Appendix 5-1: Water Budgets, Total Phosphorus Budgets and Treatment Performance in STA Treatment Cells and Flow-ways

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This appendix presents the Water Year 2011 (WY2011) (May 1, 2010–April 30, 2011) and period of record (POR) water budget and total phosphorus (TP) budgets for individual Stormwater Treatment Area (STA) treatment cells and flow-ways (see Chapter 5, Figures 5-1 and 5-2 of this volume). The flow records and water quality sites queried to develop these budgets are listed in **Table 1**. The District conducts the field sampling and laboratory analyses associated with this effort under the Everglades Construction Project Operations Monitoring Project. Water budgets were developed using the best available data at the time of this report, which may reflect revisions to data reported in previous South Florida Environmental Reports (SFERs). Future SFERs likewise may contain revisions to the data provided in this report.

Annual and POR water budgets were developed for all operational cells/flow-ways (**Tables 2** through **7**). Surface flow was calculated using a hydraulic equation developed for each water control structure. Rainfall volume was measured at rain gauges located within or near each STA. Evapotranspiration (ET) was estimated from first-order models with coefficients specific to different wetland vegetation communities. Groundwater outflow was estimated as seepage through the perimeter levees, and is based on head differences between the STA and outside area water levels, levee length, and a first-order seepage coefficient [cubic feet per second per mile per feet (cfs/mi/ft)] optimized for each STA. All water budget components were calculated on a daily basis and aggregated over longer periods. The Water Budget Application tool provided inflow seepage, outflow groundwater, rainfall, ET, and change in storage volumes. Inflow seepage and outflow groundwater estimates were calculated for STA-2, STA-5, and STA-6, but have not been calculated for STA-1E, STA-1W, or STA-3/4. Residuals to the TP budgets were regarded as mass retained within the cell/flow-way. The water budget residual was calculated by adding the total outflow volume and change in storage then subtracting the total inflow volume. The water budget error was estimated by dividing the residual by the average of the total inflow and outflow volume.

TP concentrations were monitored at the inflow and outflow of each cell/flow-way using composited samples (from either flow- or time-proportional auto-samplers) or weekly grab samples when auto-sampler data is not available. Annual and POR TP budgets were developed for each cell/flow-way. The TP loads in surface water inflow and outflow were calculated using a Microsoft Excel VBA application that accessed DBHYDRO (Reardon and Germain, 2005) or by using the web-based Nutrient Load Program. Both positive and negative (i.e., reverse) flows at water control structures were used in these calculations. The TP load in precipitation was based on annual rainfall volume multiplied by the median rainfall TP concentration [4 parts per billion (ppb)] monitored at STA-1W (Site ENR308) from May 1999 through April 30, 2011. The TP load in groundwater outflow was based on the annual groundwater outflow volume (where available) multiplied by the annual geometric mean of the annual inflow and outflow TP flow-

weighted mean concentration (FWMC) for each cell/flow-way. The acreage assumed for each STA cell or flow-way was taken from the STA schematics. Because seepage and groundwater estimates are not available for all the STAs, the hydraulic and phosphorus loading rates are calculated using surface water volumes.

TP removal coefficients were calculated for the water year using a first-order model following Kadlec and Knight (1996):

$$k = \ln[(Cin/Cout)*((Qin + Qout)/2)/A)] \qquad \textit{Equation 5.1}$$

where k is the TP removal coefficient [meters/year (m/yr)], C_{in} is the inflow TP FWMC (ppb), C_{out} is the outflow TP FWMC (ppb), Q_{in} is the inflow water load in cubic meters (m^3), Q_{out} is the outflow water load (m^3), A is the cell/flow-way surface area [square meter (m^2)]. Because k values were used only to assess the relative treatment performance of cells/flow-ways and not for design, **Equation 5.1** was determined to be sufficient for this purpose.

Budgets were prepared for the following cells and flow-ways:

- **STA-1E.** Cells 3, 4N, 4S, 5, 6, and 7 budget calculations start in WY2007. Budgets were not prepared for Cells 1 and 2 because they remain under restricted operations for the Periphyton Stormwater Treatment Area Demonstration Project. Budgets for the Central Flow-way were estimated by using the inflow volume and TP concentrations collected at the inflows to Cell 3 and the outflow was estimated using the outflow volume and TP concentrations measured at the outflow of Cell 4S. The rainfall, ET, and change in storage components were estimated by summing the respective volumes for Cells 3, 4N, and 4S. Budgets for the Western Flow-way were estimated by using the inflow volume and TP concentrations collected at the inflows to Cells 5 and 7 and the outflow volume and TP concentrations measured at the outflow of Cell 6. The rainfall, ET, and change in storage components were estimated by summing up the respective volumes for Cells 5, 6, and 7.
- **STA-1W.** Cells 1, 1A, 2, 3, 1B+3, and 4, and the Eastern, Western and Northern flow-ways budget calculations start in WY2001. Budgets were initially prepared for Cells 1, 2, 3, and 4 and the Northern Flow-way (Cells 5A and 5B) starting in WY2001. Budgets for the Eastern Flow-way were estimated by using the inflow volume and TP concentrations collected at the inflows to Cell 1 and the outflow volume and TP concentrations measured at the outflow of Cell 3. The rainfall, ET, and change in storage components were estimated by summing the respective volumes for Cells 1 and 3. In previous SFERs, the volume and TP loads collected at the G-255 structure (inflow to Cell 2) was considered to be part of the Cell 1 outflow term; in this report, the volume and TP loads from G-255 were subtracted from the Cell 1 and Cell 1A inflow term. Budgets for the Western Flow-way for WY2001–WY2004 were estimated by using the inflow volume and TP concentrations collected at the inflows to Cell 2 and the outflow volume and TP concentrations measured at the outflow of Cell 4. The rainfall, ET, and change in storage components were estimated by summing the respective volumes for Cells 2 and 4. Starting in WY2009, the water budgets were estimated on the entire flow-way instead of individual treatment cells.

  Flow monitoring was effectively discontinued at the G-253 levee separating Cells 1 and 3 in WY2006 and at the G-254 levee separating Cells 2 and 4 in WY2004. New levees were built that divided Cell 1 into Cells 1A and 1B (levee G-248) and divided Cell 2 into Cells 2A and 2B (levee G-249). The inflow culverts into

Cell 2 (G-255) were replaced in 2005 and flow records for the new culverts started in calendar year 2008. Water budgets for the Eastern and Western flow-ways were not calculated during the period when construction and rehabilitation activities occurred in these flow-ways.

- **STA-2.** Cell 1 budget calculations start in WY2003, Cells 2 and 3 budget calculations start in WY2002, and Cell 4 budget calculation starts in WY2009. In WY2006, the outflow water quality sampling location was changed from G-330A to structure G-330D.
- **STA-3/4.** Cells 1A, 1B, 2A, 2B, and 3 budget calculations start in WY2006 and Cells 3A and 3B budget calculations start in WY2009. Cell 3 was divided into two cells (3A and 3B) by constructing levee G-384 in WY2005. In previous SFERs, the outflow for Cell 2B did not include the STA-3/4 Periphyton Stormwater Treatment Area Implementation Project (PSTA) outflow station G-388; in this reporting, G-388 flows and TP loads are included. Budgets for the Eastern Flow-way was estimated by using the inflow volume and TP concentrations collected at the inflows to Cell 1A and the outflow volume and TP concentrations measured at the outflows of Cell 1B; budgets for the Central Flow-way were estimated by using the inflow volume and TP concentrations collected at the inflows to Cell 2A and the outflow volume and TP concentrations measured at the outflows of Cell 2B; and budgets for the Eastern Flow-way were estimated by using the inflow volume and TP concentrations collected at the inflows to Cell 3 and the outflow volume and TP concentrations measured at the outflows of Cell 3 until the divide levee was installed, then the inflows into Cell 3A and outflows from Cell 3B were used. The rainfall, ET, and change in storage components were estimated by summing the respective volumes for the treatment cells in each flow-way.
- **STA-5.** The Northern and Central flow-ways budget calculations start in WY2001 and Cells 1A, 1B, 2A, 2B, 3A, and 3B budget calculations start in WY2009. Flow monitoring was initiated at the G-343 levee in WY2009, which enabled the calculation of separate budgets for Cells 1A, 1B, 2A, and 2B rather than combined budgets for the North and Center flow-ways as in previous years. Note that the cells that now comprise the Center Flow-way (Cells 2A and 2B) were referred to as the Southern Flow-way in SFERs published before Cells 3A and 3B were constructed. With the construction of Compartment C, the Northern Flow-way is now referred to as Flow-way 1, the Center Flow-way is referred to as Flow-way 2, and the Southern Flow-way is referred to as Flow-way 3.

  From WY2009 to present, budgets for Flow-way 1 were estimated by using the inflow volume and TP concentrations collected at the inflows to Cell 1A and the outflow volume and TP concentrations measured at the outflows of Cell 1B; budgets for Flow-way 2 were estimated by using the inflow volume and TP concentrations collected at the inflows to Cell 2A and the outflow volume and TP concentrations measured at the outflows of Cell 2B; and budgets for Flow-way 3 were estimated by using the inflow volume and TP concentrations collected at the inflows into Cell 3A and outflows from Cell 3B were used. The rainfall, ET, and change in storage components were estimated by summing the respective volumes for the treatment cells in each flow-way.
- **STA-6.** Because the water quality data for Cells 3 and 5 begin in October 2002 and are only for a partial water year, budget calculation begins for the full water year WY2004; Section 2 budget calculations start in WY2009. For Cells 3 and 5

from WY2004–WY2008, the inflow volumes and water quality collected from the weir structures G-601, G-602, and G-603; from WY2009 to present, flows and water quality collected from the improved inflow structures (G-353s) were used. In previous SFERs, the weir structures were used for inflow volumes for WY2009 and WY2010.

Alterations to these budgets were necessitated by various infrastructure changes in the STAs over the years. Details regarding the major operational events, such as construction activities or rehabilitation efforts can be found in the sections of this and previous SFERs regarding STA performance and in the 2010 SFER, Appendix 5-3 (through WY2009).

Table 1. The flow records (referred to as DBKEY) and water quality sites used to estimate the Stormwater Treatment Area (STA) cell-by-cell and flow-way water and total phosphorus (TP) budgets. Water Year (WY) runs from May 1 through April 30.

STA	Treatment Cell	Region	Start Date	End Date	Flow Station	Prefered DBKEY	Source DBKEY	Source DBKEY	Water Quality Station	Region	Start Date	End Date	Flow Station	Prefered DBKEY	Source DBKEY	Source DBKEY	Water Quality Station
STA-1E	Cell 3	Inflow	WY2007	Present	S366A	W3906	SD001		S366B	Outflow	WY2007	Present	S367A		TA349		S367B
					S366B	W3907	SD002		S366B				S367B		TA350		S367B
					S366C	W3908	SD007		S366D				S367C		TA312		S367D
					S366D	W3909	SD003		S366D				S367E		TA352		S367D
					S366E	W3910	SD008		S366D				S367D		TA351		S367D
	Cell 4N	Inflow	WY2007	Present	S367A		TA349		S367B	Outflow	WY2007	Present	S368A		SG581		S368B
					S367B		TA350		S367B				S368B		SG583		S368B
					S367C		TA312		S367D				S368C		SG585		S368D
					S367D		TA351		S367D				S368D		SG591		S368D
					S367E		TA352		S367D				S368E		SG593		S368D
	Cell 4S	Inflow	WY2007	Present	S368A		SG581		S368B	Outflow	WY2007	Present	S369A	W3911	TA355		S369B
					S368B		SG583		S368B				S369B	W3912	TA356		S369B
					S368C		SG585		S368D				S369C	W3913	TA318		S369C
					S368D		SG591		S368D				S369D	W3914	TA357		S369C
					S368E		SG593		S368D								
					S361	TP368	T0904		S361								
	Cell 5	Inflow	WY2007	Present	S370A	W3915	SG921		S370A	Outflow	WY2007	Present	S371A		TA324		S371A
					S370B	W3916	SG927		S370A				S371B		TA324		S371A
					S370C	W3917	SG929		S370C				S371C		TA324		S371C
	Cell 6	Inflow	WY2007	Present	S371A		TA324		S371A	Outflow	WY2007	Present	S372A	W3918	TN560		S372B
					S371B		TA324		S371A				S372B	W3916	TY236		S372B
					S371C		TA324		S371C				S372C	W3920	TA330		S372B
					S374A		TB006		S374A				S372D	W3921	TN561		S372D
					S374B		TA336		S374A				S372E	W3922	TY238		S372D
					S374C		TB008		S374C								
	Cell 7	Inflow	WY2007	Present	S373A	W3923	SG931		S373A	Outflow	WY2007	Present	S374A		TB006		S374A
					S373B	W3924	SG937		S373B				S374B		TA336		S374A
	Central Flow-way	Inflow	WY2007	Present	Cell 3 Inflow					Outflow	WY2007	Present	Cell 4S outflow				
	Western Flow-way	Inflow	WY2007	Present	Cell 5 + Cell 7 Inflows					Outflow	WY2007	Present	Cell 6 outflow				

Table 1. Continued.

STA	Treatment Cell	Region	Start Date	End Date	Flow Station	Prefered DBKEY	Source DBKEY	Source DBKEY	Water Quality Station	Region	Start Date	End Date	Flow Station	Prefered DBKEY	Source DBKEY	Source DBKEY	Water Quality Station
STA-1W	Cell 1	Inflow	WY2001	WY2006	G303	W3880	L9830		G303	Outflow	WY2001	WY2006	G255A		16731		G255
					G250s	W3883	JK278		ENR002				G255B		16732		G255
													G255C		16733		G255
													G255D		16734		G255
													G255E		16735		G255
													G255F		SC986		G255
													G255G		SC987		G255
													G253A		16237		G253C
													G253B		16238		G253C
													G253C		16208		G253C
													G253D		16209		G253C
													G253E		16247		G253C
													G253F		16248		G253G
													G253G		16210		G253G
													G253H		16211		G253G
													G253I		16249		G253G
													G253J		16250		G253G
	Cell 1A	Inflow	WY2009	Present	G303	W3880	L9830		G303	Outflow	WY2009	Present	G255	WF797	VM838		G255
					G250s	W3883	JK278		ENR002				G248A		VW982		G248B
													G248B		VW983		G248B
													G248C		VW984		G248B
													G248D		VW985		G248B
	Cell 1B+3	Inflow	WY2009	Present	G248A		VW982		G248B	Outflow	WY2009	Present	G251	JW222	15848		ENR012
					G248B		VW983		G248B				G259	W3884	SG917		ENR012
					G248C		VW984		G248B				G308	W3881	L9846		G308
					G248D		VW985		G248B								
	Cell 2	Inflow	WY2001	WY2004	G255A		16731		G255	Outflow	WY2001	WY2004	G254A1		N8575		G254B
					G255B		16732		G255				G254A		16212		G254B
					G255C		16733		G255				G254B1		N8576		G254B
					G255D		16734		G255				G254B		16213		G254B
					G255E		16735		G255				G254C1		N8577		G254B
					G255F		SC986		G255				G254C		16251		G254D
					G255G		SC987		G255				G254D1		N8578		G254D
													G254D		16214		G254D
													G254E		16215		G254D

Table 1. Continued.

STA	Treatment Cell	Region	Start Date	End Date	Flow Station	Prefered DBKEY	Source DBKEY	Source DBKEY	Water Quality Station	Region	Start Date	End Date	Flow Station	Prefered DBKEY	Source DBKEY	Source DBKEY	Water Quality Station
STA-1W	Cell 3	Inflow	WY2001	WY2006	G253A		16237		G253C	Outflow	WY2001	WY2006	G251	JW222	15848		ENR012
					G253B		16238		G253C				G259	W3884	SG917		ENR012
					G253C		16208		G253C				G308	W3881	L9846		G308
					G253D		16209		G253C								
					G253E		16247		G253C								
					G253F		16248		G253G								
					G253G		16210		G253G								
					G253H		16211		G253G								
					G253I		16249		G253G								
					G253J		16250		G253G								
					G256A		16736		G256								
					G256B		16737		G256								
					G256C		16738		G256								
					G256D		16739		G256								
					G256E		16740		G256								
	Cell 4	Inflow	WY2001	WY2004	G254A1		N8575		G254B	Outflow	WY2001	WY2004	G256A		16736		G256
					G254A		16212		G254B				G256B		16737		G256
					G254B1		N8576		G254B				G256C		16738		G256
					G254B		16213		G254B				G256D		16739		G256
					G254C1		N8577		G254B				G256E		16740		G256
					G254C		16251		G254D				G258		SG916		G309
					G254D1		N8578		G254D				G309	W3882	L9849		G309
					G254D		16214		G254D				G307		VM853		G307
					G254E		16215		G254D								

Table 1. Continued.

STA	Treatment Cell	Region	Start Date	End Date	Flow Station	Prefered DBKEY	Source DBKEY	Source DBKEY	Water Quality Station	Region	Start Date	End Date	Flow Station	Prefered DBKEY	Source DBKEY	Source DBKEY	Water Quality Station
STA-1W	Northern Flow-way	Inflow	WY2001	Present	G304A	W3860	OB425		G302	Outflow	WY2001	Present	G306A	W3870	L9866		G306C
					G304B	W3861	OU412		G302				G306B	W3871	L9867		G306C
					G304C	W3862	OU413		G302				G306C	W3872	L9868		G306C
					G304D	W3863	OU414		G302				G306D	W3873	L9869		G306C
					G304E	W3864	OU415		G302				G306E	W3874	L9870		G306C
					G304F	W3865	OU416		G302				G306F	W3875	L9871		G306G
					G304G	W3866	OU417		G302				G306G	W3876	L9872		G306G
					G304H	W3867	OU418		G302				G306H	W3877	L9873		G306G
					G304I	W3868	OU419		G302				G306I	W3878	L9874		G306G
					G304J	W3869	OB434		G302				G306J	W3879	L9875		G306G
	Eastern Flow-way		WY2001	WY2006	Cell 1 inflow					Outflow	WY2001	Present	Cell 3 outflow				
			WY2009	Present	Cell 1A inflow												
	Western FW	Inflow	WY2001	WY2004	Cell 2 inflow					Outflow	WY2001	WY2004	Cell 4 outflow				
		Inflow	WY2009	Present	G255	WF797	VM838		G255	Outflow	WY2009	Present	G258		SG916		G309
													G309	W3882	L9849		G309
													G307		VM853		G307

Table 1. Continued.

STA	Treatment Cell	Region	Start Date	End Date	Flow Station	Prefered DBKEY	Source DBKEY	Source DBKEY	Water Quality Station	Region	Start Date	End Date	Flow Station	Prefered DBKEY	Source DBKEY	Source DBKEY	Water Quality Station
STA-2	Cell 1	Inflow	WY2003	Present	G329A	W3926	N0748		G329B	Outflow	WY2003	Jun-05	G330A	W3930	LG706		G330A
					G329B	W3927	LG703		G329B				G330B	W3931	LG707		G330A
					G329C	W3928	LG704		G329B				G330C	W3932	LG708		G330A
					G329D	W3929	LG705		G329B				G330D	W3933	LG709		G330A
													G330E	W3934	LG710		G330A
										Outflow	Jul-05	Present	G330A	W3930	LG706		G330D
													G330B	W3931	LG707		G330D
													G330C	W3932	LG708		G330D
													G330D	W3933	LG709		G330D
													G330E	W3934	LG710		G330D
	Cell 2	Inflow	WY2002	Present	G331A	W3935	LG711		G331D	Outflow	WY2002	Present	G332	W3942	LG719		G332
					G331B	W3936	LG712		G331D								
					G331C	W3937	LG713		G331D								
					G331D	W3938	LG714		G331D								
					G331E	W3939	LG715		G331D								
					G331F	W3940	LG716		G331D								
					G331G	W3941	LG718		G331D								
	Cell 3	Inflow	WY2002	Present	G333A	W3943	LG720		G333C	Outflow	WY2002	Present	G334	W3948	LG725		G334
					G333B	W3944	LG721		G333C								
					G333C	W3945	LG722		G333C								
					G333D	W3946	LG723		G333C								
					G333E	W3947	LG724		G333C								
	Cell 4	Inflow	WY2009	Present	G367A		W4349		G337A	Outflow	WY2009	Present	G368		VN385		G368
					G367B		VN382		G337A								
					G367C		VN383		G337A								
					G367D		W4350		G337A								
					G367E		VN384		G337A								
					G367F		VW834		G337A								

Table 1. Continued.

STA	Treatment Cell	Region	Start Date	End Date	Flow Station	Prefered DBKEY	Source DBKEY	Source DBKEY	Water Quality Station	Region	Start Date	End Date	Flow Station	Prefered DBKEY	Source DBKEY	Source DBKEY	Water Quality Station
STA-3/4	Cell 1A	Inflow	WY2006	Present	G374A	W3964	T8434		G374B	Outflow	WY2006	Present	G375A	T8440			G375B
					G374B	W3965	T8435		G374B				G375B	T8441			G375B
					G374C	W3966	T8436		G374B				G375C	T8442			G375B
					G374D	W3967	T8437		G374E				G375D	T8443			G375E
					G374E	W3968	T8438		G374E				G375E	T8444			G375E
					G374F	W3969	T8439		G374E				G375F	T8445			G375E
					G382A	T9990			G378B				G382A	T9990			G375E
													G385	VW873			G375B
	Cell 1B	Inflow	WY2006	Present	G375A		T8440		G375B	Outflow	WY2006	Present	G376ABC	TA445	WN165		G376B
					G375B		T8441		G375B				G376DEF	TA446	WN166		G376E
					G375C		T8442		G375B								
					G375D		T8443		G375E								
					G375E		T8444		G375E								
					G375F		T8445		G375E								
					G385		VW873		G375B								
	Cell 2A	Inflow	WY2006	Present	G377A	W3970	T9945		G377B	Outflow	WY2006	Present	G378A	T9950			G378B
					G377B	W3971	T9946		G377B				G378B	T9951			G378B
					G377C	W3972	T9947		G377B				G378C	T9952			G378B
					G377D	W3973	T9948		G377D				G378D	T9953			G378D
					G377E	W3974	T9949		G377D				G378E	T9954	UT729		G378D
					G382A	T9990			G375E				G386	VW874			G378B
					G382B	T9992			G381B				G382A	T9990			G378B
													G382B	T9992			G378D
	Cell 2B	Inflow	WY2006	Present	G378A		T9950		G378B	Outflow	WY2006	Present	G379ABC	TA449	WN167		G379B
					G378B		T9951		G378B				G379DE	TA450	WN168		G379D
					G378C		T9952		G378B				G388	W3981	V2504		G388
					G378D		T9953		G378D								
					G378E		T9954		G378D								
					G386		VW874		G378B								

Table 1. Continued.

STA	Treatment Cell	Region	Start Date	End Date	Flow Station	Prefered DBKEY	Source DBKEY	Source DBKEY	Water Quality Station	Region	Start Date	End Date	Flow Station	Prefered DBKEY	Source DBKEY	Source DBKEY	Water Quality Station
STA-3/4	Cell 3	Inflow	WY2006	WY2008	G380A	W3975	T9955		G380B	Outflow	WY2006	WY2008	G381A	TA296			G381B
					G380B	W3976	T9956		G380B				G381B	TA586	TA297		G381B
					G380C	W3977	T9957		G380B				G381C	TA298			G381B
					G380D	W3978	T9958		G380E				G381D	TA299			G381E
					G380E	W3979	T9959		G380E				G381E	TA587	TA300		G381E
					G380F	W3980	T9960		G380E				G381F	TA301			G381E
					G382B	T9992			G378D				G382B	T9992			G381B
	Cell 3A	Inflow	WY2009	Present	G380A	W3975	T9955		G380B	Outflow	WY2009	Present	G384A		W1927		G384B
					G380B	W3976	T9956		G380B				G384B		W1928		G384B
					G380C	W3977	T9957		G380B				G384C		VV483		G384B
					G380D	W3978	T9958		G380E				G384D		W1929		G384E
					G380E	W3979	T9959		G380E				G384E		W1930		G384E
					G380F	W3980	T9960		G380E				G384F		W1931		G384E
													G387		VW875		G384B
	Cell 3B	Inflow	WY2009	Present	G384A	W1927			G384B	Outflow	WY2009	Present	G381A-B	TA447	WN163		G381B
					G384B	W1928			G384B				G381C-F	TA448	WN164		G381E
					G384C	VV483			G384B				G382B	T9992			G381B
					G384D	W1929			G384E								
					G384E	W1930			G384E								
					G384F	W1931			G384E								
					G387	VW875			G384B								
					G382B	T9992			G378D								
	Eastern Flow-way	Inflow	WY2006	Present	Cell 1A inflow					Outflow	WY2006	Present	Cell 1B outflow				
	Central Flow-way	Inflow	WY2006	Present	Cell 2A inflow					Outflow	WY2006	Present	Cell 2B outflow				
	Eastern Flow-wayW	Inflow	WY2006	WY2008	Cell 3 inflow					Outflow	WY2006	WY2008	Cell 3 outflow				

Table 1. Continued.

STA	Treatment Cell	Region	Start Date	End Date	Flow Station	Prefered DBKEY	Source DBKEY	Source DBKEY	Water Quality Station	Region	Start Date	End Date	Flow Station	Prefered DBKEY	Source DBKEY	Source DBKEY	Water Quality Station
STA-5	Cell 1A	Inflow	WY2009	Present	G342A	J6406	JJ111		G342A	Outflow	WY2009	Present	G343A		VG491		G343B
					G342B	J6398	JJ116		G342B				G343B		VV382		G343B
					G349A	JJ838	JJ130		G349A				G343C		VV383		G343B
													G343D		VV419		G343B
	Cell 1B	Inflow	WY2009	Present	G343A	VG491			G343B	Outflow	WY2009	Present	G344A	J0719	JJ117	JJ131	G344A
					G343B	VV382			G343B				G344B	J0720	JJ118	JJ136	G344B
					G343C	VV383			G343B				G345	P4547			G344B
					G343D	VV419			G343B								
					G349C	VV392			G349C								
					G507	SJ382	SJ383		G507								
					G345	P4547			G344C								
	Cell 2A	Inflow	WY2009	Present	G342C	J6407	LS293		G342C	Outflow	WY2009	Present	G343E		VV420		G343F
					G342D	J6405	JJ126		G342D				G343F		VV384		G343F
													G343G		VV385		G343F
													G343H		VV421		G343F
	Cell 2B	Inflow	WY2009	Present	G343E	VV420			G343F	Outflow	WY2009	Present	G344C	J0721	JJ119	JJ141	G344C
					G343F	VV384	PT105		G343F				G344D	J0722	JJ120	JJ146	G344D
					G343G	VV385	PT106		G343F				G345	P4547			G344C
					G343H	VV421			G343F								
					G345	P4547			G344B								
	Cell 3A	Inflow	WY2009	Present	G342E	WH024	VV399		G342E	Outflow	WY2009	Present	G343I		VW789		G343I
					G342F	WH025	VV406		G342F				G343J		VW790		G343J
	Cell 3B	Inflow	WY2009	Present	G343I		VW789		G343I	Outflow	WY2009	Present	G344E	WH026	VW787		G344E
					G343J		VW790		G343J				G344F	WH027	VW788		G344F
					G350B	JA352	JJ850		G350B								
	Flow-way 1	Inflow	WY2001	Present	G342A	J6406	JJ111		G342A	Outflow	WY2001	Present	G344A	J0719	JJ117		G344A
					G342B	J6398	JJ116		G342B				G344B	J0720	JJ118		G344B
					G349A	JJ838	JJ130		G349A				G345		P4547		G344B
					G349C		VV392		G349C								
					G507	SJ382	SJ383		G507								
	Flow-way 2	Inflow	WY2001	Present	G342C	J6407	LS293		G342C	Outflow	WY2001	Present	G344C	J0721	JJ119		G344C
					G342D	J6405	JJ126		G342D				G344D	J0722	JJ120		G344D
					G350A	JJ839	JJ129		G350A								
					G345		P4547		G344B								

Table 1. Continued.

STA	Treatment Cell	Region	Start Date	End Date	Flow Station	Prefered DBKEY	Source DBKEY	Source DBKEY	Water Quality Station	Region	Start Date	End Date	Flow Station	Prefered DBKEY	Source DBKEY	Source DBKEY	Water Quality Station
STA-6	Cell 3	Inflow	WY2004	WY2008	G603		J5568		G603	Outflow	WY2004	Present	G393ABC	MC959	J5569		G393B
			WY2009	Present	G353AB	WN363			G353B								
	Cell 5	Inflow	WY2004	WY2008	G601		J5566		G602	Outflow	WY2004	Present	G354ABC	MC958	J0939		G354C
			WY2004	WY2008	G602		J5567		G602								
			WY2009	Present	G353C	WN384			G353B								
	Section 2	Inflow	WY2009	Present	G396ABC	WN361			G396B	Outflow	WY2009	Present	G352ABC	WN362			G352B

Table 2. Annual and period-of-record water and total phosphorus budgets for treatment cells and flow-ways in STA-1E.

Location			*Inflow*												
	Area	On-Line status entire Water Year	PLR	HLR	PLR based on Surface Water	HLR based on Surface Water	Surface Water	Seepage	Rainfall	Σ Volume	Surface Water TP Load	Rainfall TP Load	Σ TP Load	Inflow FWM TP	Inflow FWM TP based on Surface Water
	(acres)	(Y/N)	($g/m^2/yr$)	(cm/day)	($g/m^2/yr$)	(cm/day)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(mt)	(mt)	(mt)	(ppb)	(ppb)
STA-1E, Cell 3	589														
WY2007		Y	2.192	4.4	2.189	4.2	29,589	-	1,691	31,280	5.217	0.008	5.225	135	143
WY2008		Y	6.574	14.1	6.570	13.8	97,393	-	2,177	99,570	15.660	0.011	15.671	128	130
WY2009		Y	4.486	8.7	4.481	8.4	59,475	-	2,225	61,700	10.682	0.011	10.693	140	146
WY2010		Y	3.022	3.7	3.016	3.3	23,186	-	3,079	26,265	7.189	0.015	7.204	222	251
WY2011		Y	0.429	1.2	0.426	1.0	6,859	-	1,670	8,529	1.016	0.008	1.024	97	120
POR							**216,502**		**10,842**	**227,344**	**39.763**	**0.053**	**39.816**	**142**	**149**
							95.2%	**NC**	**4.8%**		**99.9%**	**0.1%**			

Location	*Outflow*																
	Surface Water	Ground-water	Σ Surface Water + Groundwater	ET	Σ Volume	Change in Storage	Water Budget Residual	Water Budget Error	TP Load from Surface Water	Ground- water TP Load	Σ TP Load	Outflow FWM TP based on Surface Water	TP Retained Based on Surface Water	TP from Surface Water Retained	k based on Surface Water	TP Geo Mean based on Surface Water
	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(%)	(mt)	(mt)	(mt)	(ppb)	(mt)	(%)	(m/yr)	(ppb)
STA-1E, Cell 3																
WY2007	32,946	-	32,946	2,545	35,491	(616)	3,594	11%	2.703	-	2.703	67	2.514	48%	12.38	98
WY2008	99,605	-	99,605	2,547	102,152	1,018	3,600	4%	12.615	-	12.615	103	3.045	19%	12.17	116
WY2009	74,413	-	74,413	2,511	76,924	(987)	14,237	21%	12.117	-	12.117	132	(1.436)	-13%	3.39	139
WY2010	22,015	-	22,015	2,402	24,417	796	(1,052)	-4%	4.384	-	4.384	161	2.805	39%	5.18	201
WY2011	6,101	-	6,101	2,669	8,770	(144)	97	1%	0.542	-	0.542	72	0.474	46%	1.71	93
POR	**235,079**			**12,674**	**247,753**	**67**	**20,477**	**9%**	**32.361**		**32.361**	**112**	**7.402**	**18.6%**		
	94.9%	**NC**		**5.1%**					**100.0%**	**NC**						

Table 2. Continued.

Location	Area	On-Line status entire Water Year	*Inflow* PLR	HLR	PLR based on Surface Water	HLR based on Surface Water	Surface Water	Seepage	Rainfall	Σ Volume	Surface Water TP Load	Rainfall TP Load	Σ TP Load	Inflow FWM TP	Inflow FWM TP based on Surface Water
	(acres)	(Y/N)	($g/m^2/yr$)	(cm/day)	($g/m^2/yr$)	(cm/day)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(mt)	(mt)	(mt)	(ppb)	(ppb)
STA-1E, Cell 4N	645														
WY2007		Y	1.039	4.5	1.035	4.3	32,946	-	1,852	34,798	2.703	0.009	2.712	63	67
WY2008		Y	4.837	13.2	4.833	12.9	99,605	-	2,384	101,989	12.615	0.012	12.627	100	103
WY2009		Y	4.647	9.9	4.642	9.6	74,413	-	2,437	76,850	12.117	0.012	12.129	128	132
WY2010		Y	1.686	3.3	1.679	2.9	22,015	-	3,372	25,387	4.384	0.017	4.401	141	161
WY2011		Y	0.211	1.0	0.208	0.8	6,101	-	1,829	7,930	0.542	0.009	0.551	56	72
POR							**235,079**		**11,874**	**246,953**	**32.361**	**0.059**	**32.420**	**106**	**112**
							95%	**NC**	**5%**		**100%**	**0%**			

Location	*Outflow* Surface Water	Ground-water	Σ Surface Water + Groundwater	ET	Σ Volume	Change in Storage	Water Budget Residual	Water Budget Error	TP Load from Surface Water	Ground- water TP Load	Σ TP Load	Outflow FWM TP based on Surface Water	TP Retained Based on Surface Water	TP from Surface Water Retained	k based on Surface Water
	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(%)	(mt)	(mt)	(mt)	(ppb)	(mt)	(%)	(m/yr)
STA-1E, Cell 4N															
WY2007	36,497	-	36,497	2,787	39,284	(110)	4,377	12%	1.322	-	1.322	29	1.381	51%	13.42
WY2008	107,134	-	107,134	2,789	109,923	607	8,542	8%	3.592	-	3.592	27	9.023	71%	64.92
WY2009	70,925	-	70,925	2,749	73,674	(969)	(4,145)	-6%	2.845	-	2.845	33	9.272	76%	48.11
WY2010	23,272	-	23,272	2,630	25,902	743	1,258	5%	3.132	-	3.132	109	1.252	28%	4.19
WY2011	6,419	-	6,419	2,923	9,342	59	1,471	17%	0.583	-	0.583	74	(0.041)	-7%	-0.06
POR	**244,247**			**13,878**	**258,125**	**330**	**11,502**	**5%**	**11.474**		**11.474**	**38**	**20.887**	**65%**	
	95%	**NC**		**5%**					**100%**	**NC**					

Table 2. Continued.

Location			*Inflow*												
	Area	On-Line status entire Water Year	PLR	HLR	PLR based on Surface Water	HLR based on Surface Water	Surface Water	Seepage	Rainfall	Σ Volume	Surface Water TP Load	Rainfall TP Load	Σ TP Load	Inflow FWM TP	Inflow FWM TP based on Surface Water
	(acres)	(Y/N)	($g/m^2/yr$)	(cm/day)	($g/m^2/yr$)	(cm/day)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(mt)	(mt)	(mt)	(ppb)	(ppb)
STA-1E, Cell 4S	752														
WY2007		Y	0.777	5.3	0.774	5.1	45,520	-	2,160	47,680	2.354	0.011	2.365	40	42
WY2008		Y	1.615	13.8	1.610	13.5	121,664	-	2,779	124,443	4.901	0.014	4.915	32	33
WY2009		Y	1.243	9.4	1.239	9.1	81,920	-	2,841	84,761	3.770	0.014	3.784	36	37
WY2010		Y	1.601	4.0	1.595	3.6	32,029	-	3,931	35,960	4.853	0.019	4.872	110	123
WY2011		Y	0.264	1.7	0.261	1.4	12,739	-	2,133	14,872	0.793	0.011	0.804	44	50
POR							**293,871**		**13,844**	**307,715**	**16.671**	**0.068**	**16.740**	**44**	**46**
							96%	**NC**	**4.5%**		**99.6%**	**0.4%**			

Location	*Outflow*														
	Surface Water	Ground-water	Σ Surface Water + Groundwater	ET	Σ Volume	Change in Storage	Water Budget Residual	Water Budget Error	TP Load from Surface Water	Ground- water TP Load	Σ TP Load	Outflow FWM TP based on Surface Water	TP Retained Based on Surface Water	TP from Surface Water Retained	k based on Surface Water
	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(%)	(mt)	(mt)	(mt)	(ppb)	(mt)	(%)	(m/yr)
STA-1E, Cell 4S															
WY2007	39,978	-	39,978	3,250	43,228	96	(4,356)	-10%	1.097	-	1.097	22	1.257	53%	10.98
WY2008	119,011	-	119,011	3,252	122,263	545	(1,635)	-1%	2.724	-	2.724	19	2.177	44%	27.57
WY2009	81,162	-	81,162	3,205	84,367	(376)	(769)	-1%	1.535	-	1.535	15	2.235	59%	29.38
WY2010	30,570	-	30,570	3,067	33,637	(356)	(2,678)	-8%	2.085	-	2.085	55	2.768	57%	10.13
WY2011	10,594	-	10,594	3,408	14,002	58	(812)	-6%	0.586	-	0.586	45	0.207	26%	0.56
POR	**281,315**			**16,182**	**297,497**	**(33)**	**(10,251)**	**-3%**	**8.028**		**8.028**	**23**	**8.643**	**52%**	
	95%	**NC**		**5.4%**					**100%**	**NC**					

Table 2. Continued.

Location			*Inflow*												
	Area	On-Line status entire Water Year	PLR	HLR	PLR based on Surface Water	HLR based on Surface Water	Surface Water	Seepage	Rainfall	Σ Volume	Surface Water TP Load	Rainfall TP Load	Σ TP Load	Inflow FWM TP	Inflow FWM TP based on Surface Water
	(acres)	(Y/N)	($g/m^2/yr$)	(cm/day)	($g/m^2/yr$)	(cm/day)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(mt)	(mt)	(mt)	(ppb)	(ppb)
STA-1E, Cell 5	571														
WY2007		Y	8.905	5.6	8.901	5.4	36,757	-	1,640	38,397	20.570	0.008	20.578	434	454
WY2008		Y	0.480	1.2	0.475	0.9	6,120	-	2,110	8,230	1.098	0.010	1.108	109	145
WY2009		Y	4.503	6.6	4.498	6.2	42,685	-	2,157	44,842	10.395	0.011	10.406	188	197
WY2010		N	2.477	3.3	2.471	2.9	19,665	-	2,985	22,650	5.709	0.015	5.724	205	235
WY2011		N	0.055	0.4	0.051	0.2	1,318	-	1,619	2,937	0.119	0.008	0.127	35	73
POR							**106,546**		**10,511**	**117,057**	**37.891**	**0.052**	**37.943**	**263**	**288**
							91%	**NC**	**9%**		**100%**	**0%**			

Location	*Outflow*														
	Surface Water	Ground-water	Σ Surface Water + Groundwater	ET	Σ Volume	Change in Storage	Water Budget Residual	Water Budget Error	TP Load from Surface Water	Ground- water TP Load	Σ TP Load	Outflow FWM TP based on Surface Water	TP Retained Based on Surface Water	TP from Surface Water Retained	k based on Surface Water
	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(%)	(mt)	(mt)	(mt)	(ppb)	(mt)	(%)	(m/yr)
STA-1E, Cell 5															
WY2007	22,945	-	22,945	2,468	25,413	-	(12,984)	-41%	6.894	-	6.894	244	13.676	66%	9.91
WY2008	9,633	-	9,633	2,469	12,102	922	4,794	47%	1.558	-	1.558	131	(0.460)	-42%	0.43
WY2009	54,969	-	54,969	2,434	57,403	(705)	11,856	23%	22.117	-	22.117	326	(11.722)	-113%	-13.09
WY2010	23,669	-	23,669	2,329	25,998	(168)	3,180	13%	7.002	-	7.002	240	(1.293)	-23%	-0.22
WY2011	925	-	925	2,587	3,512	208	783	24%	0.323	-	0.323	283	(0.204)	-161%	-0.81
POR	**112,141**			**12,287**	**124,428**	**257**	**7,628**	**6%**	**37.894**		**37.894**	**274**	**(0.003)**	**0%**	
	90%	**NC**		**10%**					**100%**	**NC**					

Table 2. Continued.

Location			*Inflow*												
	Area	On-Line status entire Water Year	PLR	HLR	PLR based on Surface Water	HLR based on Surface Water	Surface Water	Seepage	Rainfall	Σ Volume	Surface Water TP Load	Rainfall TP Load	Σ TP Load	Inflow FWM TP	Inflow FWM TP based on Surface Water
	(acres)	(Y/N)	($g/m^2/yr$)	(cm/day)	($g/m^2/yr$)	(cm/day)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(mt)	(mt)	(mt)	(ppb)	(ppb)
STA-1E, Cell 6	1049														
WY2007		Y	3.177	4.0	3.174	3.8	47,392	-	3,012	50,404	13.474	0.015	13.489	217	230
WY2008		Y	0.649	2.1	0.645	1.8	22,018	-	3,877	25,895	2.738	0.019	2.757	86	101
WY2009		Y	6.978	7.2	6.974	6.9	86,196	-	3,963	90,159	29.605	0.020	29.625	266	278
WY2010		N	3.402	4.5	3.396	4.1	50,979	-	5,484	56,463	14.417	0.027	14.444	207	229
WY2011		N	0.101	0.4	0.098	0.2	2,609	-	2,975	5,584	0.416	0.015	0.430	62	129
POR							**209,193**		**19,311**	**228,504**	**60.650**	**0.095**	**60.745**	**216**	**235**
							92%	**NC**	**8.5%**		**99.8%**	**0.2%**			

Location	*Outflow*														
	Surface Water	Ground-water	Σ Surface Water + Groundwater	ET	Σ Volume	Change in Storage	Water Budget Residual	Water Budget Error	TP Load from Surface Water	Ground- water TP Load	Σ TP Load	Outflow FWM TP based on Surface Water	TP Retained Based on Surface Water	TP from Surface Water Retained	k based on Surface Water
	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(%)	(mt)	(mt)	(mt)	(ppb)	(mt)	(%)	(m/yr)
STA-1E, Cell 6															
WY2007	52,705	-	52,705	4,533	57,238	(6)	6,828	13%	9.976	-	9.976	153	3.498	26%	5.92
WY2008	23,391	-	23,391	4,536	27,927	360	2,392	9%	1.462	-	1.462	51	1.276	46%	4.54
WY2009	76,456	-	76,456	4,471	80,927	(402)	(9,634)	-11%	4.467	-	4.467	47	25.138	85%	41.86
WY2010	42,686	-	42,686	4,278	46,964	(1,072)	(10,570)	-20%	16.406	-	16.406	312	(1.989)	-14%	-4.17
WY2011	472	-	472	4,753	5,225	1,086	728	13%	0.083	-	0.083	142	0.333	77%	-0.04
POR	**195,711**			**22,571**	**218,282**	**(34)**	**(10,256)**	**-5%**	**32.394**		**32.394**	**134**	**28.256**	**47%**	
	90%	**NC**		**10.3%**					**100%**	**NC**					

Table 2. Continued.

Location	Area	On-Line status entire Water Year	*Inflow* PLR	HLR	PLR based on Surface Water	HLR based on Surface Water	Surface Water	Seepage	Rainfall	Σ Volume	Surface Water TP Load	Rainfall TP Load	Σ TP Load	Inflow FWM TP	Inflow FWM TP based on Surface Water
	(acres)	(Y/N)	($g/m^2/yr$)	(cm/day)	($g/m^2/yr$)	(cm/day)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(mt)	(mt)	(mt)	(ppb)	(ppb)
STA-1E, Cell 7	418														
WY2007		Y	4.756	5.4	4.752	5.1	25,593	-	1,200	26,793	8.039	0.006	8.045	243	255
WY2008		Y	1.044	2.4	1.040	2.1	10,539	-	1,545	12,084	1.759	0.008	1.767	119	135
WY2009		Y	5.328	6.4	5.324	6.1	30,649	-	1,579	32,228	9.006	0.008	9.014	227	238
WY2010		N	4.424	5.5	4.417	5.0	25,207	-	2,185	27,392	7.472	0.011	7.483	221	240
WY2011		N	0.011	0.3	0.008	0.0	72	-	1,185	1,257	0.013	0.006	0.019	12	145
POR							**92,059**		**7,694**	**99,753**	**26.289**	**0.038**	**26.327**	**214**	**232**
							92%	**NC**	**8%**		**100%**	**0%**			

Location	*Outflow* Surface Water	Ground-water	Σ Surface Water + Groundwater	ET	Σ Volume	Change in Storage	Water Budget Residual	Water Budget Error	TP Load from Surface Water	Ground- water TP Load	Σ TP Load	Outflow FWM TP based on Surface Water	TP Retained Based on Surface Water	TP from Surface Water Retained	k based on Surface Water
	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(%)	(mt)	(mt)	(mt)	(ppb)	(mt)	(%)	(m/yr)
STA-1E, Cell 7															
WY2007	24,447	-	24,447	1,806	26,253	(91)	(631)	-2%	6.581	-	6.581	218	1.458	18%	2.82
WY2008	12,385	-	12,385	1,808	14,193	205	2,314	18%	1.180	-	1.180	77	0.579	33%	4.69
WY2009	31,227	-	31,227	1,782	33,009	(3)	778	2%	7.488	-	7.488	194	1.518	17%	4.59
WY2010	27,310	-	27,310	1,705	29,015	69	1,692	6%	7.415	-	7.415	220	0.057	1%	1.68
WY2011	1,684	-	1,684	1,894	3,578	15	2,336	97%	0.093	-	0.093	45	(0.080)	-427%	0.76
POR	**97,053**			**8,995**	**106,048**	**195**	**6,489**	**6%**	**22.756**		**22.756**	**190**	**3.533**	**13%**	
	92%	**NC**		**8%**					**100%**	**NC**					

Table 2. Continued.

Location			*Inflow*												
	Area	On-Line status entire Water Year	PLR	HLR	PLR based on Surface Water	HLR based on Surface Water	Surface Water	Seepage	Rainfall	Σ Volume	Surface Water TP Load	Rainfall TP Load	Σ TP Load	Inflow FWM TP	Inflow FWM TP based on Surface Water
	(acres)	(Y/N)	($g/m^2/yr$)	(cm/day)	($g/m^2/yr$)	(cm/day)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(mt)	(mt)	(mt)	(ppb)	(ppb)
STA-1E, Central Flow-way	1986														
WY2007		Y	0.650	1.5	0.649	1.2	29,589	-	5,703	35,292	5.217	0.028	5.225	120	143
WY2008		Y	1.950	4.4	1.948	4.1	97,393	-	7,340	104,733	15.660	0.036	15.671	121	130
WY2009		Y	1.330	2.8	1.329	2.5	59,475	-	7,503	66,978	10.682	0.037	10.693	129	146
WY2010		Y	0.896	1.4	0.894	1.0	23,186	-	10,382	33,568	7.189	0.051	7.204	174	251
WY2011		Y	0.127	0.5	0.126	0.3	6,859	-	5,632	12,491	1.016	0.028	1.024	66	120
POR							**216,502**		**36,560**	**253,062**	**39.763**	**0.180**	**39.816**	**128**	**149**
							86%	**NC**	**14.4%**		**99.9%**	**0.5%**			

Location	*Outflow*														
	Surface Water	Ground-water	Σ Surface Water + Groundwater	ET	Σ Volume	Change in Storage	Water Budget Residual	Water Budget Error	TP Load from Surface Water	Ground- water TP Load	Σ TP Load	Outflow FWM TP based on Surface Water	TP Retained Based on Surface Water	TP from Surface Water Retained	k based on Surface Water
	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(%)	(mt)	(mt)	(mt)	(ppb)	(mt)	(%)	(m/yr)
STA-1E, Central Flow-way															
WY2007	39,978	-	39,978	8,582	48,560	(630)	12,637	30%	1.097	-	1.097	22	4.120	79%	9.93
WY2008	119,011	-	119,011	8,588	127,599	2,170	25,036	22%	2.724	-	2.724	19	12.936	83%	32.37
WY2009	81,162	-	81,162	8,465	89,627	(2,332)	20,318	26%	1.535	-	1.535	15	9.146	86%	24.29
WY2010	30,570	-	30,570	8,099	38,669	1,183	6,285	17%	2.085	-	2.085	55	5.104	71%	6.25
WY2011	10,594	-	10,594	9,000	19,594	(27)	7,076	44%	0.586	-	0.586	45	0.430	42%	1.32
POR	**281,315**			**42,734**	**324,049**	**364**	**71,351**	**25%**	**8.028**		**8.028**	**23**	**31.735**	**80%**	
	87%	**NC**		**13.2%**					**100%**	**NC**					

Table 2. Continued.

Location			*Inflow*												
	Area	On-Line status entire Water Year	PLR	HLR	PLR based on Surface Water	HLR based on Surface Water	Surface Water	Seepage	Rainfall	Σ Volume	Surface Water TP Load	Rainfall TP Load	Σ TP Load	Inflow FWM TP	Inflow FWM TP based on Surface Water
	(acres)	(Y/N)	($g/m^2/yr$)	(cm/day)	($g/m^2/yr$)	(cm/day)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(mt)	(mt)	(mt)	(ppb)	(ppb)
STA-1E, Western Flow-way	2038														
WY2007		Y	3.470	2.8	3.469	2.6	62,351	-	5,852	68,203	28.609	0.029	28.623	340	372
WY2008		Y	0.349	1.0	0.346	0.7	16,659	-	7,532	24,191	2.857	0.037	2.875	96	139
WY2009		Y	2.355	3.3	2.352	3.0	73,334	-	7,699	81,033	19.401	0.038	19.419	194	214
WY2010		N	1.601	2.3	1.598	1.8	44,871	-	10,654	55,525	13.182	0.053	13.207	193	238
WY2011		N	0.018	0.3	0.016	0.1	1,390	-	5,779	7,169	0.132	0.029	0.145	16	77
POR							**198,605**		**37,516**	**236,121**	**64.180**	**0.185**	**64.270**	**221**	**262**
							84%	**NC**	**15.9%**		**99.9%**	**0.3%**			

Location	*Outflow*															
	Surface Water	Ground-water	Σ Surface Water + Groundwater	ET	Σ Volume	Change in Storage	Water Budget Residual	Water Budget Error	TP Load from Surface Water	Ground- water TP Load	Σ TP Load	Outflow FWM TP	Outflow FWM TP based on Surface Water	TP Retained Based on Surface Water	TP from Surface Water Retained	k based on Surface Water
	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(%)	(mt)	(mt)	(mt)	(ppb)	(ppb)	(mt)	(%)	(m/yr)
STA-1E, Western Flow-way																
WY2007	52,705	-	52,705	8,807	61,512	(97)	(6,788)	-10%	9.976	-	9.976	153	153	18.633	65%	7.62
WY2008	23,391	-	23,391	8,813	32,204	1,487	9,500	34%	1.462	-	1.462	51	51	1.395	49%	3.02
WY2009	76,456	-	76,456	8,687	85,143	(1,110)	3,000	4%	4.467	-	4.467	47	47	14.934	77%	16.92
WY2010	42,686	-	42,686	8,312	50,998	(1,171)	(5,698)	-11%	16.406	-	16.406	312	312	(3.225)	-24%	-1.76
WY2011	472	-	472	9,234	9,706	1,309	3,847	46%	0.083	-	0.083	142	142	0.049	34%	-0.09
POR	**195,711**			**43,853**	**239,564**	**418**	**3,861**	**2%**	**32.394**		**32.394**		**134**	**31.786**	**50%**	
	82%	**NC**		**18.3%**					**100%**	**NC**						

Table 3. Annual and period-of-record water and total phosphorus budgets for treatment cells and flow-ways in STA-1W.

			Inflow												
Location	Area	On-Line status entire Water Year	PLR	HLR	PLR based on Surface Water	HLR based on Surface Water	Surface Water	Seepage	Rainfall	Σ Volume	Surface Water TP Load	Rainfall TP Load	Σ TP Load	Inflow FWM TP	Inflow FWM TP based on Surface Water
	(acres)	(Y/N)	($g/m^2/yr$)	(cm/day)	($g/m^2/yr$)	(cm/day)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(mt)	(mt)	(mt)	(ppb)	(ppb)
STA-1W, Cell 1	1490														
WY2001		Y	1.753	4.7	1.750	4.5	80,211	-	4,351	84,562	10.551	0.021	10.572	101	107
WY2002		Y	2.200	5.3	2.194	5.0	88,408	-	6,532	94,940	13.232	0.032	13.264	113	121
WY2003		Y	5.654	10.2	5.650	10.0	177,548	-	5,252	182,800	34.070	0.026	34.096	151	156
WY2004		Y	2.823	7.0	2.820	6.8	121,397	-	4,230	125,627	17.004	0.021	17.024	110	114
WY2005		Y	3.485	6.5	3.481	6.2	111,003	-	5,200	116,203	20.990	0.026	21.016	147	153
WY2006		Y	4.881	6.9	4.876	6.6	118,213	-	5,443	123,656	29.405	0.027	29.432	193	202
POR							**696,780**		**31,008**	**727,788**	**125.252**	**0.153**	**125.405**	**140**	**146**
							96%	**NC**	**4%**		**100%**	**0%**			

	Outflow														
Location	Surface Water	Ground-water	Σ Surface Water + Groundwater	ET	Σ Volume	Change in Storage	Water Budget Residual	Water Budget Error	TP Load from Surface Water	Ground- water TP Load	Σ TP Load	Outflow FWM TP based on Surface Water	TP Retained Based on Surface Water	TP from Surface Water Retained	k based on Surface Water
	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(%)	(mt)	(mt)	(mt)	(ppb)	(mt)	(%)	(m/yr)
STA-1W, Cell 1															
WY2001	45,651	-	45,651	6,958	52,609	(36)	(31,990)	-47%	1.947	-	1.947	35	8.604	81%	14.50
WY2002	71,149	-	71,149	6,551	77,700	(10)	(17,250)	-20%	3.173	-	3.173	36	10.059	76%	19.76
WY2003	137,668	-	137,668	6,339	144,007	(8)	(38,801)	-24%	8.704	-	8.704	51	25.366	74%	35.80
WY2004	96,413	-	96,413	6,350	102,763	(16)	(22,880)	-20%	11.853	-	11.853	100	5.151	30%	2.91
WY2005	141,992	-	141,992	6,290	148,282	16	32,094	24%	33.801	-	33.801	193	(12.810)	-61%	-5.96
WY2006	110,990	-	110,990	6,422	117,412	(3)	(6,247)	-5%	26.685	-	26.685	195	2.720	9%	0.80
POR	**603,863**				**642,773**	**(58)**	**(85,073)**	**-12%**	**86.163**		**86.163**	**116**	**39.089**	**31%**	
	94%	**NC**		**0%**					**100%**	**NC**					

Table 3. Continued.

Location			*Inflow*												
	Area	On-Line status entire Water Year	PLR	HLR	PLR based on Surface Water	HLR based on Surface Water	Surface Water	Seepage	Rainfall	Σ Volume	Surface Water TP Load	Rainfall TP Load	Σ TP Load	Inflow FWM TP	Inflow FWM TP based on Surface Water
	(acres)	(Y/N)	($g/m^2/yr$)	(cm/day)	($g/m^2/yr$)	(cm/day)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(mt)	(mt)	(mt)	(ppb)	(ppb)
STA-1W, Cell 1A	745														
WY2009		Y	4.037	5.5	4.035	5.4	47,828	-	1,593	49,420	12.164	0.008	12.172	200	206
WY2010		Y	4.270	5.7	4.267	5.5	49,383	-	1,799	51,182	12.866	0.009	12.875	204	211
WY2011		Y	1.588	3.6	1.586	3.5	30,896	-	1,164	32,060	4.782	0.006	4.788	121	125
POR							**128,106**		**4,556**	**132,662**	**29.813**	**0.022**	**29.835**	**182**	**189**
							97%	**NC**	**3.4%**		**99.9%**	**0.1%**			

Location	*Outflow*														
	Surface Water	Ground-water	Σ Surface Water + Groundwater	ET	Σ Volume	Change in Storage	Water Budget Residual	Water Budget Error	TP Load from Surface Water	Ground- water TP Load	Σ TP Load	Outflow FWM TP based on Surface Water	TP Retained Based on Surface Water	TP from Surface Water Retained	k based on Surface Water
	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(%)	(mt)	(mt)	(mt)	(ppb)	(mt)	(%)	(m/yr)
STA-1W, Cell 1A															
WY2009	202,388	-	202,388	1,588	203,975	(1,085)	153,470	121%	108.463	-	108.463	434	(96.298)	-791%	-38.15
WY2010	255,048	-	255,048	1,519	256,567	195	205,580	134%	34.406	-	34.406	109	(21.539)	-167%	40.99
WY2011	157,900	-	157,900	1,688	159,588	37	127,565	133%	11.853	-	11.853	61	(7.071)	-148%	27.95
POR	**615,335**				**620,129**	**(853)**	**486,615**	**129%**	**154.721**		**154.721**	**204**	**(124.908)**	**-419%**	
	99%	**NC**		**0.0%**					**100%**	**NC**					

Table 3. Continued.

Location			*Inflow*												
	Area	On-Line status entire Water Year	PLR	HLR	PLR based on Surface Water	HLR based on Surface Water	Surface Water	Seepage	Rainfall	Σ Volume	Surface Water TP Load	Rainfall TP Load	Σ TP Load	Inflow FWM TP	Inflow FWM TP based on Surface Water
	(acres)	(Y/N)	(g/m^2/yr)	(cm/day)	(g/m^2/yr)	(cm/day)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(mt)	(mt)	(mt)	(ppb)	(ppb)
STA-1W, Cell 3	1026														
WY2001		Y	0.662	6.3	0.659	6.0	73,920	-	2,996	76,916	2.735	0.015	2.750	29	30
WY2002		Y	1.034	9.8	1.029	9.5	116,332	-	4,498	120,830	4.272	0.022	4.294	29	30
WY2003		Y	3.127	17.3	3.123	17.0	208,689	-	3,617	212,306	12.968	0.018	12.985	50	50
WY2004		Y	3.421	11.1	3.417	10.8	133,166	-	2,913	136,079	14.190	0.014	14.204	85	86
WY2005		Y	8.736	13.3	8.732	13.0	159,576	-	3,581	163,157	36.258	0.018	36.276	180	184
WY2006		Y	6.431	9.3	6.427	9.0	110,990	-	3,748	114,738	26.685	0.018	26.704	189	195
POR							**802,673**		**21,353**	**824,026**	**97.108**	**0.105**	**97.213**	**96**	**98**
							97%	**NC**	**2.6%**		**99.9%**	**0.1%**			

Location	*Outflow*														
	Surface Water	Ground-water	Σ Surface Water + Groundwater	ET	Σ Volume	Change in Storage	Water Budget Residual	Water Budget Error	TP Load from Surface Water	Ground- water TP Load	Σ TP Load	Outflow FWM TP based on Surface Water	TP Retained Based on Surface Water	TP from Surface Water Retained	k based on Surface Water
	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(%)	(mt)	(mt)	(mt)	(ppb)	(mt)	(%)	(m/yr)
STA-1W, Cell 3															
WY2001	65,303	-	65,303	4,791	70,094	(689)	(7,511)	-10%	2.147	-	2.147	27	0.589	21%	2.45
WY2002	103,612	-	103,612	4,511	108,123	614	(12,093)	-11%	3.340	-	3.340	26	0.931	22%	4.25
WY2003	166,627	-	166,627	4,365	170,992	1,250	(40,064)	-21%	8.418	-	8.418	41	4.550	35%	11.54
WY2004	106,939	-	106,939	4,372	111,311	(1,613)	(26,381)	-21%	6.527	-	6.527	49	7.663	54%	19.87
WY2005	130,905	-	130,905	4,331	135,236	130	(27,792)	-19%	18.529	-	18.529	115	17.729	49%	20.42
WY2006	92,060	-	92,060	4,422	96,482	270	(17,986)	-17%	14.534	-	14.534	128	12.151	46%	12.69
POR	**665,446**			**26,792**	**692,238**	**(38)**	**(131,827)**	**-17%**	**53.495**		**53.495**	**65**	**43.613**	**45%**	
	96%	**NC**		**3.9%**					**100%**	**NC**					

Table 3. Continued.

Location			*Inflow*												
	Area	On-Line status entire Water Year	PLR	HLR	PLR based on Surface Water	HLR based on Surface Water	Surface Water	Seepage	Rainfall	Σ Volume	Surface Water TP Load	Rainfall TP Load	Σ TP Load	Inflow FWM TP	Inflow FWM TP based on Surface Water
	(acres)	(Y/N)	($g/m^2/yr$)	(cm/day)	($g/m^2/yr$)	(cm/day)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(mt)	(mt)	(mt)	(ppb)	(ppb)
STA-1W, Cell 1B+3	1771														
WY2009		Y	15.139	10.0	15.133	9.5	202,388	-	9,164	211,551	108.463	0.045	108.508	416	434
WY2010		Y	4.808	12.5	4.800	12.0	255,048	-	10,353	265,401	34.406	0.051	34.457	105	109
WY2011		Y	1.658	7.8	1.654	7.4	157,900	-	6,698	164,598	11.853	0.033	11.886	59	61
POR							**615,335**		**26,215**	**641,549**	**154.721**	**0.129**	**154.850**	**196**	**204**
							96%	**NC**	**4%**		**100%**	**0%**			

Location	*Outflow*														
	Surface Water	Ground-water	Σ Surface Water + Groundwater	ET	Σ Volume	Change in Storage	Water Budget Residual	Water Budget Error	TP Load from Surface Water	Ground- water TP Load	Σ TP Load	Outflow FWM TP based on Surface Water	TP Retained Based on Surface Water	TP from Surface Water Retained	k based on Surface Water
	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(%)	(mt)	(mt)	(mt)	(ppb)	(mt)	(%)	(m/yr)
STA-1W, Cell 1B+3															
WY2009	60,526	-	60,526	9,137	69,663	(2,595)	(144,483)	-103%	2.830	-	2.830	38	105.633	97%	55.18
WY2010	65,306	-	65,306	8,741	74,047	1,219	(190,134)	-112%	2.906	-	2.906	36	31.500	91%	30.58
WY2011	34,267	-	34,267	9,713	43,980	(62)	(120,680)	-116%	0.997	-	0.997	24	10.856	91%	15.67
POR	**160,099**			**27,591**	**187,690**	**(1,438)**	**(455,297)**	**-110%**	**6.733**		**6.733**	**34**	**147.988**	**96%**	
	85%	**NC**		**15%**					**100%**	**NC**					

Table 3. Continued.

Location			*Inflow*												
	Area	On-Line status entire Water Year	PLR	HLR	PLR based on Surface Water	HLR based on Surface Water	Surface Water	Seepage	Rainfall	Σ Volume	Surface Water TP Load	Rainfall TP Load	Σ TP Load	Inflow FWM TP	Inflow FWM TP based on Surface Water
	(acres)	(Y/N)	($g/m^2/yr$)	(cm/day)	($g/m^2/yr$)	(cm/day)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(mt)	(mt)	(mt)	(ppb)	(ppb)
STA-1W, Cell 2	941														
WY2001		Y	1.142	3.0	1.138	2.8	31,401	-	2,748	34,149	4.334	0.014	4.348	103	112
WY2002		Y	1.664	5.2	1.658	4.8	54,093	-	4,126	58,219	6.316	0.020	6.336	88	95
WY2003		Y	6.114	10.9	6.109	10.6	118,966	-	3,317	122,283	23.266	0.016	23.282	154	159
WY2004			2.789	5.6	2.785	5.4	60,797	-	2,672	63,469	10.606	0.013	10.619	136	141
POR							**265,257**		**12,863**	**278,120**	**44.522**	**0.063**	**44.585**	**136**	**136**
							95%	**NC**	**5%**		**100%**	**0%**			

Location	*Outflow*														
	Surface Water	Ground-water	Σ Surface Water + Groundwater	ET	Σ Volume	Change in Storage	Water Budget Residual	Water Budget Error	TP Load from Surface Water	Ground- water TP Load	Σ TP Load	Outflow FWM TP based on Surface Water	TP Retained Based on Surface Water	TP from Surface Water Retained	k based on Surface Water
	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(%)	(mt)	(mt)	(mt)	(ppb)	(mt)	(%)	(m/yr)
STA-1W, Cell 2															
WY2001	38,450	-	38,450	4,394	42,844	(1,415)	7,280	19%	3.678	-	3.678	78	0.656	15%	4.15
WY2002	51,198	-	51,198	4,137	55,335	625	(2,259)	-4%	3.685	-	3.685	58	2.631	42%	8.25
WY2003	123,286	-	123,286	4,004	127,290	1,200	6,207	5%	20.733	-	20.733	136	2.533	11%	5.92
WY2004	111,000	-	111,000	4,010	115,010	(1,735)	49,806	56%	18.939	-	18.939	138	(8.333)	-78%	0.62
POR	**323,934**			**16,545**	**340,479**	**(1,325)**	**61,034**	**20%**	**47.035**		**47.035**	**118**	**(2.513)**	**-6%**	
	95%	**NC**		**5%**					**100%**	**NC**					

Table 3. Continued.

Location			*Inflow*												
	Area	On-Line status entire Water Year	PLR	HLR	PLR based on Surface Water	HLR based on Surface Water	Surface Water	Seepage	Rainfall	Σ Volume	Surface Water TP Load	Rainfall TP Load	Σ TP Load	Inflow FWM TP based on Surface Water	
	(acres)	(Y/N)	(g/m^2/yr)	(cm/day)	(g/m^2/yr)	(cm/day)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(mt)	(mt)	(mt)	(ppb)	(ppb)
STA-1W, Cell 4	358														
WY2001		Y	2.542	9.2	2.539	9.0	38,450	-	1,045	39,495	3.678	0.005	3.683	76	78
WY2002		Y	2.549	12.3	2.543	11.9	51,198	-	1,570	52,768	3.685	0.008	3.693	57	58
WY2003		Y	14.315	29.1	14.310	28.8	123,286	-	1,262	124,548	20.733	0.006	20.739	135	136
WY2004			13.076	26.1	13.072	25.9	111,000	-	1,016	112,016	18.939	0.005	18.944	137	138
POR							**323,934**		**4,893**	**328,827**	**47.035**	**0.024**	**47.059**	**118**	**118**
							99%	**NC**	**1.5%**		**99.9%**	**0.1%**			

Location	*Outflow*														
	Surface Water	Ground-water	Σ Surface Water + Groundwater	ET	Σ Volume	Change in Storage	Water Budget Residual	Water Budget Error	TP Load from Surface Water	Ground- water TP Load	Σ TP Load	Outflow FWM TP based on Surface Water	TP Retained Based on Surface Water	TP from Surface Water Retained	k based on Surface Water
	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(%)	(mt)	(mt)	(mt)	(ppb)	(mt)	(%)	(m/yr)
STA-1W, Cell 4															
WY2001	31,425	-	31,425	1,672	33,097	(372)	(6,770)	-19%	1.028	-	1.028	27	2.650	72%	31.91
WY2002	65,455	-	65,455	1,574	67,029	216	14,476	24%	2.190	-	2.190	27	1.495	40%	38.05
WY2003	158,209	-	158,209	1,523	159,732	248	35,432	25%	13.393	-	13.393	69	7.340	35%	82.25
WY2004	103,379	-	103,379	1,526	104,905	(588)	(7,699)	-7%	9.403	-	9.403	74	9.536	50%	57.41
POR	**358,467**			**6,295**	**364,762**	**(496)**	**35,439**	**10%**	**26.013**		**26.013**	**59**	**21.022**	**45%**	
	98%	**NC**		**1.7%**					**100%**	**NC**					

Table 3. Continued.

Location			*Inflow*												
	Area	On-Line status entire Water Year	PLR	HLR	PLR based on Surface Water	HLR based on Surface Water	Surface Water	Seepage	Rainfall	Σ Volume	Surface Water TP Load	Rainfall TP Load	Σ TP Load	Inflow FWM TP	Inflow FWM TP based on Surface Water
	(acres)	(Y/N)	($g/m^2/yr$)	(cm/day)	($g/m^2/yr$)	(cm/day)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(mt)	(mt)	(mt)	(ppb)	(ppb)
STA-1W, Eastern Flow-way	2516														
WY2001		Y	1.038	2.9	1.036	2.7	80,211	-	7,347	87,558	10.551	0.021	10.572	101	107
WY2002		Y	1.303	3.3	1.300	2.9	88,408	-	11,030	99,438	13.232	0.032	13.264	113	121
WY2003		Y	3.349	6.2	3.346	5.9	177,548	-	8,869	186,417	34.070	0.026	34.096	151	156
WY2004		Y	1.672	4.3	1.670	4.0	121,397	-	7,143	128,540	17.004	0.021	17.024	110	114
WY2005		Y	2.064	4.0	2.061	3.7	111,003	-	8,781	119,784	20.990	0.026	21.016	147	153
WY2006		Y	2.891	4.2	2.888	3.9	118,213	-	9,191	127,404	29.405	0.027	29.432	193	202
WY2009		Y	1.195	1.9	1.195	1.6	47,828	-	10,756	58,584	12.164	0.053	12.172	168	206
WY2010		Y	1.264	2.0	1.264	1.6	49,383	-	12,152	61,535	12.866	0.060	12.875	170	211
WY2011		Y	0.470	1.3	0.470	1.0	30,896	-	7,862	38,758	4.782	0.039	4.788	100	125
POR							**128,106**		**30,770**	**158,876**	**29.813**	**0.152**	**29.835**	**152**	**189**
							81%	**NC**	**19%**		**100%**	**1%**			

Location	*Outflow*														
	Surface Water	Ground-water	Σ Surface Water + Groundwater	ET	Σ Volume	Change in Storage	Water Budget Residual	Water Budget Error	TP Load from Surface Water	Ground- water TP Load	Σ TP Load	Outflow FWM TP based on Surface Water	TP Retained Based on Surface Water	TP from Surface Water Retained	k based on Surface Water
	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(%)	(mt)	(mt)	(mt)	(ppb)	(mt)	(%)	(m/yr)
STA-1W, Eastern Flow-way															
WY2001	65,303	-	65,303	11,749	77,052	(2,635)	(13,142)	-16%	2.147	-	2.147	27	8.404	79%	12.22
WY2002	103,612	-	103,612	11,062	114,674	1,483	16,720	16%	3.340	-	3.340	26	9.892	75%	17.86
WY2003	166,627	-	166,627	10,704	177,331	4,309	(4,777)	-3%	8.418	-	8.418	41	25.652	75%	27.82
WY2004	106,939	-	106,939	10,722	117,661	(4,878)	(15,757)	-13%	6.527	-	6.527	49	10.476	62%	11.49
WY2005	130,905	-	130,905	10,621	141,526	44	21,786	17%	18.529	-	18.529	115	2.461	12%	4.24
WY2006	92,060	-	92,060	10,844	102,904	975	(23,525)	-20%	14.534	-	14.534	128	14.871	51%	5.79
WY2009	60,526	-	60,526	10,724	71,250	(3,679)	8,988	14%	2.830	-	2.830	38	9.334	77%	11.12
WY2010	65,306	-	65,306	10,260	75,566	1,414	15,445	23%	2.906	-	2.906	36	9.960	77%	12.28
WY2011	34,267	-	34,267	11,401	45,668	(25)	6,885	16%	0.997	-	0.997	24	3.785	79%	6.60
POR	**160,099**			**32,385**	**192,484**	**(2,290)**	**31,318**	**18%**	**6.733**		**6.733**	**34**	**23.080**	**77%**	
	83%	**NC**		**17%**					**100%**	**NC**					

Table 3. Continued.

Location			*Inflow*												
	Area	On-Line status entire Water Year	PLR	HLR	PLR based on Surface Water	HLR based on Surface Water	Surface Water	Seepage	Rainfall	Σ Volume	Surface Water TP Load	Rainfall TP Load	Σ TP Load	Inflow FWM TP	Inflow FWM TP based on Surface Water
	(acres)	(Y/N)	($g/m^2/yr$)	(cm/day)	($g/m^2/yr$)	(cm/day)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(mt)	(mt)	(mt)	(ppb)	(ppb)
STA-1W, Western Flow-way	1299														
WY2001		Y	0.827	2.3	0.824	2.0	31,401	-	3,793	35,194	4.334	0.014	4.348	103	112
WY2002		Y	1.205	3.8	1.201	3.5	54,093	-	5,696	59,789	6.316	0.020	6.336	88	95
WY2003		Y	4.429	7.9	4.426	7.6	118,966	-	4,579	123,545	23.266	0.016	23.282	154	159
WY2004			2.020	4.1	2.018	3.9	60,797	-	3,688	64,485	10.606	0.013	10.619	136	141
WY2009		Y	2.860	4.1	2.854	3.8	58,838	-	5,553	64,391	15.005	0.027	15.033	189	207
WY2010		Y	3.498	5.0	3.492	4.6	71,262	-	6,274	77,536	18.359	0.031	18.390	192	209
WY2011		Y	1.138	2.4	1.134	2.1	32,590	-	4,059	36,649	5.961	0.020	5.981	132	148
POR							**162,690**		**15,886**	**178,576**	**39.326**	**0.078**	**39.404**	**179**	**196**
							91%	**NC**	**8.9%**		**99.8%**	**0.2%**			

Location	*Outflow*														
	Surface Water	Ground-water	Σ Surface Water + Groundwater	ET	Σ Volume	Change in Storage	Water Budget Residual	Water Budget Error	TP Load from Surface Water	Ground- water TP Load	Σ TP Load	Outflow FWM TP based on Surface Water	TP Retained Based on Surface Water	TP from Surface Water Retained	k based on Surface Water
	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(%)	(mt)	(mt)	(mt)	(ppb)	(mt)	(%)	(m/yr)
STA-1W, Western Flow-way															
WY2001	31,425	-	31,425	6,066	37,491	(1,787)	511	1%	1.028	-	1.028	27	3.306	76%	10.61
WY2002	65,455	-	65,455	5,711	71,166	841	12,218	19%	2.190	-	2.190	27	4.126	65%	17.53
WY2003	158,209	-	158,209	5,527	163,736	1,448	41,639	29%	13.393	-	13.393	69	9.873	42%	27.23
WY2004	103,379	-	103,379	5,536	108,915	(2,323)	42,107	49%	9.403	-	9.403	74	1.203	11%	12.54
WY2009	47,066	-	47,066	5,537	52,603	(1,180)	(12,968)	-22%	1.380	-	1.380	24	13.625	91%	26.87
WY2010	52,595	-	52,595	5,297	57,892	1,151	(18,493)	-27%	3.763	-	3.763	58	14.596	79%	18.62
WY2011	24,890	-	24,890	5,886	30,776	(398)	(6,271)	-19%	0.780	-	0.780	25	5.181	87%	11.90
POR	**124,551**			**16,720**	**141,271**	**(427)**	**(37,732)**	**-24%**	**5.924**		**5.924**	**39**	**33.402**	**85%**	
	88%	**NC**		**11.8%**					**100%**	**NC**					

Table 3. Continued.

Location	Area	On-Line status entire Water Year	PLR	HLR	PLR based on Surface Water	HLR based on Surface Water	Surface Water	Seepage	Rainfall	Σ Volume	Surface Water TP Load	Rainfall TP Load	Σ TP Load	Inflow FWM TP	Inflow FWM TP based on Surface Water
			Inflow												
	(acres)	(Y/N)	($g/m^2/yr$)	(cm/day)	($g/m^2/yr$)	(cm/day)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(mt)	(mt)	(mt)	(ppb)	(ppb)
STA-1W, Northern Flow-way	2855														
WY2001		Y	0.584	1.7	0.581	1.4	47,896	-	8,856	56,752	6.708	0.044	6.752	96	114
WY2002		Y	3.210	6.2	3.205	5.8	198,667	-	13,297	211,964	37.028	0.066	37.094	142	151
WY2003		N	5.755	10.5	5.750	10.2	349,869	-	10,691	360,560	66.441	0.053	66.494	150	154
WY2004		N	1.914	4.1	1.911	3.8	131,132	-	8,611	139,743	22.077	0.042	22.119	128	136
WY2005		N	4.822	5.5	4.818	5.1	175,904	-	10,585	186,489	55.664	0.052	55.717	242	257
WY2006		N	0.731	1.3	0.726	0.9	32,296	-	11,081	43,377	8.387	0.055	8.442	158	211
WY2007		N	0.040	0.3	0.035	0.0	1,539	-	9,650	11,189	0.409	0.048	0.457	33	215
WY2008		Y	0.839	1.6	0.834	1.3	44,138	-	11,824	55,962	9.641	0.058	9.700	141	177
WY2009		Y	2.056	2.4	2.051	2.1	70,857	-	12,205	83,062	23.699	0.060	23.760	232	271
WY2010		Y	2.283	2.9	2.277	2.5	86,664	-	13,790	100,454	26.309	0.068	26.377	213	246
WY2011		Y	1.105	2.3	1.101	2.0	69,759	-	8,922	78,681	12.725	0.044	12.769	132	148
POR							**1,208,722**		**119,512**	**1,328,234**	**269.090**	**0.589**	**269.680**	**165**	**180**
							91%	**NC**	**9%**		**100%**	**0%**			

Location	Surface Water	Ground-water	Σ Surface Water + Groundwater	ET	Σ Volume	Change in Storage	Water Budget Residual	Water Budget Error	TP Load from Surface Water	Ground- water TP Load	Σ TP Load	Outflow FWM TP based on Surface Water	TP Retained Based on Surface Water	TP from Surface Water Retained	k based on Surface Water
	Outflow														
	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(%)	(mt)	(mt)	(mt)	(ppb)	(mt)	(%)	(m/yr)
STA-1W, Northern Flow-way															
WY2001	14,352	-	14,352	14,163	28,515	(4,417)	(32,654)	-77%	1.499	-	1.499	85	5.209	77%	0.98
WY2002	160,438	-	160,438	13,334	173,772	1,796	(36,396)	-19%	18.324	-	18.324	93	18.704	50%	9.39
WY2003	346,911	-	346,911	12,904	359,815	(536)	(1,281)	0%	34.027	-	34.027	80	32.414	49%	24.57
WY2004	105,426	-	105,426	12,926	118,352	1,358	(20,033)	-16%	5.878	-	5.878	45	16.199	73%	13.95
WY2005	188,371	-	188,371	12,803	201,174	(2,301)	12,384	6%	40.754	-	40.754	175	14.911	27%	7.39
WY2006	42,249	-	42,249	13,073	55,322	(1,914)	10,030	20%	12.153	-	12.153	233	(3.765)	-45%	-0.41
WY2007	30,824	-	30,824	13,107	43,931	510	33,253	121%	1.474	-	1.474	39	(1.065)	-233%	2.96
WY2008	96,232	-	96,232	13,116	109,348	2,959	56,344	68%	3.728	-	3.728	31	5.913	61%	12.96
WY2009	78,639	-	78,639	12,169	90,808	728	8,474	10%	2.147	-	2.147	22	21.553	91%	20.00
WY2010	106,653	-	106,653	11,643	118,296	557	18,398	17%	4.861	-	4.861	37	21.448	81%	19.57
WY2011	75,898	-	75,898	12,937	88,835	(330)	9,824	12%	1.920	-	1.920	21	10.805	85%	15.36
POR	**1,245,994**			**142,175**	**1,388,169**	**(1,590)**	**58,345**	**4%**	**126.765**		**126.765**	**82**	**142.325**	**53%**	
	90%	**NC**		**10%**					**100%**	**NC**					

Table 4. Annual and period-of-record water and total phosphorus budgets for treatment cells and flow-ways in STA-2.

			Inflow												
Location	Area	On-Line status entire Water Year	PLR	HLR	PLR based on Surface Water	HLR based on Surface Water	Surface Water	Seepage	Rainfall	Σ Volume	Surface Water TP Load	Rainfall TP Load	Σ TP Load	Inflow FWM TP	Inflow FWM TP based on Surface Water
	(acres)	(Y/N)	($g/m^2/yr$)	(cm/day)	($g/m^2/yr$)	(cm/day)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(mt)	(mt)	(mt)	(ppb)	(ppb)
STA-2, Cell 1	1798														
WY2003		Y	0.437	2.4	0.437	2.4	50,637	229.0	-	50,866	3.176	-	3.176	51	51
WY2004		Y	0.940	3.1	0.940	3.1	67,001	3.0	-	67,004	6.837	-	6.837	83	83
WY2005		Y	1.106	3.1	1.106	3.1	66,188	14.0	-	66,202	8.049	-	8.049	99	99
WY2006		Y	1.079	3.4	1.078	3.3	70,100	21.0	2,579	72,700	7.842	0.013	7.854	88	91
WY2007		Y	1.529	3.1	1.525	2.8	59,691	10.0	6,151	65,852	11.096	0.030	11.127	137	151
WY2008		Y	1.127	3.9	1.122	3.5	76,267	38.0	8,170	84,475	8.162	0.040	8.202	79	87
WY2009		Y	0.957	2.5	0.952	2.2	47,419	16.0	7,352	54,787	6.928	0.036	6.964	103	118
WY2010		Y	1.181	3.1	1.175	2.7	58,750	19.0	8,187	66,956	8.553	0.040	8.594	104	118
WY2011		Y	0.402	1.5	0.398	1.2	26,605	23.0	5,704	32,332	2.898	0.028	2.926	73	88
POR							**522,658**	**373.0**	**38,143**	**561,174**	**63.542**	**0.188**	**63.730**	**92**	**99**
							93%	**0.1%**	**6.8%**		**99.7%**	**0.3%**			

	Outflow														
Location	Surface Water	Ground-water	Σ Surface Water + Groundwater	ET	Σ Volume	Change in Storage	Water Budget Residual	Water Budget Error	TP Load from Surface Water	Ground- water TP Load	Σ TP Load	Outflow FWM TP based on Surface Water	TP Retained Based on Surface Water	TP from Surface Water Retained	k based on Surface Water
	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(%)	(mt)	(mt)	(mt)	(ppb)	(mt)	(%)	(m/yr)
STA-2, Cell 1															
WY2003	31,504	226	31,730	7,717	39,447	4,175	(7,244)	-16%	0.560	0.008	0.568	14	2.616	82%	8.78
WY2004	46,866	331	47,197	7,807	55,004	(1,567)	(13,567)	-22%	0.784	0.014	0.797	14	6.053	89%	17.46
WY2005	54,555	342	54,897	7,379	62,276	350	(3,576)	-6%	0.674	0.013	0.688	10	7.374	92%	23.40
WY2006	54,404	318	54,722	7,965	62,687	(160)	(10,174)	-15%	0.478	0.010	0.488	7	7.364	94%	26.85
WY2007	44,413	455	44,868	7,594	52,462	(1,883)	(15,273)	-26%	0.474	0.020	0.495	9	10.622	95%	25.21
WY2008	56,697	438	57,135	7,657	64,792	1,809	(17,874)	-24%	0.809	0.017	0.826	12	7.353	90%	22.71
WY2009	50,666	282	50,948	7,944	58,892	(2,680)	1,425	3%	0.612	0.012	0.624	10	6.317	91%	20.73
WY2010	66,938	408	67,346	8,001	75,347	4,131	12,522	18%	3.245	0.034	3.279	39	5.309	62%	11.72
WY2011	32,269	410	32,679	8,282	40,961	(1,820)	6,809	19%	0.476	0.016	0.493	12	2.422	83%	9.98
POR	**438,311**	**3,210**		**70,346**	**511,867**	**2,355**	**(46,952)**	**-9%**	**8.111**	**0.144**	**8.256**	**15**	**55.430**	**87%**	
	86%	**0.6%**		**13.7%**					**98%**	**2%**					

Table 4. Continued.

Location	Area	On-Line status entire Water Year	*Inflow* PLR	HLR	PLR based on Surface Water	HLR based on Surface Water	Surface Water	Seepage	Rainfall	Σ Volume	Surface Water TP Load	Rainfall TP Load	Σ TP Load	Inflow FWM TP	Inflow FWM TP based on Surface Water
	(acres)	(Y/N)	($g/m^2/yr$)	(cm/day)	($g/m^2/yr$)	(cm/day)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(mt)	(mt)	(mt)	(ppb)	(ppb)
STA-2, Cell 2	2270														
WY2002		Y	1.049	3.6	1.049	3.6	97,061	65.0	-	97,126	9.633	-	9.633	80	80
WY2003		Y	1.129	4.5	1.129	4.5	123,190	293.0	-	123,483	10.371	-	10.371	68	68
WY2004		Y	1.223	3.5	1.223	3.5	95,912	116.0	-	96,028	11.235	-	11.235	95	95
WY2005		Y	2.211	5.3	2.211	5.3	144,615	108.0	-	144,723	20.316	-	20.316	114	114
WY2006		Y	2.137	5.3	2.135	5.2	141,276	30.0	3,256	144,562	19.614	0.016	19.630	110	113
WY2007		Y	3.069	4.9	3.065	4.6	126,265	46.0	7,765	134,076	28.155	0.038	28.193	170	181
WY2008		Y	1.011	2.6	1.006	2.2	60,147	204.0	10,315	70,666	9.241	0.051	9.292	107	125
WY2009		Y	1.717	4.1	1.712	3.8	102,523	298.0	9,282	112,103	15.731	0.046	15.777	114	124
WY2010		Y	2.209	4.9	2.204	4.5	123,175	81.0	10,336	133,592	20.244	0.051	20.295	123	133
WY2011		Y	0.894	2.7	0.890	2.4	65,696	23.0	7,202	72,921	8.176	0.036	8.211	91	101
POR							**1,079,859**	**1,264.0**	**48,156**	**1,129,279**	**152.716**	**0.238**	**152.954**	**110**	**115**
							96%	**0.1%**	**4%**		**100%**	**0.2%**			

Location	*Outflow* Surface Water	Ground-water	Σ Surface Water + Groundwater	ET	Σ Volume	Change in Storage	Water Budget Residual	Water Budget Error	TP Load from Surface Water	Ground- water TP Load	Σ TP Load	Outflow FWM TP	Outflow FWM TP based on Surface Water	TP Retained Based on Surface Water	TP from Surface Water Retained	k based on Surface Water
	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(%)	(mt)	(mt)	(mt)	(ppb)	(ppb)	(mt)	(%)	(m/yr)
STA-2, Cell 2																
WY2002	89,344	328	89,672	9,980	99,652	1,348	3,875	4%	1.738	0.014	1.753	16	16	7.894	82%	20.39
WY2003	100,378	270	100,648	9,743	110,391	3,322	(9,771)	-8%	2.486	0.012	2.499	20	20	7.885	76%	18.36
WY2004	89,833	437	90,270	9,856	100,126	(1,693)	2,405	2%	1.750	0.021	1.771	16	16	9.484	84%	22.37
WY2005	131,969	673	132,642	9,315	141,957	(1,413)	(4,179)	-3%	6.266	0.055	6.321	39	38	14.050	69%	20.14
WY2006	98,563	627	99,190	10,056	109,246	154	(35,162)	-28%	3.310	0.043	3.353	27	27	16.304	83%	22.85
WY2007	118,027	786	118,813	9,587	128,400	(1,768)	(7,444)	-6%	7.980	0.096	8.076	55	55	20.175	72%	19.57
WY2008	61,636	138	61,774	9,667	71,441	2,053	2,828	4%	2.759	0.011	2.770	36	36	6.482	70%	10.08
WY2009	111,899	352	112,251	10,030	122,281	(1,938)	8,240	7%	2.710	0.021	2.732	20	20	13.021	83%	26.58
WY2010	141,294	400	141,694	10,101	151,795	4,084	22,288	16%	10.789	0.045	10.833	62	62	9.455	47%	13.61
WY2011	68,712	778	69,490	10,457	79,947	(1,248)	5,778	8%	1.581	0.042	1.623	19	19	6.595	80%	15.23
POR	**1,011,655**	**4,789**		**98,792**	**1,115,236**	**2,901**	**(11,142)**	**-1%**	**41.370**	**0.361**	**41.731**		**33**	**111.346**	**73%**	
	91%	**0%**		**9%**					**99%**	**1%**						

Table 4. Continued.

Location	Area	On-Line status entire Water Year	*Inflow* PLR	HLR	PLR based on Surface Water	HLR based on Surface Water	Surface Water	Seepage	Rainfall	Σ Volume	Surface Water TP Load	Rainfall TP Load	Σ TP Load	Inflow FWM TP	Inflow FWM TP based on Surface Water
	(acres)	(Y/N)	($g/m^2/yr$)	(cm/day)	($g/m^2/yr$)	(cm/day)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(mt)	(mt)	(mt)	(ppb)	(ppb)
STA-2, Cell 3	2270														
WY2002		Y	0.447	4.5	0.447	4.5	122,699	-	-	122,699	4.104	-	4.104	27	27
WY2003		Y	1.087	5.5	1.087	5.5	150,632	-	-	150,632	9.987	-	9.987	54	54
WY2004		Y	1.295	4.3	1.295	4.3	117,546	-	-	117,546	11.892	-	11.892	82	82
WY2005		Y	2.114	5.3	2.114	5.3	143,865	-	-	143,865	19.420	-	19.420	109	109
WY2006		Y	1.456	4.3	1.454	4.2	113,685	-	3,256	116,941	13.356	0.016	13.372	93	95
WY2007		Y	1.179	2.8	1.175	2.5	67,574	-	7,765	75,339	10.796	0.038	10.834	117	130
WY2008		Y	1.344	3.6	1.338	3.2	88,316	-	10,315	98,631	12.295	0.051	12.345	101	113
WY2009		Y	1.548	2.8	1.543	2.4	66,527	-	9,282	75,809	14.177	0.046	14.223	152	173
WY2010		Y	1.894	5.1	1.888	4.7	127,972	-	10,336	138,308	17.345	0.051	17.396	102	110
WY2011		Y	0.761	2.8	0.757	2.6	69,891	-	7,202	77,093	6.955	0.036	6.990	74	81
POR							**1,068,706**		**48,156**	**1,116,862**	**120.327**	**0.238**	**120.565**	**88**	**91**
							96%	**NC**	**4.3%**		**99.8%**	**0.2%**			

Location	*Outflow* Surface Water	Ground-water	Σ Surface Water + Groundwater	ET	Σ Volume	Change in Storage	Water Budget Residual	Water Budget Error	TP Load from Surface Water	Ground- water TP Load	Σ TP Load	Outflow FWM TP	Outflow FWM TP based on Surface Water	TP Retained Based on Surface Water	TP from Surface Water Retained	k based on Surface Water
	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(%)	(mt)	(mt)	(mt)	(ppb)	(ppb)	(mt)	(%)	(m/yr)
STA-2, Cell 3																
WY2002	88,577	12,931	101,508	9,980	111,488	2,094	(9,118)	-8%	1.723	0.330	2.052	16	16	2.381	58%	7.69
WY2003	117,316	14,083	131,399	9,743	141,142	1,723	(7,766)	-5%	2.246	0.502	2.748	17	16	7.741	78%	22.34
WY2004	104,826	11,584	116,410	9,856	126,266	(3,016)	5,704	5%	1.701	0.469	2.170	15	13	10.192	86%	27.33
WY2005	135,929	8,302	144,231	9,315	153,546	(364)	9,317	6%	2.704	0.430	3.134	18	16	16.716	86%	35.97
WY2006	115,562	8,331	123,893	10,056	133,949	(617)	16,391	13%	2.517	0.421	2.938	19	18	10.839	81%	25.94
WY2007	69,872	7,658	77,530	9,587	87,117	(59)	11,719	14%	2.203	0.543	2.746	29	26	8.593	79%	14.97
WY2008	94,536	8,997	103,533	9,667	113,200	1,464	16,033	15%	1.968	0.484	2.452	19	17	10.326	84%	23.33
WY2009	58,147	7,409	65,556	10,030	75,586	(806)	(1,029)	-1%	2.094	0.649	2.743	34	29	12.083	85%	14.88
WY2010	124,505	7,453	131,958	10,101	142,059	2,775	6,526	5%	2.671	0.402	3.073	19	17	14.674	84%	31.24
WY2011	67,747	8,195	75,942	10,457	86,399	(1,744)	7,563	9%	1.265	0.353	1.618	17	15	5.690	81%	15.46
POR	**977,018**	**94,943**		**98,792**	**1,170,753**	**1,450**	**55,340**	**5%**	**21.093**	**4.583**	**25.676**		**18**	**99.234**	**82%**	
	83%	**8.1%**		**8.4%**					**82%**	**18%**						

Table 4. Continued.

Location			*Inflow*												
	Area	On-Line status entire Water Year	PLR	HLR	PLR based on Surface Water	HLR based on Surface Water	Surface Water	Seepage	Rainfall	Σ Volume	Surface Water TP Load	Rainfall TP Load	Σ TP Load	Inflow FWM TP	Inflow FWM TP based on Surface Water
	(acres)	(Y/N)	($g/m^2/yr$)	(cm/day)	($g/m^2/yr$)	(cm/day)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(mt)	(mt)	(mt)	(ppb)	(ppb)
STA-2, Cell 4	1902														
WY2009		Y	1.084	2.3	1.079	1.9	44,144	1,310.0	7,778	53,232	8.303	0.038	8.341	127	152
WY2010		Y	1.094	3.2	1.088	2.8	63,130	498.0	8,660	72,288	8.376	0.043	8.419	94	108
WY2011		N	0.012	0.9	0.008	0.1	1,168	14,225.0	6,034	21,427	0.064	0.030	0.094	4	44
POR							**108,442**	**16,033.0**	**22,472**	**146,947**	**16.743**	**0.111**	**16.854**	**125**	**125**
							74%	**11%**	**15%**		**99%**	**1%**			

Location	*Outflow*														
	Surface Water	Ground-water	Σ Surface Water + Groundwater	ET	Σ Volume	Change in Storage	Water Budget Residual	Water Budget Error	TP Load from Surface Water	Ground- water TP Load	Σ TP Load	Outflow FWM TP based on Surface Water	TP Retained Based on Surface Water	TP from Surface Water Retained	k based on Surface Water
	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(%)	(mt)	(mt)	(mt)	(ppb)	(mt)	(%)	(m/yr)
STA-2, Cell 4															
WY2009	50,952	386	51,338	8,404	59,742	(1,578)	4,932	9%	1.258	0.026	1.284	20	7.045	84%	15.47
WY2010	58,908	708	59,616	8,464	68,080	957	(3,250)	-5%	1.841	0.046	1.886	25	6.536	78%	14.14
WY2011	12,071	-	12,071	8,761	20,832	(3,393)	(3,988)	-19%	0.514	0.000	0.514	35	(0.450)	-480%	0.27
POR	**121,932**	**1,094**		**25,629**	**148,655**	**(4,014)**	**(2,306)**	**-2%**	**3.612**	**0.072**	**3.684**	**24**	**13.131**	**78%**	
	82%	**1%**		**17%**					**98%**	**2%**					

Table 5. Annual and period-of-record water and total phosphorus budgets for treatment cells and flow-ways in STA-3/4.

Location			*Inflow*												
	Area	On-Line status entire Water Year	PLR	HLR	PLR based on Surface Water	HLR based on Surface Water	Surface Water	Seepage	Rainfall	Σ Volume	Surface Water TP Load	Rainfall TP Load	Σ TP Load	Inflow FWM TP	Inflow FWM TP based on Surface Water
	(acres)	(Y/N)	($g/m^2/yr$)	(cm/day)	($g/m^2/yr$)	(cm/day)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(mt)	(mt)	(mt)	(ppb)	(ppb)
STA-3/4, Cell 1A	3039														
WY2006		Y	3.506	8.2	3.500	7.8	285,159	-	14,516	299,675	43.043	0.072	43.115	117	122
WY2007		Y	2.348	5.0	2.343	4.7	171,127	-	11,857	182,984	28.818	0.058	28.877	128	137
WY2008		Y	1.140	3.9	1.134	3.5	126,065	-	14,212	140,277	13.945	0.070	14.015	81	90
WY2009		Y	1.363	5.3	1.359	5.0	182,054	-	10,788	192,842	16.712	0.053	16.766	70	74
WY2010		Y	2.064	5.9	2.057	5.5	201,022	-	15,433	216,455	25.304	0.076	25.380	95	102
WY2011		Y	0.796	2.8	0.792	2.6	93,579	-	9,246	102,825	9.742	0.046	9.787	77	84
POR							**1,059,007**		**76,052**	**1,135,059**	**137.565**	**0.375**	**137.940**	**99**	**105**
							93%	**NC**	**7%**		**100%**	**0%**			

Location	*Outflow*															
	Surface Water	Ground-water	Σ Surface Water + Groundwater	ET	Σ Volume	Change in Storage	Water Budget Residual	Water Budget Error	TP Load from Surface Water	Ground- water TP Load	Σ TP Load	Outflow FWM TP	Outflow FWM TP based on Surface Water	TP Retained Based on Surface Water	TP from Surface Water Retained	k based on Surface Water
	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(%)	(mt)	(mt)	(mt)	(ppb)	(ppb)	(mt)	(%)	(m/yr)
STA-3/4, Cell 1A																
WY2006	444,888	-	444,888	13,402	458,290	(6,946)	151,668	40%	33.198	-	33.198	60	60	9.846	23%	25.79
WY2007	26,410	-	26,410	13,289	39,699	(1,182)	(144,467)	-130%	1.355	-	1.355	42	42	27.463	95%	11.78
WY2008	181,219	-	181,219	13,450	194,669	3,936	58,328	35%	9.046	-	9.046	40	40	4.899	35%	12.26
WY2009	192,573	-	192,573	13,803	206,376	(3,070)	10,464	5%	4.024	-	4.024	17	17	12.689	76%	27.81
WY2010	335,060	-	335,060	13,523	348,583	2,784	134,912	48%	16.880	-	16.880	41	41	8.424	33%	24.62
WY2011	104,654	-	104,654	13,999	118,653	(4,869)	10,959	10%	3.829	-	3.829	30	30	5.913	60%	10.39
POR	**1,284,805**			**81,466**	**1,366,271**	**(9,347)**	**221,866**	**18%**	**68.332**		**68.332**		**43**	**69.233**	**50%**	
	94%	**NC**		**6%**					**100%**	**NC**						

Table 5. Continued.

Location			*Inflow*												
	Area	On-Line status entire Water Year	PLR	HLR	PLR based on Surface Water	HLR based on Surface Water	Surface Water	Seepage	Rainfall	Σ Volume	Surface Water TP Load	Rainfall TP Load	Σ TP Load	Inflow FWM TP	Inflow FWM TP based on Surface Water
	(acres)	(Y/N)	($g/m^2/yr$)	(cm/day)	($g/m^2/yr$)	(cm/day)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(mt)	(mt)	(mt)	(ppb)	(ppb)
STA-3/4, Cell 1B	3488														
WY2006		Y	2.396	11.2	2.390	10.8	452,337	-	16,661	468,998	33.739	0.082	33.821	58	60
WY2007		Y	0.656	3.5	0.651	3.2	131,938	-	13,609	145,547	9.191	0.067	9.258	52	56
WY2008		Y	0.709	5.3	0.704	4.9	206,409	-	16,312	222,721	9.932	0.080	10.013	36	39
WY2009		Y	0.289	4.9	0.285	4.6	192,631	-	12,382	205,013	4.025	0.061	4.087	16	17
WY2010		Y	1.211	8.5	1.205	8.1	337,875	-	17,713	355,588	17.012	0.087	17.100	39	41
WY2011		Y	0.343	3.7	0.339	3.4	143,700	-	10,612	154,312	4.787	0.052	4.839	25	27
POR							**1,464,889**		**87,289**	**1,552,178**	**78.687**	**0.431**	**79.117**	**41**	**44**
							94%	**NC**	**5.6%**		**99.5%**	**0.5%**			

Location	*Outflow*															
	Surface Water	Ground-water	Σ Surface Water + Groundwater	ET	Σ Volume	Change in Storage	Water Budget Residual	Water Budget Error	TP Load from Surface Water	Ground- water TP Load	Σ TP Load	Outflow FWM TP	Outflow FWM TP based on Surface Water	TP Retained Based on Surface Water	TP from Surface Water Retained	k based on Surface Water
	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(%)	(mt)	(mt)	(mt)	(ppb)	(ppb)	(mt)	(%)	(m/yr)
STA-3/4, Cell 1B																
WY2006	379,014	-	379,014	15,382	394,396	(4,638)	(79,240)	-18%	10.621	-	10.621	23	23	23.118	68%	35.56
WY2007	160,037	-	160,037	15,253	175,290	(406)	29,337	18%	4.220	-	4.220	21	21	4.971	54%	12.39
WY2008	128,766	-	128,766	15,438	144,204	2,990	(75,527)	-41%	3.070	-	3.070	19	19	6.863	69%	10.29
WY2009	200,249	-	200,249	15,843	216,092	(2,290)	8,789	4%	3.168	-	3.168	13	13	0.857	21%	4.78
WY2010	227,948	-	227,948	15,521	243,469	(122)	(112,241)	-37%	3.781	-	3.781	13	13	13.231	77%	27.45
WY2011	102,716	-	102,716	16,067	118,783	(517)	(36,045)	-26%	2.092	-	2.092	17	17	2.694	56%	5.29
POR	**1,198,730**			**93,504**	**1,292,234**	**(4,983)**	**(264,927)**	**-19%**	**26.952**		**26.952**		**18**	**51.735**	**66%**	
	93%	**NC**		**7.2%**					**100%**	**NC**						

Table 5. Continued.

Location	Area	On-Line status entire Water Year	*Inflow* PLR	HLR	PLR based on Surface Water	HLR based on Surface Water	Surface Water	Seepage	Rainfall	Σ Volume	Surface Water TP Load	Rainfall TP Load	Σ TP Load	Inflow FWM TP	Inflow FWM TP based on Surface Water
	(acres)	(Y/N)	($g/m^2/yr$)	(cm/day)	($g/m^2/yr$)	(cm/day)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(mt)	(mt)	(mt)	(ppb)	(ppb)
STA-3/4, Cell 2A	2542														
WY2006		Y	3.778	8.8	3.772	8.4	255,133	-	12,142	267,275	38.806	0.060	38.865	118	123
WY2007		Y	1.367	3.9	1.363	3.6	109,509	-	9,918	119,427	14.017	0.049	14.066	95	104
WY2008		Y	0.509	3.0	0.503	2.6	79,498	-	11,888	91,386	5.178	0.059	5.237	46	53
WY2009		Y	1.065	4.3	1.061	4.0	120,768	-	9,024	129,792	10.913	0.045	10.957	68	73
WY2010		Y	1.959	7.4	1.952	7.0	212,058	-	12,909	224,967	20.085	0.064	20.148	73	77
WY2011		Y	0.615	3.4	0.611	3.2	97,230	-	7,734	104,964	6.287	0.038	6.325	49	52
POR							**874,197**		**63,615**	**937,812**	**95.286**	**0.314**	**95.600**	**83**	**88**
							93%	**NC**	**6.8%**		**99.7%**	**0.3%**			

Location	*Outflow* Surface Water	Ground-water	Σ Surface Water + Groundwater	ET	Σ Volume	Change in Storage	Water Budget Residual	Water Budget Error	TP Load from Surface Water	Ground- water TP Load	Σ TP Load	Outflow FWM TP	Outflow FWM TP based on Surface Water	TP Retained Based on Surface Water	TP from Surface Water Retained	k based on Surface Water
	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(%)	(mt)	(mt)	(mt)	(ppb)	(ppb)	(mt)	(%)	(m/yr)
STA-3/4, Cell 2A																
WY2006	399,652	-	399,652	11,210	410,862	(3,874)	139,713	41%	28.703	-	28.703	58	58	10.103	26%	29.46
WY2007	149,574	-	149,574	11,116	160,690	(2,629)	38,634	28%	6.248	-	6.248	34	34	7.770	55%	17.39
WY2008	70,764	-	70,764	11,251	82,015	4,849	(4,522)	-5%	2.677	-	2.677	31	31	2.501	48%	4.89
WY2009	124,765	-	124,765	11,546	136,311	(3,063)	3,456	3%	2.395	-	2.395	16	16	8.517	78%	22.80
WY2010	133,478	-	133,478	11,312	144,790	3,926	(76,251)	-41%	4.034	-	4.034	25	25	16.051	80%	23.66
WY2011	28,835	-	28,835	11,709	40,544	(3,366)	(67,786)	-93%	0.623	-	0.623	18	18	5.664	90%	8.28
POR	**907,068**			**68,144**	**975,212**	**(4,157)**	**33,243**	**3%**	**44.680**		**44.680**		**40**	**50.605**	**53%**	
	93%	**NC**		**7.0%**					**100%**	**NC**						

Table 5. Continued.

Location			*Inflow*												
	Area	On-Line status entire Water Year	PLR	HLR	PLR based on Surface Water	HLR based on Surface Water	Surface Water	Seepage	Rainfall	Σ Volume	Surface Water TP Load	Rainfall TP Load	Σ TP Load	Inflow FWM TP	Inflow FWM TP based on Surface Water
	(acres)	(Y/N)	(g/m^2/yr)	(cm/day)	(g/m^2/yr)	(cm/day)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(mt)	(mt)	(mt)	(ppb)	(ppb)
STA-3/4, Cell 2B	2894														
WY2006		Y	2.441	11.8	2.435	11.4	394,278	-	13,824	408,102	28.520	0.068	28.588	57	59
WY2007		Y	0.538	4.6	0.533	4.3	149,574	-	11,291	160,865	6.248	0.056	6.304	32	34
WY2008		Y	0.234	2.4	0.229	2.0	70,762	-	13,534	84,296	2.677	0.067	2.744	26	31
WY2009		Y	0.209	3.9	0.204	3.6	124,736	-	10,274	135,010	2.395	0.051	2.445	15	16
WY2010		Y	0.351	4.3	0.344	3.9	133,474	-	14,697	148,171	4.033	0.072	4.105	22	24
WY2011		Y	0.053	1.0	0.049	0.8	27,185	-	8,805	35,990	0.575	0.043	0.619	14	17
POR							**900,008**		**72,425**	**972,433**	**44.447**	**0.357**	**44.804**	**37**	**40**
							93%	**NC**	**7%**		**99%**	**1%**			

Location	*Outflow*															
	Surface Water	Ground-water	Σ Surface Water + Groundwater	ET	Σ Volume	Change in Storage	Water Budget Residual	Water Budget Error	TP Load from Surface Water	Ground- water TP Load	Σ TP Load	Outflow FWM TP	Outflow FWM TP based on Surface Water	TP Retained Based on Surface Water	TP from Surface Water Retained	k based on Surface Water
	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(%)	(mt)	(mt)	(mt)	(ppb)	(ppb)	(mt)	(%)	(m/yr)
STA-3/4, Cell 2B																
WY2006	262,269	-	262,269	12,763	275,032	(1,376)	(134,445)	-39%	8.253	-	8.253	26	26	20.266	71%	28.78
WY2007	121,971	-	121,971	12,655	134,626	(1,686)	(27,924)	-19%	3.325	-	3.325	22	22	2.923	46%	6.10
WY2008	81,421	-	81,421	12,809	94,230	3,306	13,240	15%	2.319	-	2.319	23	23	0.359	13%	2.28
WY2009	136,574	-	136,574	13,145	149,719	(1,584)	13,125	9%	2.280	-	2.280	14	14	0.115	5%	1.92
WY2010	207,274	-	207,274	12,878	220,152	529	72,510	39%	4.197	-	4.197	16	16	(0.165)	-4%	7.18
WY2011	94,193	-	94,193	13,331	107,524	(987)	70,547	98%	2.384	-	2.384	21	21	(1.809)	-292%	-1.14
POR	**903,703**			**77,581**	**981,284**	**(1,798)**	**7,053**	**1%**	**22.757**		**22.757**		**20**	**21.690**	**49%**	
	92%	**NC**		**8%**					**100%**	**NC**						

Table 5. Continued.

Location			*Inflow*												
	Area	On-Line status entire Water Year	PLR	HLR	PLR based on Surface Water	HLR based on Surface Water	Surface Water	Seepage	Rainfall	Σ Volume	Surface Water TP Load	Rainfall TP Load	Σ TP Load	Inflow FWM TP	Inflow FWM TP based on Surface Water
	(acres)	(Y/N)	($g/m^2/yr$)	(cm/day)	($g/m^2/yr$)	(cm/day)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(mt)	(mt)	(mt)	(ppb)	(ppb)
STA-3/4, Cell 3	4580														
WY2006		N	0.522	1.9	0.516	1.5	82,659	-	21,877	104,536	9.569	0.108	9.677	75	94
WY2007		N	0.626	1.8	0.621	1.5	82,894	-	17,870	100,764	11.510	0.088	11.598	93	113
WY2008		Y	0.462	2.6	0.456	2.2	122,433	-	21,419	143,852	8.449	0.106	8.554	48	56
POR							**287,987**		**61,166**	**349,153**	**29.528**	**0.302**	**29.830**	**83**	
							82%	**NC**	**17.5%**		**99.0%**	**1.0%**			

Location	*Outflow*												
	Surface Water	Ground-water	Σ Surface Water + Groundwater	ET	Σ Volume	Change in Storage	Water Budget Residual	Water Budget Error	TP Load from Surface Water	Ground- water TP Load	Σ TP Load	Outflow FWM TP	Outflow FWM TP based on Surface Water
	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(%)	(mt)	(mt)	(mt)	(ppb)	(ppb)
STA-3/4, Cell 3													
WY2006	105,494	-	105,494	20,198	125,692	(2,998)	18,158	16%	2.697	-	2.697	21	21
WY2007	86,595	-	86,595	20,028	106,623	(181)	5,677	5%	2.682	-	2.682	25	25
WY2008	112,309	-	112,309	20,271	132,580	5,664	(5,608)	-4%	2.485	-	2.485	18	18
POR	**304,398**			**60,497**	**364,895**	**2,485**	**18,227**	**5%**	**7.864**		**7.864**		**21**
	83%	**NC**		**16.6%**					**100%**	**NC**			

Table 5. Continued.

Location			*Inflow*												
	Area	On-Line status entire Water Year	PLR	HLR	PLR based on Surface Water	HLR based on Surface Water	Surface Water	Seepage	Rainfall	Σ Volume	Surface Water TP Load	Rainfall TP Load	Σ TP Load	Inflow FWM TP	Inflow FWM TP based on Surface Water
	(acres)	(Y/N)	($g/m^2/yr$)	(cm/day)	($g/m^2/yr$)	(cm/day)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(mt)	(mt)	(mt)	(ppb)	(ppb)
STA-3/4, Cell 3A	2153														
WY2009		Y	2.019	6.8	2.015	6.6	168,914	-	7,643	176,557	17.558	0.038	17.596	81	84
WY2010		Y	2.169	8.9	2.163	8.5	219,526	-	10,934	230,460	18.846	0.054	18.900	66	70
WY2011		Y	0.824	4.6	0.821	4.4	112,832	-	6,550	119,382	7.151	0.032	7.184	49	51
POR							**501,272**		**25,127**	**526,399**	**43.555**	**0.124**	**43.679**	**67**	**70**
							95%	**NC**	**4.8%**		**99.7%**	**0.3%**			

Location	*Outflow*																
	Surface Water	Ground-water	Σ Surface Water + Groundwater	ET	Σ Volume	Change in Storage	Water Budget Residual	Water Budget Error	TP Load from Surface Water	Ground- water TP Load	Σ TP Load	Outflow FWM TP	Outflow FWM TP based on Surface Water	TP Retained Based on Surface Water	TP from Surface Water Retained	k based on Surface Water
	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(%)	(mt)	(mt)	(mt)	(ppb)	(ppb)	(mt)	(%)	(m/yr)
STA-3/4, Cell 3A																
WY2009	167,308	-	167,308	9,779	177,087	(2,384)	(1,854)	-1%	4.188	-	4.188	20	20	13.371	76%	33.89
WY2010	358,603	-	358,603	9,581	368,184	3,875	141,599	47%	15.642	-	15.642	35	35	3.204	17%	27.71
WY2011	331,696	-	331,696	9,918	341,614	(3,673)	218,559	95%	8.567	-	8.567	21	21	(1.416)	-20%	28.25
POR	**857,607**			**29,278**	**886,885**	**(2,182)**	**358,304**	**51%**	**28.396**		**28.396**		**27**	**15.159**	**35%**	
	97%	**NC**		**3.3%**					**100%**	**NC**						

Table 5. Continued.

Location			*Inflow*												
	Area	On-Line status entire Water Year	PLR	HLR	PLR based on Surface Water	HLR based on Surface Water	Surface Water	Seepage	Rainfall	Σ Volume	Surface Water TP Load	Rainfall TP Load	Σ TP Load	Inflow FWM TP	Inflow FWM TP based on Surface Water
	(acres)	(Y/N)	(g/m^2/yr)	(cm/day)	(g/m^2/yr)	(cm/day)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(mt)	(mt)	(mt)	(ppb)	(ppb)
STA-3/4, Cell 3B	2427														
WY2009		Y	0.428	6.0	0.424	5.7	166,189	-	8,616	174,805	4.164	0.042	4.206	20	20
WY2010		Y	1.599	12.8	1.592	12.3	358,603	-	12,325	370,928	15.642	0.061	15.702	34	35
WY2011		Y	0.956	12.7	0.953	12.4	360,747	-	7,384	368,131	9.356	0.036	9.393	21	21
POR							**885,539**	**-**	**28,325**	**913,864**	**29.162**	**0.140**	**29.302**	**27**	**27**
							97%	**NC**	**3%**		**100%**	**0%**			

Location	*Outflow*																
	Surface Water	Ground-water	Σ Surface Water + Groundwater	ET	Σ Volume	Change in Storage	Water Budget Residual	Water Budget Error	TP Load from Surface Water	Ground- water TP Load	Σ TP Load	Outflow FWM TP	Outflow FWM TP based on Surface Water	TP Retained Based on Surface Water	TP from Surface Water Retained	k based on Surface Water
	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(%)	(mt)	(mt)	(mt)	(ppb)	(ppb)	(mt)	(%)	(m/yr)
STA-3/4, Cell 3B																
WY2009	129,209	-	129,209	11,024	140,233	(1,725)	(36,298)	-23%	1.964	-	1.964	12	12	2.200	52%	9.27
WY2010	233,842	-	233,842	10,800	244,642	1,242	(125,043)	-41%	4.326	-	4.326	15	15	11.316	72%	31.91
WY2011	124,384	-	124,384	11,180	135,564	(1,909)	(234,476)	-93%	2.082	-	2.082	14	14	7.274	77%	13.34
POR	**487,435**			**33,004**	**520,439**	**(2,392)**	**(395,816)**	**-55%**	**8.372**		**8.372**		**14**	**20.790**	**71%**	
	94%	**NC**		**6%**					**100%**	**NC**						

Table 5. Continued.

Location			*Inflow*												
	Area	On-Line status entire Water Year	PLR	HLR	PLR based on Surface Water	HLR based on Surface Water	Surface Water	Seepage	Rainfall	Σ Volume	Surface Water TP Load	Rainfall TP Load	Σ TP Load	Inflow FWM TP	Inflow FWM TP based on Surface Water
	(acres)	(Y/N)	($g/m^2/yr$)	(cm/day)	($g/m^2/yr$)	(cm/day)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(mt)	(mt)	(mt)	(ppb)	(ppb)
STA-3/4, Eastern Flow-way	6527														
WY2006		Y	1.635	4.0	1.630	3.6	285,159	-	31,177	316,336	43.043	0.154	43.197	111	122
WY2007		Y	1.096	2.5	1.091	2.2	171,127	-	25,466	196,593	28.818	0.126	28.944	119	137
WY2008		Y	0.534	2.0	0.528	1.6	126,065	-	30,524	156,589	13.945	0.151	14.096	73	90
WY2009		Y	0.637	2.6	0.633	2.3	182,054	-	23,170	205,224	16.712	0.114	16.827	66	74
WY2010		Y	0.964	3.0	0.958	2.6	201,022	-	33,146	234,168	25.304	0.163	25.468	88	102
WY2011		Y	0.373	1.5	0.369	1.2	93,579	-	19,858	113,437	9.742	0.098	9.840	70	84
POR							**1,059,007**		**163,341**	**1,222,348**	**137.565**	**0.806**	**138.370**	**92**	**105**
							87%	**NC**	**13.4%**		**99.4%**	**0.6%**			

Location	*Outflow*															
	Surface Water	Ground-water	Σ Surface Water + Groundwater	ET	Σ Volume	Change in Storage	Water Budget Residual	Water Budget Error	TP Load from Surface Water	Ground- water TP Load	Σ TP Load	Outflow FWM TP	Outflow FWM TP based on Surface Water	TP Retained Based on Surface Water	TP from Surface Water Retained	k based on Surface Water
	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(%)	(mt)	(mt)	(mt)	(ppb)	(ppb)	(mt)	(%)	(m/yr)
STA-3/4, Eastern Flow-way																
WY2006	379,014	-	379,014	28,784	407,798	(11,584)	79,877	22%	10.621	-	10.621	23	23	32.422	75%	26.11
WY2007	160,037	-	160,037	28,542	188,579	(1,588)	(9,602)	-5%	4.220	-	4.220	21	21	24.598	85%	14.34
WY2008	128,766	-	128,766	28,888	157,654	6,926	7,991	5%	3.070	-	3.070	19	19	10.875	77%	9.13
WY2009	200,249	-	200,249	29,646	229,895	(5,360)	19,311	9%	3.168	-	3.168	13	13	13.544	80%	15.69
WY2010	227,948	-	227,948	29,044	256,992	2,662	25,486	10%	3.781	-	3.781	13	13	21.523	85%	20.30
WY2011	102,716	-	102,716	30,066	132,782	(5,386)	13,959	11%	2.092	-	2.092	17	17	7.649	78%	7.48
POR	**1,198,730**			**174,970**	**1,373,700**	**(14,330)**	**137,023**	**11%**	**26.952**		**26.952**		**18**	**110.613**	**80%**	
	87%	**NC**		**12.7%**					**100%**	**NC**						

Table 5. Continued.

Location	Area	On-Line status entire Water Year	*Inflow* PLR	HLR	PLR based on Surface Water	HLR based on Surface Water	Surface Water	Seepage	Rainfall	Σ Volume	Surface Water TP Load	Rainfall TP Load	Σ TP Load	Inflow FWM TP	Inflow FWM TP based on Surface Water
	(acres)	(Y/N)	($g/m^2/yr$)	(cm/day)	($g/m^2/yr$)	(cm/day)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(mt)	(mt)	(mt)	(ppb)	(ppb)
STA-3/4, Central Flow-way	5436														
WY2006		Y	1.770	4.3	1.764	3.9	255,133	-	25,966	281,099	38.806	0.128	38.934	112	123
WY2007		Y	0.642	2.0	0.637	1.7	109,509	-	21,209	130,718	14.017	0.105	14.122	88	104
WY2008		Y	0.241	1.6	0.235	1.2	79,498	-	25,422	104,920	5.178	0.125	5.304	41	53
WY2009		Y	0.500	2.2	0.496	1.9	120,768	-	19,298	140,066	10.913	0.095	11.008	64	73
WY2010		Y	0.919	3.7	0.913	3.3	212,058	-	27,606	239,664	20.085	0.136	20.221	68	77
WY2011		Y	0.289	1.7	0.286	1.5	97,230	-	16,539	113,769	6.287	0.082	6.369	45	52
POR							**874,197**		**136,040**	**1,010,237**	**95.286**	**0.671**	**95.957**	**77**	**88**
							87%	**NC**	**13%**		**99%**	**1%**			

Location	*Outflow* Surface Water	Ground-water	Σ Surface Water + Groundwater	ET	Σ Volume	Change in Storage	Water Budget Residual	Water Budget Error	TP Load from Surface Water	Ground- water TP Load	Σ TP Load	Outflow FWM TP	Outflow FWM TP based on Surface Water	TP Retained Based on Surface Water	TP from Surface Water Retained	k based on Surface Water
	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(%)	(mt)	(mt)	(mt)	(ppb)	(ppb)	(mt)	(%)	(m/yr)
STA-3/4, Central Flow-way																
WY2006	262,269	-	262,269	23,973	286,242	(5,250)	(107)	0%	8.253	-	8.253	26	26	30.552	78%	22.85
WY2007	121,971	-	121,971	23,771	145,742	(4,315)	10,709	8%	3.325	-	3.325	22	22	10.693	76%	10.04
WY2008	81,421	-	81,421	24,060	105,481	8,155	8,715	8%	2.319	-	2.319	23	23	2.860	54%	3.73
WY2009	136,574	-	136,574	24,691	161,265	(4,647)	16,551	11%	2.280	-	2.280	14	14	8.633	78%	12.18
WY2010	207,274	-	207,274	24,190	231,464	4,455	(3,745)	-2%	4.197	-	4.197	16	16	15.887	79%	18.14
WY2011	94,193	-	94,193	25,040	119,233	(4,353)	1,111	1%	2.384	-	2.384	21	21	3.903	61%	5.03
POR	**903,703**			**145,725**	**1,049,428**	**(5,955)**	**33,235**	**3%**	**22.757**		**22.757**		**20**	**72.528**	**76%**	
	86%	**NC**		**14%**					**100%**	**NC**						

Table 5. Continued.

Location			*Inflow*												
	Area	On-Line status entire Water Year	PLR	HLR	PLR based on Surface Water	HLR based on Surface Water	Surface Water	Seepage	Rainfall	Σ Volume	Surface Water TP Load	Rainfall TP Load	Σ TP Load	Inflow FWM TP	Inflow FWM TP based on Surface Water
	(acres)	(Y/N)	($g/m^2/yr$)	(cm/day)	($g/m^2/yr$)	(cm/day)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(mt)	(mt)	(mt)	(ppb)	(ppb)
STA-3/4, Western Flow-way	4,580														
WY2006		N	0.522	1.9	0.516	1.5	82,659	-	21,877	104,536	9.569	0.108	9.677	75	94
WY2007		N	0.626	1.8	0.621	1.5	82,894	-	17,870	100,764	11.510	0.088	11.598	93	113
WY2008		Y	0.462	2.6	0.456	2.2	122,433	-	21,419	143,852	8.449	0.106	8.554	48	56
WY2009		Y	0.949	3.4	0.947	3.1	168,914	-	16,259	185,173	17.558	0.080	17.596	77	84
WY2010		Y	1.020	4.4	1.017	4.0	219,526	-	23,259	242,785	18.846	0.115	18.900	63	70
WY2011		Y	0.388	2.3	0.386	2.1	112,832	-	13,934	126,766	7.151	0.069	7.184	46	51
POR							**501,272**		**53,452**	**554,724**	**43.555**	**0.264**	**43.679**	**64**	**70**
							90%	**NC**	**10%**		**100%**	**1%**			

Location	*Outflow*																
	Surface Water	Ground-water	Σ Surface Water + Groundwater	ET	Σ Volume	Change in Storage	Water Budget Residual	Water Budget Error	TP Load from Surface Water	Ground- water TP Load	Σ TP Load	Outflow FWM TP	Outflow FWM TP based on Surface Water	TP Retained Based on Surface Water	TP from Surface Water Retained	k based on Surface Water
	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(%)	(mt)	(mt)	(mt)	(ppb)	(ppb)	(mt)	(%)	(m/yr)
STA-3/4, Western Flow-way																
WY2006	105,494	-	105,494	20,198	125,692	(2,998)	18,158	16%	2.697	-	2.697	21	21	6.872	71%	9.46
WY2007	86,595	-	86,595	20,028	106,623	(181)	5,677	5%	2.682	-	2.682	25	25	8.828	76%	8.46
WY2008	112,309	-	112,309	20,271	132,580	5,664	(5,608)	-4%	2.485	-	2.485	18	18	5.963	70%	8.88
WY2009	129,209	-	129,209	20,803	150,012	(4,109)	(39,270)	-23%	1.964	-	1.964	12	12	15.594	89%	19.07
WY2010	233,842	-	233,842	20,381	254,223	5,117	16,556	7%	4.326	-	4.326	15	15	14.520	77%	23.15
WY2011	124,384	-	124,384	21,098	145,482	(5,582)	13,135	10%	2.082	-	2.082	14	14	5.069	71%	10.51
POR	**487,435**			**62,282**	**549,717**	**(4,574)**	**(9,580)**	**-2%**	**8.372**		**8.372**		**14**	**35.183**	**81%**	
	89%	**NC**		**11%**					**100%**	**NC**						

Table 6. Annual and period-of-record water and total phosphorus budgets for treatment cells and flow-ways in STA-5.

Location			*Inflow*												
	Area	On-Line status entire Water Year	PLR	HLR	PLR based on Surface Water	HLR based on Surface Water	Surface Water	Seepage	Rainfall	Σ Volume	Surface Water TP Load	Rainfall TP Load	Σ TP Load	Inflow FWM TP	Inflow FWM TP based on Surface Water
	(acres)	(Y/N)	($g/m^2/yr$)	(cm/day)	($g/m^2/yr$)	(cm/day)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(mt)	(mt)	(mt)	(ppb)	(ppb)
STA-5, Cell 1A	835														
WY2009		N	4.366	5.8	4.361	5.2	52,080	2,929.0	2,980	57,989	14.738	0.015	14.753	206	229
WY2010		N	1.322	3.0	1.315	2.5	24,897	477.0	4,380	29,754	4.444	0.022	4.466	122	145
WY2011		Y	0.910	2.1	0.906	1.9	18,780	-	2,712	21,492	3.061	0.013	3.075	116	132
POR							**95,757**	**3,406.0**	**10,072**	**109,235**	**22.244**	**0.050**	**22.293**	**165**	**188**
							88%	**3%**	**9%**		**100%**	**0%**			

Location	*Outflow*														
	Surface Water	Ground-water	Σ Surface Water + Groundwater	ET	Σ Volume	Change in Storage	Water Budget Residual	Water Budget Error	TP Load from Surface Water	Ground- water TP Load	Σ TP Load	Outflow FWM TP based on Surface Water	TP Retained Based on Surface Water	TP from Surface Water Retained	k based on Surface Water
	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(%)	(mt)	(mt)	(mt)	(ppb)	(mt)	(%)	(m/yr)
STA-5, Cell 1A							-								
WY2009	115,256	1,619	116,875	3,732	120,607	(138)	62,480	70%	22.461	0.380	22.841	158	(7.723)	-52%	11.39
WY2010	43,698	2,368	46,066	3,568	49,634	1,416	21,296	54%	9.875	0.475	10.350	183	(5.430)	-122%	-2.95
WY2011	16,746	3,915	20,661	3,778	24,439	(1,369)	1,578	7%	0.819	0.349	1.169	40	2.242	73%	7.80
POR	**175,700**	**7,902**		**11,078**	**194,680**	**(91)**	**85,354**	**56%**	**33.155**	**1.205**	**34.360**	**153**	**(10.911)**	**-49%**	
	90%	**4%**		**6%**					**96%**	**4%**					

Table 6. Continued.

Location			*Inflow*												
	Area	On-Line status entire Water Year	PLR	HLR	PLR based on Surface Water	HLR based on Surface Water	Surface Water	Seepage	Rainfall	Σ Volume	Surface Water TP Load	Rainfall TP Load	Σ TP Load	Inflow FWM TP	Inflow FWM TP based on Surface Water
	(acres)	(Y/N)	($g/m^2/yr$)	(cm/day)	($g/m^2/yr$)	(cm/day)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(mt)	(mt)	(mt)	(ppb)	(ppb)
STA-5, Cell 1B	1220														
WY2009		N	4.835	9.1	4.831	8.8	129,162	-	4,354	133,516	23.852	0.021	23.874	145	150
WY2010		N	2.221	4.2	2.214	3.8	55,292	-	6,399	61,691	10.934	0.032	10.965	144	160
WY2011		Y	0.265	2.5	0.261	2.2	32,747	-	3,962	36,709	1.290	0.020	1.310	29	32
POR							**217,201**		**14,715**	**231,916**	**36.076**	**0.073**	**36.149**	**126**	**135**
							94%	**NC**	**6.3%**		**99.8%**	**0.2%**			

Location	*Outflow*															
	Surface Water	Ground-water	Σ Surface Water + Groundwater	ET	Σ Volume	Change in Storage	Water Budget Residual	Water Budget Error	TP Load from Surface Water	Ground- water TP Load	Σ TP Load	Outflow FWM TP	Outflow FWM TP based on Surface Water	TP Retained Based on Surface Water	TP from Surface Water Retained	k based on Surface Water
	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(%)	(mt)	(mt)	(mt)	(ppb)	(ppb)	(mt)	(%)	(m/yr)
STA-5, Cell 1B																
WY2009	69,976	6,209	76,185	5,453	81,638	(641)	(52,518)	-49%	3.943	0.633	4.577	49	46	19.909	83%	29.53
WY2010	28,596	3,730	32,326	5,213	37,539	245	(23,907)	-48%	1.982	0.437	2.419	61	56	8.951	82%	10.99
WY2011	16,926	5,692	22,618	5,520	28,138	(825)	(9,397)	-29%	0.852	0.253	1.105	40	41	0.439	33%	-1.52
POR	**115,498**	**15,631**		**16,186**	**147,315**	**(1,221)**	**(85,822)**	**-45%**	**6.777**	**1.323**	**8.100**		**48**	**29.299**	**81%**	
	78%	**10.6%**		**11.0%**					**84%**	**16%**						

Table 6. Continued.

Location			*Inflow*												
	Area	On-Line status entire Water Year	PLR	HLR	PLR based on Surface Water	HLR based on Surface Water	Surface Water	Seepage	Rainfall	Σ Volume	Surface Water TP Load	Rainfall TP Load	Σ TP Load	Inflow FWM TP	Inflow FWM TP based on Surface Water
	(acres)	(Y/N)	($g/m^2/yr$)	(cm/day)	($g/m^2/yr$)	(cm/day)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(mt)	(mt)	(mt)	(ppb)	(ppb)
STA-5, Cell 2A	835														
WY2009		N	3.452	4.2	3.447	3.8	38,112	1,019.0	2,980	42,111	11.649	0.015	11.664	225	248
WY2010		Y	4.474	7.2	4.467	6.8	67,714	119.0	4,380	72,213	15.096	0.022	15.118	170	181
WY2011		Y	0.515	1.3	0.511	0.9	9,381	1,055.0	2,712	13,148	1.726	0.013	1.739	107	149
POR							**115,207**	**2,193.0**	**10,072**	**127,472**	**28.471**	**0.050**	**28.521**	**181**	**200**
							90%	**1.7%**	**7.9%**		**99.8%**	**0.2%**			

Location	*Outflow*														
	Surface Water	Ground-water	Σ Surface Water + Groundwater	ET	Σ Volume	Change in Storage	Water Budget Residual	Water Budget Error	TP Load from Surface Water	Ground- water TP Load	Σ TP Load	Outflow FWM TP based on Surface Water	TP Retained Based on Surface Water	TP from Surface Water Retained	k based on Surface Water
	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(%)	(mt)	(mt)	(mt)	(ppb)	(mt)	(%)	(m/yr)
STA-5, Cell 2A															
WY2009	37,066	2,145	39,211	3,732	42,943	(15)	817	2%	4.217	0.400	4.617	92	7.432	64%	13.56
WY2010	76,457	1,751	78,208	3,568	81,776	1,342	10,905	14%	8.126	0.269	8.395	86	6.970	46%	19.49
WY2011	8,379	562	8,941	3,778	12,719	(1,341)	(1,770)	-14%	0.433	0.055	0.488	42	1.293	74%	4.12
POR	**121,902**	**4,458**		**11,078**	**137,438**	**(14)**	**9,953**	**8%**	**12.775**	**0.724**	**13.499**	**85**	**15.695**	**55%**	
	89%	**3.2%**		**8.1%**					**95%**	**5%**					

Table 6. Continued.

Location	Area	On-Line status entire Water Year	PLR	HLR	PLR based on Surface Water	HLR based on Surface Water	Surface Water	Seepage	Rainfall	Σ Volume	Surface Water TP Load	Rainfall TP Load	Σ TP Load	Inflow FWM TP	Inflow FWM TP based on Surface Water
			Inflow												
	(acres)	(Y/N)	($g/m^2/yr$)	(cm/day)	($g/m^2/yr$)	(cm/day)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(mt)	(mt)	(mt)	(ppb)	(ppb)
STA-5, Cell 2B	1220														
WY2009		N	0.451	2.1	0.447	1.7	24,689	1,097.0	4,354	30,140	2.207	0.021	2.229	60	72
WY2010		Y	1.702	6.0	1.695	5.5	80,589	288.0	6,399	87,276	8.371	0.032	8.402	78	84
WY2011		Y	0.079	0.8	0.075	0.5	7,092	1,039.0	3,962	12,093	0.372	0.020	0.392	26	43
POR							**112,371**	**2,424.0**	**14,715**	**129,510**	**10.950**	**0.073**	**11.023**	**69**	**79**
							87%	**2%**	**11%**		**99%**	**1%**			

Location	Surface Water	Ground-water	Σ Surface Water + Groundwater	ET	Σ Volume	Change in Storage	Water Budget Residual	Water Budget Error	TP Load from Surface Water	Ground- water TP Load	Σ TP Load	Outflow FWM TP	Outflow FWM TP based on Surface Water	TP Retained Based on Surface Water	TP from Surface Water Retained	k based on Surface Water
	Outflow															
	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(%)	(mt)	(mt)	(mt)	(ppb)	(ppb)	(mt)	(%)	(m/yr)
STA-5, Cell 2B																
WY2009	37,684	3,955	41,639	5,453	47,092	363	17,315	45%	3.383	0.354	3.737	73	73	(1.176)	-53%	-0.03
WY2010	72,085	3,540	75,625	5,213	80,838	246	(6,192)	-7%	4.349	0.280	4.629	50	49	4.022	48%	10.36
WY2011	4,618	1,846	6,464	5,520	11,984	(845)	(954)	-8%	0.314	0.110	0.424	53	55	0.059	15%	-0.38
POR	**114,387**	**9,341**		**16,186**	**139,914**	**(236)**	**10,168**	**8%**	**8.046**	**0.744**	**8.790**		**57**	**2.904**	**27%**	
	82%	**7%**		**12%**					**92%**	**8%**						

Table 6. Continued.

Location			*Inflow*												
	Area	On-Line status entire Water Year	PLR	HLR	PLR based on Surface Water	HLR based on Surface Water	Surface Water	Seepage	Rainfall	Σ Volume	Surface Water TP Load	Rainfall TP Load	Σ TP Load	Inflow FWM TP	Inflow FWM TP based on Surface Water
	(acres)	(Y/N)	($g/m^2/yr$)	(cm/day)	($g/m^2/yr$)	(cm/day)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(mt)	(mt)	(mt)	(ppb)	(ppb)
STA-5, Cell 3A	1002														
WY2009		N	1.878	1.4	1.873	1.0	11,412	1,482.0	3,576	16,470	7.596	0.018	7.613	375	540
WY2010		N	1.049	2.1	1.042	1.5	18,491	1,378.2	5,256	25,125	4.227	0.026	4.253	137	185
WY2011		N	0.197	0.5	0.193	0.2	2,005	174.0	3,254	5,433	0.784	0.016	0.800	119	317
POR							**31,907**	**3,034.2**	**12,086**	**47,027**	**12.607**	**0.060**	**12.666**	**218**	**320**
							68%	**6%**	**26%**		**100%**	**0%**			

Location	*Outflow*														
	Surface Water	Ground-water	Σ Surface Water + Groundwater	ET	Σ Volume	Change in Storage	Water Budget Residual	Water Budget Error	TP Load from Surface Water	Ground- water TP Load	Σ TP Load	Outflow FWM TP based on Surface Water	TP Retained Based on Surface Water	TP from Surface Water Retained	k based on Surface Water
	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(%)	(mt)	(mt)	(mt)	(ppb)	(mt)	(%)	(m/yr)
STA-5, Cell 3A															
WY2009	5,765	5,358	11,123	4,479	15,602	(88)	(955)	-6%	1.671	2.352	4.023	235	5.925	78%	2.17
WY2010	16,425	9,161	25,586	4,281	29,867	-	4,742	17%	1.296	1.230	2.525	64	2.931	69%	5.65
WY2011	9,740	12,216	21,956	4,533	26,489	86	21,143	132%	0.459	1.659	2.118	38	0.325	41%	3.78
POR	**31,930**	**26,735**		**13,293**	**71,958**	**(2)**	**24,929**	**42%**	**3.426**	**5.241**	**8.667**	**87**	**9.181**	**73%**	
	44%	**37%**		**18%**					**40%**	**60%**					

Table 6. Continued.

Location			*Inflow*												
	Area	On-Line status entire Water Year	PLR	HLR	PLR based on Surface Water	HLR based on Surface Water	Surface Water	Seepage	Rainfall	Σ Volume	Surface Water TP Load	Rainfall TP Load	Σ TP Load	Inflow FWM TP	Inflow FWM TP based on Surface Water
	(acres)	(Y/N)	($g/m^2/yr$)	(cm/day)	($g/m^2/yr$)	(cm/day)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(mt)	(mt)	(mt)	(ppb)	(ppb)
STA-5, Cell 3B	983														
WY2009		N	0.425	1.0	0.420	0.5	5,797	2,032.0	3,508	11,337	1.672	0.017	1.689	121	234
WY2010		N	0.332	2.0	0.326	1.4	16,434	2,107.8	5,156	23,698	1.296	0.025	1.321	45	64
WY2011		N	0.129	1.3	0.125	0.9	10,979	1,614.0	3,192	15,785	0.499	0.016	0.515	26	37
POR							**33,210**	**5,753.8**	**11,856**	**50,820**	**3.467**	**0.058**	**3.525**	**56**	**85**
							65%	**11.3%**	**23.3%**		**98.3%**	**1.7%**			

Location	*Outflow*														
	Surface Water	Ground-water	Σ Surface Water + Groundwater	ET	Σ Volume	Change in Storage	Water Budget Residual	Water Budget Error	TP Load from Surface Water	Ground- water TP Load	Σ TP Load	Outflow FWM TP based on Surface Water	TP Retained Based on Surface Water	TP from Surface Water Retained	k based on Surface Water
	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(%)	(mt)	(mt)	(mt)	(ppb)	(mt)	(%)	(m/yr)
STA-5, Cell 3B															
WY2009	3,247	2,139	5,386	4,394	9,780	(67)	(1,624)	-15%	0.122	0.222	0.344	30	1.550	92%	2.86
WY2010	3,604	2,042	5,646	4,200	9,846	214	(13,638)	-81%	0.160	0.121	0.281	36	1.136	86%	1.79
WY2011	2,775	2,925	5,700	4,447	10,147	(173)	(5,811)	-45%	0.262	0.192	0.454	77	0.237	46%	-1.56
POR	**9,626**	**7,106**		**13,041**	**29,773**	**(26)**	**(21,072)**	**-52%**	**0.544**	**0.535**	**1.079**	**46**	**2.923**	**84%**	
	32%	**23.9%**		**43.8%**					**50%**	**50%**					

Table 6. Continued.

Location			*Inflow*												
	Area	On-Line status entire Water Year	PLR	HLR	PLR based on Surface Water	HLR based on Surface Water	Surface Water	Seepage	Rainfall	Σ Volume	Surface Water TP Load	Rainfall TP Load	Σ TP Load	Inflow FWM TP	Inflow FWM TP based on Surface Water
	(acres)	(Y/N)	($g/m^2/yr$)	(cm/day)	($g/m^2/yr$)	(cm/day)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(mt)	(mt)	(mt)	(ppb)	(ppb)
STA-5, Flow-way 1	2055														
WY2001		Y	0.686	1.8	0.683	1.5	36,870	-	6,589	43,459	5.676	0.032	5.709	106	125
WY2002		Y	2.864	4.3	2.861	4.1	100,022	-	6,088	106,110	23.790	0.030	23.820	182	193
WY2003		Y	2.822	4.5	2.817	4.2	103,490	-	8,173	111,663	23.431	0.040	23.472	170	184
WY2004		Y	2.552	4.9	2.547	4.6	113,064	-	7,814	120,878	21.185	0.039	21.224	142	152
WY2005		N	1.822	4.1	1.818	3.8	92,868	1,629.0	7,196	101,693	15.116	0.035	15.152	121	132
WY2006		Y	3.471	6.0	3.467	5.7	141,118	426.0	6,893	148,437	28.830	0.034	28.864	158	166
WY2007		Y	2.331	2.7	2.327	2.4	58,505	-	7,200	65,705	19.349	0.036	19.384	239	268
WY2008		Y	0.179	0.9	0.174	0.5	12,363	939.0	7,718	21,020	1.447	0.038	1.485	57	95
WY2009		N	1.814	3.0	1.810	2.5	62,436	2,929.0	7,334	72,699	15.050	0.036	15.086	168	195
WY2010		N	0.558	1.7	0.552	1.2	30,386	477.0	10,779	41,642	4.587	0.053	4.640	90	122
WY2011		Y	0.422	1.6	0.418	1.4	33,483	-	6,674	40,157	3.476	0.033	3.509	71	84
POR							**784,604**	**6,400.0**	**82,458**	**873,462**	**161.940**	**0.407**	**162.347**	**151**	**167**
							90%	**0.7%**	**9.4%**		**99.7%**	**0.3%**			

Location	*Outflow*															
	Surface Water	Ground-water	Σ Surface Water + Groundwater	ET	Σ Volume	Change in Storage	Water Budget Residual	Water Budget Error	TP Load from Surface Water	Ground- water TP Load	Σ TP Load	Outflow FWM TP	Outflow FWM TP based on Surface Water	TP Retained Based on Surface Water	TP from Surface Water Retained	k based on Surface Water
	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(%)	(mt)	(mt)	(mt)	(ppb)	(ppb)	(mt)	(%)	(m/yr)
STA-5, Flow-way 1																
WY2001	20,566	8,626	29,192	9,615	38,807	(1,953)	(6,605)	-16%	3.598	1.415	5.013	139	142	2.078	36%	-0.54
WY2002	83,779	9,341	93,120	9,052	102,172	1,907	(2,031)	-2%	8.762	1.473	10.234	89	85	15.029	63%	11.20
WY2003	100,938	7,601	108,539	8,760	117,299	(25)	5,612	5%	17.965	1.525	19.490	146	144	5.466	23%	3.65
WY2004	100,922	8,667	109,589	8,775	118,364	1,006	(1,508)	-1%	8.554	1.092	9.645	71	69	12.632	60%	12.59
WY2005	73,465	6,383	79,848	8,692	88,540	(2,748)	(15,901)	-17%	5.680	0.716	6.396	65	63	9.436	62%	9.18
WY2006	112,770	10,080	122,850	8,875	131,725	(79)	(16,791)	-12%	12.477	1.515	13.992	92	90	16.353	57%	11.55
WY2007	64,530	7,300	71,830	8,998	80,828	45	15,168	21%	14.130	1.964	16.094	182	178	5.218	27%	3.76
WY2008	3,855	2,348	6,203	8,827	15,030	1,439	(4,551)	-25%	0.425	0.267	0.692	90	89	1.022	69%	0.07
WY2009	69,976	7,828	77,804	9,185	86,989	(779)	13,511	17%	3.940	0.912	4.852	51	46	11.110	74%	14.28
WY2010	28,596	6,098	34,694	8,781	43,475	1,661	3,494	8%	1.982	0.624	2.606	61	56	2.605	56%	3.40
WY2011	16,926	9,607	26,533	9,298	35,831	(2,194)	(6,520)	-17%	0.851	0.694	1.545	47	41	2.625	75%	2.71
POR	**676,324**	**83,879**		**98,858**	**859,061**	**(1,720)**	**(16,121)**	**-2%**	**78.365**	**12.195**	**90.560**		**94**	**83.575**	**52%**	
	79%	**9.8%**		**11.5%**					**87%**	**13%**						

Table 6. Continued.

Location			*Inflow*												
	Area	On-Line status entire Water Year	PLR	HLR	PLR based on Surface Water	HLR based on Surface Water	Surface Water	Seepage	Rainfall	Σ Volume	Surface Water TP Load	Rainfall TP Load	Σ TP Load	Inflow FWM TP	Inflow FWM TP based on Surface Water
	(acres)	(Y/N)	(g/m^2/yr)	(cm/day)	(g/m^2/yr)	(cm/day)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(mt)	(mt)	(mt)	(ppb)	(ppb)
STA-5, Flow-way 2	2055														
WY2001		Y	1.313	2.2	1.309	1.9	46,857	1,095.0	6,589	54,541	10.883	0.032	10.916	162	188
WY2002		Y	3.150	4.0	3.146	3.8	92,994	375.0	6,088	99,457	26.166	0.030	26.196	214	228
WY2003		Y	4.248	4.3	4.243	3.9	96,985	-	8,173	105,158	35.291	0.040	35.331	272	295
WY2004		Y	3.456	3.4	3.451	3.0	74,699	-	7,814	82,513	28.703	0.039	28.741	282	312
WY2005		Y	1.328	2.6	1.323	2.3	55,853	-	7,196	63,049	11.007	0.035	11.042	142	160
WY2006		N	3.063	4.9	3.059	4.1	100,029	14,678.0	6,893	121,600	25.437	0.034	25.471	170	206
WY2007		N	0.707	1.7	0.703	1.2	29,614	4,932.0	7,200	41,746	5.843	0.036	5.878	114	160
WY2008		Y	0.130	0.9	0.125	0.3	7,972	6,249.0	7,718	21,939	1.042	0.038	1.080	40	106
WY2009		N	1.421	2.1	1.416	1.7	42,803	2,116.0	7,334	52,253	11.780	0.036	11.816	183	223
WY2010		Y	1.836	3.4	1.829	2.9	71,846	407.0	10,779	83,032	15.214	0.053	15.268	149	172
WY2011		Y	0.211	0.7	0.207	0.4	9,381	2,094.0	6,674	18,149	1.726	0.033	1.758	79	149
POR							**629,033**	**31,946.0**	**82,458**	**743,437**	**173.091**	**0.407**	**173.497**	**189**	**223**
							85%	**4%**	**11%**		**100%**	**0%**			

Location	*Outflow*															
	Surface Water	Ground-water	Σ Surface Water + Groundwater	ET	Σ Volume	Change in Storage	Water Budget Residual	Water Budget Error	TP Load from Surface Water	Ground- water TP Load	Σ TP Load	Outflow FWM TP	Outflow FWM TP based on Surface Water	TP Retained Based on Surface Water	TP from Surface Water Retained	k based on Surface Water
	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(%)	(mt)	(mt)	(mt)	(ppb)	(ppb)	(mt)	(%)	(m/yr)
STA-5, Flow-way 2																
WY2001	19,412	20,481	39,893	9,615	49,508	(2,019)	(7,052)	-14%	1.289	2.542	3.831	78	54	9.595	88%	6.16
WY2002	47,226	18,726	65,952	9,052	75,004	1,617	(22,836)	-26%	4.333	3.008	7.341	90	74	21.833	83%	11.65
WY2003	59,580	27,183	86,763	8,760	95,523	(173)	(9,809)	-10%	8.491	6.188	14.679	137	116	26.800	76%	10.88
WY2004	37,822	22,740	60,562	8,775	69,337	1,183	(11,993)	-16%	8.000	6.480	14.481	194	171	20.702	72%	4.98
WY2005	48,323	27,524	75,847	8,692	84,539	(852)	20,638	28%	6.558	4.499	11.057	118	110	4.449	40%	2.88
WY2006	88,573	16,238	104,811	8,875	113,686	(2,507)	(10,421)	-9%	11.258	2.918	14.176	110	103	14.179	56%	9.70
WY2007	3,145	2,444	5,589	8,998	14,587	432	(26,727)	-95%	0.954	0.598	1.551	225	246	4.889	83%	-1.04
WY2008	3,220	408	3,628	8,827	12,455	995	(8,490)	-49%	0.410	0.053	0.463	103	103	0.632	59%	0.02
WY2009	37,684	6,100	43,784	9,185	52,969	348	1,064	2%	3.393	0.960	4.352	81	73	8.387	71%	6.67
WY2010	67,742	5,291	73,033	8,781	81,814	1,588	370	0%	4.014	0.592	4.607	51	48	11.200	73%	13.18
WY2011	4,618	2,408	7,026	9,298	16,324	(2,186)	(4,011)	-23%	0.306	0.266	0.572	66	54	1.419	81%	1.06
POR	**417,344**	**149,543**		**98,858**	**665,745**	**(1,574)**	**(79,266)**	**-11%**	**49.006**	**28.104**	**77.110**		**95**	**124.084**	**72%**	
	63%	**22%**		**15%**					**64%**	**36%**						

Table 6. Continued.

Location			*Inflow*												
	Area	On-Line status entire Water Year	PLR	HLR	PLR based on Surface Water	HLR based on Surface Water	Surface Water	Seepage	Rainfall	Σ Volume	Surface Water TP Load	Rainfall TP Load	Σ TP Load	Inflow FWM TP	Inflow FWM TP based on Surface Water
	(acres)	(Y/N)	($g/m^2/yr$)	(cm/day)	($g/m^2/yr$)	(cm/day)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(mt)	(mt)	(mt)	(ppb)	(ppb)
STA-5, Flow-way 3	1985														
WY2009		N	0.950	0.9	0.946	0.5	11,412	3,514	7,084	22,010	7.596	0.035	7.631	281	540
WY2010		N	0.533	1.4	0.526	0.8	18,491	3,486	10,412	32,389	4.227	0.051	4.278	107	185
WY2011		N	0.102	0.4	0.098	0.1	2,005	1,788	6,446	10,239	0.784	0.032	0.816	65	317
POR							**31,907**	**8,788.0**	**23,942**	**64,637**	**12.607**	**0.118**	**12.725**	**160**	**320**
							49%	**13.6%**	**37.0%**		**99.1%**	**0.9%**			

Location	*Outflow*														
	Surface Water	Ground-water	Σ Surface Water + Groundwater	ET	Σ Volume	Change in Storage	Water Budget Residual	Water Budget Error	TP Load from Surface Water	Ground- water TP Load	Σ TP Load	Outflow FWM TP based on Surface Water	TP Retained Based on Surface Water	TP from Surface Water Retained	k based on Surface Water
	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(%)	(mt)	(mt)	(mt)	(ppb)	(mt)	(%)	(m/yr)
STA-5, Flow-way 3															
WY2009	3,247		3,247	8,873	12,120	(155)	(10,044)	-59%	0.122	-	0.122	30	7.474	98%	3.24
WY2010	3,604		3,604	8,481	12,085	214	(20,090)	-90%	0.160	-	0.160	36	4.067	95%	2.78
WY2011	2,775		2,775	8,980	11,755	(87)	1,430	13%	0.262	-	0.262	77	0.522	64%	0.52
POR	**9,626**			**26,334**	**35,960**	**(28)**	**(28,704)**	**-57%**	**0.544**		**0.544**	**46**	**12.063**	**96%**	
	27%	**NC**		**73%**					**100%**	**NC**					

Table 7. Annual and period-of-record water and total phosphorus budgets for treatment cells and flow-ways in STA-6.

			Inflow												
Location	Area	On-Line status entire Water Year	PLR	HLR	PLR based on Surface Water	HLR based on Surface Water	Surface Water	Seepage	Rainfall	Σ Volume	Surface Water TP Load	Rainfall TP Load	Σ TP Load	Inflow FWM TP	Inflow FWM TP based on Surface Water
	(acres)	(Y/N)	($g/m^2/yr$)	(cm/day)	($g/m^2/yr$)	(cm/day)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(mt)	(mt)	(mt)	(ppb)	(ppb)
STA-6, Cell 3	245														
WY2004		Y	0.478	4.9	0.472	4.6	13,376	-	1,125	14,501	0.468	0.006	0.474	26	28
WY2005		Y	1.226	4.4	1.221	4.1	11,971	-	1,026	12,997	1.211	0.005	1.216	76	82
WY2006		Y	1.036	4.1	1.031	3.8	11,003	-	927	11,930	1.023	0.005	1.027	70	75
WY2007		Y	0.736	3.5	0.733	3.3	9,670	-	582	10,252	0.727	0.003	0.730	58	61
WY2008		Y	0.074	0.8	0.070	0.5	1,518	10.0	915	2,443	0.069	0.005	0.074	24	37
WY2009		Y	0.540	1.0	0.535	0.6	1,901	252.0	907	3,060	0.531	0.004	0.535	142	226
WY2010		Y	1.104	3.6	1.098	3.0	8,919	321.0	1,321	10,561	1.088	0.007	1.095	84	99
WY2011		Y	0.658	2.2	0.653	1.9	5,629	61.0	862	6,552	0.648	0.004	0.652	81	93
POR							**63,987**	**644.0**	**7,665**	**72,296**	**5.764**	**0.038**	**5.802**	**65**	**73**
							89%	**1%**	**11%**		**99%**	**1%**			

	Outflow														
Location	Surface Water	Ground-water	Σ Surface Water + Groundwater	ET	Σ Volume	Change in Storage	Water Budget Residual	Water Budget Error	TP Load from Surface Water	Ground- water TP Load	Σ TP Load	Outflow FWM TP based on Surface Water	TP Retained Based on Surface Water	TP from Surface Water Retained	k based on Surface Water
	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(%)	(mt)	(mt)	(mt)	(ppb)	(mt)	(%)	(m/yr)
STA-6, Cell 3															
WY2004	12,464	-	12,464	1,073	13,537	(328)	(1,293)	-9%	0.188	-	0.188	12	0.280	59%	13.54
WY2005	6,883	-	6,883	1,075	7,958	180	(4,859)	-46%	0.157	-	0.157	18	1.054	87%	17.50
WY2006	11,151	-	11,151	1,080	12,231	(76)	225	2%	0.449	-	0.449	33	0.573	56%	11.52
WY2007	5,232	-	5,232	1,071	6,303	(102)	(4,051)	-49%	0.278	-	0.278	43	0.448	61%	3.20
WY2008	586	87	673	1,084	1,757	211	(475)	-23%	0.039	0.005	0.044	54	0.030	41%	-0.49
WY2009	2,065	226	2,291	1,113	3,404	(211)	133	4%	0.087	0.024	0.111	34	0.444	83%	4.68
WY2010	3,518	45	3,563	1,090	4,653	376	(5,532)	-73%	0.187	0.004	0.190	43	0.902	82%	6.44
WY2011	4,496	391	4,887	1,129	6,016	(374)	(911)	-14%	0.089	0.019	0.108	16	0.558	86%	11.07
POR	**46,393**	**749**		**8,715**	**55,857**	**(324)**	**(16,763)**	**-26%**	**1.473**	**0.052**	**1.525**	**26**	**4.291**	**74%**	
	83%	**1%**		**16%**					**97%**	**3%**					

Table 7. Continued.

Location			*Inflow*												
	Area	On-Line status entire Water Year	PLR	HLR	PLR based on Surface Water	HLR based on Surface Water	Surface Water	Seepage	Rainfall	Σ Volume	Surface Water TP Load	Rainfall TP Load	Σ TP Load	Inflow FWM TP	Inflow FWM TP based on Surface Water
	(acres)	(Y/N)	($g/m^2/yr$)	(cm/day)	($g/m^2/yr$)	(cm/day)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(mt)	(mt)	(mt)	(ppb)	(ppb)
STA-6, Cell 5	625														
WY2004		Y	0.420	3.8	0.414	3.4	25,380	-	2,869	28,249	1.047	0.014	1.061	30	33
WY2005		Y	0.756	3.2	0.751	2.9	21,344	-	2,617	23,961	1.900	0.013	1.913	65	72
WY2006		Y	0.595	2.2	0.590	1.9	14,369	-	2,366	16,735	1.493	0.012	1.504	73	84
WY2007		Y	2.116	2.7	2.113	2.5	18,936	-	1,484	20,420	5.345	0.007	5.353	213	229
WY2008		Y	0.098	1.0	0.094	0.7	5,484	37.0	2,334	7,855	0.237	0.012	0.248	26	35
WY2009		Y	0.389	1.1	0.384	0.5	3,784	2,097.0	2,314	8,195	0.972	0.011	0.983	97	208
WY2010		Y	0.946	3.4	0.940	2.7	20,252	1,516.0	3,370	25,138	2.376	0.017	2.393	77	95
WY2011		Y	0.473	1.7	0.469	1.3	9,941	468.0	2,199	12,608	1.186	0.011	1.197	77	97
POR							**119,489**	**4,118.0**	**19,553**	**143,160**	**14.557**	**0.096**	**14.653**	**83**	**99**
							83%	**2.9%**	**13.7%**		**99.3%**	**0.7%**			

Location	*Outflow*														
	Surface Water	Ground-water	Σ Surface Water + Groundwater	ET	Σ Volume	Change in Storage	Water Budget Residual	Water Budget Error	TP Load from Surface Water	Ground- water TP Load	Σ TP Load	Outflow FWM TP based on Surface Water	TP Retained Based on Surface Water	TP from Surface Water Retained	k based on Surface Water
	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(%)	(mt)	(mt)	(mt)	(ppb)	(mt)	(%)	(m/yr)
STA-6, Cell 5															
WY2004	16,585	-	16,585	2,736	19,321	(622)	(9,550)	-40%	0.228	-	0.228	11	0.819	77%	11.24
WY2005	9,399	-	9,399	2,743	12,142	5	(11,814)	-65%	0.225	-	0.225	19	1.676	88%	9.86
WY2006	12,095	-	12,095	2,756	14,851	28	(1,856)	-12%	0.277	-	0.277	19	1.216	81%	9.77
WY2007	6,293	-	6,293	2,733	9,026	(1)	(11,395)	-77%	0.355	-	0.355	46	4.990	93%	9.90
WY2008	1,089	-	1,089	2,766	3,855	172	(3,829)	-65%	0.035	-	0.035	26	0.202	81%	0.46
WY2009	4,857	337	5,194	2,839	8,033	(185)	(347)	-4%	0.143	0.029	0.172	24	0.829	84%	4.56
WY2010	11,058	654	11,712	2,781	14,493	957	(9,688)	-49%	0.354	0.040	0.394	26	2.022	85%	9.92
WY2011	7,863	1,268	9,131	2,879	12,010	(956)	(1,554)	-13%	0.164	0.063	0.227	17	1.023	85%	7.58
POR	**69,240**	**2,259**		**22,233**	**93,732**	**(602)**	**(50,031)**	**-42%**	**1.780**	**0.133**	**1.913**	**21**	**12.776**	**88%**	
	74%	**2.4%**		**23.7%**					**93.1%**	**6.9%**					

Table 7. Continued.

Location			*Inflow*												
	Area	On-Line status entire Water Year	PLR	HLR	PLR based on Surface Water	HLR based on Surface Water	Surface Water	Seepage	Rainfall	Σ Volume	Surface Water TP Load	Rainfall TP Load	Σ TP Load	Inflow FWM TP	Inflow FWM TP based on Surface Water
	(acres)	(Y/N)	($g/m^2/yr$)	(cm/day)	($g/m^2/yr$)	(cm/day)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(mt)	(mt)	(mt)	(ppb)	(ppb)
STA-6, Section 2	1387														
WY2009		Y	2.244	3.5	2.240	3.1	51,584	751.0	5,135	57,470	12.571	0.025	12.596	178	198
WY2010		Y	2.019	5.0	2.012	4.4	73,711	1,692.0	7,478	82,881	11.296	0.037	11.333	111	124
WY2011		N	1.485	3.7	1.481	3.4	57,274	127.0	4,880	62,281	8.311	0.024	8.335	108	118
POR							**182,568**	**2,570.0**	**17,493**	**202,631**	**32.177**	**0.086**	**32.264**	**129**	**143**
							90%	**1%**	**9%**		**100%**	**0%**			

Location	*Outflow*														
	Surface Water	Ground-water	Σ Surface Water + Groundwater	ET	Σ Volume	Change in Storage	Water Budget Residual	Water Budget Error	TP Load from Surface Water	Ground- water TP Load	Σ TP Load	Outflow FWM TP based on Surface Water	TP Retained Based on Surface Water	TP from Surface Water Retained	k based on Surface Water
	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	(%)	(mt)	(mt)	(mt)	(ppb)	(mt)	(%)	(m/yr)
STA-6, Section 2															
WY2009	35,401	13,057	48,458	6,300	54,758	(1,327)	(4,039)	-7%	4.644	2.334	6.978	106	7.927	63%	5.92
WY2010	61,261	29,591	90,852	6,172	97,024	2,975	17,118	19%	4.143	3.011	7.155	55	7.152	63%	12.13
WY2011	62,233	22,742	84,975	6,389	91,364	(2,986)	26,097	34%	2.064	1.577	3.641	27	6.247	75%	19.38
POR	**158,894**	**65,390**		**18,861**	**243,145**	**(1,338)**	**39,176**	**18%**	**10.851**	**6.922**	**17.773**	**55**	**21.326**	**66%**	
	65%	**27%**		**8%**					**61%**	**39%**					

Notes:

1. Water budget terms expressed in acre feet (ac-ft); hm^3 = ac-ft/810.7.
2. NC indicates that the parameter was not calculated; negative values are shown in parenthesis
3. Gray shading indicates that the treatment cell was off-line part of the year.
4. ET = Evapotranspiration.
5. Surface water volume and total phosphorus (TP) loads from Nutrient Load program
6. Rainfall, seepage, and ET from Water Budget program
7. Rainfall TP was estimated using station ENR308 rainfall TP and median concentration from 2000-2011
8. Groundwater TP was estimated from geometric mean. Water Budget residual (r): (Σoutflow + Change in Storage) –Σinflow; Water budget error: r ÷ [(Σinflow + Σoutflow)/2].
9. k = TP removal coefficient (equation 5-1)

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