

# **Appendix 5-18: Annual Water and Constituent Mass Balance Budgets for the Flow-Ways and Treatment Cells in the STAs**

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**Table 1.** Annual water budgets for flow-ways and treatment cells in the Everglades Protection Area (EPA) Stormwater Treatment Areas (STAs).<sup>a</sup>

	Inflows <sup>b</sup>				Outflows <sup>b</sup>				$\Delta S$	r	$\epsilon$
	I <sub>s</sub>	I <sub>g</sub>	P	$\Sigma$ inflow	O <sub>s</sub>	O <sub>g</sub>	ET	$\Sigma$ outflow			
<u>STA-1E, Cell 3</u>											
WY2007	32.1	0.0	2.1	34.1	51.7	0.0	3.1	54.8	0.0	20.7	46.5%
TOTAL	32.1	0.0	2.1	34.1	51.7	0.0	3.1	54.8	0.0	20.7	46.5%
<i>% In</i>	93.9%	0.0%	6.1%	<i>% out</i>	94.3%	0.0%	5.7%		0.0%		
<u>STA-1E, Cell 4N</u>											
WY2007	51.7	0.0	2.3	54.0	58.8	0.0	3.4	62.2	0.0	8.3	14.2%
TOTAL	51.7	0.0	2.3	54.0	58.8	0.0	3.4	62.2	0.0	8.3	14.2%
<i>% In</i>	95.8%	0.0%	4.2%	<i>% out</i>	94.5%	0.0%	5.5%		0.0%		
<u>STA-1E, Cell 4S</u>											
WY2007	58.8	0.0	2.7	61.5	60.2	0.0	4.0	64.2	0.0	2.8	4.4%
TOTAL	58.8	0.0	2.7	61.5	60.2	0.0	4.0	64.2	0.0	2.8	4.4%
<u>STA-1E, Cell 5</u>											
WY2007	51.3	0.0	2.0	53.4	28.3	0.0	3.0	31.3	0.0	-22.0	-52.0%
TOTAL	51.3	0.0	2.0	53.4	28.3	0.0	3.0	31.3	0.0	-22.0	-52.0%
<i>% In</i>	96.2%	0.0%	3.8%	<i>% out</i>	90.3%	0.0%	9.7%		0.0%		
<u>STA-1E, Cell 6</u>											
WY2007	66.7	0.0	3.7	70.4	86.1	0.0	5.6	91.7	0.0	21.3	26.2%
TOTAL	66.7	0.0	3.7	70.4	86.1	0.0	5.6	91.7	0.0	21.3	26.2%
<i>% In</i>	94.7%	0.0%	5.3%	<i>% out</i>	93.9%	0.0%	6.1%		0.0%		
<u>STA-1E, Cell 7</u>											
WY2007	35.5	0.0	1.5	37.0	38.4	0.0	2.2	40.7	0.0	3.7	9.5%
TOTAL	35.5	0.0	1.5	37.0	38.4	0.0	2.2	40.7	0.0	3.7	9.5%
<i>% In</i>	96.0%	0.0%	4.0%	<i>% out</i>	94.5%	0.0%	5.5%		0.0%		
<u>STA-1W, Cell 1</u>											
WY2001	125.5	1.9	5.2	132.6	80.0	7.7	8.3	96.0	-1.9	-38.5	-33.7%
WY2002	157.0	3.1	7.8	167.8	141.4	6.5	7.8	155.6	0.8	-11.4	-7.0%
WY2003	298.6	3.1	6.2	308.0	309.5	5.9	7.5	322.8	2.9	17.8	5.6%
WY2004	193.6	3.0	5.0	201.6	184.5	4.6	7.5	196.7	-3.2	-8.1	-4.1%
WY2005	205.1	2.3	6.4	213.8	263.2	2.6	7.8	273.5	-0.1	59.7	24.5%
WY2006	138.5	2.1	6.7	147.3	131.8	0.4	7.9	140.1	0.4	-6.8	-4.8%
WY2007	121.1	0.0	5.8	126.9	98.3	0.0	7.9	106.2	0.0	-20.8	-17.8%
TOTAL	1239.4	15.4	43.1	1298.0	1208.6	27.7	54.7	1291.0	-1.0	-8.0	-0.6%
<i>% In</i>	95.5%	1.2%	3.3%	<i>% out</i>	93.6%	2.1%	4.2%		-0.1%		
<u>STA-1W, Cell 2</u>											
WY2001	31.3	0.0	3.7	35.0	41.2	0.0	5.9	47.1	0.0	12.1	29.5%
WY2002	61.6	0.0	5.5	67.1	56.3	0.0	5.5	61.8	0.0	-5.3	-8.2%
WY2003	143.8	0.0	4.4	148.2	148.3	0.0	5.4	153.7	0.0	5.5	3.6%
WY2004	72.3	0.0	3.6	75.8	130.6	0.0	5.4	135.9	0.0	60.1	56.8%
WY2005	94.8	0.0	4.1	98.8	45.1	0.0	5.3	50.4	0.0	-48.4	-64.9%
WY2006	--	--	--	--	--	--	--	--	--	--	--

Table 1. Continued.

	Inflows <sup>b</sup>				Outflows <sup>b</sup>				$\Delta S$	r	$\epsilon$
	I <sub>s</sub>	I <sub>g</sub>	P	$\Sigma$ inflow	O <sub>s</sub>	O <sub>g</sub>	ET	$\Sigma$ outflow			
WY2007	--	--	--	--	--	--	--	--	--	--	--
TOTAL	403.7	0.0	21.3	425.0	421.4	0.0	27.5	448.9	0.0	24.0	5.5%
<i>% In</i>	95.0%	0.0%	5.0%	<i>% out</i>	93.9%	0.0%	6.1%		0.0%		
<u>STA-1W, Cell 3</u>											
WY2001	80.9	2.2	3.6	86.6	79.5	7.4	5.7	92.7	-0.5	5.6	6.2%
WY2002	133.3	3.4	5.4	142.2	121.5	6.2	5.4	133.1	0.5	-8.5	-6.2%
WY2003	250.8	3.4	4.3	258.6	198.5	5.6	5.2	209.4	0.9	-48.3	-20.7%
WY2004	154.3	3.3	3.5	161.1	127.2	4.4	5.2	136.8	-1.1	-25.3	-17.0%
WY2005	187.5	2.5	4.4	194.4	155.6	2.3	5.3	163.2	0.2	-31.1	-17.4%
WY2006	131.8	2.3	4.6	138.7	110.2	0.3	5.5	116.0	0.3	-22.3	-17.5%
WY2007	98.3	0.0	4.0	102.3	94.3	0.0	5.5	99.8	-1.7	-4.2	-4.2%
TOTAL	1036.9	17.0	29.9	1083.8	886.9	26.2	37.9	951.0	-1.4	-134.2	-13.2%
<i>% In</i>	95.7%	1.6%	2.8%	<i>% out</i>	93.3%	2.8%	4.0%		-0.1%		
<u>STA-1W, Cell 4</u>											
WY2001	41.2	0.0	1.3	42.5	36.0	0.0	2.1	38.1	0.0	-4.4	-11.0%
WY2002	56.3	0.0	2.0	58.3	78.5	0.0	2.0	80.4	0.0	22.2	32.0%
WY2003	148.3	0.0	1.6	149.9	192.7	0.0	1.9	194.6	0.0	44.7	25.9%
WY2004	130.6	0.0	1.3	131.8	118.0	0.0	1.9	119.8	0.0	-12.0	-9.5%
WY2005	45.1	0.0	1.5	46.6	65.0	0.0	1.9	66.8	0.0	20.2	35.6%
WY2006	--	--	--	--	--	--	--	--	--	--	--
WY2007	--	--	--	--	--	--	--	--	--	--	--
TOTAL	421.4	0.0	7.6	429.1	490.0	0.0	9.7	499.7	0.0	70.7	15.2%
<i>% In</i>	98.2%	0.0%	1.8%		98.1%	0.0%	1.9%		0.0%		
<u>STA-1W, Cell 5</u>											
WY2001	118.1	0.0	10.9	129.0	17.0	0.0	17.5	34.5	-10.9	-105.5	-129%
WY2002	456.4	0.0	16.4	472.8	197.7	0.0	16.5	214.2	3.8	-254.8	-74.2%
WY2003	395.7	0.0	13.2	408.9	427.5	0.0	15.9	443.4	-2.0	32.5	7.6%
WY2004	116.2	0.0	10.6	126.8	129.6	0.0	14.9	144.5	4.7	22.4	16.5%
WY2005	155.9	0.0	12.3	168.2	230.3	0.0	15.2	245.5	-8.4	68.9	33.3%
WY2006	48.2	0.0	12.9	61.1	50.2	0.0	15.2	65.4	-37.1	-32.8	-51.9%
WY2007	--	--	--	--	--	--	--	--	--	--	--
TOTAL	1290.5	0.0	76.3	1366.8	1052.3	0.0	95.1	1147.5	-50.0	-269.3	-21.4%
<i>% In</i>	94.4%	0.0%	5.6%	<i>% out</i>	91.7%	0.0%	8.3%		-3.7%		
<u>STA-2, Cell 1</u>											
WY2003	57.2	0.3	10.3	67.8	36.9	0.3	10.4	47.6	5.7	-14.5	-25.0%
WY2004	78.1	0.0	9.4	87.4	61.3	0.4	10.5	72.2	-2.1	-17.4	-21.8%
WY2005	67.8	0.0	8.9	76.8	71.4	0.4	10.4	82.2	0.5	5.9	7.4%
WY2006	72.6	0.0	10.4	83.1	70.8	0.4	10.6	81.7	-0.2	-1.5	-1.9%
WY2007	72.4	0.0	8.8	81.2	81.8	0.6	10.6	93.0	-2.6	9.2	10.6%
TOTAL	348.1	0.3	47.9	396.3	322.3	2.1	52.5	376.8	1.2	-18.2	-4.7%
<i>% In</i>	87.8%	0.1%	12.1%	<i>% out</i>	85.5%	0.6%	13.9%		0.3%		

Table 1. Continued.

	Inflows <sup>b</sup>			Outflows <sup>b</sup>				$\Delta S$	r	$\epsilon$	
	I <sub>s</sub>	I <sub>g</sub>	P	$\Sigma$ inflow	O <sub>s</sub>	O <sub>g</sub>	ET				$\Sigma$ outflow
<u>STA-2, Cell 2</u>											
WY2003	149.3	0.3	11.5	161.1	123.8	0.4	11.7	135.8	4.0	-21.3	-14.3%
WY2004	111.6	0.1	10.4	122.2	110.8	0.6	11.7	123.1	-2.0	-1.2	-1.0%
WY2005	177.9	0.1	10.0	188.0	164.3	0.9	11.6	176.7	-1.7	-13.0	-7.1%
WY2006	160.3	0.0	11.6	172.0	121.6	0.8	11.8	134.2	0.2	-37.6	-24.6%
WY2007	146.6	0.1	9.9	156.5	145.6	1.0	11.8	158.4	-2.1	-0.2	-0.1%
TOTAL	745.7	0.7	53.4	799.8	666.0	3.6	58.5	728.2	-1.7	-73.3	-9.6%
<i>% In</i>	93.2%	0.1%	6.7%	<i>% out</i>	91.5%	0.5%	8.0%		-0.2%		
<u>STA-2, Cell 3</u>											
WY2003	178.7	0.0	11.5	190.2	144.7	17.1	11.7	173.5	2.1	-14.7	-8.1%
WY2004	137.8	0.0	10.4	148.3	129.3	14.0	11.7	155.0	-3.6	3.1	2.1%
WY2005	173.2	0.0	10.0	183.1	155.9	10.0	11.6	177.5	-0.4	-6.1	-3.4%
WY2006	146.5	0.0	11.6	158.1	133.0	10.0	11.8	154.8	-0.7	-4.0	-2.6%
WY2007	75.4	0.0	9.9	85.2	86.2	9.2	11.8	107.2	-0.1	21.9	22.8%
TOTAL	711.5	0.0	53.4	764.9	649.1	60.4	58.5	768.1	-2.8	0.3	<0.1%
	93.0%	0.0%	7.0%		84.5%	7.9%	7.6%		-0.4%		
<u>STA-3/4, Cell 1A</u>											
WY2006	272.4	0.0	16.9	289.3	548.8	0.0	16.5	565.4	-8.5	267.5	62.6%
WY2007	219.2	0.0	12.8	232.0	19.5	0.0	4.4	24.0	-3.1	-211.2	-165%
TOTAL	491.6	0.0	29.7	521.3	568.4	0.0	21.0	589.3	-11.6	56.4	10.2%
<i>% In</i>	94.3%	0.0%	5.7%	<i>% out</i>	96.4%	0.0%	3.6%		-2.2%		
<u>STA-3/4, Cell 1B</u>											
WY2006	548.6	0.0	19.4	568.0	467.2	0.0	19.0	486.1	-10.2	-92.1	-17.5%
WY2007	22.2	0.0	14.7	36.9	189.6	0.0	5.1	194.7	4.0	161.8	139.7%
TOTAL	570.8	0.0	34.1	604.9	656.8	0.0	24.0	680.8	-6.2	69.7	10.8%
<i>% In</i>	94.4%	0.0%	5.6%	<i>% out</i>	96.5%	0.0%	3.5%		-1.0%		
<u>STA-3/4, Cell 2A</u>											
WY2006	261.7	0.0	14.1	275.9	399.6	0.0	13.8	413.5	-4.8	132.8	38.5%
WY2007	121.8	0.0	10.7	132.6	49.3	0.0	3.7	53.0	-3.2	-82.8	-89.2%
TOTAL	383.6	0.0	24.9	408.4	448.9	0.0	17.5	466.5	-8.0	50.0	11.4%
<i>% In</i>	93.9%	0.0%	6.1%	<i>% out</i>	96.2%	0.0%	3.8%		-2.0%		
<u>STA-3/4, Cell 2B</u>											
WY2006	399.6	0.0	16.1	415.7	323.5	0.0	15.7	339.3	-1.7	-78.2	-20.7%
WY2007	49.3	0.0	12.2	61.5	147.7	0.0	4.2	151.9	-2.1	88.3	82.8%
TOTAL	448.9	0.0	28.3	477.3	471.2	0.0	20.0	491.2	-3.8	10.2	2.1%
<i>% In</i>	94.1%	0.0%	5.9%	<i>% out</i>	95.9%	0.0%	4.1%		-0.8%		
<u>STA-3/4, Cell 3</u>											
WY2006	94.6	0.0	25.5	120.1	117.7	0.0	24.9	142.6	-3.7	18.8	14.3%
WY2007	102.2	0.0	19.4	121.6	101.1	0.0	6.7	107.7	-0.2	-14.1	-12.3%
TOTAL	196.8	0.0	44.8	241.7	218.8	0.0	31.6	250.3	-3.9	4.8	1.9%
<i>% In</i>	81.5%	0.0%	18.5%	<i>% out</i>	87.4%	0.0%	12.6%		-1.6%		

Table 1. Continued.

	Inflows <sup>b</sup>				Outflows <sup>b</sup>				$\Delta S$	r	$\epsilon$
	I <sub>s</sub>	I <sub>g</sub>	P	$\Sigma$ inflow	O <sub>s</sub>	O <sub>g</sub>	ET	$\Sigma$ outflow			
<u>STA-5, North</u>											
WY2001	45.5	0.0	8.1	53.6	25.4	10.5	11.9	47.7	-2.4	-8.3	-16.3%
WY2002	122.7	0.0	7.5	130.2	103.3	11.4	11.2	125.9	2.4	-1.9	-1.5%
WY2003	127.6	0.0	10.1	137.7	124.5	9.3	10.8	144.6	-0.1	6.8	4.8%
WY2004	139.5	0.0	9.6	149.1	121.7	10.9	10.8	143.4	1.2	-4.4	-3.0%
WY2005	114.6	2.0	8.9	125.4	90.2	7.8	10.7	108.7	-3.4	-20.2	-17.2%
WY2006	171.8	0.5	8.5	180.8	138.8	12.7	10.9	162.4	0.0	-18.4	-10.7%
WY2007	70.2	0.0	8.9	79.1	79.8	8.8	11.0	99.5	0.1	20.5	22.9%
TOTAL	791.8	2.5	61.6	855.9	683.6	71.4	77.3	832.3	-2.3	-25.9	-3.1%
<i>% In</i>	92.5%	0.3%	7.2%	<i>% out</i>	82.1%	8.6%	9.3%		-0.3%		
<u>STA-5, South</u>											
WY2001	57.4	1.3	8.1	66.8	23.9	25.5	11.9	61.3	-2.6	-8.2	-12.8%
WY2002	114.7	0.4	7.5	122.6	52.3	23.3	11.2	86.8	2.1	-33.8	-32.2%
WY2003	119.6	0.0	10.1	129.7	73.5	33.3	10.8	117.6	-0.3	-12.3	-10.0%
WY2004	89.2	0.0	9.6	98.9	46.7	27.9	10.8	85.4	1.5	-12.0	-13.1%
WY2005	68.1	0.0	8.9	77.0	59.6	33.8	10.7	104.1	-1.1	26.0	28.7%
WY2006	123.0	18.2	8.5	149.8	109.0	19.7	10.9	139.7	-3.2	-13.4	-9.2%
WY2007	19.8	5.8	8.9	34.5	3.9	4.0	11.0	18.8	0.7	-15.0	-56.3%
TOTAL	591.9	25.8	61.6	679.3	368.8	167.4	77.3	613.5	-2.9	-68.7	-10.6%
<i>% In</i>	87.1%	3.8%	9.1%	<i>% out</i>	60.1%	27.3%	12.6%		-0.4%		
<u>STA-6, Cell 3</u>											
WY2003	30.9	1.0	1.2	33.2	19.1	8.3	1.3	28.6	0.4	-4.1	-13.4%
WY2004	24.1	0.1	1.4	25.6	22.4	11.5	1.3	35.1	-0.4	9.2	30.2%
WY2005	23.0	0.5	1.3	24.7	13.0	8.2	1.3	22.5	0.2	-1.9	-8.2%
WY2006	20.5	1.6	1.1	23.2	15.9	4.9	1.3	22.2	-0.1	-1.2	-5.2%
WY2007	18.3	1.5	0.7	20.5	10.2	8.8	1.3	20.3	-0.1	-0.3	-1.5%
TOTAL	116.8	4.6	5.7	127.1	80.6	41.7	6.5	128.7	0.0	1.6	1.2%
<i>% In</i>	91.9%	3.6%	4.5%	<i>% out</i>	62.6%	32.4%	5.0%		0.0%		
<u>STA-6, Cell 5</u>											
WY2003	34.7	0.1	3.1	37.9	24.9	7.5	3.3	35.6	0.8	-1.5	-4.0%
WY2004	24.1	0.0	3.5	27.6	25.4	6.1	3.3	34.8	-0.8	6.3	20.3%
WY2005	19.9	0.1	3.2	23.2	14.3	5.5	3.3	23.1	0.0	-0.1	-0.4%
WY2006	14.4	1.0	2.9	18.3	14.6	2.8	3.3	20.7	0.1	2.4	12.5%
WY2007	17.0	0.3	1.8	19.2	10.5	5.0	3.3	18.8	0.0	-0.4	-2.0%
TOTAL	110.0	1.5	14.6	126.2	89.6	26.9	16.5	133.0	0.0	6.8	5.2%
<i>% In</i>	87.2%	1.2%	11.6%	<i>% out</i>	67.4%	20.3%	12.4%		0.0%		

<sup>a</sup> All water budget terms expressed as hm<sup>3</sup> (= 1,000,000 m<sup>3</sup>); 1 hm<sup>3</sup> = 810.713 acre-ft. The STA cell by cell water budgets were developed using the best available data, some of which is preliminary and subject to revision. Future reports will reflect the updated data as it becomes available.

<sup>b</sup>I<sub>s</sub> = surface water inflow; I<sub>g</sub> = groundwater inflow; P = precipitation; O<sub>s</sub> = surface water outflow; O<sub>g</sub> = groundwater outflow; ET = evapotranspiration;  $\Delta S$  = change in storage volume; r = water budget residual:  $(\Sigma\text{outflow} + \Delta S) - \Sigma\text{inflow}$ ;  $\epsilon$  = water budget error:  $r \div [(\Sigma\text{inflow} + \Sigma\text{outflow})/2]$ .

**Table 2.** Annual alkalinity mass balance budgets for flow-ways and treatment cells in the EPA STAs.<sup>a</sup>

	Inflows <sup>b</sup>			Outflows <sup>b</sup>			Retained	% Ret
	I <sub>s</sub>	P	∑inflow	O <sub>s</sub>	O <sub>g</sub>	∑outflow		
<u>STA-1E, Cell 3</u>								
WY2007	6,661	2.1	6,663	10,495	0	10,495	-3,832	-57.5%
TOTAL	6,661	2.1	6,663	10,495	0	10,495	-3,832	-57.5%
<i>%in</i>	99.97%	0.03%	<i>% out</i>	100.0%	0.0%			
<u>STA-1E, Cell 4N</u>								
WY2007	10,495	2.3	10,497	8,772	0	8,772	1,726	16.4%
TOTAL	10,495	2.3	10,497	8,772	0	8,772	1,726	16.4%
<i>%in</i>	99.98%	0.03%	<i>% out</i>	100.0%	0.0%			
<u>STA-1E, Cell 4S</u>								
WY2007	11,811	2.7	11,814	7,891	0	7,891	3,923	33.2%
TOTAL	11,811	2.7	11,814	7,891	0	7,891	3,923	33.2%
<i>%in</i>	99.98%	0.04%	<i>% out</i>	100.0%	0.0%			
<u>STA-1E, Cell 5</u>								
WY2007	11,417	2.0	11,419	6,740	0	6,740	4,679	41.0%
TOTAL	11,417	2.0	11,419	6,740	0	6,740	4,679	41.0%
<i>%in</i>	99.98%	0.02%	<i>% out</i>	100.0%	0.0%			
<u>STA-1E, Cell 6</u>								
WY2007	16,716	3.7	16,720	19,960	0	19,960	-3,240	-19.4%
TOTAL	16,716	3.7	16,720	19,960	0	19,960	-3,240	-19.4%
<i>%in</i>	99.98%	0.02%	<i>% out</i>	100.0%	0.0%			
<u>STA-1E, Cell 7</u>								
WY2007	9,588	1.5	9,589	9,976	0	9,976	-387	-4.0%
TOTAL	9,588	1.5	9,589	9,976	0	9,976	-387	-4.0%
<i>%in</i>	99.98%	0.02%	<i>% out</i>	100.0%	0.0%			
<u>STA-1W, Cell 1</u>								
WY2001	38,105	5.2	38,110	22,110	2,235	24,345	13,765	36.1%
WY2002	41,772	7.8	41,780	37,248	1,710	38,958	2,821	6.8%
WY2003	62,101	6.2	62,107	65,184	1,228	66,412	-4,304	-6.9%
WY2004	57,851	5.0	57,856	54,297	1,377	55,674	2,182	3.8%
WY2005	50,671	6.4	50,678	60,553	617	61,169	-10,492	-20.7%
WY2006	43,673	6.7	43,680	39,029	128	39,157	4,522	10.4%
WY2007	33,544	5.8	33,550	28,213	0	28,213	5,336	15.9%
TOTAL	327,718	43.1	327,761	306,635	7,295	313,930	13,831	4.2%
<i>% in</i>	99.99%	0.01%	<i>% out</i>	97.7%	2.3%			
<u>STA-1W, Cell 2</u>								
WY2001	9,131	3.7	9,134	10,918	0	10,918	-1,784	-19.5%
WY2002	16,381	5.5	16,386	14,365	0	14,365	2,022	12.3%
WY2003	31,318	4.4	31,322	30,583	0	30,583	740	2.4%
WY2004	21,080	3.6	21,083	38,139	0	38,139	-17,056	-80.9%

Table 2. Continued.

	Inflows <sup>b</sup>			Outflows <sup>b</sup>			Retained	% Ret
	I <sub>s</sub>	P	∑inflow	O <sub>s</sub>	O <sub>g</sub>	∑outflow		
WY2005	16,755	4.1	16,760	7,218	0	7,218	9,542	56.9%
WY2006	--	--	--	--	--	--	--	--
WY2007	--	--	--	--	--	--	--	--
TOTAL	94,664	21.3	94,685	101,222	0	101,222	-6,537	-6.9%
<i>% in</i>	99.98%	0.02%	<i>% out</i>	100.0%	0.0%			
<u>STA-1W, Cell 3</u>								
WY2001	20,082	3.6	20,085	19,140	1,804	20,944	-859	-4.3%
WY2002	33,071	5.4	33,076	35,312	1,656	36,968	-3,892	-11.8%
WY2003	49,940	4.3	49,944	47,637	1,225	48,861	1,083	2.2%
WY2004	44,020	3.5	44,023	36,936	1,279	38,214	5,809	13.2%
WY2005	42,690	4.4	42,695	40,295	553	40,849	1,846	4.3%
WY2006	39,029	4.6	39,034	31,804	88	31,892	7,142	18.3%
WY2007	28,213	4.0	28,217	25,574	0	25,574	2,643	9.4%
TOTAL	257,045	29.9	257,075	236,698	6,605	243,303	13,772	5.4%
<i>% in</i>	99.99%	0.01%	<i>% out</i>	97.3%	2.7%			
<u>STA-1W, Cell 4</u>								
WY2001	10,918	1.3	10,919	8,034	0	8,034	2,886	26.4%
WY2002	14,365	2.0	14,367	17,797	0	17,797	-3,430	-23.9%
WY2003	30,583	1.6	30,584	37,143	0	37,143	-6,559	-21.4%
WY2004	38,139	1.3	38,140	33,067	0	33,067	5,073	13.3%
WY2005	7,218	1.5	7,218	14,052	0	14,052	-6,819	-94.3%
WY2006	--	--	--	--	--	--	--	--
WY2007	--	--	--	--	--	--	--	--
TOTAL	101,222	7.6	101,230	110,092	0	110,092	-8,848	-8.7%
<i>% in</i>	99.99%	0.01%	<i>% out</i>	100.0%	0.0%			
<u>STA-1W, Cell 5</u>								
WY2001	23,779	10.9	23,790	2,935	0	2,935	20,855	87.7%
WY2002	119,333	16.4	119,350	52,992	0	52,992	66,358	55.6%
WY2003	77,617	13.2	77,630	81,925	0	81,925	-4,295	-5.5%
WY2004	34,157	10.6	34,168	32,259	0	32,259	1,909	5.6%
WY2005	37,174	12.3	37,186	54,924	0	54,924	-17,738	-47.7%
WY2006	15,196	12.9	15,209	13,446	0	13,446	1,764	11.6%
WY2007	--	--	--	--	--	--	--	--
TOTAL	307,257	76.3	307,333	238,480	0	238,480	68,853	22.4%
<i>% in</i>	99.98%	0.02%	<i>% out</i>	100.0%	0.0%			
<u>STA-2, Cell 1</u>								
WY2003	15,870	10.3	15,880	9,619	76	9,695	6,185	39.0%
WY2004	27,345	9.4	27,354	18,164	134	18,299	9,055	33.1%
WY2005	22,405	8.9	22,414	19,873	130	20,003	2,411	10.8%
WY2006	25,906	10.4	25,916	20,887	130	21,018	4,898	18.9%
WY2007	24,284	8.8	24,292	24,434	180	24,614	-322	-1.3%
TOTAL	115,809	47.9	115,857	92,977	651	93,628	22,228	19.2%
<i>% in</i>	99.96%	0.04%	<i>% out</i>	99.3%	0.7%			

Table 2. Continued.

	Inflows <sup>b</sup>			Outflows <sup>b</sup>			Retained	% Ret
	I <sub>s</sub>	P	Σinflow	O <sub>s</sub>	O <sub>g</sub>	Σoutflow		
<u>STA-2, Cell 2</u>								
WY2003	21,014	11.5	21,025	14,988	47	15,034	5,991	28.5%
WY2004	38,912	10.4	38,923	35,591	192	35,783	3,140	8.1%
WY2005	58,767	10.0	58,777	52,236	282	52,518	6,259	10.6%
WY2006	56,146	11.6	56,157	40,231	279	40,510	15,648	27.9%
WY2007	51,484	9.9	51,494	46,404	340	46,744	4,750	9.2%
TOTAL	226,323	53.4	226,377	189,449	1,140	190,589	35,788	15.8%
<i>% in</i>	99.98%	0.02%	<i>% out</i>	99.4%	0.6%			
<u>STA-2, Cell 3</u>								
WY2003	32,033	11.5	32,045	15,835	2,398	18,233	13,811	43.1%
WY2004	47,429	10.4	47,440	35,699	4,329	40,028	7,412	15.6%
WY2005	56,729	10.0	56,739	42,528	2,989	45,517	11,222	19.8%
WY2006	45,105	11.6	45,117	34,521	2,839	37,360	7,757	17.2%
WY2007	26,274	9.9	26,284	23,456	2,836	26,292	-8	<0.1%
TOTAL	207,571	53.4	207,625	152,039	15,391	167,430	40,195	19.4%
<i>% in</i>	99.97%	0.03%	<i>% out</i>	90.8%	9.2%			
<u>STA-3/4, Cell 1A</u>								
WY2006	31,172	16.9	31,189	96,635	0	96,635	-65,447	-209%
WY2007	65,475	12.8	65,487	1,307	0	1,307	64,180	98.0%
TOTAL	96,646	29.7	96,676	97,942	0	97,942	-1,266	-1.3%
<i>% in</i>	99.97%	0.03%	<i>% out</i>	100.0%	0.0%			
<u>STA-3/4, Cell 1B</u>								
WY2006	96,562	19.4	96,581	64,989	0	64,989	31,592	32.7%
WY2007	1,883	14.7	1,897	52,215	0	52,215	-50,318	-2652%
TOTAL	98,445	34.1	98,479	117,204	0	117,204	-18,726	-19.0%
<i>% in</i>	99.97%	0.03%	<i>% out</i>	100.0%	0.0%			
<u>STA-3/4, Cell 2A</u>								
WY2006	25,369	14.1	25,383	45,248	0	45,248	-19,864	-78.3%
WY2007	27,817	10.7	27,827	11,963	0	11,963	15,864	57.0%
TOTAL	53,186	24.9	53,211	57,210	0	57,210	-4,000	-7.5%
<i>% in</i>	99.95%	0.05%	<i>% out</i>	100.0%	0.0%			
<u>STA-3/4, Cell 2B</u>								
WY2006	45,255	16.1	45,271	29,335	0	29,335	15,937	35.2%
WY2007	13,334	12.2	13,347	28,553	0	28,553	-15,207	-113%
TOTAL	58,590	28.3	58,618	57,888	0	57,888	730	1.2%
<i>% in</i>	99.95%	0.05%	<i>% out</i>	100.0%	0.0%			
<u>STA-3/4, Cell 3</u>								
WY2006	15,965	25.5	15,991	15,831	0	15,831	160	1.0%
WY2007	24,223	19.4	24,243	23,461	0	23,461	782	3.2%
TOTAL	40,189	44.8	40,233	39,291	0	39,291	942	2.3%
<i>% in</i>	99.9%	0.1%	<i>% out</i>	100.0%	0.0%			

Table 2. Continued.

	Inflows <sup>b</sup>			Outflows <sup>b</sup>			Retained	% Ret
	I <sub>s</sub>	P	Σinflow	O <sub>s</sub>	O <sub>g</sub>	Σoutflow		
<u>STA-5, North Flow-way</u>								
WY2001	9,890	8.1	9,898	4,245	2,007	6,252	3,646	36.8%
WY2002	19,917	7.5	19,924	14,873	1,743	16,616	3,308	16.6%
WY2003	20,284	10.1	20,294	19,050	1,445	20,495	-200	-1.0%
WY2004	23,180	9.6	23,190	16,977	1,664	18,641	4,549	19.6%
WY2005	18,688	8.9	18,697	12,248	1,156	13,404	5,293	28.3%
WY2006	23,370	8.5	23,378	19,474	1,752	21,225	2,153	9.2%
WY2007	8,593	8.9	8,602	9,200	1,046	10,246	-1,644	-19.1%
TOTAL	123,922	61.6	123,983	96,067	10,811	106,878	17,105	13.8%
<i>% in</i>	99.95%	0.05%	<i>% out</i>	89.9%	10.1%			
<u>STA-5, South Flow-way</u>								
WY2001	12,686	8.1	12,694	4,335	5,092	9,427	3,267	25.7%
WY2002	21,282	7.5	21,289	9,154	4,198	13,352	7,937	37.3%
WY2003	21,957	10.1	21,967	13,296	6,076	19,372	2,595	11.8%
WY2004	17,286	9.6	17,296	8,537	5,251	13,789	3,507	20.3%
WY2005	13,284	8.9	13,293	10,826	6,351	17,177	-3,884	-29.2%
WY2006	21,079	8.5	21,087	15,893	3,120	19,013	2,074	9.8%
WY2007	4,504	8.9	4,513	594	739	1,333	3,180	70.5%
TOTAL	112,077	61.6	112,139	62,636	30,827	93,464	18,675	16.7%
<i>% in</i>	99.9%	0.1%	<i>% out</i>	67.0%	33.0%			
<u>STA-6, Cell 3</u>								
WY2003	4,429	1.2	4,430	2,063	1,030	3,094	1,337	30.2%
WY2004	6,676	1.4	6,677	5,672	3,048	8,720	-2,043	-30.6%
WY2005	5,936	1.3	5,938	3,004	1,996	5,000	938	15.8%
WY2006	4,252	1.1	4,253	2,815	944	3,759	494	11.6%
WY2007	5,183	0.7	5,184	2,605	2,362	4,967	217	4.2%
TOTAL	26,476	6	26,482	16,159	9,381	25,540	943	3.6%
<i>% in</i>	99.98%	0.02%	<i>% out</i>	63.3%	36.7%			
<u>STA-6, Cell 5</u>								
WY2003	5,063	3.1	5,066	5,063	1,288	6,351	-1,285	-25.4%
WY2004	6,623	3.5	6,627	6,623	1,640	8,263	-1,637	-24.7%
WY2005	5,127	3.2	5,130	5,127	1,678	6,805	-1,675	-32.6%
WY2006	3,054	2.9	3,057	3,054	594	3,648	-591	-19.3%
WY2007	4,938	1.8	4,940	4,938	1,853	6,791	-1,851	-37.5%
TOTAL	24,805	15	24,820	24,805	7,053	31,858	-7,039	-28.4%
<i>% in</i>	99.9%	0.1%	<i>% out</i>	77.9%	22.1%			

<sup>a</sup> All budget terms expressed as metric tonnes of calcium carbonate.

<sup>b</sup> I<sub>s</sub> = surface water inflow; P = precipitation; O<sub>s</sub> = surface water outflow; O<sub>g</sub> = groundwater outflow; Retained = Σinflow – Σoutflow; %Ret = (retained/Σinflow)\*100.

**Table 3.** Annual calcium mass balance budgets for flow-ways and treatment cells in the EPA STAs.<sup>a</sup>

	Inflows <sup>b</sup>			Outflows <sup>b</sup>			Retained	% Ret
	I <sub>s</sub>	P	∑inflow	O <sub>s</sub>	O <sub>g</sub>	∑outflow		
<u>STA-1E, Cell 3</u>								
WY2007	2,754	0.4	2,755	4,064	0	4,064	-1,309	-47.5%
TOTAL	2,754	0.4	2,755	4,064	0	4,064	-1,309	-47.5%
<i>%in</i>	99.98%	0.02%	<i>% out</i>	100.0%	0.0%			
<u>STA-1E, Cell 4N</u>								
WY2007	4,064	0.5	4,064	3,343	0	3,343	721	17.7%
TOTAL	4,064	0.5	4,064	3,343	0	3,343	721	17.7%
<i>%in</i>	99.99%	0.02%	<i>% out</i>	100.0%	0.0%			
<u>STA-1E, Cell 4S</u>								
WY2007	4,578	0.6	4,578	3,045	0	3,045	1,533	33.5%
TOTAL	4,578	0.6	4,578	3,045	0	3,045	1,533	33.5%
<i>%in</i>	99.99%	0.02%	<i>% out</i>	100.0%	0.0%			
<u>STA-1E, Cell 5</u>								
WY2007	4,076	0.4	4,077	2,334	0	2,334	1,743	42.8%
TOTAL	4,076	0.4	4,077	2,334	0	2,334	1,743	42.8%
<i>%in</i>	99.99%	0.01%	<i>% out</i>	100.0%	0.0%			
<u>STA-1E, Cell 6</u>								
WY2007	5,676	0.8	5,677	6,764	0	6,764	-1,087	-19.2%
TOTAL	5,676	0.8	5,677	6,764	0	6,764	-1,087	-19.2%
<i>%in</i>	99.99%	0.01%	<i>% out</i>	100.0%	0.0%			
<u>STA-1E, Cell 7</u>								
WY2007	3,204	0.3	3,204	3,342	0	3,342	-138	-4.3%
TOTAL	3,204	0.3	3,204	3,342	0	3,342	-138	-4.3%
<i>%in</i>	99.99%	0.01%	<i>% out</i>	100.0%	0.0%			
<u>STA-1W, Cell 1</u>								
WY2001	11,285	1.1	11,286	6,582	664	7,246	4,040	35.8%
WY2002	14,330	1.6	14,332	12,479	580	13,058	1,273	8.9%
WY2003	21,553	1.3	21,555	22,473	425	22,898	-1,343	-6.2%
WY2004	20,037	1.0	20,038	18,602	474	19,076	962	4.8%
WY2005	17,802	1.3	17,803	21,528	218	21,746	-3,943	-22.1%
WY2006	15,192	1.4	15,193	13,325	44	13,369	1,824	12.0%
WY2007	11,600	1.2	11,602	9,514	0	9,514	2,087	18.0%
TOTAL	111,799	8.9	111,808	104,502	2,405	106,907	4,901	4.4%
<i>% in</i>	99.99%	0.01%	<i>% out</i>	97.8%	2.2%			
<u>STA-1W, Cell 2</u>								
WY2001	2,699	0.8	2,700	3,349	0	3,349	-649	-24.0%
WY2002	5,593	1.1	5,594	4,804	0	4,804	790	14.1%
WY2003	10,837	0.9	10,838	10,665	0	10,665	173	1.6%
WY2004	7,314	0.7	7,315	13,173	0	13,173	-5,858	-80.1%

Table 3. Continued.

	Inflows <sup>b</sup>			Outflows <sup>b</sup>			Retained	% Ret
	I <sub>s</sub>	P	∑inflow	O <sub>s</sub>	O <sub>g</sub>	∑outflow		
WY2005	6,086	0.8	6,087	2,560	0	2,560	3,527	57.9%
WY2006	--	--	--	--	--	--	--	--
WY2007	--	--	--	--	--	--	--	--
TOTAL	32,530	4.4	32,534	34,551	0	34,551	-2,017	-6.2%
<i>% in</i>	99.99%	0.01%	<i>% out</i>	100.0%	0.0%			
<u>STA-1W, Cell 3</u>								
WY2001	5,961	0.7	5,962	5,654	534	6,188	-226	-3.8%
WY2002	10,856	1.1	10,857	11,612	544	12,156	-1,298	-12.0%
WY2003	17,205	0.9	17,206	15,859	415	16,274	932	5.4%
WY2004	14,946	0.7	14,947	12,208	428	12,636	2,310	15.5%
WY2005	14,842	0.9	14,843	13,362	188	13,549	1,294	8.7%
WY2006	13,325	1.0	13,326	10,656	30	10,686	2,639	19.8%
WY2007	9,514	0.8	9,515	8,579	0	8,579	936	9.8%
TOTAL	86,650	6.2	86,656	77,929	2,139	80,068	6,588	7.6%
<i>% in</i>	99.99%	0.01%	<i>% out</i>	97.3%	2.7%			
<u>STA-1W, Cell 4</u>								
WY2001	3,349	0.3	3,349	2,348	0	2,348	1,002	29.9%
WY2002	4,804	0.4	4,804	5,762	0	5,762	-958	-19.9%
WY2003	10,665	0.3	10,665	12,848	0	12,848	-2,183	-20.5%
WY2004	13,173	0.3	13,173	11,217	0	11,217	1,956	14.9%
WY2005	2,560	0.3	2,561	4,885	0	4,885	-2,320	-90.4%
WY2006	--	--	--	--	--	--	--	--
WY2007	--	--	--	--	--	--	--	--
TOTAL	34,551	1.6	34,552	37,060	0	37,060	-2,502	-7.2%
WY2005	2,560	0.3	2,561	100.0%	0.0%			
<u>STA-1W, Cell 5</u>								
WY2001	7,567	2.3	7,569	846	0	846	6,723	88.8%
WY2002	41,827	3.4	41,830	17,447	0	17,447	24,384	58.3%
WY2003	27,869	2.7	27,872	28,679	0	28,679	-807	-2.9%
WY2004	11,404	2.2	11,407	10,688	0	10,688	719	6.3%
WY2005	13,598	2.5	13,601	19,098	0	19,098	-5,497	-40.4%
WY2006	5,518	2.7	5,521	4,171	0	4,171	1,349	24.4%
WY2007	--	--	--	--	--	--	--	--
TOTAL	107,784	15.8	107,800	80,929	0	80,929	26,870	24.9%
<i>% in</i>	99.99%	0.01%	<i>% out</i>	100.0%	0.0%			
<u>STA-2, Cell 1</u>								
WY2003	4,491	2.1	4,494	2,645	21	2,666	1,827	40.7%
WY2004	8,143	1.9	8,145	5,133	39	5,172	2,973	36.5%
WY2005	6,795	1.8	6,797	5,986	39	6,026	771	11.3%
WY2006	7,704	2.2	7,706	5,196	35	5,232	2,474	32.1%
WY2007	7,135	1.8	7,137	6,064	49	6,112	1,025	14.4%
TOTAL	34,269	9.9	34,279	25,025	184	25,209	9,070	26.5%
<i>% in</i>	99.97%	0.03%	<i>% out</i>	99.3%	0.7%			

Table 3. Continued.

	Inflows <sup>b</sup>			Outflows <sup>b</sup>			Retained	% Ret
	I <sub>s</sub>	P	∑inflow	O <sub>s</sub>	O <sub>g</sub>	∑outflow		
<u>STA-2, Cell 2</u>								
WY2003	6,162	2.4	6,164	4,246	13	4,259	1,905	30.9%
WY2004	12,070	2.2	12,073	10,707	59	10,765	1,307	10.8%
WY2005	18,458	2.1	18,460	16,173	88	16,261	2,199	11.9%
WY2006	17,397	2.4	17,400	12,187	85	12,273	5,127	29.5%
WY2007	15,165	2.0	15,167	13,862	101	13,963	1,203	7.9%
TOTAL	69,252	11.0	69,263	57,175	347	57,521	11,742	17.0%
<i>% in</i>	99.98%	0.02%	<i>% out</i>	99.4%	0.6%			
<u>STA-2, Cell 3</u>								
WY2003	9,187	2.4	9,189	4,017	647	4,664	4,525	49.2%
WY2004	14,475	2.2	14,477	10,292	1,284	11,576	2,901	20.0%
WY2005	17,435	2.1	17,437	12,488	898	13,386	4,051	23.2%
WY2006	14,236	2.4	14,239	9,712	846	10,558	3,680	25.8%
WY2007	7,585	2.0	7,587	6,525	804	7,328	259	3.4%
TOTAL	62,917	11.0	62,928	43,033	4,479	47,512	15,417	24.5%
<i>% in</i>	99.98%	0.02%	<i>% out</i>	90.6%	9.4%			
<u>STA-3/4, Cell 1A</u>								
WY2006	11,749	3.5	11,753	34,402	0	34,402	-22,650	-193%
WY2007	22,113	2.7	22,116	1,786	0	1,786	20,330	91.9%
TOTAL	33,862	6.1	33,869	36,188	0	36,188	-2,320	-6.8%
<i>% in</i>	99.98%	0.02%	<i>% out</i>	100.0%	0.0%			
<u>STA-3/4, Cell 1B</u>								
WY2006	34,377	4.0	34,381	22,759	0	22,759	11,623	33.8%
WY2007	1,976	3.0	1,979	16,849	0	16,849	-14,870	-751%
TOTAL	36,353	7.0	36,360	39,607	0	39,607	-3,247	-8.9%
<i>% in</i>	99.98%	0.02%	<i>% out</i>	100.0%	0.0%			
<u>STA-3/4, Cell 2A</u>								
WY2006	10,657	2.9	10,660	17,781	0	17,781	-7,121	-66.8%
WY2007	11,153	2.2	11,156	5,590	0	5,590	5,566	49.9%
TOTAL	21,810	5.1	21,815	23,371	0	23,371	-1,556	-7.1%
<i>% in</i>	99.98%	0.02%	<i>% out</i>	100.0%	0.0%			
<u>STA-3/4, Cell 2B</u>								
WY2006	17,784	3.3	17,787	11,268	0	11,268	6,520	36.7%
WY2007	6,015	2.5	6,017	10,589	0	10,589	-4,572	-76.0%
TOTAL	23,798	5.8	23,804	21,857	0	21,857	1,948	8.2%
<i>% in</i>	99.98%	0.02%	<i>% out</i>	100.0%	0.0%			
<u>STA-3/4, Cell 3</u>								
WY2006	6,642	5.3	6,648	5,969	0	5,969	679	10.2%
WY2007	9,901	4.0	9,905	8,845	0	8,845	1,059	10.7%
TOTAL	16,543	9.3	16,552	14,814	0	14,814	1,738	10.5%
<i>% in</i>	99.9%	0.1%	<i>% out</i>	100.0%	0.0%			

Table 3. Continued.

	Inflows <sup>b</sup>			Outflows <sup>b</sup>			Retained	% Ret
	I <sub>s</sub>	P	Σinflow	O <sub>s</sub>	O <sub>g</sub>	Σoutflow		
<u>STA-5, North Flow-way</u>								
WY2001	3,734	1.7	3,736	1,659	771	2,429	1,306	35.0%
WY2002	9,465	1.6	9,467	6,766	810	7,576	1,891	20.0%
WY2003	9,714	2.1	9,716	8,131	653	8,784	932	9.6%
WY2004	8,205	2.0	8,207	5,667	572	6,238	1,969	24.0%
WY2005	6,705	1.8	6,707	4,424	416	4,840	1,867	27.8%
WY2006	8,363	1.8	8,365	7,091	632	7,723	642	7.7%
WY2007	3,039	1.8	3,040	3,237	369	3,606	-566	-18.6%
TOTAL	49,225	12.7	49,237	36,973	4,223	41,196	8,041	16.3%
<i>% in</i>	99.97%	0.03%	<i>% out</i>	89.7%	10.3%			
<u>STA-5, South Flow-way</u>								
WY2001	4,814	1.7	4,815	1,907	2,081	3,988	827	17.2%
WY2002	9,392	1.6	9,393	4,202	1,889	6,091	3,302	35.2%
WY2003	9,677	2.1	9,679	5,839	2,673	8,512	1,167	12.1%
WY2004	6,047	2.0	6,049	2,890	1,807	4,698	1,351	22.3%
WY2005	4,675	1.8	4,677	3,710	2,206	5,915	-1,238	-26.5%
WY2006	7,484	1.8	7,486	5,516	1,095	6,611	875	11.7%
WY2007	1,545	1.8	1,547	189	244	434	1,113	72.0%
TOTAL	43,634	12.7	43,647	24,253	11,995	36,249	7,398	17.0%
<i>% in</i>	99.97%	0.03%	<i>% out</i>	66.9%	33.1%			
<u>STA-6, Cell 3</u>								
WY2003	1,677	0.3	1,678	762	385	1,147	531	31.6%
WY2004	2,555	0.3	2,555	2,201	1,175	3,376	-821	-32.1%
WY2005	2,257	0.3	2,257	1,131	755	1,886	371	16.4%
WY2006	1,555	0.2	1,555	1,042	347	1,389	166	10.7%
WY2007	1,911	0.1	1,912	961	871	1,832	79	4.1%
TOTAL	9,955	1.2	9,956	6,097	3,534	9,631	326	3.3%
<i>% in</i>	99.99%	0.01%	<i>% out</i>	63.3%	36.7%			
<u>STA-6, Cell 5</u>								
WY2003	1,915	0.6	1,915	810	317	1,127	788	41.2%
WY2004	2,538	0.7	2,539	2,379	609	2,988	-449	-17.7%
WY2005	1,938	0.7	1,939	1,167	492	1,659	280	14.4%
WY2006	1,117	0.6	1,117	916	197	1,112	5	0.5%
WY2007	1,790	0.4	1,790	864	467	1,331	459	25.6%
TOTAL	9,297	3.0	9,300	6,136	2,081	8,217	1,084	11.7%
<i>% in</i>	99.97%	0.03%	<i>% out</i>	74.7%	25.3%			

<sup>a</sup> All budget terms expressed as metric tonnes of calcium.

<sup>b</sup> I<sub>s</sub> = surface water inflow; P = precipitation; O<sub>s</sub> = surface water outflow; O<sub>g</sub> = groundwater outflow; Retained = Σinflow – Σoutflow; %Ret = (retained/Σinflow)\*100.

**Table 4.** Annual chloride mass balance budgets for flow-ways and treatment cells in the EPA STAs.<sup>a</sup>

	Inflows <sup>b</sup>			Outflows <sup>b</sup>			Retained	% Ret
	I <sub>s</sub>	P	∑inflow	O <sub>s</sub>	O <sub>q</sub>	∑outflow		
<b>STA-1E, Cell 3</b>								
WY2007	3,465	1.8	3,467	4,618	0	4,618	-1,152	-33.2%
TOTAL	3,465	1.8	3,467	4,618	0	4,618	-1,152	-33.2%
<i>%in</i>	99.9%	0.1%	<i>% out</i>	100.0%	0.0%			
<b>STA-1E, Cell 4N</b>								
WY2007	4,618	2.0	4,620	5,288	0	5,288	-668	-14.5%
TOTAL	4,618	2.0	4,620	5,288	0	5,288	-668	-14.5%
<i>%in</i>	99.96%	0.06%	<i>% out</i>	100.0%	0.0%			
<b>STA-1E, Cell 4S</b>								
WY2007	6,519	2.3	6,522	5,670	0	5,670	851	13.1%
TOTAL	6,519	2.3	6,522	5,670	0	5,670	851	13.1%
<i>%in</i>	99.96%	0.07%	<i>% out</i>	100.0%	0.0%			
<b>STA-1E, Cell 5</b>								
WY2007	4,373	1.8	4,375	2,578	0	2,578	1,797	41.1%
TOTAL	4,373	1.8	4,375	2,578	0	2,578	1,797	41.1%
<i>%in</i>	99.96%	0.04%	<i>% out</i>	100.0%	0.0%			
<b>STA-1E, Cell 6</b>								
WY2007	6,977	3.3	6,980	9,370	0	9,370	-2,390	-34.2%
TOTAL	6,977	3.3	6,980	9,370	0	9,370	-2,390	-34.2%
<i>%in</i>	99.95%	0.05%	<i>% out</i>	100.0%	0.0%			
<b>STA-1E, Cell 7</b>								
WY2007	3,948	1.3	3,949	4,399	0	4,399	-450	-11.4%
TOTAL	3,948	1.3	3,949	4,399	0	4,399	-450	-11.4%
<i>%in</i>	99.97%	0.03%	<i>% out</i>	100.0%	0.0%			
<b>STA-1W, Cell 1</b>								
WY2001	20,894	4.5	20,899	12,711	1,255	13,966	6,932	33.2%
WY2002	21,589	6.8	21,596	20,572	914	21,485	111	0.5%
WY2003	36,233	5.5	36,238	38,460	721	39,180	-2,942	-8.1%
WY2004	32,406	4.4	32,410	30,461	772	31,232	1,178	3.6%
WY2005	23,339	5.6	23,345	27,315	281	27,596	-4,251	-18.2%
WY2006	22,370	5.9	22,376	21,126	67	21,194	1,182	5.3%
WY2007	15,830	5.1	15,835	12,785	0	12,785	3,049	19.3%
TOTAL	172,660	38.0	172,698	163,430	4,009	167,439	5,259	3.0%
<i>% in</i>	99.98%	0.02%	<i>% out</i>	97.6%	2.4%			
<b>STA-1W, Cell 2</b>								
WY2001	5,076	3.2	5,079	6,135	0	6,135	-1,056	-20.8%
WY2002	8,596	4.9	8,600	8,068	0	8,068	533	6.2%
WY2003	17,972	3.9	17,976	18,768	0	18,768	-792	-4.4%
WY2004	11,586	3.2	11,589	22,040	0	22,040	-10,451	-90.2%

Table 4. Continued.

	Inflows <sup>b</sup>			Outflows <sup>b</sup>			Retained	% Ret
	I <sub>s</sub>	P	∑inflow	O <sub>s</sub>	O <sub>g</sub>	∑outflow		
WY2005	6,983	3.6	6,987	3,192	0	3,192	3,795	54.3%
WY2006	--	--	--	--	--	--	--	--
WY2007	--	--	--	--	--	--	--	--
TOTAL	50,212	18.7	50,231	58,202	0	58,202	-7,972	-15.9%
<i>% in</i>	99.96%	0.04%	<i>% out</i>	100.0%	0.0%			
<u>STA-1W, Cell 3</u>								
WY2001	12,410	3.2	12,414	11,731	1,110	12,841	-428	-3.4%
WY2002	19,354	4.8	19,359	19,203	934	20,137	-779	-4.0%
WY2003	30,853	3.8	30,857	26,840	723	27,562	3,295	10.7%
WY2004	25,717	3.1	25,720	20,710	732	21,442	4,278	16.6%
WY2005	20,361	3.9	20,365	20,687	274	20,961	-596	-2.9%
WY2006	21,126	4.1	21,130	17,082	48	17,130	4,001	18.9%
WY2007	12,785	3.5	12,789	11,485	0	11,485	1,304	10.2%
TOTAL	142,606	26.3	142,633	127,738	3,820	131,558	11,075	7.8%
<i>% in</i>	99.98%	0.02%	<i>% out</i>	97.1%	2.9%			
<u>STA-1W, Cell 4</u>								
WY2001	6,135	1.1	6,136	5,397	0	5,397	739	12.0%
WY2002	8,068	1.7	8,069	11,230	0	11,230	-3,161	-39.2%
WY2003	18,768	1.4	18,770	23,856	0	23,856	-5,087	-27.1%
WY2004	22,040	1.1	22,041	20,375	0	20,375	1,666	7.6%
WY2005	3,192	1.4	3,193	6,886	0	6,886	-3,686	-115%
WY2006	--	--	--	--	--	--	--	--
WY2007	--	--	--	--	--	--	--	--
TOTAL	58,202	6.7	58,209	67,744	0	67,744	-9,528	-16.4%
<i>% in</i>	99.99%	0.01%	<i>% out</i>	100.0%	0.0%			
<u>STA-1W, Cell 5</u>								
WY2001	12,547	9.6	12,557	1,853	0	1,853	10,704	85.2%
WY2002	60,517	14.4	60,531	24,274	0	24,274	36,257	59.9%
WY2003	47,192	11.6	47,204	46,093	0	46,093	1,111	2.4%
WY2004	20,039	9.4	20,048	21,024	0	21,024	-976	-4.9%
WY2005	17,679	10.8	17,690	28,230	0	28,230	-10,540	-59.6%
WY2006	7,932	11.3	7,944	9,600	0	9,600	-1,656	-20.8%
WY2007	--	--	--	--	--	--	--	--
TOTAL	165,907	67.2	165,974	131,075	0	131,075	34,899	21.0%
<i>% in</i>	99.96%	0.04%	<i>% out</i>	100.0%	0.0%			
<u>STA-2, Cell 1</u>								
WY2003	9,255	9.1	9,264	5,855	45	5,901	3,363	36.3%
WY2004	14,372	8.2	14,381	10,396	74	10,470	3,911	27.2%
WY2005	11,005	7.9	11,013	10,056	65	10,121	892	8.1%
WY2006	11,703	9.2	11,712	15,734	76	15,810	-4,098	-35.0%
WY2007	10,845	7.8	10,853	18,508	105	18,613	-7,760	-71.5%
TOTAL	57,182	42.1	57,224	60,550	365	60,915	-3,692	-6.5%
<i>% in</i>	99.9%	0.1%	<i>% out</i>	99.4%	0.6%			

Table 4. Continued.

	Inflows <sup>b</sup>			Outflows <sup>b</sup>			Retained	% Ret
	I <sub>s</sub>	P	∑inflow	O <sub>s</sub>	O <sub>g</sub>	∑outflow		
<u>STA-2, Cell 2</u>								
WY2003	10,135	10.1	10,145	7,789	23	7,813	2,333	23.0%
WY2004	18,283	9.2	18,292	18,083	94	18,177	115	0.6%
WY2005	27,933	8.8	27,942	24,636	134	24,770	3,172	11.4%
WY2006	26,632	10.2	26,642	19,527	134	19,661	6,981	26.2%
WY2007	21,939	8.7	21,948	18,618	141	18,759	3,189	14.5%
TOTAL	104,922	47.0	104,969	88,653	525	89,179	15,790	15.0%
<i>% in</i>	99.96%	0.04%	<i>% out</i>	99.4%	0.6%			
<u>STA-2, Cell 3</u>								
WY2003	16,557	10.1	16,567	11,831	1,490	13,321	3,246	19.6%
WY2004	23,149	9.2	23,158	21,887	2,368	24,255	-1,098	-4.7%
WY2005	27,212	8.8	27,220	23,042	1,524	24,566	2,654	9.8%
WY2006	21,217	10.2	21,227	21,065	1,521	22,586	-1,359	-6.4%
WY2007	10,824	8.7	10,833	10,693	1,229	11,922	-1,089	-10.1%
TOTAL	98,959	47.0	99,006	88,518	8,132	96,650	2,355	2.4%
<i>% in</i>	99.95%	0.05%	<i>% out</i>	91.6%	8.4%			
<u>STA-3/4, Cell 1A</u>								
WY2006	10,023	14.9	10,038	35,088	0	35,088	-25,050	-250%
WY2007	21,664	11.3	21,676	-3,842	0	-3,842	25,518	117.7%
TOTAL	31,687	26.2	31,714	31,246	0	31,246	468	1.5%
<i>% in</i>	99.92%	0.08%	<i>% out</i>	100.00%	0.00%			
<u>STA-3/4, Cell 1B</u>								
WY2006	35,058	17.1	35,075	22,849	0	22,849	12,226	34.9%
WY2007	-3,651	13.0	-3,638	16,742	0	16,742	-20,381	560.2%
TOTAL	31,407	30.0	31,437	39,592	0	39,592	-8,155	-25.9%
<i>% in</i>	99.9%	0.1%	<i>% out</i>	100.00%	0.00%			
<u>STA-3/4, Cell 2A</u>								
WY2006	9,087	12.4	9,099	17,026	0	17,026	-7,927	-87.1%
WY2007	8,748	9.5	8,758	2,203	0	2,203	6,555	74.8%
TOTAL	17,835	21.9	17,857	19,229	0	19,229	-1,372	-7.7%
<i>% in</i>	99.88%	0.12%	<i>% out</i>	100.00%	0.00%			
<u>STA-3/4, Cell 2B</u>								
WY2006	17,029	14.2	17,043	12,106	0	12,106	4,937	29.0%
WY2007	2,904	10.8	2,915	11,390	0	11,390	-8,475	-291%
TOTAL	19,934	24.9	19,958	23,496	0	23,496	-3,538	-17.7%
<i>% in</i>	99.88%	0.12%	<i>% out</i>	100.00%	0.00%			
<u>STA-3/4, Cell 3</u>								
WY2006	5,707	22.4	5,730	4,963	0	4,963	767	13.4%
WY2007	7,687	17.0	7,704	7,685	0	7,685	19	0.2%
TOTAL	13,394	39.4	13,433	12,648	0	12,648	786	5.8%
<i>% in</i>	99.71%	0.29%	<i>% out</i>	100.00%	0.00%			

Table 4. Continued.

	Inflows <sup>b</sup>			Outflows <sup>b</sup>			Retained	% Ret
	I <sub>s</sub>	P	Σinflow	O <sub>s</sub>	O <sub>g</sub>	Σoutflow		
<u>STA-5, North Flow-way</u>								
WY2001	4,761	7.2	4,768	2,000	956	2,956	1,813	38.0%
WY2002	7,263	6.6	7,270	4,920	605	5,525	1,745	24.0%
WY2003	7,333	8.9	7,342	6,182	495	6,677	665	9.1%
WY2004	7,696	8.5	7,704	6,289	583	6,873	831	10.8%
WY2005	6,576	7.8	6,583	4,609	420	5,029	1,554	23.6%
WY2006	6,429	7.5	6,436	4,438	439	4,876	1,560	24.2%
WY2007	2,150	7.8	2,158	2,653	281	2,934	-776	-36.0%
TOTAL	42,207	54.2	42,262	31,091	3,779	34,870	7,391	17.5%
<i>% in</i>	99.9%	0.1%	<i>% out</i>	89.2%	10.8%			
<u>STA-5, South Flow-way</u>								
WY2001	3,483	7.2	3,490	1,459	1,548	3,007	483	13.8%
WY2002	5,352	6.6	5,359	2,137	1,017	3,155	2,204	41.1%
WY2003	5,205	8.9	5,213	3,128	1,435	4,563	651	12.5%
WY2004	4,001	8.5	4,009	1,917	1,197	3,114	895	22.3%
WY2005	3,512	7.8	3,520	3,326	1,810	5,136	-1,617	-45.9%
WY2006	4,572	7.5	4,579	3,905	720	4,626	-47	-1.0%
WY2007	835	7.8	843	179	175	354	489	58.0%
TOTAL	26,958	54.2	27,013	16,052	7,902	23,954	3,058	11.3%
<i>% in</i>	99.8%	0.2%	<i>% out</i>	67.0%	33.0%			
<u>STA-6, Cell 3</u>								
WY2003	1,538	1.1	1,539	744	365	1,109	430	27.9%
WY2004	2,043	1.2	2,044	1,639	907	2,546	-502	-24.5%
WY2005	1,859	1.1	1,860	908	614	1,522	338	18.1%
WY2006	869	1.0	870	444	170	614	256	29.4%
WY2007	1,562	0.6	1,563	775	707	1,482	81	5.2%
TOTAL	7,871	5.1	7,876	4,511	2,762	7,273	603	7.7%
<i>% in</i>	99.9%	0.1%	<i>% out</i>	62.0%	38.0%			
<u>STA-6, Cell 5</u>								
WY2003	1,715	2.8	1,717	808	299	1,107	610	35.5%
WY2004	1,991	3.1	1,994	1,910	483	2,392	-399	-20.0%
WY2005	1,595	2.8	1,598	961	405	1,367	231	14.5%
WY2006	612	2.6	614	382	94	476	138	22.5%
WY2007	1,483	1.6	1,485	754	397	1,151	333	22.4%
TOTAL	7,395	12.9	7,408	4,815	1,679	6,494	914	12.3%
<i>% in</i>	99.8%	0.2%	<i>% out</i>	74.2%	25.8%			

<sup>a</sup> All budget terms expressed as metric tonnes of chloride.

<sup>b</sup> I<sub>s</sub> = surface water inflow; P = precipitation; O<sub>s</sub> = surface water outflow; O<sub>g</sub> = groundwater outflow; Retained = Σinflow – Σoutflow; %Ret = (retained/Σinflow)\*100.

**Table 5.** Annual soluble reactive phosphorus mass balance budgets for flow-ways and treatment cells in the EPA STAs.<sup>a</sup>

	Inflows <sup>b</sup>			Outflows <sup>b</sup>			Retained	% Ret
	I <sub>s</sub>	P	∑inflow	O <sub>s</sub>	O <sub>q</sub>	∑outflow		
<b>STA-1E, Cell 3</b>								
WY2007	1.898	0.008	1.906	1.461	0.000	1.461	0.445	23.4%
TOTAL	1.898	0.008	1.906	1.461	0.000	1.461	0.445	23.4%
<i>%in</i>	99.6%	0.4%	<i>% out</i>	100.0%	0.0%			
<b>STA-1E, Cell 4N</b>								
WY2007	1.461	0.009	1.470	0.234	0.000	0.234	1.236	84.1%
TOTAL	1.461	0.009	1.470	0.234	0.000	0.234	1.236	84.1%
<i>%in</i>	99.4%	0.5%	<i>% out</i>	100.0%	0.0%			
<b>STA-1E, Cell 4S</b>								
WY2007	0.412	0.011	0.423	0.331	0.000	0.331	0.092	21.8%
TOTAL	0.412	0.011	0.423	0.331	0.000	0.331	0.092	21.8%
<i>%in</i>	97.5%	0.6%	<i>% out</i>	100.0%	0.0%			
<b>STA-1E, Cell 5</b>								
WY2007	15.323	0.008	15.331	5.928	0.000	5.928	9.403	61.3%
TOTAL	15.323	0.008	15.331	5.928	0.000	5.928	9.403	61.3%
<i>%in</i>	99.9%	0.1%	<i>% out</i>	100.0%	0.0%			
<b>STA-1E, Cell 6</b>								
WY2007	11.380	0.015	11.395	9.659	0.000	9.659	1.736	15.2%
TOTAL	11.380	0.015	11.395	9.659	0.000	9.659	1.736	15.2%
<i>%in</i>	99.9%	0.1%	<i>% out</i>	100.0%	0.0%			
<b>STA-1E, Cell 7</b>								
WY2007	5.868	0.006	5.874	5.452	0.000	5.452	0.422	7.2%
TOTAL	5.868	0.006	5.874	5.452	0.000	5.452	0.422	7.2%
<i>%in</i>	99.9%	0.1%	<i>% out</i>	100.0%	0.0%			
<b>STA-1W, Cell 1</b>								
WY2001	3.762	0.021	3.782	2.299	0.226	2.526	1.257	33.2%
WY2002	10.741	0.031	10.772	6.259	0.356	6.615	4.157	38.6%
WY2003	23.787	0.025	23.812	16.175	0.379	16.554	7.258	30.5%
WY2004	13.216	0.020	13.236	13.265	0.325	13.590	-0.354	-2.7%
WY2005	24.670	0.026	24.696	36.078	0.332	36.410	-11.715	-47.4%
WY2006	14.401	0.027	14.428	10.400	0.038	10.438	3.990	27.7%
WY2007	16.858	0.023	16.882	10.083	0.000	10.083	6.798	40.3%
TOTAL	107.436	0.173	107.608	94.560	1.656	96.216	11.392	10.6%
<i>% in</i>	99.8%	0.2%	<i>% out</i>	98.3%	1.7%			
<b>STA-1W, Cell 2</b>								
WY2001	1.524	0.015	1.538	0.822	0.000	0.822	0.716	46.5%
WY2002	3.993	0.022	4.015	2.032	0.000	2.032	1.983	49.4%
WY2003	10.542	0.018	10.560	8.177	0.000	8.177	2.383	22.6%
WY2004	4.809	0.014	4.823	5.510	0.000	5.510	-0.686	-14.2%

Table 5. Continued.

	Inflows <sup>b</sup>			Outflows <sup>b</sup>			Retained	% Ret
	I <sub>s</sub>	P	∑inflow	O <sub>s</sub>	O <sub>g</sub>	∑outflow		
WY2005	13.354	0.016	13.370	5.107	0.000	5.107	8.264	61.8%
WY2006	--	--	--	--	--	--	--	--
WY2007	--	--	--	--	--	--	--	--
TOTAL	34.222	0.085	34.307	21.648	0.000	21.648	12.659	36.9%
<i>% in</i>	99.8%	0.2%	<i>% out</i>	100.0%	0.0%			
<u>STA-1W, Cell 3</u>								
WY2001	0.866	0.014	0.881	0.616	0.067	0.683	0.197	22.4%
WY2002	2.705	0.022	2.727	1.353	0.093	1.446	1.281	47.0%
WY2003	7.713	0.017	7.730	3.949	0.139	4.088	3.642	47.1%
WY2004	9.045	0.014	9.059	4.062	0.192	4.254	4.805	53.0%
WY2005	21.731	0.018	21.749	12.654	0.221	12.875	8.874	40.8%
WY2006	10.400	0.018	10.419	9.074	0.024	9.099	1.320	12.7%
WY2007	10.083	0.016	10.099	10.982	0.000	10.982	-0.883	-8.7%
TOTAL	62.544	0.120	62.664	42.690	0.736	43.427	19.237	30.7%
<i>% in</i>	99.8%	0.2%	<i>% out</i>	98.3%	1.7%			
<u>STA-1W, Cell 4</u>								
WY2001	0.822	0.005	0.828	0.104	0.000	0.104	0.724	87.5%
WY2002	2.032	0.008	2.039	0.596	0.000	0.596	1.443	70.8%
WY2003	8.177	0.006	8.183	6.935	0.000	6.935	1.249	15.3%
WY2004	5.510	0.005	5.515	4.241	0.000	4.241	1.274	23.1%
WY2005	5.107	0.006	5.113	7.387	0.000	7.387	-2.265	-44.2%
WY2006	--	--	--	--	--	--	--	--
WY2007	--	--	--	--	--	--	--	--
TOTAL	21.648	0.030	21.679	19.263	0.000	19.263	2.425	11.2%
<i>% in</i>	99.86%	0.14%	<i>% out</i>	100.0%	0.0%			
<u>STA-1W, Cell 5</u>								
WY2001	5.634	0.044	5.678	0.297	0.000	0.297	5.381	94.8%
WY2002	37.921	0.066	37.986	13.025	0.000	13.025	24.961	65.7%
WY2003	28.922	0.053	28.975	20.183	0.000	20.183	8.792	30.3%
WY2004	9.143	0.043	9.186	2.760	0.000	2.760	6.426	70.0%
WY2005	20.636	0.049	20.685	19.194	0.000	19.194	1.491	7.2%
WY2006	6.473	0.051	6.524	0.608	0.000	0.608	5.916	90.7%
WY2007	--	--	--	--	--	--	--	--
TOTAL	108.728	0.305	109.033	56.067	0.000	56.067	52.966	48.6%
<i>% in</i>	99.7%	0.3%	<i>% out</i>	100.0%	0.0%			
<u>STA-2, Cell 1</u>								
WY2003	1.445	0.041	1.486	0.175	0.003	0.178	1.308	88.0%
WY2004	4.307	0.037	4.344	0.400	0.008	0.408	3.936	90.6%
WY2005	4.950	0.036	4.985	0.424	0.009	0.433	4.553	91.3%
WY2006	3.306	0.042	3.348	0.416	0.007	0.423	2.925	87.4%
WY2007	8.116	0.035	8.151	0.487	0.015	0.502	7.650	93.8%
TOTAL	22.123	0.191	22.315	1.902	0.041	1.943	20.372	91.3%
<i>% in</i>	99.1%	0.9%	<i>% out</i>	97.9%	2.1%			

Table 5. Continued.

	Inflows <sup>b</sup>			Outflows <sup>b</sup>			Retained	% Ret
	I <sub>s</sub>	P	∑inflow	O <sub>s</sub>	O <sub>g</sub>	∑outflow		
<u>STA-2, Cell 2</u>								
WY2003	6.396	0.046	6.442	0.902	0.006	0.908	5.534	85.9%
WY2004	7.578	0.042	7.620	0.879	0.013	0.893	6.727	88.3%
WY2005	15.889	0.040	15.929	5.061	0.046	5.107	10.822	67.9%
WY2006	9.594	0.046	9.640	1.589	0.023	1.612	8.028	83.3%
WY2007	16.968	0.039	17.008	6.223	0.072	6.295	10.713	63.0%
TOTAL	56.425	0.214	56.638	14.654	0.160	14.814	41.824	73.8%
<i>% in</i>	99.6%	0.4%	<i>% out</i>	98.9%	1.1%			
<u>STA-2, Cell 3</u>								
WY2003	6.391	0.046	6.437	0.744	0.232	0.977	5.461	84.8%
WY2004	8.265	0.042	8.307	0.724	0.257	0.982	7.325	88.2%
WY2005	15.844	0.040	15.884	1.204	0.266	1.470	14.415	90.7%
WY2006	8.380	0.046	8.426	0.651	0.168	0.819	7.607	90.3%
WY2007	8.064	0.039	8.104	0.784	0.287	1.071	7.033	86.8%
TOTAL	46.945	0.214	47.158	4.107	1.211	5.318	41.840	88.7%
<i>% in</i>	99.5%	0.5%	<i>% out</i>	77.2%	22.8%			
<u>STA-3/4, Cell 1A</u>								
WY2006	6.830	0.068	6.898	5.902	0.000	5.902	0.996	14.4%
WY2007	13.967	0.051	14.018	3.091	0.000	3.091	10.927	78.0%
TOTAL	20.797	0.119	20.916	8.993	0.000	8.993	11.923	57.0%
<i>% in</i>	99.4%	0.6%	<i>% out</i>	100.0%	0.0%			
<u>STA-3/4, Cell 1B</u>								
WY2006	5.901	0.078	5.978	1.176	0.000	1.176	4.802	80.3%
WY2007	3.101	0.059	3.160	0.819	0.000	0.819	2.341	74.1%
TOTAL	9.002	0.137	9.138	1.995	0.000	1.995	7.144	78.2%
<i>% in</i>	98.5%	1.5%	<i>% out</i>	100.0%	0.0%			
<u>STA-3/4, Cell 2A</u>								
WY2006	4.397	0.057	4.453	2.385	0.000	2.385	2.068	46.4%
WY2007	7.300	0.043	7.343	0.871	0.000	0.871	6.472	88.1%
TOTAL	11.697	0.099	11.797	3.256	0.000	3.256	8.540	72.4%
<i>% in</i>	99.2%	0.8%	<i>% out</i>	100.0%	0.0%			
<u>STA-3/4, Cell 2B</u>								
WY2006	2.386	0.064	2.450	0.607	0.000	0.607	1.843	75.2%
WY2007	0.891	0.049	0.940	0.695	0.000	0.695	0.245	26.1%
TOTAL	3.276	0.113	3.389	1.302	0.000	1.302	2.088	61.6%
<i>% in</i>	96.7%	3.3%	<i>% out</i>	100.0%	0.0%			
<u>STA-3/4, Cell 3</u>								
WY2006	4.366	0.102	4.468	0.618	0.000	0.618	3.850	86.2%
WY2007	6.887	0.077	6.965	0.411	0.000	0.411	6.554	94.1%
TOTAL	11.253	0.179	11.433	1.029	0.000	1.029	10.403	91.0%
<i>% in</i>	98.4%	1.6%	<i>% out</i>	100.0%	0.0%			

Table 5. Continued.

	Inflows <sup>b</sup>			Outflows <sup>b</sup>			Retained	% Ret
	I <sub>s</sub>	P	Σinflow	O <sub>s</sub>	O <sub>g</sub>	Σoutflow		
<u>STA-5, North Flow-way</u>								
WY2001	1.893	0.033	1.925	0.276	0.224	0.500	1.425	74.0%
WY2002	14.561	0.030	14.591	4.700	0.838	5.538	9.053	62.0%
WY2003	10.889	0.040	10.930	13.428	0.889	14.317	-3.387	-31.0%
WY2004	10.088	0.039	10.126	5.046	0.598	5.644	4.482	44.3%
WY2005	8.430	0.036	8.466	3.788	0.432	4.220	4.246	50.2%
WY2006	12.718	0.034	12.752	11.165	0.978	12.143	0.609	4.8%
WY2007	9.773	0.036	9.808	11.597	1.253	12.850	-3.041	-31.0%
TOTAL	68.352	0.246	68.599	50.000	5.211	55.211	13.387	19.5%
<i>% in</i>	99.6%	0.4%	<i>% out</i>	90.6%	9.4%			
<u>STA-5, South Flow-way</u>								
WY2001	5.478	0.033	5.510	0.677	1.323	2.000	3.510	63.7%
WY2002	16.274	0.030	16.305	3.163	2.158	5.321	10.983	67.4%
WY2003	14.298	0.040	14.339	7.110	3.586	10.696	3.643	25.4%
WY2004	15.855	0.039	15.894	8.180	4.923	13.103	2.791	17.6%
WY2005	7.206	0.036	7.242	5.086	3.206	8.293	-1.051	-14.5%
WY2006	11.677	0.034	11.711	11.408	1.967	13.376	-1.665	-14.2%
WY2007	2.232	0.036	2.267	0.231	0.324	0.556	1.712	75.5%
TOTAL	73.020	0.246	73.267	35.857	17.487	53.345	19.922	27.2%
<i>% in</i>	99.7%	0.3%	<i>% out</i>	67.2%	32.8%			
<u>STA-6, Cell 3</u>								
WY2003	0.072	0.005	0.077	0.035	0.017	0.052	0.025	32.1%
WY2004	0.246	0.006	0.251	0.095	0.076	0.170	0.081	32.3%
WY2005	0.448	0.005	0.454	0.108	0.104	0.213	0.241	53.1%
WY2006	0.118	0.005	0.122	0.205	0.042	0.247	-0.125	-102%
WY2007	0.219	0.003	0.222	0.215	0.140	0.355	-0.133	-59.7%
TOTAL	1.104	0.023	1.127	0.658	0.379	1.037	0.089	7.9%
<i>% in</i>	98.0%	2.0%	<i>% out</i>	63.5%	36.5%			
<u>STA-6, Cell 5</u>								
WY2003	0.108	0.013	0.121	0.033	0.015	0.048	0.073	60.4%
WY2004	0.276	0.014	0.290	0.102	0.041	0.143	0.147	50.7%
WY2005	0.578	0.013	0.591	0.080	0.070	0.150	0.441	74.6%
WY2006	0.157	0.012	0.169	-0.018	0.000	-0.018	0.186	110.4%
WY2007	0.347	0.007	0.355	0.194	0.097	0.291	0.064	17.9%
TOTAL	1.467	0.059	1.525	0.391	0.224	0.615	0.910	59.7%
<i>% in</i>	96.2%	3.8%	<i>% out</i>	63.5%	36.5%			

<sup>a</sup> All budget terms expressed as metric tonnes of phosphorus.

<sup>b</sup> I<sub>s</sub> = surface water inflow; P = precipitation; O<sub>s</sub> = surface water outflow; O<sub>g</sub> = groundwater outflow; Retained = Σinflow – Σoutflow; %Ret = (retained/Σinflow)\*100.

**Table 6.** Annual dissolved organic phosphorus mass balance budgets for flow-ways and treatment cells in the EPA STAs.<sup>a</sup>

	Inflows <sup>b</sup>			Outflows <sup>b</sup>			Retained	% Ret
	I <sub>s</sub>	P	∑inflow	O <sub>s</sub>	O <sub>q</sub>	∑outflow		
<b>STA-1E, Cell 3</b>								
WY2007	0.430	--	0.430	0.575	0.000	0.575	-0.145	-33.7%
TOTAL	0.430	0.000	0.430	0.575	0.000	0.575	-0.145	-33.7%
<i>%in</i>	100.0%	0.0%	<i>% out</i>	100.0%	0.0%			
<b>STA-1E, Cell 4N</b>								
WY2007	0.575	--	0.575	0.494	0.000	0.494	0.081	14.1%
TOTAL	0.575	0.000	0.575	0.494	0.000	0.494	0.081	14.1%
<i>%in</i>	100.0%	0.0%	<i>% out</i>	100.0%	0.0%			
<b>STA-1E, Cell 4S</b>								
WY2007	0.577	--	0.577	0.597	0.000	0.597	-0.019	-3.3%
TOTAL	0.577	0.000	0.577	0.597	0.000	0.597	-0.019	-3.3%
<i>%in</i>	100.0%	0.0%	<i>% out</i>	100.0%	0.0%			
<b>STA-1E, Cell 5</b>								
WY2007	1.197	--	1.197	0.479	0.000	0.479	0.718	60.0%
TOTAL	1.197	0.000	1.197	0.479	0.000	0.479	0.718	60.0%
<i>%in</i>	100.0%	0.0%	<i>% out</i>	100.0%	0.0%			
<b>STA-1E, Cell 6</b>								
WY2007	1.200	--	1.200	1.604	0.000	1.604	-0.404	-33.7%
TOTAL	1.200	0.000	1.200	1.604	0.000	1.604	-0.404	-33.7%
<i>%in</i>	100.0%	0.0%	<i>% out</i>	100.0%	0.0%			
<b>STA-1E, Cell 7</b>								
WY2007	0.623	--	0.623	0.721	0.000	0.721	-0.098	-15.8%
TOTAL	0.623	0.000	0.623	0.721	0.000	0.721	-0.098	-15.8%
<i>%in</i>	100.0%	0.0%	<i>% out</i>	100.0%	0.0%			
<b>STA-1W, Cell 1</b>								
WY2001	1.475	--	1.475	1.097	0.098	1.195	0.280	19.0%
WY2002	1.465	--	1.465	0.689	0.044	0.732	0.733	50.0%
WY2003	2.333	--	2.333	2.102	0.043	2.145	0.189	8.1%
WY2004	1.118	--	1.118	1.299	0.030	1.328	-0.211	-18.9%
WY2005	1.561	--	1.561	2.826	0.023	2.849	-1.288	-82.5%
WY2006	1.950	--	1.950	1.428	0.005	1.433	0.517	26.5%
WY2007	1.754	--	1.754	2.003	0.000	2.003	-0.248	-14.2%
TOTAL	11.656	0.000	11.656	11.443	0.242	11.685	-0.029	-0.2%
<i>% in</i>	100.0%	0.0%	<i>% out</i>	97.9%	2.1%			
<b>STA-1W, Cell 2</b>								
WY2001	0.633	--	0.633	0.661	0.000	0.661	-0.028	-4.4%
WY2002	0.087	--	0.087	0.427	0.000	0.427	-0.340	-393%
WY2003	0.987	--	0.987	1.225	0.000	1.225	-0.239	-24.2%
WY2004	0.403	--	0.403	1.287	0.000	1.287	-0.884	-220%

Table 6. Continued.

	Inflows <sup>b</sup>			Outflows <sup>b</sup>			Retained	% Ret
	I <sub>s</sub>	P	∑inflow	O <sub>s</sub>	O <sub>g</sub>	∑outflow		
WY2005	1.062	--	1.062	0.395	0.000	0.395	0.667	62.8%
WY2006	--	--	--	--	--	--	--	--
WY2007	--	--	--	--	--	--	--	--
TOTAL	3.170	0.000	3.170	3.994	0.000	3.994	-0.824	-26.0%
<i>% in</i>	100.0%	0.0%	<i>% out</i>	100.0%	0.0%			
<u>STA-1W, Cell 3</u>								
WY2001	0.797	--	0.797	0.488	0.057	0.545	0.252	31.6%
WY2002	1.021	--	1.021	0.696	0.041	0.737	0.284	27.8%
WY2003	1.739	--	1.739	1.258	0.037	1.295	0.443	25.5%
WY2004	1.158	--	1.158	0.603	0.027	0.630	0.529	45.6%
WY2005	1.516	--	1.516	1.101	0.017	1.118	0.398	26.3%
WY2006	1.428	--	1.428	1.233	0.003	1.236	0.192	13.4%
WY2007	2.003	--	2.003	1.457	0.000	1.457	0.545	27.2%
TOTAL	9.661	0.000	9.661	6.836	0.182	7.018	2.643	27.4%
<i>% in</i>	100.0%	0.0%	<i>% out</i>	97.4%	2.6%			
<u>STA-1W, Cell 4</u>								
WY2001	0.661	--	0.661	0.383	0.000	0.383	0.278	42.0%
WY2002	0.427	--	0.427	0.584	0.000	0.584	-0.157	-36.7%
WY2003	1.225	--	1.225	1.659	0.000	1.659	-0.434	-35.4%
WY2004	1.287	--	1.287	0.919	0.000	0.919	0.368	28.6%
WY2005	0.395	--	0.395	0.555	0.000	0.555	-0.160	-40.4%
WY2006	--	--	--	--	--	--	--	--
WY2007	--	--	--	--	--	--	--	--
TOTAL	3.995	0.000	3.995	4.099	0.000	4.099	-0.104	-2.6%
<i>% in</i>	100.0%	0.0%	<i>% out</i>	100.0%	0.0%			
<u>STA-1W, Cell 5</u>								
WY2001	1.234	--	1.234	0.225	0.000	0.225	1.009	81.7%
WY2002	2.685	--	2.685	1.467	0.000	1.467	1.218	45.4%
WY2003	3.335	--	3.335	3.270	0.000	3.270	0.065	1.9%
WY2004	0.554	--	0.554	0.942	0.000	0.942	-0.388	-70.1%
WY2005	1.538	--	1.538	2.432	0.000	2.432	-0.894	-58.1%
WY2006	0.584	--	0.584	2.561	0.000	2.561	-1.977	-339%
WY2007	--	--	--	--	--	--	--	--
TOTAL	9.929	0.000	9.929	10.898	0.000	10.898	-0.968	-9.8%
<i>% in</i>	100.0%	0.0%	<i>% out</i>	100.0%	0.0%			
<u>STA-2, Cell 1</u>								
WY2003	0.229	--	0.229	0.127	0.001	0.128	0.101	44.0%
WY2004	0.398	--	0.398	0.078	0.001	0.079	0.320	80.2%
WY2005	0.115	--	0.115	0.035	0.000	0.035	0.080	69.6%
WY2006	0.952	--	0.952	0.140	0.002	0.142	0.810	85.1%
WY2007	0.714	--	0.714	0.162	0.003	0.165	0.549	76.9%
TOTAL	2.409	0.000	2.409	0.542	0.007	0.549	1.860	77.2%
<i>% in</i>	100.0%	0.0%	<i>% out</i>	98.7%	1.3%			

Table 6. Continued.

	Inflows <sup>b</sup>			Outflows <sup>b</sup>			Retained	% Ret
	I <sub>s</sub>	P	∑inflow	O <sub>s</sub>	O <sub>g</sub>	∑outflow		
<u>STA-2, Cell 2</u>								
WY2003	0.866	--	0.866	0.643	0.002	0.645	0.221	25.5%
WY2004	0.451	--	0.451	0.254	0.002	0.256	0.195	43.2%
WY2005	-0.066	--	-0.066	0.768	0.000	0.768	-0.834	1261%
WY2006	1.374	--	1.374	1.077	0.007	1.085	0.290	21.1%
WY2007	1.626	--	1.626	1.526	0.011	1.537	0.089	5.4%
TOTAL	4.252	0.000	4.252	4.269	0.022	4.291	-0.039	-0.9%
<i>% in</i>	100.0%	0.0%	<i>% out</i>	99.5%	0.5%			
<u>STA-2, Cell 3</u>								
WY2003	0.992	--	0.992	0.472	0.073	0.544	0.448	45.1%
WY2004	0.549	--	0.549	0.284	0.042	0.326	0.223	40.6%
WY2005	0.811	--	0.811	0.174	0.023	0.197	0.615	75.8%
WY2006	1.231	--	1.231	0.545	0.059	0.604	0.627	50.9%
WY2007	0.939	--	0.939	0.583	0.084	0.667	0.272	29.0%
TOTAL	4.522	0.000	4.522	2.057	0.281	2.338	2.184	48.3%
<i>% in</i>	100.0%	0.0%	<i>% out</i>	88.0%	12.0%			
<u>STA-3/4, Cell 1A</u>								
WY2006	0.718	--	0.718	4.759	0.000	4.759	-4.041	-563%
WY2007	2.608	--	2.608	-0.075	0.000	-0.075	2.683	102.9%
TOTAL	3.326	0.000	3.326	4.684	0.000	4.684	-1.358	-40.8%
<i>% in</i>	100.0%	0.0%	<i>% out</i>	100.0%	0.0%			
<u>STA-3/4, Cell 1B</u>								
WY2006	4.755	--	4.755	2.056	0.000	2.056	2.698	56.8%
WY2007	-0.045	--	-0.045	0.942	0.000	0.942	-0.987	2192%
TOTAL	4.710	0.000	4.710	2.999	0.000	2.999	1.711	36.3%
<i>% in</i>	100.0%	0.0%	<i>% out</i>	100.0%	0.0%			
<u>STA-3/4, Cell 2A</u>								
WY2006	0.881	--	0.881	1.935	0.000	1.935	-1.054	-120%
WY2007	1.583	--	1.583	0.048	0.000	0.048	1.535	97.0%
TOTAL	2.464	0.000	2.464	1.983	0.000	1.983	0.481	19.5%
<i>% in</i>	100.0%	0.0%	<i>% out</i>	100.0%	0.0%			
<u>STA-3/4, Cell 2B</u>								
WY2006	1.936	--	1.936	0.895	0.000	0.895	1.041	53.8%
WY2007	0.163	--	0.163	0.617	0.000	0.617	-0.454	-279%
TOTAL	2.099	0.000	2.099	1.511	0.000	1.511	0.587	28.0%
<i>% in</i>	100.0%	0.0%	<i>% out</i>	100.0%	0.0%			
<u>STA-3/4, Cell 3</u>								
WY2006	1.006	--	1.006	0.759	0.000	0.759	0.247	24.6%
WY2007	1.390	--	1.390	0.988	0.000	0.988	0.402	28.9%
TOTAL	2.396	0.000	2.396	1.747	0.000	1.747	0.649	27.1%
<i>% in</i>	100.0%	0.0%	<i>% out</i>	100.0%	0.0%			

Table 6. Continued.

	Inflows <sup>b</sup>			Outflows <sup>b</sup>			Retained	% Ret
	I <sub>s</sub>	P	Σinflow	O <sub>s</sub>	O <sub>g</sub>	Σoutflow		
<u>STA-5, North Flow-way</u>								
WY2001	0.293	--	0.293	0.474	0.116	0.590	-0.296	-101%
WY2002	1.643	--	1.643	1.295	0.148	1.442	0.201	12.2%
WY2003	1.617	--	1.617	1.817	0.126	1.943	-0.326	-20.1%
WY2004	1.480	--	1.480	1.292	0.116	1.407	0.072	4.9%
WY2005	1.965	--	1.965	0.761	0.093	0.855	1.111	56.5%
WY2006	2.478	--	2.478	0.675	0.106	0.782	1.696	68.5%
WY2007	1.589	--	1.589	1.290	0.168	1.459	0.130	8.2%
TOTAL	11.066	0.000	11.066	7.604	0.873	8.477	2.589	23.4%
<i>% in</i>	100.0%	0.0%	<i>% out</i>	89.7%	10.3%			
<u>STA-5, South Flow-way</u>								
WY2001	0.585	--	0.585	0.305	0.290	0.595	-0.010	-1.7%
WY2002	1.475	--	1.475	0.395	0.230	0.625	0.850	57.6%
WY2003	1.584	--	1.584	0.863	0.416	1.279	0.305	19.3%
WY2004	1.105	--	1.105	0.490	0.318	0.808	0.297	26.9%
WY2005	0.340	--	0.340	0.342	0.181	0.522	-0.182	-53.7%
WY2006	1.689	--	1.689	1.231	0.246	1.477	0.212	12.6%
WY2007	0.405	--	0.405	0.223	0.136	0.359	0.046	11.4%
TOTAL	7.183	0.000	7.183	3.849	1.816	5.665	1.518	21.1%
<i>% in</i>	100.0%	0.0%	<i>% out</i>	67.9%	32.1%			
<u>STA-6, Cell 3</u>								
WY2003	0.060	--	0.060	0.015	0.010	0.025	0.035	57.8%
WY2004	0.130	--	0.130	0.049	0.040	0.089	0.041	31.5%
WY2005	0.205	--	0.205	0.061	0.053	0.114	0.091	44.3%
WY2006	0.280	--	0.280	0.161	0.058	0.219	0.061	21.8%
WY2007	0.155	--	0.155	0.105	0.082	0.187	-0.033	-21.1%
TOTAL	0.830	0.000	0.830	0.392	0.243	0.635	0.195	23.5%
<i>% in</i>	100.0%	0.0%	<i>% out</i>	61.7%	38.3%			
<u>STA-6, Cell 5</u>								
WY2003	0.075	--	0.075	0.012	0.008	0.020	0.055	73.2%
WY2004	0.154	--	0.154	0.041	0.020	0.060	0.094	60.9%
WY2005	0.182	--	0.182	0.067	0.036	0.103	0.079	43.4%
WY2006	0.215	--	0.215	0.100	0.029	0.128	0.087	40.4%
WY2007	0.166	--	0.166	0.122	0.053	0.176	-0.009	-5.6%
TOTAL	0.792	0.000	0.792	0.342	0.145	0.487	0.305	38.5%
<i>% in</i>	100.0%	0.0%	<i>% out</i>	70.2%	29.8%			

<sup>a</sup> All budget terms expressed as metric tonnes of phosphorus.

<sup>b</sup> I<sub>s</sub> = surface water inflow; P = precipitation; O<sub>s</sub> = surface water outflow; O<sub>g</sub> = groundwater outflow; Retained = Σinflow – Σoutflow; %Ret = (retained/Σinflow)\*100.

**Table 7.** Annual particulate phosphorus mass balance budgets for flow-ways and treatment cells in the EPA STAs.<sup>a</sup>

	Inflows <sup>b</sup>			Outflows <sup>b</sup>			Retained	% Ret
	I <sub>s</sub>	P	∑inflow	O <sub>s</sub>	O <sub>q</sub>	∑outflow		
<b>STA-1E, Cell 3</b>								
WY2007	2.254	--	2.254	1.236	0.000	1.236	1.019	45.2%
TOTAL	2.254	0.000	2.254	1.236	0.000	1.236	1.019	45.2%
<i>%in</i>	100.0%	0.0%	<i>% out</i>	100.0%	0.0%			
<b>STA-1E, Cell 4N</b>								
WY2007	1.236	--	1.236	1.135	0.000	1.135	0.100	8.1%
TOTAL	1.236	0.000	1.236	1.135	0.000	1.135	0.100	8.1%
<i>%in</i>	100.0%	0.0%	<i>% out</i>	100.0%	0.0%			
<b>STA-1E, Cell 4S</b>								
WY2007	1.902	--	1.902	0.431	0.000	0.431	1.471	77.4%
TOTAL	1.902	0.000	1.902	0.431	0.000	0.431	1.471	77.4%
<i>%in</i>	100.0%	0.0%	<i>% out</i>	100.0%	0.0%			
<b>STA-1E, Cell 5</b>								
WY2007	-1.992	--	-1.992	1.085	0.000	1.085	-3.077	154.5%
TOTAL	-1.992	0.000	-1.992	1.085	0.000	1.085	-3.077	154.5%
<i>%in</i>	100.0%	0.0%	<i>% out</i>	100.0%	0.0%			
<b>STA-1E, Cell 6</b>								
WY2007	2.171	--	2.171	2.680	0.000	2.680	-0.509	-23.4%
TOTAL	2.171	0.000	2.171	2.680	0.000	2.680	-0.509	-23.4%
<i>%in</i>	100.0%	0.0%	<i>% out</i>	100.0%	0.0%			
<b>STA-1E, Cell 7</b>								
WY2007	2.815	--	2.815	1.086	0.000	1.086	1.728	61.4%
TOTAL	2.815	0.000	2.815	1.086	0.000	1.086	1.728	61.4%
<i>%in</i>	100.0%	0.0%	<i>% out</i>	100.0%	0.0%			
<b>STA-1W, Cell 1</b>								
WY2001	12.603	--	12.603	2.100	0.396	2.497	10.106	80.2%
WY2002	5.100	--	5.100	1.937	0.136	2.073	3.027	59.3%
WY2003	17.496	--	17.496	13.088	0.292	13.380	4.116	23.5%
WY2004	8.673	--	8.673	6.827	0.189	7.016	1.657	19.1%
WY2005	16.484	--	16.484	23.294	0.218	23.512	-7.028	-42.6%
WY2006	11.466	--	11.466	13.933	0.039	13.972	-2.505	-21.8%
WY2007	9.081	--	9.081	7.461	0.000	7.461	1.620	17.8%
TOTAL	80.903	0.000	80.903	68.640	1.271	69.911	10.993	13.6%
<i>% in</i>	100.0%	0.0%	<i>% out</i>	98.2%	1.8%			
<b>STA-1W, Cell 2</b>								
WY2001	1.760	--	1.760	1.658	0.000	1.658	0.102	5.8%
WY2002	1.918	--	1.918	0.841	0.000	0.841	1.077	56.1%
WY2003	11.405	--	11.405	11.246	0.000	11.246	0.158	1.4%
WY2004	4.786	--	4.786	10.824	0.000	10.824	-6.037	-126%

Table 7. Continued.

	Inflows <sup>b</sup>			Outflows <sup>b</sup>			Retained	% Ret
	I <sub>s</sub>	P	∑inflow	O <sub>s</sub>	O <sub>g</sub>	∑outflow		
WY2005	11.721	--	11.721	6.638	0.000	6.638	5.084	43.4%
WY2006	--	--	--	--	--	--	--	--
WY2007	--	--	--	--	--	--	--	--
TOTAL	31.591	0.000	31.591	31.207	0.000	31.207	0.383	1.2%
<i>% in</i>	100.0%	0.0%	<i>% out</i>	100.0%	0.0%			
<u>STA-1W, Cell 3</u>								
WY2001	0.653	--	0.653	1.021	0.075	1.096	-0.443	-67.9%
WY2002	0.226	--	0.226	1.155	0.025	1.179	-0.954	-422%
WY2003	3.114	--	3.114	2.896	0.075	2.972	0.143	4.6%
WY2004	3.164	--	3.164	1.624	0.072	1.695	1.469	46.4%
WY2005	11.589	--	11.589	4.069	0.092	4.160	7.429	64.1%
WY2006	13.933	--	13.933	3.837	0.018	3.855	10.078	72.3%
WY2007	7.461	--	7.461	3.299	0.000	3.299	4.162	55.8%
TOTAL	40.140	0.000	40.140	17.900	0.357	18.257	21.883	54.5%
<i>% in</i>	100.0%	0.0%	<i>% out</i>	98.0%	2.0%			
<u>STA-1W, Cell 4</u>								
WY2001	1.658	--	1.658	0.350	0.000	0.350	1.308	78.9%
WY2002	0.841	--	0.841	0.585	0.000	0.585	0.257	30.5%
WY2003	11.246	--	11.246	4.707	0.000	4.707	6.539	58.1%
WY2004	10.824	--	10.824	3.678	0.000	3.678	7.145	66.0%
WY2005	6.638	.	6.638	3.766	0.000	3.766	2.881	43.3%
WY2006	--	--	--	--	--	--	--	--
WY2007	--	--	--	--	--	--	--	--
TOTAL	31.208	0.000	31.208	13.086	0.000	13.086	18.130	58.1%
WY2005	6.638	.	6.638	100.0%	0.0%			
<u>STA-1W, Cell 5</u>								
WY2001	7.387	--	7.387	0.706	0.000	0.706	6.681	90.4%
WY2002	21.079	--	21.079	6.467	0.000	6.467	14.612	69.3%
WY2003	27.890	--	27.890	6.927	0.000	6.927	20.962	75.2%
WY2004	5.724	--	5.724	2.203	0.000	2.203	3.520	61.5%
WY2005	15.950	--	15.950	18.573	0.000	18.573	-2.622	-16.4%
WY2006	2.904	--	2.904	6.429	0.000	6.429	-3.525	-121%
WY2007	--	--	--	--	--	--	--	--
TOTAL	80.934	0.000	80.934	41.305	0.000	41.305	39.628	49.0%
<i>% in</i>	100.0%	0.0%	<i>% out</i>	100.0%	0.0%			
<u>STA-2, Cell 1</u>								
WY2003	0.879	--	0.879	0.204	0.003	0.207	0.672	76.5%
WY2004	1.028	--	1.028	0.337	0.004	0.341	0.687	66.8%
WY2005	1.348	--	1.348	0.244	0.004	0.248	1.100	81.6%
WY2006	2.386	--	2.386	0.617	0.007	0.624	1.762	73.9%
WY2007	2.130	--	2.130	0.731	0.009	0.740	1.390	65.3%
TOTAL	7.770	0.000	7.770	2.133	0.026	2.159	5.611	72.2%
<i>% in</i>	100.0%	0.0%	<i>% out</i>	98.8%	1.2%			

Table 7. Continued.

	Inflows <sup>b</sup>			Outflows <sup>b</sup>			Retained	% Ret
	I <sub>s</sub>	P	∑inflow	O <sub>s</sub>	O <sub>g</sub>	∑outflow		
<u>STA-2, Cell 2</u>								
WY2003	2.274	--	2.274	0.969	0.004	0.973	1.301	57.2%
WY2004	1.719	--	1.719	0.620	0.005	0.625	1.094	63.6%
WY2005	3.735	--	3.735	0.445	0.007	0.451	3.283	87.9%
WY2006	5.859	--	5.859	0.609	0.011	0.620	5.238	89.4%
WY2007	8.449	--	8.449	0.230	0.010	0.239	8.210	97.2%
TOTAL	22.035	0.000	22.035	2.872	0.037	2.909	19.126	86.8%
<i>% in</i>	100.0%	0.0%	<i>% out</i>	98.7%	1.3%			
<u>STA-2, Cell 3</u>								
WY2003	2.032	--	2.032	1.032	0.154	1.186	0.846	41.6%
WY2004	1.779	--	1.779	0.699	0.117	0.817	0.963	54.1%
WY2005	3.471	--	3.471	1.184	0.123	1.307	2.164	62.4%
WY2006	2.878	--	2.878	1.085	0.127	1.212	1.666	57.9%
WY2007	0.715	--	0.715	0.836	0.088	0.924	-0.210	-29.3%
TOTAL	10.876	0.000	10.876	4.835	0.610	5.446	5.430	49.9%
<i>% in</i>	100.0%	0.0%	<i>% out</i>	88.8%	11.2%			
<u>STA-3/4, Cell 1A</u>								
WY2006	7.430	--	7.430	10.309	0.000	10.309	-2.879	-38.7%
WY2007	13.220	--	13.220	-2.151	0.000	-2.151	15.371	116.3%
TOTAL	20.650	0.000	20.650	8.158	0.000	8.158	12.492	60.5%
<i>% in</i>	100.0%	0.0%	<i>% out</i>	100.0%	0.0%			
<u>STA-3/4, Cell 1B</u>								
WY2006	10.302	--	10.302	2.278	0.000	2.278	8.024	77.9%
WY2007	-2.084	--	-2.084	2.363	0.000	2.363	-4.447	213.3%
TOTAL	8.217	0.000	8.217	4.641	0.000	4.641	3.577	43.5%
<i>% in</i>	100.0%	0.0%	<i>% out</i>	100.0%	0.0%			
<u>STA-3/4, Cell 2A</u>								
WY2006	7.965	--	7.965	2.833	0.000	2.833	5.133	64.4%
WY2007	4.362	--	4.362	0.283	0.000	0.283	4.079	93.5%
TOTAL	12.327	0.000	12.327	3.116	0.000	3.116	9.211	74.7%
<i>% in</i>	100.0%	0.0%	<i>% out</i>	100.0%	0.0%			
<u>STA-3/4, Cell 2B</u>								
WY2006	2.833	--	2.833	3.393	0.000	3.393	-0.561	-19.8%
WY2007	0.497	--	0.497	2.010	0.000	2.010	-1.513	-304%
TOTAL	3.330	0.000	3.330	5.404	0.000	5.404	-2.074	-62.3%
<i>% in</i>	100.0%	0.0%	<i>% out</i>	100.0%	0.0%			
<u>STA-3/4, Cell 3</u>								
WY2006	3.679	--	3.679	1.173	0.000	1.173	2.507	68.1%
WY2007	3.262	--	3.262	1.179	0.000	1.179	2.083	63.9%
TOTAL	6.941	0.000	6.941	2.351	0.000	2.351	4.590	66.1%
<i>% in</i>	100.0%	0.0%	<i>% out</i>	100.0%	0.0%			

Table 7. Continued.

	Inflows <sup>b</sup>			Outflows <sup>b</sup>			Retained	% Ret
	I <sub>s</sub>	P	Σinflow	O <sub>s</sub>	O <sub>g</sub>	Σoutflow		
<u>STA-5, North Flow-way</u>								
WY2001	3.382	--	3.382	2.886	0.968	3.854	-0.471	-13.9%
WY2002	7.398	--	7.398	2.766	0.458	3.224	4.174	56.4%
WY2003	10.916	--	10.916	2.875	0.412	3.287	7.629	69.9%
WY2004	9.437	--	9.437	2.059	0.370	2.428	7.009	74.3%
WY2005	4.629	--	4.629	1.111	0.173	1.284	3.345	72.3%
WY2006	12.657	--	12.657	0.603	0.227	0.830	11.826	93.4%
WY2007	7.071	--	7.071	-0.977	0.000	-0.977	8.047	113.8%
TOTAL	55.491	0.000	55.491	11.324	2.607	13.931	41.560	74.9%
<i>% in</i>	100.0%	0.0%	<i>% out</i>	81.3%	18.7%			
<u>STA-5, South Flow-way</u>								
WY2001	4.739	--	4.739	0.302	0.822	1.124	3.615	76.3%
WY2002	8.401	--	8.401	0.546	0.644	1.190	7.211	85.8%
WY2003	19.396	--	19.396	0.500	1.108	1.608	17.788	91.7%
WY2004	11.364	--	11.364	-0.671	0.000	-0.671	12.035	105.9%
WY2005	3.391	--	3.391	1.124	1.034	2.158	1.233	36.4%
WY2006	12.031	--	12.031	-1.465	0.000	-1.465	13.495	112.2%
WY2007	1.199	--	1.199	0.458	0.335	0.793	0.406	33.8%
TOTAL	60.520	0.000	60.520	0.795	3.942	4.737	55.783	92.2%
<i>% in</i>	100.0%	0.0%	<i>% out</i>	16.8%	83.2%			
<u>STA-6, Cell 3</u>								
WY2003	0.279	--	0.279	0.077	0.050	0.128	0.151	54.3%
WY2004	0.419	--	0.419	0.126	0.114	0.240	0.179	42.7%
WY2005	1.105	--	1.105	0.060	0.122	0.182	0.923	83.5%
WY2006	1.096	--	1.096	0.122	0.100	0.222	0.873	79.7%
WY2007	0.704	--	0.704	0.115	0.183	0.298	0.405	57.6%
TOTAL	3.603	0.000	3.603	0.501	0.569	1.070	2.532	70.3%
<i>% in</i>	100.0%	0.0%	<i>% out</i>	46.8%	53.2%			
<u>STA-6, Cell 5</u>								
WY2003	0.360	--	0.360	0.055	0.036	0.090	0.270	75.0%
WY2004	0.446	--	0.446	0.138	0.062	0.200	0.246	55.1%
WY2005	0.637	--	0.637	0.125	0.092	0.217	0.420	65.9%
WY2006	0.799	--	0.799	0.107	0.057	0.163	0.636	79.5%
WY2007	3.331	--	3.331	0.169	0.282	0.451	2.881	86.5%
TOTAL	5.574	0.000	5.574	0.593	0.528	1.121	4.452	79.9%
<i>% in</i>	100.0%	0.0%	<i>% out</i>	52.9%	47.1%			

<sup>a</sup> All budget terms expressed as metric tonnes of phosphorus.

<sup>b</sup> I<sub>s</sub> = surface water inflow; P = precipitation; O<sub>s</sub> = surface water outflow; O<sub>g</sub> = groundwater outflow; Retained = Σinflow – Σoutflow; %Ret = (retained/Σinflow)\*100.

**Table 8.** Annual total phosphorus mass balance budgets for flow-ways and treatment cells in the EPA STAs.<sup>a</sup>

	Inflows <sup>b</sup>			Outflows <sup>b</sup>			Retained	% Ret
	I <sub>s</sub>	P	∑inflow	O <sub>s</sub>	O <sub>q</sub>	∑outflow		
<b>STA-1E, Cell 3</b>								
WY2007	4.582	0.008	4.591	3.272	0.000	3.272	1.319	28.7%
TOTAL	4.582	0.008	4.591	3.272	0.000	3.272	1.319	28.7%
<i>%in</i>	99.8%	0.2%	<i>% out</i>	100.0%	0.0%			
<b>STA-1E, Cell 4N</b>								
WY2007	3.272	0.009	3.281	1.864	0.000	1.864	1.417	43.2%
TOTAL	3.272	0.009	3.281	1.864	0.000	1.864	1.417	43.2%
<i>%in</i>	99.7%	0.2%	<i>% out</i>	100.0%	0.0%			
<b>STA-1E, Cell 4S</b>								
WY2007	2.892	0.011	2.902	1.358	0.000	1.358	1.544	53.2%
TOTAL	2.892	0.011	2.902	1.358	0.000	1.358	1.544	53.2%
<i>%in</i>	99.6%	0.2%	<i>% out</i>	100.0%	0.0%			
<b>STA-1E, Cell 5</b>								
WY2007	14.528	0.008	14.536	7.492	0.000	7.492	7.044	48.5%
TOTAL	14.528	0.008	14.536	7.492	0.000	7.492	7.044	48.5%
<i>%in</i>	99.9%	0.1%	<i>% out</i>	100.0%	0.0%			
<b>STA-1E, Cell 6</b>								
WY2007	14.751	0.015	14.766	13.943	0.000	13.943	0.823	5.6%
TOTAL	14.751	0.015	14.766	13.943	0.000	13.943	0.823	5.6%
<i>%in</i>	99.9%	0.1%	<i>% out</i>	100.0%	0.0%			
<b>STA-1E, Cell 7</b>								
WY2007	9.305	0.006	9.311	7.259	0.000	7.259	2.052	22.0%
TOTAL	9.305	0.006	9.311	7.259	0.000	7.259	2.052	22.0%
<i>%in</i>	99.9%	0.1%	<i>% out</i>	100.0%	0.0%			
<b>STA-1W, Cell 1</b>								
WY2001	17.839	0.021	17.860	5.497	0.763	6.259	11.601	65.0%
WY2002	17.306	0.031	17.337	8.885	0.538	9.423	7.914	45.6%
WY2003	43.617	0.025	43.642	31.365	0.714	32.079	11.563	26.5%
WY2004	23.006	0.020	23.026	21.391	0.545	21.935	1.091	4.7%
WY2005	42.715	0.026	42.740	62.198	0.574	62.772	-20.031	-46.9%
WY2006	27.818	0.027	27.845	25.761	0.083	25.844	2.001	7.2%
WY2007	27.694	0.023	27.717	19.547	0.000	19.547	8.170	29.5%
TOTAL	199.995	0.173	200.168	174.643	3.216	177.859	22.309	11.1%
<i>% in</i>	99.9%	0.1%	<i>% out</i>	98.2%	1.8%			
<b>STA-1W, Cell 2</b>								
WY2001	3.917	0.015	3.931	3.141	0.000	3.141	0.790	20.1%
WY2002	5.997	0.022	6.019	3.300	0.000	3.300	2.719	45.2%
WY2003	22.933	0.018	22.951	20.649	0.000	20.649	2.303	10.0%
WY2004	9.998	0.014	10.013	17.620	0.000	17.620	-7.608	-76.0%

Table 8. Continued.

	Inflows <sup>b</sup>			Outflows <sup>b</sup>			Retained	% Ret
	I <sub>s</sub>	P	∑inflow	O <sub>s</sub>	O <sub>g</sub>	∑outflow		
WY2005	26.137	0.016	26.154	12.139	0.000	12.139	14.014	53.6%
WY2006	--	--	--	--	--	--	--	--
WY2007	--	--	--	--	--	--	--	--
TOTAL	68.983	0.085	69.068	56.849	0.000	56.849	12.219	17.7%
<i>% in</i>	99.9%	0.1%	<i>% out</i>	100.0%	0.0%			
<u>STA-1W, Cell 3</u>								
WY2001	2.316	0.014	2.330	2.125	0.204	2.329	0.001	0.1%
WY2002	3.952	0.022	3.974	3.204	0.172	3.376	0.597	15.0%
WY2003	12.566	0.017	12.583	8.104	0.253	8.357	4.226	33.6%
WY2004	13.368	0.014	13.382	6.289	0.291	6.579	6.803	50.8%
WY2005	34.836	0.018	34.854	17.823	0.332	18.156	16.698	47.9%
WY2006	25.761	0.018	25.779	14.144	0.048	14.192	11.588	44.9%
WY2007	19.547	0.016	19.563	15.739	0.000	15.739	3.824	19.5%
TOTAL	112.345	0.120	112.465	67.427	1.301	68.728	43.738	38.9%
<i>% in</i>	99.9%	0.1%	<i>% out</i>	98.1%	1.9%			
<u>STA-1W, Cell 4</u>								
WY2001	3.141	0.005	3.147	0.837	0.000	0.837	2.310	73.4%
WY2002	3.300	0.008	3.308	1.764	0.000	1.764	1.544	46.7%
WY2003	20.649	0.006	20.655	13.300	0.000	13.300	7.355	35.6%
WY2004	17.620	0.005	17.625	8.838	0.000	8.838	8.787	49.9%
WY2005	12.139	0.006	12.145	11.708	0.000	11.708	0.456	3.7%
WY2006	--	--	--	--	--	--	--	--
WY2007	--	--	--	--	--	--	--	--
TOTAL	56.849	0.030	56.880	36.448	0.000	36.448	20.450	35.9%
<i>% in</i>	99.95%	0.05%	<i>% out</i>	100.0%	0.0%			
<u>STA-1W, Cell 5</u>								
WY2001	14.256	0.044	14.300	1.229	0.000	1.229	13.071	91.4%
WY2002	61.684	0.066	61.750	20.959	0.000	20.959	40.791	66.1%
WY2003	60.146	0.053	60.199	30.380	0.000	30.380	29.819	49.5%
WY2004	15.420	0.043	15.463	5.905	0.000	5.905	9.558	61.8%
WY2005	38.124	0.049	38.173	40.199	0.000	40.199	-2.026	-5.3%
WY2006	9.961	0.051	10.012	9.599	0.000	9.599	0.414	4.1%
WY2007	--	--	--	--	--	--	--	--
TOTAL	199.591	0.305	199.896	108.270	0.000	108.270	91.626	45.8%
<i>% in</i>	99.8%	0.2%	<i>% out</i>	100.0%	0.0%			
<u>STA-2, Cell 1</u>								
WY2003	2.552	0.041	2.594	0.506	0.007	0.513	2.081	80.2%
WY2004	5.733	0.037	5.770	0.815	0.013	0.828	4.942	85.6%
WY2005	6.413	0.036	6.449	0.703	0.013	0.716	5.733	88.9%
WY2006	6.644	0.042	6.686	1.173	0.016	1.189	5.497	82.2%
WY2007	10.960	0.035	10.995	1.380	0.029	1.409	9.586	87.2%
TOTAL	32.302	0.191	32.493	4.577	0.078	4.654	27.839	85.7%
<i>% in</i>	99.4%	0.6%	<i>% out</i>	98.3%	1.7%			

Table 8. Continued.

	Inflows <sup>b</sup>			Outflows <sup>b</sup>			Retained	% Ret
	I <sub>s</sub>	P	∑inflow	O <sub>s</sub>	O <sub>g</sub>	∑outflow		
<u>STA-2, Cell 2</u>								
WY2003	9.536	0.046	9.582	2.514	0.013	2.527	7.055	73.6%
WY2004	9.748	0.042	9.790	1.753	0.021	1.775	8.016	81.9%
WY2005	19.558	0.040	19.597	6.273	0.056	6.330	13.268	67.7%
WY2006	16.827	0.046	16.873	3.276	0.044	3.320	13.553	80.3%
WY2007	27.043	0.039	27.083	7.979	0.102	8.081	19.002	70.2%
TOTAL	82.712	0.214	82.925	21.796	0.237	22.032	60.893	73.4%
<i>% in</i>	99.7%	0.3%	<i>% out</i>	98.9%	1.1%			
<u>STA-2, Cell 3</u>								
WY2003	9.415	0.046	9.461	2.247	0.490	2.737	6.724	71.1%
WY2004	10.593	0.042	10.635	1.708	0.447	2.156	8.479	79.7%
WY2005	20.127	0.040	20.167	2.561	0.437	2.998	17.169	85.1%
WY2006	12.489	0.046	12.535	2.282	0.384	2.666	9.870	78.7%
WY2007	9.718	0.039	9.758	2.202	0.528	2.730	7.027	72.0%
TOTAL	62.343	0.214	62.556	11.000	2.287	13.287	49.269	78.8%
<i>% in</i>	99.7%	0.3%	<i>% out</i>	82.8%	17.2%			
<u>STA-3/4, Cell 1A</u>								
WY2006	14.978	0.068	15.046	20.970	0.000	20.970	-5.924	-39.4%
WY2007	29.795	0.051	29.846	0.865	0.000	0.865	28.981	97.1%
TOTAL	44.773	0.119	44.892	21.835	0.000	21.835	23.057	51.4%
<i>% in</i>	99.7%	0.3%	<i>% out</i>	100.0%	0.0%			
<u>STA-3/4, Cell 1B</u>								
WY2006	20.957	0.078	21.035	5.510	0.000	5.510	15.524	73.8%
WY2007	0.972	0.059	1.031	4.124	0.000	4.124	-3.093	-300%
TOTAL	21.929	0.137	22.065	9.634	0.000	9.634	12.431	56.3%
<i>% in</i>	99.4%	0.6%	<i>% out</i>	100.0%	0.0%			
<u>STA-3/4, Cell 2A</u>								
WY2006	13.243	0.057	13.300	7.153	0.000	7.153	6.147	46.2%
WY2007	13.245	0.043	13.288	1.202	0.000	1.202	12.086	91.0%
TOTAL	26.489	0.099	26.588	8.355	0.000	8.355	18.233	68.6%
<i>% in</i>	99.6%	0.4%	<i>% out</i>	100.0%	0.0%			
<u>STA-3/4, Cell 2B</u>								
WY2006	7.154	0.064	7.218	4.895	0.000	4.895	2.323	32.2%
WY2007	1.550	0.049	1.599	3.321	0.000	3.321	-1.722	-108%
TOTAL	8.704	0.113	8.818	8.217	0.000	8.217	0.601	6.8%
<i>% in</i>	98.7%	1.3%	<i>% out</i>	100.0%	0.0%			
<u>STA-3/4, Cell 3</u>								
WY2006	9.052	0.102	9.154	2.550	0.000	2.550	6.604	72.1%
WY2007	11.539	0.077	11.617	2.578	0.000	2.578	9.039	77.8%
TOTAL	20.591	0.179	20.770	5.128	0.000	5.128	15.643	75.3%
<i>% in</i>	99.1%	0.9%	<i>% out</i>	100.0%	0.0%			

Table 8. Continued.

	Inflows <sup>b</sup>			Outflows <sup>b</sup>			Retained	% Ret
	I <sub>s</sub>	P	Σinflow	O <sub>s</sub>	O <sub>g</sub>	Σoutflow		
<u>STA-5, North Flow-way</u>								
WY2001	5.569	0.033	5.601	3.637	1.394	5.030	0.571	10.2%
WY2002	23.603	0.030	23.633	8.761	1.456	10.217	13.416	56.8%
WY2003	23.423	0.040	23.463	18.120	1.514	19.634	3.829	16.3%
WY2004	21.005	0.039	21.043	8.396	1.114	9.509	11.534	54.8%
WY2005	15.024	0.036	15.060	5.660	0.704	6.364	8.695	57.7%
WY2006	27.853	0.034	27.887	12.444	1.529	13.972	13.914	49.9%
WY2007	18.433	0.036	18.468	11.910	1.744	13.654	4.814	26.1%
TOTAL	134.909	0.246	135.156	68.928	9.454	78.382	56.774	42.0%
<i>% in</i>	99.8%	0.2%	<i>% out</i>	87.9%	12.1%			
<u>STA-5, South Flow-way</u>								
WY2001	10.802	0.033	10.835	1.285	2.558	3.843	6.992	64.5%
WY2002	26.150	0.030	26.180	4.105	3.116	7.221	18.960	72.4%
WY2003	35.278	0.040	35.318	8.473	6.148	14.622	20.697	58.6%
WY2004	28.324	0.039	28.363	7.999	6.507	14.506	13.857	48.9%
WY2005	10.937	0.036	10.973	6.552	4.483	11.035	-0.062	-0.6%
WY2006	25.396	0.034	25.430	11.175	2.871	14.047	11.384	44.8%
WY2007	3.836	0.036	3.871	0.913	0.845	1.758	2.114	54.6%
TOTAL	140.724	0.246	140.971	40.502	26.528	67.030	73.941	52.5%
<i>% in</i>	99.8%	0.2%	<i>% out</i>	60.42%	39.58%			
<u>STA-6, Cell 3</u>								
WY2003	0.411	0.005	0.416	0.128	0.078	0.206	0.210	50.5%
WY2004	0.795	0.006	0.801	0.270	0.230	0.500	0.301	37.6%
WY2005	1.758	0.005	1.763	0.230	0.300	0.530	1.233	69.9%
WY2006	1.494	0.005	1.498	0.488	0.233	0.721	0.777	51.9%
WY2007	1.078	0.003	1.081	0.436	0.441	0.876	0.204	18.9%
TOTAL	5.536	0.023	5.559	1.552	1.282	2.834	2.725	49.0%
<i>% in</i>	99.6%	0.4%	<i>% out</i>	54.8%	45.2%			
<u>STA-6, Cell 5</u>								
WY2003	0.544	0.013	0.556	0.100	0.059	0.159	0.397	71.4%
WY2004	0.875	0.014	0.889	0.281	0.123	0.403	0.486	54.6%
WY2005	1.397	0.013	1.410	0.272	0.202	0.473	0.937	66.4%
WY2006	1.172	0.012	1.184	0.189	0.092	0.281	0.903	76.3%
WY2007	3.845	0.007	3.852	0.485	0.512	0.997	2.855	74.1%
TOTAL	7.833	0.059	7.891	1.326	0.988	2.313	5.578	70.7%
<i>% in</i>	99.3%	0.7%	<i>% out</i>	57.3%	42.7%			

<sup>a</sup> All budget terms expressed as metric tonnes of phosphorus.

<sup>b</sup> I<sub>s</sub> = surface water inflow; P = precipitation; O<sub>s</sub> = surface water outflow; O<sub>g</sub> = groundwater outflow; Retained = Σinflow – Σoutflow; %Ret = (retained/Σinflow)\*100.

**Table 9.** Annual ammonia-nitrogen mass balance budgets for flow-ways and treatment cells in the EPA STAs.<sup>a</sup>

	Inflows <sup>b</sup>			Outflows <sup>b</sup>			Retained	% Ret
	I <sub>s</sub>	P	∑inflow	O <sub>s</sub>	O <sub>q</sub>	∑outflow		
<b>STA-1E, Cell 3</b>								
WY2007	3.825	0.176	4.002	1.061	0.000	1.061	2.941	73.5%
TOTAL	3.825	0.176	4.002	1.061	0.000	1.061	2.941	73.5%
<i>%in</i>	95.6%	4.4%	<i>% out</i>	100.0%	0.0%			
<b>STA-1E, Cell 4N</b>								
WY2007	1.061	0.193	1.254	1.133	0.000	1.133	0.121	9.6%
TOTAL	1.061	0.193	1.254	1.133	0.000	1.133	0.121	9.6%
<i>%in</i>	84.6%	4.8%	<i>% out</i>	100.0%	0.0%			
<b>STA-1E, Cell 4S</b>								
WY2007	6.136	0.225	6.361	1.290	0.000	1.290	5.071	79.7%
TOTAL	6.136	0.225	6.361	1.290	0.000	1.290	5.071	79.7%
<i>%in</i>	96.5%	5.6%	<i>% out</i>	100.0%	0.0%			
<b>STA-1E, Cell 5</b>								
WY2007	3.393	0.171	3.564	3.128	0.000	3.128	0.436	12.2%
TOTAL	3.393	0.171	3.564	3.128	0.000	3.128	0.436	12.2%
<i>%in</i>	95.2%	4.8%	<i>% out</i>	100.0%	0.0%			
<b>STA-1E, Cell 6</b>								
WY2007	8.621	0.314	8.935	6.872	0.000	6.872	2.063	23.1%
TOTAL	8.621	0.314	8.935	6.872	0.000	6.872	2.063	23.1%
<i>%in</i>	96.5%	3.5%	<i>% out</i>	100.0%	0.0%			
<b>STA-1E, Cell 7</b>								
WY2007	13.615	0.125	13.740	5.494	0.000	5.494	8.247	60.0%
TOTAL	13.615	0.125	13.740	5.494	0.000	5.494	8.247	60.0%
<i>%in</i>	99.1%	0.9%	<i>% out</i>	100.0%	0.0%			
<b>STA-1W, Cell 1</b>								
WY2001	--	--	--	--	--	--	--	--
WY2002	--	--	--	--	--	--	--	--
WY2003	41.457	0.527	41.983	16.536	0.505	17.041	24.942	59.4%
WY2004	138.000	0.424	138.424	73.951	2.481	76.432	61.991	44.8%
WY2005	134.821	0.542	135.363	92.407	1.243	93.650	41.713	30.8%
WY2006	90.984	0.567	91.551	12.203	0.103	12.306	79.245	86.6%
WY2007	58.526	0.494	59.020	10.198	0.000	10.198	48.821	82.7%
TOTAL	463.787	2.554	466.341	205.295	4.332	209.627	256.713	55.0%
<i>% in</i>	99.5%	0.5%	<i>% out</i>	97.9%	2.1%			
<b>STA-1W, Cell 2</b>								
WY2001	--	--	--	--	--	--	--	--
WY2002	--	--	--	--	--	--	--	--
WY2003	12.316	0.376	12.692	5.684	0.000	5.684	7.008	55.2%
WY2004	37.154	0.303	37.457	17.068	0.000	17.068	20.389	54.4%

Table 9. Continued.

	Inflows <sup>b</sup>			Outflows <sup>b</sup>			Retained	% Ret
	I <sub>s</sub>	P	∑inflow	O <sub>s</sub>	O <sub>g</sub>	∑outflow		
WY2005	50.635	0.342	50.978	6.353	0.000	6.353	44.624	87.5%
WY2006	--	--	--	--	--	--	--	--
WY2007	--	--	--	--	--	--	--	--
TOTAL	100.105	1.021	101.126	29.105	0.000	29.105	72.021	71.2%
<i>% in</i>	99.0%	1.0%	<i>% out</i>	100.0%	0.0%			
<u>STA-1W, Cell 3</u>								
WY2001	--	--	--	--	--	--	--	--
WY2002	--	--	--	--	--	--	--	--
WY2003	4.019	0.367	4.386	3.911	0.100	4.010	0.375	8.6%
WY2004	35.431	0.295	35.726	13.467	0.693	14.160	21.566	60.4%
WY2005	27.343	0.373	27.716	13.627	0.258	13.884	13.832	49.9%
WY2006	11.091	0.391	11.481	10.760	0.027	10.787	0.694	6.0%
WY2007	10.010	0.340	10.350	8.476	0.000	8.476	1.875	18.1%
TOTAL	87.893	1.766	89.659	50.240	1.077	51.318	38.342	42.8%
<i>% in</i>	98.0%	2.0%	<i>% out</i>	97.9%	2.1%			
<u>STA-1W, Cell 4</u>								
WY2001	--	--	--	--	--	--	--	--
WY2002	--	--	--	--	--	--	--	--
WY2003	5.684	0.133	5.816	3.361	0.000	3.361	2.455	42.2%
WY2004	17.068	0.107	17.175	9.734	0.000	9.734	7.441	43.3%
WY2005	6.353	0.130	6.483	6.410	0.000	6.410	0.076	1.2%
WY2006	--	--	--	--	--	--	--	--
WY2007	--	--	--	--	--	--	--	--
TOTAL	29.105	0.369	29.474	19.505	0.000	19.505	9.972	33.8%
<i>% in</i>	98.75%	1.25%	<i>% out</i>	100.0%	0.0%			
<u>STA-1W, Cell 5</u>								
WY2001	--	--	--	--	--	--	--	--
WY2002	--	--	--	--	--	--	--	--
WY2003	67.489	1.115	68.604	105.802	0.000	105.802	-37.198	-54.2%
WY2004	64.174	0.898	65.072	12.306	0.000	12.306	52.766	81.1%
WY2005	104.085	1.039	105.123	18.035	0.000	18.035	87.088	82.8%
WY2006	38.051	1.087	39.139	11.418	0.000	11.418	27.721	70.8%
WY2007	--	--	--	--	--	--	--	--
TOTAL	273.799	4.138	277.938	147.560	0.000	147.560	130.377	46.9%
<i>% in</i>	98.5%	1.5%	<i>% out</i>	100.0%	0.0%			
<u>STA-2, Cell 1</u>								
WY2003	16.793	0.872	17.665	0.645	0.020	0.665	17.000	96.2%
WY2004	34.162	0.791	34.953	2.603	0.057	2.660	32.293	92.4%
WY2005	29.323	0.755	30.077	2.439	0.052	2.491	27.586	91.7%
WY2006	31.821	0.880	32.701	1.783	0.042	1.825	30.876	94.4%
WY2007	22.878	0.746	23.624	2.111	0.051	2.162	21.462	90.8%
TOTAL	134.976	4.044	139.020	9.580	0.223	9.803	129.217	92.9%
<i>% in</i>	97.1%	2.9%	<i>% out</i>	97.7%	2.3%			

Table 9. Continued.

	Inflows <sup>b</sup>			Outflows <sup>b</sup>			Retained	% Ret
	I <sub>s</sub>	P	Σinflow	O <sub>s</sub>	O <sub>g</sub>	Σoutflow		
<u>STA-2, Cell 2</u>								
WY2003	18.426	0.973	19.399	1.722	0.015	1.737	17.661	91.0%
WY2004	47.322	0.882	48.204	5.505	0.083	5.588	42.616	88.4%
WY2005	77.821	0.842	78.663	9.095	0.136	9.230	69.433	88.3%
WY2006	67.737	0.982	68.719	6.332	0.121	6.453	62.266	90.6%
WY2007	44.469	0.833	45.301	5.178	0.106	5.284	40.018	88.3%
TOTAL	255.775	4.511	260.286	27.832	0.461	28.293	231.994	89.1%
<i>% in</i>	98.3%	1.7%	<i>% out</i>	98.4%	1.6%			
<u>STA-2, Cell 3</u>								
WY2003	20.785	0.973	21.757	1.475	0.590	2.064	19.693	90.5%
WY2004	48.108	0.882	48.990	4.291	1.511	5.802	43.188	88.2%
WY2005	56.807	0.842	57.649	11.818	1.577	13.395	44.254	76.8%
WY2006	49.499	0.982	50.480	5.666	1.205	6.872	43.609	86.4%
WY2007	17.883	0.833	18.716	2.251	0.725	2.976	15.740	84.1%
TOTAL	193.082	4.511	197.593	25.501	5.608	31.108	166.485	84.3%
<i>% in</i>	97.7%	2.3%	<i>% out</i>	82.0%	18.0%			
<u>STA-3/4, Cell 1A</u>								
WY2006	22.364	1.428	23.791	30.749	0.000	30.749	-6.957	-29.2%
WY2007	49.328	1.085	50.413	0.168	0.000	0.168	50.246	99.7%
TOTAL	71.692	2.513	74.205	30.916	0.000	30.916	43.288	58.3%
<i>% in</i>	96.6%	3.4%	<i>% out</i>	100.0%	0.0%			
<u>STA-3/4, Cell 1B</u>								
WY2006	30.717	1.638	32.355	12.238	0.000	12.238	20.117	62.2%
WY2007	0.271	1.245	1.516	4.688	0.000	4.688	-3.172	-209%
TOTAL	30.988	2.884	33.871	16.926	0.000	16.926	16.946	50.0%
<i>% in</i>	91.5%	8.5%	<i>% out</i>	100.0%	0.0%			
<u>STA-3/4, Cell 2A</u>								
WY2006	12.999	1.194	14.193	15.689	0.000	15.689	-1.496	-10.5%
WY2007	13.726	0.908	14.634	5.000	0.000	5.000	9.634	65.8%
TOTAL	26.725	2.102	28.827	20.689	0.000	20.689	8.138	28.2%
<i>% in</i>	92.7%	7.3%	<i>% out</i>	100.0%	0.0%			
<u>STA-3/4, Cell 2B</u>								
WY2006	15.689	1.359	17.049	13.841	0.000	13.841	3.208	18.8%
WY2007	6.030	1.033	7.063	5.211	0.000	5.211	1.852	26.2%
TOTAL	21.719	2.393	24.112	19.052	0.000	19.052	5.059	21.0%
<i>% in</i>	90.1%	9.9%	<i>% out</i>	100.0%	0.0%			
<u>STA-3/4, Cell 3</u>								
WY2006	5.477	2.151	7.628	5.747	0.000	5.747	1.881	24.7%
WY2007	12.041	1.635	13.676	3.988	0.000	3.988	9.688	70.8%
TOTAL	17.518	3.787	21.304	9.736	0.000	9.736	11.569	54.3%
<i>% in</i>	82.2%	17.8%	<i>% out</i>	100.0%	0.0%			

Table 9. Continued.

	Inflows <sup>b</sup>			Outflows <sup>b</sup>			Retained	% Ret
	I <sub>s</sub>	P	Σinflow	O <sub>s</sub>	O <sub>g</sub>	Σoutflow		
<u>STA-5, North Flow-way</u>								
WY2001	20.342	0.687	21.029	0.984	1.385	2.369	18.660	88.7%
WY2002	31.715	0.635	32.350	2.236	0.853	3.089	29.261	90.5%
WY2003	31.282	0.852	32.134	25.790	2.087	27.878	4.256	13.2%
WY2004	26.911	0.814	27.725	5.442	1.015	6.457	21.268	76.7%
WY2005	19.210	0.750	19.960	2.036	0.478	2.514	17.446	87.4%
WY2006	22.232	0.718	22.950	4.371	0.809	5.180	17.770	77.4%
WY2007	9.530	0.750	10.280	2.750	0.602	3.353	6.928	67.4%
TOTAL	161.222	5.207	166.428	43.609	7.230	50.839	115.589	69.5%
<i>% in</i>	96.9%	3.1%	<i>% out</i>	85.8%	14.2%			
<u>STA-5, South Flow-way</u>								
WY2001	12.883	0.687	13.570	0.875	2.306	3.182	10.389	76.6%
WY2002	19.264	0.635	19.899	0.848	1.215	2.063	17.836	89.6%
WY2003	19.473	0.852	20.325	2.171	2.312	4.483	15.842	77.9%
WY2004	19.045	0.814	19.859	2.448	2.951	5.399	14.460	72.8%
WY2005	12.281	0.750	13.032	4.152	3.782	7.934	5.098	39.1%
WY2006	19.008	0.718	19.727	4.915	1.647	6.562	13.164	66.7%
WY2007	1.251	0.750	2.001	0.166	0.206	0.372	1.629	81.4%
TOTAL	103.207	5.207	108.413	15.575	14.420	29.995	78.418	72.3%
<i>% in</i>	95.2%	4.8%	<i>% out</i>	51.9%	48.1%			
<u>STA-6, Cell 3</u>								
WY2003	2.668	0.104	2.772	0.076	0.153	0.229	2.543	91.7%
WY2004	3.082	0.117	3.199	0.282	0.462	0.743	2.456	76.8%
WY2005	1.927	0.107	2.034	0.180	0.279	0.459	1.575	77.4%
WY2006	2.729	0.097	2.826	0.829	0.410	1.239	1.587	56.1%
WY2007	2.737	0.061	2.797	0.227	0.507	0.734	2.063	73.7%
TOTAL	13.143	0.485	13.628	1.594	1.811	3.405	10.223	75.0%
<i>% in</i>	96.4%	3.6%	<i>% out</i>	46.8%	53.2%			
<u>STA-6, Cell 5</u>								
WY2003	4.708	0.265	4.972	0.221	0.259	0.480	4.492	90.3%
WY2004	3.616	0.299	3.915	1.004	0.472	1.476	2.438	62.3%
WY2005	2.525	0.273	2.798	1.208	0.572	1.779	1.018	36.4%
WY2006	3.316	0.247	3.563	0.416	0.228	0.645	2.918	81.9%
WY2007	3.508	0.155	3.663	0.228	0.335	0.563	3.100	84.6%
TOTAL	17.673	1.238	18.910	3.077	1.867	4.944	13.967	73.9%
<i>% in</i>	93.5%	6.5%	<i>% out</i>	62.2%	37.8%			

<sup>a</sup> All budget terms expressed as metric tonnes of nitrogen.

<sup>b</sup> I<sub>s</sub> = surface water inflow; P = precipitation; O<sub>s</sub> = surface water outflow; O<sub>g</sub> = groundwater outflow; Retained = Σinflow – Σoutflow; %Ret = (retained/Σinflow)\*100.

**Table 10.** Annual nitrite+nitrate-nitrogen mass balance budgets for flow-ways and treatment cells in the EPA STAs.<sup>a</sup>

	Inflows <sup>b</sup>			Outflows <sup>b</sup>			Retained	% Ret
	I <sub>s</sub>	P	∑inflow	O <sub>s</sub>	O <sub>q</sub>	∑outflow		
<b>STA-1E, Cell 3</b>								
WY2007	3.487	0.336	3.822	0.808	0.000	0.808	3.014	78.9%
TOTAL	3.487	0.336	3.822	0.808	0.000	0.808	3.014	78.9%
<i>%in</i>	91.2%	8.8%	<i>% out</i>	100.0%	0.0%			
<b>STA-1E, Cell 4N</b>								
WY2007	0.808	0.368	1.176	0.726	0.000	0.726	0.450	38.2%
TOTAL	0.808	0.368	1.176	0.726	0.000	0.726	0.450	38.2%
<i>%in</i>	68.7%	9.6%	<i>% out</i>	100.0%	0.0%			
<b>STA-1E, Cell 4S</b>								
WY2007	1.765	0.429	2.194	1.460	0.000	1.460	0.734	33.4%
TOTAL	1.765	0.429	2.194	1.460	0.000	1.460	0.734	33.4%
<i>%in</i>	80.5%	11.2%	<i>% out</i>	100.0%	0.0%			
<b>STA-1E, Cell 5</b>								
WY2007	8.683	0.326	9.009	0.500	0.000	0.500	8.509	94.4%
TOTAL	8.683	0.326	9.009	0.500	0.000	0.500	8.509	94.4%
<i>%in</i>	96.4%	3.6%	<i>% out</i>	100.0%	0.0%			
<b>STA-1E, Cell 6</b>								
WY2007	6.671	0.598	7.269	17.592	0.000	17.592	-10.324	-142%
TOTAL	6.671	0.598	7.269	17.592	0.000	17.592	-10.324	-142%
<i>%in</i>	91.8%	8.2%	<i>% out</i>	100.0%	0.0%			
<b>STA-1E, Cell 7</b>								
WY2007	24.218	0.238	24.457	6.170	0.000	6.170	18.286	74.8%
TOTAL	24.218	0.238	24.457	6.170	0.000	6.170	18.286	74.8%
<i>%in</i>	99.0%	1.0%	<i>% out</i>	100.0%	0.0%			
<b>STA-1W, Cell 1</b>								
WY2001	--	--	--	--	--	--	--	--
WY2002	--	--	--	--	--	--	--	--
WY2003	68.423	1.003	69.427	40.035	1.010	41.045	28.382	40.9%
WY2004	136.925	0.808	137.733	92.741	2.768	95.509	42.224	30.7%
WY2005	165.574	1.033	166.607	183.550	1.941	185.491	-18.884	-11.3%
WY2006	98.437	1.081	99.518	61.441	0.241	61.682	37.836	38.0%
WY2007	61.076	0.942	62.018	40.304	0.000	40.304	21.714	35.0%
TOTAL	530.437	4.866	535.303	418.071	5.960	424.031	111.272	20.8%
<i>% in</i>	99.1%	0.9%	<i>% out</i>	98.6%	1.4%			
<b>STA-1W, Cell 2</b>								
WY2001	--	--	--	--	--	--	--	--
WY2002	--	--	--	--	--	--	--	--
WY2003	23.467	0.716	24.183	35.351	0.000	35.351	-11.169	-46.2%
WY2004	55.171	0.577	55.748	77.818	0.000	77.818	-22.070	-39.6%

Table 10. Continued.

	Inflows <sup>b</sup>			Outflows <sup>b</sup>			Retained	% Ret
	I <sub>s</sub>	P	∑inflow	O <sub>s</sub>	O <sub>g</sub>	∑outflow		
WY2005	61.019	0.652	61.671	24.089	0.000	24.089	37.581	60.9%
WY2006	--	--	--	--	--	--	--	--
WY2007	--	--	--	--	--	--	--	--
TOTAL	139.656	1.945	141.601	137.258	0.000	137.258	4.343	3.1%
<i>% in</i>	98.6%	1.4%	<i>% out</i>	100.0%	0.0%			
<u>STA-1W, Cell 3</u>								
WY2001	--	--	--	--	--	--	--	--
WY2002	--	--	--	--	--	--	--	--
WY2003	25.041	0.699	25.740	9.010	0.377	9.387	16.353	63.5%
WY2004	44.227	0.563	44.789	3.437	0.391	3.828	40.962	91.5%
WY2005	97.340	0.711	98.051	8.746	0.389	9.135	88.916	90.7%
WY2006	61.441	0.744	62.185	24.323	0.097	24.419	37.765	60.7%
WY2007	40.304	0.648	40.952	23.194	0.000	23.194	17.758	43.4%
TOTAL	268.352	3.365	271.717	68.709	1.254	69.963	201.754	74.3%
<i>% in</i>	98.8%	1.2%	<i>% out</i>	98.2%	1.8%			
<u>STA-1W, Cell 4</u>								
WY2001	--	--	--	--	--	--	--	--
WY2002	--	--	--	--	--	--	--	--
WY2003	35.351	0.253	35.604	24.117	0.000	24.117	11.487	32.3%
WY2004	77.818	0.203	78.021	43.151	0.000	43.151	34.870	44.7%
WY2005	24.089	0.248	24.337	28.046	0.000	28.046	-3.637	-14.9%
WY2006	--	--	--	--	--	--	--	--
WY2007	--	--	--	--	--	--	--	--
TOTAL	137.258	0.704	137.962	95.314	0.000	95.314	42.720	30.9%
<i>% in</i>	99.49%	0.51%	<i>% out</i>	100.0%	0.0%			
<u>STA-1W, Cell 5</u>								
WY2001	--	--	--	--	--	--	--	--
WY2002	--	--	--	--	--	--	--	--
WY2003	45.740	2.124	47.864	45.705	0.000	45.705	2.159	4.5%
WY2004	59.599	1.711	61.310	17.960	0.000	17.960	43.350	70.7%
WY2005	174.110	1.979	176.089	122.275	0.000	122.275	53.814	30.6%
WY2006	35.109	2.071	37.180	21.765	0.000	21.765	15.415	41.5%
WY2007	--	--	--	--	--	--	--	--
TOTAL	314.558	7.885	322.443	207.705	0.000	207.705	114.738	35.6%
<i>% in</i>	97.6%	2.4%	<i>% out</i>	100.0%	0.0%			
<u>STA-2, Cell 1</u>								
WY2003	34.712	1.661	36.373	0.270	0.019	0.289	36.084	99.2%
WY2004	51.449	1.507	52.956	1.009	0.043	1.052	51.904	98.0%
WY2005	59.470	1.438	60.908	1.041	0.049	1.089	59.819	98.2%
WY2006	43.302	1.677	44.979	0.418	0.024	0.442	44.537	99.0%
WY2007	41.191	1.422	42.613	0.487	0.033	0.520	42.093	98.8%
TOTAL	230.124	7.705	237.829	3.225	0.168	3.392	234.437	98.6%
<i>% in</i>	96.8%	3.2%	<i>% out</i>	95.1%	4.9%			

Table 10. Continued.

	Inflows <sup>b</sup>			Outflows <sup>b</sup>			Retained	% Ret
	I <sub>s</sub>	P	∑inflow	O <sub>s</sub>	O <sub>g</sub>	∑outflow		
<u>STA-2, Cell 2</u>								
WY2003	53.531	1.853	55.385	1.978	0.027	2.005	53.380	96.4%
WY2004	95.944	1.681	97.625	22.660	0.241	22.901	74.724	76.5%
WY2005	161.985	1.604	163.588	46.271	0.441	46.712	116.876	71.4%
WY2006	121.494	1.871	123.365	26.996	0.336	27.332	96.032	77.8%
WY2007	92.333	1.587	93.920	2.863	0.113	2.977	90.943	96.8%
TOTAL	525.287	8.595	533.882	100.768	1.158	101.926	431.956	80.9%
<i>% in</i>	98.4%	1.6%	<i>% out</i>	98.9%	1.1%			
<u>STA-2, Cell 3</u>								
WY2003	70.925	1.853	72.779	3.249	1.617	4.866	67.913	93.3%
WY2004	127.734	1.681	129.415	21.838	5.556	27.394	102.021	78.8%
WY2005	156.476	1.604	158.080	47.645	5.255	52.900	105.180	66.5%
WY2006	102.536	1.871	104.406	45.935	4.938	50.874	53.533	51.3%
WY2007	38.444	1.587	40.030	10.363	2.280	12.644	27.387	68.4%
TOTAL	496.114	8.595	504.710	129.031	19.645	148.677	356.033	70.5%
<i>% in</i>	98.3%	1.7%	<i>% out</i>	86.8%	13.2%			
<u>STA-3/4, Cell 1A</u>								
WY2006	114.521	2.720	117.241	27.747	0.000	27.747	89.493	76.3%
WY2007	199.112	2.068	201.179	26.040	0.000	26.040	175.140	87.1%
TOTAL	313.632	4.787	318.420	53.787	0.000	53.787	264.633	83.1%
<i>% in</i>	98.5%	1.5%	<i>% out</i>	100.0%	0.0%			
<u>STA-3/4, Cell 1B</u>								
WY2006	27.727	3.122	30.848	13.311	0.000	13.311	17.538	56.9%
WY2007	26.131	2.373	28.504	2.753	0.000	2.753	25.751	90.3%
TOTAL	53.858	5.495	59.353	16.064	0.000	16.064	43.289	72.9%
<i>% in</i>	90.7%	9.3%	<i>% out</i>	100.0%	0.0%			
<u>STA-3/4, Cell 2A</u>								
WY2006	151.037	2.275	153.313	38.725	0.000	38.725	114.587	74.7%
WY2007	276.243	1.729	277.972	21.976	0.000	21.976	255.996	92.1%
TOTAL	427.281	4.004	431.285	60.702	0.000	60.702	370.583	85.9%
<i>% in</i>	99.1%	0.9%	<i>% out</i>	100.0%	0.0%			
<u>STA-3/4, Cell 2B</u>								
WY2006	38.726	2.590	41.316	10.252	0.000	10.252	31.064	75.2%
WY2007	22.353	1.969	24.322	9.447	0.000	9.447	14.875	61.2%
TOTAL	61.079	4.559	65.637	19.698	0.000	19.698	45.939	70.0%
<i>% in</i>	93.1%	6.9%	<i>% out</i>	100.0%	0.0%			
<u>STA-3/4, Cell 3</u>								
WY2006	63.705	4.099	67.805	2.211	0.000	2.211	65.594	96.7%
WY2007	225.936	3.116	229.052	2.164	0.000	2.164	226.888	99.1%
TOTAL	289.642	7.215	296.856	4.375	0.000	4.375	292.482	98.5%
<i>% in</i>	97.6%	2.4%	<i>% out</i>	100.0%	0.0%			

Table 10. Continued.

	Inflows <sup>b</sup>			Outflows <sup>b</sup>			Retained	% Ret
	I <sub>s</sub>	P	Σinflow	O <sub>s</sub>	O <sub>g</sub>	Σoutflow		
<u>STA-5, North Flow-way</u>								
WY2001	3.222	1.309	4.530	0.199	0.248	0.447	4.083	90.1%
WY2002	6.275	1.209	7.484	1.262	0.285	1.547	5.937	79.3%
WY2003	8.038	1.623	9.661	3.585	0.395	3.980	5.681	58.8%
WY2004	17.297	1.552	18.849	1.192	0.381	1.573	17.276	91.7%
WY2005	7.689	1.429	9.118	1.079	0.220	1.298	7.819	85.8%
WY2006	12.940	1.369	14.309	3.424	0.547	3.971	10.338	72.3%
WY2007	7.288	1.430	8.718	1.623	0.405	2.028	6.690	76.7%
TOTAL	62.749	9.920	72.670	12.364	2.479	14.843	57.826	79.6%
<i>% in</i>	86.3%	13.7%	<i>% out</i>	83.3%	16.7%			
<u>STA-5, South Flow-way</u>								
WY2001	6.812	1.309	8.120	0.349	1.059	1.407	6.713	82.7%
WY2002	6.282	1.209	7.491	0.485	0.525	1.010	6.480	86.5%
WY2003	4.979	1.623	6.602	1.987	1.118	3.105	3.496	53.0%
WY2004	7.305	1.552	8.857	0.376	0.716	1.092	7.766	87.7%
WY2005	2.185	1.429	3.614	0.595	0.604	1.199	2.415	66.8%
WY2006	7.779	1.369	9.148	1.126	0.504	1.630	7.518	82.2%
WY2007	1.248	1.430	2.678	0.038	0.099	0.137	2.541	94.9%
TOTAL	36.589	9.920	46.509	4.955	4.625	9.580	36.929	79.4%
<i>% in</i>	78.7%	21.3%	<i>% out</i>	51.7%	48.3%			
<u>STA-6, Cell 3</u>								
WY2003	1.806	0.198	2.004	0.060	0.112	0.171	1.832	91.4%
WY2004	10.200	0.223	10.423	0.239	0.774	1.013	9.410	90.3%
WY2005	1.385	0.204	1.589	0.071	0.148	0.220	1.369	86.2%
WY2006	0.762	0.184	0.946	0.180	0.101	0.281	0.665	70.3%
WY2007	1.760	0.116	1.875	1.077	0.885	1.962	-0.087	-4.6%
TOTAL	15.913	0.924	16.837	1.627	2.020	3.647	13.190	78.3%
<i>% in</i>	94.5%	5.5%	<i>% out</i>	44.6%	55.4%			
<u>STA-6, Cell 5</u>								
WY2003	2.346	0.504	2.850	0.060	0.096	0.156	2.694	94.5%
WY2004	11.484	0.570	12.054	0.145	0.319	0.464	11.590	96.2%
WY2005	1.217	0.520	1.736	0.094	0.111	0.205	1.531	88.2%
WY2006	0.772	0.470	1.242	0.128	0.061	0.189	1.053	84.8%
WY2007	1.572	0.295	1.866	0.072	0.126	0.198	1.668	89.4%
TOTAL	17.390	2.358	19.748	0.499	0.713	1.213	18.536	93.9%
<i>% in</i>	88.1%	11.9%	<i>% out</i>	41.2%	58.8%			

<sup>a</sup> All budget terms expressed as metric tonnes of nitrogen.

<sup>b</sup> I<sub>s</sub> = surface water inflow; P = precipitation; O<sub>s</sub> = surface water outflow; O<sub>g</sub> = groundwater outflow; Retained = Σinflow – Σoutflow; %Ret = (retained/Σinflow)\*100.

**Table 11.** Annual total nitrogen mass balance budgets for flow-ways and treatment cells in the EPA STAs.<sup>a</sup>

	Inflows <sup>b</sup>			Outflows <sup>b</sup>			Retained	% Ret
	I <sub>s</sub>	P	∑inflow	O <sub>s</sub>	O <sub>q</sub>	∑outflow		
<u>STA-1E, Cell 3</u>								
WY2007	49.5	0.8	50.4	66.4	0.0	66.4	-16.0	-31.8%
TOTAL	49.5	0.8	50.4	66.4	0.0	66.4	-16.0	-31.8%
<i>%in</i>	98.4%	1.6%	<i>% out</i>	100.0%	0.0%			
<u>STA-1E, Cell 4N</u>								
WY2007	66.4	0.9	67.3	78.7	0.0	78.7	-11.4	-16.9%
TOTAL	66.4	0.9	67.3	78.7	0.0	78.7	-11.4	-16.9%
<i>%in</i>	98.7%	1.8%	<i>% out</i>	100.0%	0.0%			
<u>STA-1E, Cell 4S</u>								
WY2007	102.3	1.1	103.3	76.5	0.0	76.5	26.8	25.9%
TOTAL	102.3	1.1	103.3	76.5	0.0	76.5	26.8	25.9%
<i>%in</i>	99.0%	2.1%	<i>% out</i>	100.0%	0.0%			
<u>STA-1E, Cell 5</u>								
WY2007	121.5	0.8	122.3	65.4	0.0	65.4	56.9	46.6%
TOTAL	121.5	0.8	122.3	65.4	0.0	65.4	56.9	46.6%
<i>%in</i>	99.3%	0.7%	<i>% out</i>	100.0%	0.0%			
<u>STA-1E, Cell 6</u>								
WY2007	178.9	1.5	180.3	251.4	0.0	251.4	-71.1	-39.4%
TOTAL	178.9	1.5	180.3	251.4	0.0	251.4	-71.1	-39.4%
<i>%in</i>	99.2%	0.8%	<i>% out</i>	100.0%	0.0%			
<u>STA-1E, Cell 7</u>								
WY2007	144.9	0.6	145.5	113.5	0.0	113.5	31.9	22.0%
TOTAL	144.9	0.6	145.5	113.5	0.0	113.5	31.9	22.0%
<i>%in</i>	99.6%	0.4%	<i>% out</i>	100.0%	0.0%			
<u>STA-1W, Cell 1</u>								
WY2001	--	--	--	--	--	--	--	--
WY2002	--	--	--	--	--	--	--	--
WY2003	346.3	2.5	348.8	260.8	5.8	266.6	82.2	23.6%
WY2004	774.5	2.0	776.5	621.0	17.0	638.1	138.5	17.8%
WY2005	806.6	2.5	809.1	961.8	9.8	971.6	-162.5	-20.1%
WY2006	608.7	2.7	611.3	500.7	1.7	502.4	108.9	17.8%
WY2007	478.9	2.3	481.2	344.0	0.0	344.0	137.2	28.5%
TOTAL	3,014.9	12.0	3,026.9	2,688.3	34.4	2,722.7	304.2	10.1%
<i>% in</i>	99.6%	0.4%	<i>% out</i>	98.7%	1.3%			
<u>STA-1W, Cell 2</u>								
WY2001	--	--	--	--	--	--	--	--
WY2002	--	--	--	--	--	--	--	--
WY2003	127.8	1.8	129.5	169.2	0.0	169.2	-39.7	-30.6%
WY2004	278.1	1.4	279.5	440.9	0.0	440.9	-161.4	-57.7%

Table 11. Continued.

	Inflows <sup>b</sup>			Outflows <sup>b</sup>			Retained	% Ret
	I <sub>s</sub>	P	∑inflow	O <sub>s</sub>	O <sub>g</sub>	∑outflow		
WY2005	346.9	1.6	348.5	111.0	0.0	111.0	237.5	68.2%
WY2006	--	--	--	--	--	--	--	--
WY2007	--	--	--	--	--	--	--	--
TOTAL	752.7	4.8	757.5	721.0	0.0	721.0	36.5	4.8%
<i>% in</i>	99.4%	0.6%	<i>% out</i>	100.0%	0.0%			
<u>STA-1W, Cell 3</u>								
WY2001	--	--	--	--	--	--	--	--
WY2002	--	--	--	--	--	--	--	--
WY2003	195.1	1.7	196.8	154.6	4.4	158.9	37.9	19.3%
WY2004	443.7	1.4	445.0	305.9	11.7	317.6	127.4	28.6%
WY2005	564.0	1.7	565.8	321.5	5.7	327.2	238.6	42.2%
WY2006	500.7	1.8	502.5	294.8	1.0	295.7	206.8	41.1%
WY2007	344.0	1.6	345.6	255.1	0.0	255.1	90.5	26.2%
TOTAL	2,047.5	8.3	2,055.8	1,331.9	22.7	1,354.6	701.2	34.1%
<i>% in</i>	99.6%	0.4%	<i>% out</i>	98.3%	1.7%			
<u>STA-1W, Cell 4</u>								
WY2001	--	--	--	--	--	--	--	--
WY2002	--	--	--	--	--	--	--	--
WY2003	169.2	0.6	169.8	152.5	0.0	152.5	17.3	10.2%
WY2004	440.9	0.5	441.4	348.3	0.0	348.3	93.1	21.1%
WY2005	111.0	0.6	111.6	183.6	0.0	183.6	-71.8	-64.2%
WY2006	--	--	--	--	--	--	--	--
WY2007	--	--	--	--	--	--	--	--
TOTAL	721.0	1.7	722.7	684.3	0.0	684.3	38.6	5.3%
<i>% in</i>	99.76%	0.24%	<i>% out</i>	100.0%	0.0%			
<u>STA-1W, Cell 5</u>								
WY2001	--	--	--	--	--	--	--	--
WY2002	--	--	--	--	--	--	--	--
WY2003	310.4	5.2	315.7	259.5	0.0	259.5	56.2	17.8%
WY2004	408.6	4.2	412.9	329.8	0.0	329.8	83.0	20.1%
WY2005	715.2	4.9	720.1	719.4	0.0	719.4	0.6	0.1%
WY2006	218.5	5.1	223.6	214.5	0.0	214.5	9.1	4.1%
WY2007	--	--	--	--	--	--	--	--
TOTAL	1,652.8	19.4	1,672.1	1,523.2	0.0	1,523.2	148.9	8.9%
<i>% in</i>	98.8%	1.2%	<i>% out</i>	100.0%	0.0%			
<u>STA-2, Cell 1</u>								
WY2003	149.1	4.1	153.2	69.6	0.6	70.3	83.0	54.1%
WY2004	262.1	3.7	265.8	135.5	1.1	136.7	129.2	48.6%
WY2005	250.6	3.5	254.1	146.5	1.2	147.7	106.4	41.9%
WY2006	248.3	4.1	252.4	143.7	1.1	144.8	107.6	42.6%
WY2007	240.0	3.5	243.5	168.5	1.5	170.0	73.5	30.2%
TOTAL	1,150.1	19.0	1,169.1	664.0	5.5	669.5	499.6	42.7%
<i>% in</i>	98.4%	1.6%	<i>% out</i>	99.2%	0.8%			

Table 11. Continued.

	Inflows <sup>b</sup>			Outflows <sup>b</sup>			Retained	% Ret
	I <sub>s</sub>	P	∑inflow	O <sub>s</sub>	O <sub>g</sub>	∑outflow		
<u>STA-2, Cell 2</u>								
WY2003	208.3	4.6	212.9	103.1	0.4	103.5	109.3	51.4%
WY2004	410.6	4.1	414.7	266.4	1.7	268.1	146.6	35.4%
WY2005	678.9	3.9	682.8	431.2	2.8	433.9	248.9	36.5%
WY2006	582.2	4.6	586.8	311.5	2.5	314.0	272.8	46.5%
WY2007	537.4	3.9	541.3	332.4	2.9	335.4	205.9	38.0%
TOTAL	2,417.3	21.1	2,438.5	1,444.7	10.3	1,455.0	983.5	40.3%
<i>% in</i>	99.1%	0.9%	<i>% out</i>	99.3%	0.7%			
<u>STA-2, Cell 3</u>								
WY2003	291.3	4.6	295.9	129.2	20.7	149.8	146.1	49.4%
WY2004	505.7	4.1	509.9	301.4	41.1	342.5	167.4	32.8%
WY2005	647.3	3.9	651.2	413.8	31.5	445.3	205.9	31.6%
WY2006	470.2	4.6	474.8	348.5	29.1	377.6	97.2	20.5%
WY2007	250.9	3.9	254.8	203.5	25.8	229.3	25.5	10.0%
TOTAL	2,165.4	21.1	2,186.6	1,396.3	148.2	1,544.5	642.1	29.4%
<i>% in</i>	99.0%	1.0%	<i>% out</i>	90.4%	9.6%			
<u>STA-3/4, Cell 1A</u>								
WY2006	361.1	6.7	367.8	800.5	0.0	800.5	-432.7	-118%
WY2007	766.4	5.1	771.5	4.2	0.0	4.2	767.3	99.5%
TOTAL	1,127.6	11.8	1,139.4	804.7	0.0	804.7	334.6	29.4%
<i>% in</i>	99.0%	1.0%	<i>% out</i>	100.0%	0.0%			
<u>STA-3/4, Cell 1B</u>								
WY2006	799.8	7.7	807.5	491.1	0.0	491.1	316.4	39.2%
WY2007	9.0	5.8	14.8	372.2	0.0	372.2	-357.4	-2416%
TOTAL	808.8	13.5	822.3	863.3	0.0	863.3	-41.0	-5.0%
<i>% in</i>	98.4%	1.6%	<i>% out</i>	100.0%	0.0%			
<u>STA-3/4, Cell 2A</u>								
WY2006	377.8	5.6	383.4	408.1	0.0	408.1	-24.7	-6.5%
WY2007	564.7	4.3	569.0	92.3	0.0	92.3	476.7	83.8%
TOTAL	942.5	9.8	952.3	500.3	0.0	500.3	452.0	47.5%
<i>% in</i>	99.0%	1.0%	<i>% out</i>	100.0%	0.0%			
<u>STA-3/4, Cell 2B</u>								
WY2006	408.2	6.4	414.5	296.0	0.0	296.0	118.5	28.6%
WY2007	110.5	4.8	115.4	294.1	0.0	294.1	-178.8	-155%
TOTAL	518.7	11.2	529.9	590.2	0.0	590.2	-60.2	-11.4%
<i>% in</i>	97.9%	2.1%	<i>% out</i>	100.0%	0.0%			
<u>STA-3/4, Cell 3</u>								
WY2006	193.0	10.1	203.0	129.9	0.0	129.9	73.2	36.0%
WY2007	477.7	7.7	485.3	219.2	0.0	219.2	266.1	54.8%
TOTAL	670.6	17.7	688.4	349.1	0.0	349.1	339.3	49.3%
<i>% in</i>	97.4%	2.6%	<i>% out</i>	100.0%	0.0%			

Table 11. Continued.

	Inflows <sup>b</sup>			Outflows <sup>b</sup>			Retained	% Ret
	I <sub>s</sub>	P	Σinflow	O <sub>s</sub>	O <sub>g</sub>	Σoutflow		
<u>STA-5, North Flow-way</u>								
WY2001	80.6	3.2	83.9	54.7	20.6	75.2	8.6	10.3%
WY2002	220.8	3.0	223.8	157.1	18.9	176.0	47.7	21.3%
WY2003	220.8	4.0	224.8	211.0	15.9	226.9	-2.1	-1.0%
WY2004	230.4	3.8	234.2	165.3	16.4	181.7	52.6	22.4%
WY2005	196.5	3.5	200.1	119.8	11.7	131.6	68.5	34.2%
WY2006	264.5	3.4	267.8	173.3	17.6	190.8	77.0	28.7%
WY2007	116.7	3.5	120.2	94.8	12.4	107.2	13.0	10.9%
TOTAL	1,330.3	24.4	1,354.7	976.0	113.3	1,089.4	265.3	19.6%
<i>% in</i>	98.2%	1.8%	<i>% out</i>	89.6%	10.4%			
<u>STA-5, South Flow-way</u>								
WY2001	92.8	3.2	96.0	38.4	41.0	79.4	16.6	17.3%
WY2002	183.6	3.0	186.5	63.0	32.3	95.4	91.2	48.9%
WY2003	187.1	4.0	191.1	99.2	48.4	147.6	43.5	22.7%
WY2004	147.5	3.8	151.3	59.6	40.5	100.2	51.1	33.8%
WY2005	115.0	3.5	118.5	80.0	50.8	130.8	-12.3	-10.3%
WY2006	209.9	3.4	213.2	146.8	29.9	176.8	36.5	17.1%
WY2007	38.9	3.5	42.4	8.4	8.2	16.6	25.8	60.8%
TOTAL	974.7	24.4	999.1	495.5	251.2	746.8	252.4	25.3%
<i>% in</i>	97.6%	2.4%	<i>% out</i>	66.4%	33.6%			
<u>STA-6, Cell 3</u>								
WY2003	25.9	0.5	26.4	9.8	5.4	15.2	11.2	42.5%
WY2004	49.9	0.5	50.4	29.9	19.1	49.0	1.4	2.7%
WY2005	40.3	0.5	40.8	17.3	12.5	29.8	11.0	26.9%
WY2006	38.1	0.5	38.5	21.3	7.8	29.0	9.5	24.7%
WY2007	33.2	0.3	33.5	16.3	14.9	31.2	2.3	6.8%
TOTAL	187.4	2.3	189.7	94.5	59.7	154.3	35.4	18.7%
<i>% in</i>	98.8%	1.2%	<i>% out</i>	61.3%	38.7%			
<u>STA-6, Cell 5</u>								
WY2003	31.6	1.2	32.9	11.1	4.8	15.9	16.9	51.6%
WY2004	53.2	1.4	54.6	37.6	11.1	48.7	5.8	10.7%
WY2005	35.3	1.3	36.6	22.6	9.3	31.9	4.7	12.9%
WY2006	28.6	1.2	29.7	19.2	4.6	23.7	6.0	20.2%
WY2007	32.7	0.7	33.4	16.3	8.7	24.9	8.5	25.4%
TOTAL	181.355	5.800	187.155	106.890	38.318	145.208	41.947	22.4%
<i>% in</i>	96.9%	3.1%	<i>% out</i>	73.6%	26.4%			

<sup>a</sup> All budget terms expressed as metric tonnes of nitrogen.

<sup>b</sup> I<sub>s</sub> = surface water inflow; P = precipitation; O<sub>s</sub> = surface water outflow; O<sub>g</sub> = groundwater outflow; Retained = Σinflow – Σoutflow; %Ret = (retained/Σinflow)\*100.