,832	81,019	30.381	37.5	94.5	75.7%	212.819
2003 (STA-1W, STA-2, STA-5, STA-6)	2003	1,097,979	135,434	196.2	144.9	1,090,940	134,565	73.274	54.5	123.0	62.7%	335.772
2004 (STA-1W, STA-2, STA-3/4, STA-5, STA-6)	2004	778,527	96,030	127.9	133.2	773,709	95,436	39.413	41.3	88.5	69.2%	424.255
2005 (STA-1E, STA-1W, STA-2, STA-3/4, STA-5, STA-6)	2005	1,499,559	184,968	273	147.4	1,556,248	191,960	86.765	45.2	185.8	68.2%	610.056
2006 (STA-1E, STA-1W, STA-2, STA-3/4, STA-5, STA-6)	2006	1,431,866	176,618	254	144.0	1,461,305	180,249	80.407	44.6	173.9	68.4%	783.983
2007 (STA-1E, STA-1W, STA-2, STA-3/4, STA-5, STA-6)	2007	922,792	113,825	211	185.6	862,747	106,418	61.423	57.7	149.9	70.9%	1,031.085
2008 (STA-1E, STA-1W, STA-2, STA-3/4, STA-5, STA-6)	2008	766,853	94,590	122	129.3	774,306	95,509	25.102	26.3	97.2	79.5%	1,031.085
2009 (STA-1E, STA-1W, STA-2, STA-3/4, STA-5, STA-6)	2009	1,162,164	143,351	218	152.0	1,235,648	152,415	38.139	25.0	179.7	82.5%	1,210.785
2010 (STA-1E, STA-1W, STA-2, STA-3/4, STA-5, STA-6)	2010	1,391,792	171,675	253	147.1	1,490,190	183,812	60.499	32.9	192.0	76.0%	1,402.797
2011 (STA-1E, STA-1W, STA-2, STA-3/4, STA-5, STA-6)	2011	735,165	90,681	85.271	94.0	723,530	89,246	17.770	19.9	67.5	79.2%	1,470.299
Total		11,515,014	1,420,356	2,017	142.0	11,575,265	1,427,788	546.572	38.3	1470.3	72.9%	1,470.299

Table 5B-3. Comparison of flow-way treatment performance in the Central and Western Flow-ways of STA-1E from WY2011 to WY2013.

Flow-way/ Water Year	Effective Treatment Area (acre)	PLR (g/m ² /yr)	HLR (cm/day)	Inflow Volume (ac-ft)	Inflow FWM TP (ppb)	Outflow FWM TP (ppb)	TP Retained (mt)	TP Retained (%)
Central Flow-way 1,939								
WY2011		0.2	0.6	13,177	75	45	0.6	52%
WY2012		1.0	2.6	60,472	104	18	6.6	85%
WY2013		1.8	3.5	82,016	136	27	10.9	79%
Western Flow-way 1,973								
WY2011		0.02	0.1	1,389	77	190	0.1	95%
WY2012		0.4	0.8	19,422	127	38	2.1	69%
WY2013		1.0	1.5	34,584	191	90	3.8	47%

Note: PLR = phosphorus loading rate; HLR = hydraulic loading rate

Table 5B-7. Comparison of flow-way treatment performance in STA-2 from WY2011 to WY2013.

Flow-way/ Water Year	Effective Treatment Area (acre)	PLR (g/m ² /yr)	HLR (cm/day)	Inflow Volume (ac-ft)	Inflow FWM TP (ppb)	Outflow FWM TP (ppb)	TP Retained (mt)	TP Retained (%)
Flow-way 1 1,840								
WY2011		0.4	1.2	26,590	88	12	2.5	87%
WY2012		0.8	2.6	57,632	79	9	5.1	91%
WY2013		1.2	3.1	69,490	103	8	8.3	94%
Flow-way 2 2,373								
WY2011		0.9	2.3	65,696	101	19	6.6	81%
WY2012		1.0	2.7	78,193	99	15	8.0	83%
WY2013		2.3	5.2	147,786	123	23	17.4	78%
Flow-way 3 2,296								
WY2011		0.8	2.6	72,493	82	15	6.0	82%
WY2012		0.8	2.7	73,549	82	14	5.8	78%
WY2013		1.6	3.9	106,266	111	26	10.5	72%

Table 5B-11. Comparison of flow-way treatment performance in STA-5/6 from WY2011 to WY2013.

Flow-way/ Water Year	Effective Treatment Area (acre)	PLR (g/m ² /yr)	HLR (cm/day)	Inflow Volume (ac-ft)	Inflow FWM TP (ppb)	Outflow FWM TP (ppb)	TP Mass Retained (mt)	TP Mass Retained (%)
Flow-way 1 2,418								
WY2011		0.4	1.2	33,423	84	41	2.6	75%
WY2012		0.5	1.3	36,393	106	36	3.8	79%
WY2013		0.4	0.9	26,343	111	15	3.2	89%
Flow-way 2 2,068								
WY2011		0.2	0.4	9,379	149	54	1.4	82%
WY2012		0.6	1.0	24,515	165	28	4.3	87%
WY2013		0.6	1.1	27,710	151	16	4.8	92%
Flow-way 7 621								
WY2011		0.5	1.3	9,941	97	17	1.0	82%
WY2012		0.7	1.6	11,650	129	85	1.2	63%
WY2013		0.02	0.1	538	73	100	0.03	53%
Flow-way 8 242								
WY2011		0.7	1.9	5,629	93	17	0.5	83%
WY2012		0.7	1.8	5,251	112	53	0.6	80%
WY2013		0.2	0.5	1,444	105	60	0.1	55%

Table 5B-5. Comparison of flow-way treatment performance in STA-1W from WY2011 to WY2013.

Flow-way/ Water Year	Effective Treatment Area (acres)	PLR (g/m ² /yr)	HLR (cm/day)	Inflow Volume (ac-ft)	Inflow FWM TP (ppb)	Outflow FWM TP (ppb)	TP Retained (mt)	TP Retained (%)
Eastern Flow-way 2,171								
WY2011		0.5	1.2	30,896	125	24	3.8	79%
WY2012		0.5	1.1	27,485	131	18	3.9	87%
WY2013		1.4	1.6	41,256	246	19	11.3	90%
Western Flow-way 1,369								
WY2011		1.1	2.0	32,590	148	25	5.2	87%
WY2012		0.8	1.9	31,964	116	23	3.9	84%
WY2013		2.4	3.3	54,850	197	43	10.7	80%
Northern Flow-way 3,004								
WY2011		1.1	2.1	74,536	140	21	10.9	85%
WY2012		0.7	1.4	48,992	133	19	6.8	85%
WY2013		2.2	2.3	84,223	260	30	23.1	86%

Table 5B-9. Comparison of flow-way treatment performance in STA-3/4 from WY2011 to WY2013.

Flow-way/ Water Year	Effective Treatment Area (acre)	PLR (g/m ² /yr)	HLR (cm/day)	Inflow Volume (ac-ft)	Inflow FWM TP (ppb)	Outflow FWM TP (ppb)	TP Retained (mt)	TP Retained (%)
Eastern Flow-way 6,476								
WY2011		0.4	1.2	93,579	84	16	7.7	80%
WY2012		0.2	1.0	80,369	60	20	3.8	64%
WY2013		0.6	2.2	172,401	79	15	13.2	79%
Central Flow-way 5,349								
WY2011		0.3	1.5	97,230	52	21	3.9	62%
WY2012		0.3	1.5	93,373	49	21	3.2	57%
WY2013		0.5	2.2	139,650	59	17	7.8	76%
Western Flow-way 4,502								
WY2011		0.4	2.1	112,832	51	14	5.2	72%
WY2012		0.3	2.3	123,600	35	15	3.1	57%
WY2013		0.7	3.6	196,412	51	13	9.5	77%

STA	Water Year	Flow-way	Area	PLR based on Surface Water	HLR based on Surface Water	Inflow			Outflow			TP Retained	TP Retained
						Surface Water	Surface Water TP Load	Inflow FWM TP based on Surface Water	Surface Water	TP Load from Surface Water	Outflow FWM TP based on Surface Water		
			(acres)	g/m ² /yr	(cm/day)	(ac-ft)	(mt)	(ppb)	(ac-ft)	(mt)	(ppb)	(mt)	(%)
STA-1E		STA-1E, Central Flow-way	1,986										
	WY2007			0.65	1.24	29,589	5.22	143	39,978	1.1	22	4.1	79%
	WY2008			1.95	4.10	97,393	15.66	130	119,011	2.7	19	12.9	83%
	WY2009			1.33	2.50	59,475	10.68	146	81,162	1.5	15	9.1	86%
	WY2010			0.89	0.97	23,186	7.19	251	30,570	2.1	55	5.1	71%
	WY2011			0.13	0.29	6,859	1.02	120	10,594	0.6	45	0.4	42%
		STA-1E, Western Flow-way	2,038										
	WY2007			3.47	2.55	62,351	28.61	372	52,705	10.0	153	18.6	65%
	WY2008			0.35	0.68	16,659	2.86	139	23,391	1.5	51	1.4	49%
	WY2009			2.35	3.00	73,334	19.40	214	76,456	4.5	47	14.9	77%
	WY2010			1.60	1.84	44,871	13.18	238	42,686	16.4	312	-3.2	-24%
	WY2011			0.02	0.06	1,390	0.13	77	472	0.1	142	0.0	34%
ENR Project		ENR Cell 1	1,490										
	WY1996			1.92	5.95	106,226	11.56	88	82,316	5.2	51	6.4	55%
	WY1997			0.99	3.78	67,471	5.96	72	45,839	1.9	33	4.1	69%
	WY1998			0.79	2.69	48,058	4.79	81	28,525	1.6	44	3.2	67%
	WY1999			1.26	4.20	74,885	7.60	82	39,723	1.4	29	6.2	81%
		ENR Cell 3	1,026										
	WY1996			1.83	13.90	170,769	7.58	36	172,447	5.1	24	2.5	33%
	WY1997			0.92	9.15	112,423	3.83	28	119,198	2.8	19	1.0	26%
	WY1998			0.58	5.94	72,925	2.39	27	80,990	2.2	22	0.2	6%
	WY1999			0.52	6.72	82,613	2.16	21	86,376	2.0	19	0.1	5%
		ENR Cell 2	941										
	WY1996			3.03	8.93	100,617	11.52	93	92,647	4.1	36	7.4	64%
	WY1997			1.71	6.56	73,934	6.51	71	71,314	3.9	44	2.6	40%
	WY1998			1.45	5.53	62,359	5.54	72	55,440	2.5	36	3.0	55%
	WY1999			1.34	5.26	59,297	5.10	70	46,547	2.3	40	2.8	55%
		ENR Cell 4	358										
	WY1996			2.86	21.61	92,647	4.15	36	88,454	2.4	22	1.7	41%
	WY1997			2.68	16.63	71,314	3.88	44	66,583	2.0	24	1.9	49%
	WY1998			1.72	12.93	55,440	2.49	36	44,400	0.8	15	1.7	67%
	WY1999			1.59	10.86	46,547	2.31	40	42,890	0.7	14	1.6	68%
		ENR Eastern Flow-way	2,516										
	WY1996			1.13	3.53	106,226	11.56	88	172,447	5.1	24	6.5	56%
	WY1997			0.59	2.24	67,471	5.96	72	119,198	2.8	19	3.1	53%
	WY1998			0.47	1.60	48,058	4.79	81	80,990	2.2	22	2.5	53%
	WY1999			0.75	2.49	74,885	7.60	82	86,376	2.0	19	5.6	73%
		ENR Western Flow-way	1,299										
	WY1996			2.19	6.47	100,617	11.52	93	88,454	2.4	22	1.7	41%
	WY1997			1.24	4.75	73,934	6.51	71	66,583	2.0	24	1.9	49%
	WY1998			1.05	4.01	62,359	5.54	72	44,400	0.8	15	1.7	67%
	WY1999			0.97	3.81	59,297	5.10	70	42,890	0.7	14	1.6	68%
STA-1W		STA-1W, Eastern Flow-way	2,516										
	WY2001			1.04	2.66	80,211	10.55	107	65,303	2.1	27	8.4	79%
	WY2002			1.30	2.93	88,408	13.23	121	103,612	3.3	26	9.9	75%
	WY2003			3.35	5.89	177,548	34.07	156	166,627	8.4	41	25.7	75%
	WY2004			1.67	4.03	121,397	17.00	114	106,939	6.5	49	10.5	62%
	WY2005			2.06	3.68	111,003	20.99	153	130,905	18.5	115	2.5	12%
	WY2006			2.89	3.92	118,213	29.41	202	92,060	14.5	128	14.9	51%
	WY2009			1.19	1.59	47,828	12.16	206	60,526	2.8	38	9.3	77%
	WY2010			1.26	1.64	49,383	12.87	211	65,306	2.9	36	10.0	77%
	WY2011			0.47	1.03	30,896	4.78	125	34,267	1.0	24	3.8	79%
		STA-1W, Western Flow-way	1,299										
	WY2001			0.82	2.02	31,401	4.33	112	31,425	1.0	27	3.3	76%
	WY2002			1.20	3.48	54,093	6.32	95	65,455	2.2	27	4.1	65%
	WY2003			4.43	7.65	118,966	23.27	159	158,209	13.4	69	9.9	42%
	WY2004			2.02	3.91	60,797	10.61	141	103,379	9.4	74	1.2	11%
	WY2009			2.85	3.78	58,838	15.01	207	47,066	1.4	24	13.6	91%
	WY2010			3.49	4.58	71,262	18.36	209	52,595	3.8	58	14.6	79%
	WY2011			1.13	2.10	32,590	5.96	148	24,890	0.8	25	5.2	87%

STA	Water Year	Flow-way	Area	PLR based on Surface Water	HLR based on Surface Water	Inflow			Outflow			TP Retained	TP Retained
						Surface Water	Surface Water TP Load	Inflow FWM TP based on Surface Water	Surface Water	TP Load from Surface Water	Outflow FWM TP based on Surface Water		
		STA-1W, Northern Flow-way	2,855										
	WY2001			0.6	1.4	47,896	6.71	114	14,352	1.5	85	5.2	77%
	WY2002			3.2	5.8	198,667	37.03	151	160,438	18.3	93	18.7	50%
	WY2003			5.8	10.2	349,869	66.44	154	346,911	34.0	80	32.4	49%
	WY2004			1.9	3.8	131,132	22.08	136	105,426	5.9	45	16.2	73%
	WY2005			4.8	5.1	175,904	55.66	257	188,371	40.8	175	14.9	27%
	WY2006			0.7	0.9	32,296	8.39	211	42,249	12.2	233	-3.8	-45%
	WY2007			0.0	0.0	1,539	0.41	215	30,824	1.5	39	-1.1	-233%
	WY2008			0.8	1.3	44,138	9.64	177	96,232	3.7	31	5.9	61%
	WY2009			2.1	2.1	70,857	23.70	271	78,639	2.1	22	21.6	91%
	WY2010			2.3	2.5	86,664	26.31	246	106,653	4.9	37	21.4	81%
	WY2011			1.10	2.04	69,759	12.73	148	75,898	1.9	21	10.8	85%
STA-2		STA-2, Cell 1	1,798										
	WY2003			0.44	2.35	50,637	3.18	51	31,504	0.6	14	2.6	82%
	WY2004			0.94	3.11	67,001	6.84	83	46,866	0.8	14	6.1	89%
	WY2005			1.11	3.07	66,188	8.05	99	54,555	0.7	10	7.4	92%
	WY2006			1.08	3.26	70,100	7.84	91	54,404	0.5	7	7.4	94%
	WY2007			1.52	2.77	59,691	11.10	151	44,413	0.5	9	10.6	95%
	WY2008			1.12	3.54	76,267	8.16	87	56,697	0.8	12	7.4	90%
	WY2009			0.95	2.20	47,419	6.93	118	50,666	0.6	10	6.3	91%
	WY2010			1.18	2.73	58,750	8.55	118	66,938	3.2	39	5.3	62%
	WY2011			0.40	1.24	26,605	2.90	88	32,269	0.5	12	2.4	83%
		STA-2, Cell 2	2,270										
	WY2002			1.05	3.57	97,061	9.63	80	89,344	1.7	16	7.9	82%
	WY2003			1.13	4.53	123,190	10.37	68	100,378	2.5	20	7.9	76%
	WY2004			1.22	3.53	95,912	11.23	95	89,833	1.8	16	9.5	84%
	WY2005			2.21	5.32	144,615	20.32	114	131,969	6.3	38	14.1	69%
	WY2006			2.14	5.20	141,276	19.61	113	98,563	3.3	27	16.3	83%
	WY2007			3.06	4.64	126,265	28.15	181	118,027	8.0	55	20.2	72%
	WY2008			1.01	2.21	60,147	9.24	125	61,636	2.8	36	6.5	70%
	WY2009			1.71	3.77	102,523	15.73	124	111,899	2.7	20	13.0	83%
	WY2010			2.20	4.53	123,175	20.24	133	141,294	10.8	62	9.5	47%
	WY2011			0.89	2.42	65,696	8.18	101	68,712	1.6	19	6.6	80%
		STA-2, Cell 3	2,270										
	WY2002			0.45	4.51	122,699	4.10	27	88,577	1.7	16	2.4	58%
	WY2003			1.09	5.54	150,632	9.99	54	117,316	2.2	16	7.7	78%
	WY2004			1.29	4.32	117,546	11.89	82	104,826	1.7	13	10.2	86%
	WY2005			2.11	5.29	143,865	19.42	109	135,929	2.7	16	16.7	86%
	WY2006			1.45	4.18	113,685	13.36	95	115,562	2.5	18	10.8	81%
	WY2007			1.18	2.49	67,574	10.80	130	69,872	2.2	26	8.6	79%
	WY2008			1.34	3.25	88,316	12.29	113	94,536	2.0	17	10.3	84%
	WY2009			1.54	2.45	66,527	14.18	173	58,147	2.1	29	12.1	85%
	WY2010			1.89	4.71	127,972	17.35	110	124,505	2.7	17	14.7	84%
	WY2011			0.76	2.57	69,891	6.95	81	67,747	1.3	15	5.7	81%
		STA-2, Cell 4	1,902										
	WY2009			1.08	1.94	44,144	8.30	152	50,952	1.3	20	7.0	84%
	WY2010			1.09	2.77	63,130	8.38	108	58,908	1.8	25	6.5	78%
	WY2011			0.01	0.05	1,168	0.06	44	12,071	0.5	35	-0.5	-480%
STA-3/4		STA-3/4, Eastern Flow-way	6,527										
	WY2006			1.63	3.65	285,159	43.04	122	379,014	10.6	23	32.4	75%
	WY2007			1.09	2.19	171,127	28.82	137	160,037	4.2	21	24.6	85%
	WY2008			0.53	1.61	126,065	13.95	90	128,766	3.1	19	10.9	77%
	WY2009			0.63	2.33	182,054	16.71	74	200,249	3.2	13	13.5	80%
	WY2010			0.96	2.57	201,022	25.30	102	227,948	3.8	13	21.5	85%
	WY2011			0.37	1.20	93,579	9.74	84	102,716	2.1	17	7.6	78%
		STA-3/4, Central Flow-way	5,436										
	WY2006			1.76	3.92	255,133	38.81	123	262,269	8.3	26	30.6	78%
	WY2007			0.64	1.68	109,509	14.02	104	121,971	3.3	22	10.7	76%
	WY2008			0.24	1.22	79,498	5.18	53	81,421	2.3	23	2.9	54%
	WY2009			0.50	1.86	120,768	10.91	73	136,574	2.3	14	8.6	78%
	WY2010			0.91	3.26	212,058	20.08	77	207,274	4.2	16	15.9	79%
	WY2011			0.29	1.49	97,230	6.29	52	94,193	2.4	21	3.9	61%
		STA-3/4, Western Flow-way	4,580										
	WY2009			0.95	3.08	168,914	17.56	84	129,209	2.0	12	15.6	89%
	WY2010			1.02	4.00	219,526	18.85	70	233,842	4.3	15	14.5	77%
	WY2011			0.39	2.06	112,832	7.15	51	124,384	2.1	14	5.1	71%

STA	Water Year	Flow-way	Area	PLR based on Surface Water	HLR based on Surface Water	Inflow			Outflow			TP Retained	TP Retained
						Surface Water	Surface Water TP Load	Inflow FWM TP based on Surface Water	Surface Water	TP Load from Surface Water	Outflow FWM TP based on Surface Water		
STA-5		STA-5, Flow-way 1	2,055										
	WY2001			0.68	1.50	36,870	5.68	125	20,566	3.6	142	2.1	36%
	WY2002			2.86	4.06	100,022	23.79	193	83,779	8.8	85	15.0	63%
	WY2003			2.82	4.21	103,490	23.43	184	100,938	18.0	144	5.5	23%
	WY2004			2.55	4.59	113,064	21.19	152	100,922	8.6	69	12.6	60%
	WY2005			1.82	3.77	92,868	15.12	132	73,465	5.7	63	9.4	62%
	WY2006			3.47	5.73	141,118	28.83	166	112,770	12.5	90	16.4	57%
	WY2007			2.33	2.38	58,505	19.35	268	64,530	14.1	178	5.2	27%
	WY2008			0.17	0.50	12,363	1.45	95	3,855	0.4	89	1.0	69%
	WY2009			1.81	2.54	62,436	15.05	195	69,976	3.9	46	11.1	74%
	WY2010			0.55	1.23	30,386	4.59	122	28,596	2.0	56	2.6	56%
	WY2011			0.42	1.36	33,483	3.48	84	16,926	0.9	41	2.6	75%
		STA-5, Flow-way 2	2,055										
	WY2001			1.31	1.90	46,857	10.88	188	19,412	1.3	54	9.6	88%
	WY2002			3.15	3.78	92,994	26.17	228	47,226	4.3	74	21.8	83%
	WY2003			4.24	3.94	96,985	35.29	295	59,580	8.5	116	26.8	76%
	WY2004			3.45	3.04	74,699	28.70	312	37,822	8.0	171	20.7	72%
	WY2005			1.32	2.27	55,853	11.01	160	48,323	6.6	110	4.4	40%
	WY2006			3.06	4.06	100,029	25.44	206	88,573	11.3	103	14.2	56%
	WY2007			0.70	1.20	29,614	5.84	160	3,145	1.0	246	4.9	83%
	WY2008			0.13	0.32	7,972	1.04	106	3,220	0.4	103	0.6	59%
	WY2009			1.42	1.74	42,803	11.78	223	37,684	3.4	73	8.4	71%
	WY2010			1.83	2.92	71,846	15.21	172	67,742	4.0	48	11.2	73%
	WY2011			0.21	0.38	9,381	1.73	149	4,618	0.3	54	1.4	81%
		STA-5, Flow-way 3	1,985										
	WY2009			0.95	0.48	11,412	7.60	540	3,247	0.1	30	7.5	98%
	WY2010			0.53	0.78	18,491	4.23	185	3,604	0.2	36	4.1	95%
	WY2011			0.10	0.08	2,005	0.78	317	2,775	0.3	77	0.5	64%
STA-6		STA-6, Cell 3	245										
	WY2004			0.47	4.56	13,376	0.47	28	12,464	0.2	12	0.3	59%
	WY2005			1.22	4.08	11,971	1.21	82	6,883	0.2	18	1.1	87%
	WY2006			1.03	3.75	11,003	1.02	75	11,151	0.4	33	0.6	56%
	WY2007			0.73	3.30	9,670	0.73	61	5,232	0.3	43	0.4	61%
	WY2008			0.07	0.52	1,518	0.07	37	586	0.0	54	0.0	41%
	WY2009			0.54	0.65	1,901	0.53	226	2,065	0.1	34	0.4	83%
	WY2010			1.10	3.04	8,919	1.09	99	3,518	0.2	43	0.9	82%
	WY2011			0.65	1.92	5,629	0.65	93	4,496	0.1	16	0.6	86%
		STA-6, Cell 5	625										
	WY2004			0.41	3.39	25,380	1.05	33	16,585	0.2	11	0.8	77%
	WY2005			0.75	2.85	21,344	1.90	72	9,399	0.2	19	1.7	88%
	WY2006			0.59	1.92	14,369	1.49	84	12,095	0.3	19	1.2	81%
	WY2007			2.11	2.53	18,936	5.35	229	6,293	0.4	46	5.0	93%
	WY2008			0.09	0.73	5,484	0.24	35	1,089	0.0	26	0.2	81%
	WY2009			0.38	0.51	3,784	0.97	208	4,857	0.1	24	0.8	84%
	WY2010			0.94	2.71	20,252	2.38	95	11,058	0.4	26	2.0	85%
	WY2011			0.47	1.33	9,941	1.19	97	7,863	0.2	17	1.0	85%
		STA-6, Section 2	1,387										
	WY2009			2.24	3.11	51,584	12.57	198	35,401	4.6	106	7.9	63%
	WY2010			2.01	4.44	73,711	11.30	124	61,261	4.1	55	7.2	63%
	WY2011			1.48	3.45	57,274	8.31	118	62,233	2.1	27	6.2	75%