Appendix 3A-4: Water Year 2015 Total Phosphorus and Total Nitrogen Concentrations at Individual Stations

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In this appendix, Table 1 provides statistical summaries of total phosphorous (TP) for each station during Water Year 2015 (WY2015) (May 1, 2014–April 30, 2015) within the Everglades Protection Area (EPA). Table 2 provides statistical summaries of total nitrogen for each station during WY2015 within the EPA. Table 3 summarizes the annual geometric mean TP Kendall trend analysis results for each monitoring station within the EPA from WY1979–WY2015. The EPA includes Arthur R. Marshall Loxahatchee National Wildlife LNWR [LNWR, also known as Water Conservation Area (WCA-)1], WCA-2, WCA-3, and Everglades National Park (ENP). Area and class of each station is identified.

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Table 1. Summary of annual TP concentrations [micrograms per liter (µg/L)] at the inflow, Rim Canal, interior marsh, and outflow monitoring stations in the EPA during WY2015. [Note: n – sample size.]

Area	Class	Station	Geometric Mean	Geometric Standard Deviation	Arithmetic Mean	Standard Deviation	25th Quartile	Median	75th Quartile	Minimum	Maximum	n
LNWR	Inflow[b]	ENR012	18.5	4.1	19.3	5.6	15.0	18.0	23.0	12.0	33.0	59
LNWR	Inflow[a]	ENR012	15.3	4.0	15.7	3.8	13.5	15.0	16.3	12.0	32.0	32
LNWR	Inflow[b]	G310	19.0	4.3	19.7	5.1	16.0	19.0	23.0	5.0	33.0	67
LNWR	Inflow[a]	G310	18.8	4.3	19.5	4.9	16.0	19.0	23.0	5.0	33.0	54
LNWR	Inflow[b]	G338	67.5	---	74.0	31.4	53.8	70.3	90.6	18.0	174.0	64
LNWR	Inflow[a]	G338	---	---	---	---	---	---	---	---	---	0
LNWR	Inflow[b]	S362	21.6	4.3	22.1	5.3	19.0	21.3	25.0	14.5	45.5	64
LNWR	Inflow[a]	S362	21.9	4.3	22.4	5.2	19.0	21.8	25.0	14.5	45.5	52
LNWR	Interior	LOX10	5.6	3.0	5.8	1.2	5.5	6.0	6.3	4.0	7.0	8
LNWR	Interior	LOX11	6.4	3.1	6.6	1.6	5.8	6.5	7.3	4.0	9.0	12
LNWR	Interior	LOX12	6.7	3.2	6.8	1.4	6.5	7.0	8.0	4.0	8.0	12
LNWR	Interior	LOX13	6.4	3.1	6.5	1.2	6.0	7.0	7.0	4.0	8.0	12
LNWR	Interior	LOX14	6.3	3.0	6.3	0.9	6.0	6.0	7.0	5.0	8.0	12
LNWR	Interior	LOX15	5.7	2.9	5.7	0.9	5.0	6.0	6.0	4.0	7.0	11
LNWR	Interior	LOX16	7.0	3.2	7.1	1.3	6.0	7.5	8.0	5.0	9.0	12
LNWR	Interior	LOX3	7.8	3.3	8.0	1.9	6.0	8.0	9.3	6.0	11.0	8
LNWR	Interior	LOX4	9.0	3.5	9.3	2.6	7.0	9.0	11.0	6.0	14.0	10
LNWR	Interior	LOX5	8.4	3.4	8.6	2.1	7.0	8.5	10.0	6.0	12.0	10
LNWR	Interior	LOX6	5.8	3.0	5.9	1.2	5.5	6.0	6.5	4.0	8.0	11
LNWR	Interior	LOX7	7.7	3.3	7.9	2.0	7.0	7.0	8.5	6.0	13.0	11
LNWR	Interior	LOX8	9.2	3.4	9.4	2.0	8.0	9.0	10.5	7.0	13.0	11
LNWR	Interior	LOX9	7.8	3.2	7.9	1.2	7.0	8.0	8.8	6.0	10.0	10
LNWR	Interior	LOXA101	12.9	3.9	13.3	3.8	10.0	13.0	14.0	9.0	21.0	9
LNWR	Interior	LOXA104.5	21.5	4.8	25.1	19.3	15.8	18.5	22.8	14.0	72.0	8
LNWR	Interior	LOXA105	13.2	4.0	14.0	5.1	10.8	13.0	17.3	7.0	23.0	8
LNWR	Interior	LOXA106	10.7	3.6	10.9	2.0	9.5	11.5	12.3	8.0	13.0	8
LNWR	Interior	LOXA107	10.0	3.5	10.1	1.6	9.0	10.0	11.0	8.0	13.0	8
LNWR	Interior	LOXA107U	7.9	3.3	8.1	1.9	7.0	8.0	9.3	5.0	11.0	8
LNWR	Interior	LOXA108	9.4	3.4	9.5	1.8	8.0	9.5	11.0	7.0	12.0	8
LNWR	Interior	LOXA124	10.6	3.7	10.9	2.8	9.0	11.0	13.0	7.0	15.0	11
LNWR	Interior	LOXA130	9.9	3.6	10.2	2.5	8.5	10.0	12.0	6.0	14.0	11
LNWR	Interior	LOXA136	16.7	4.3	17.8	6.7	12.0	18.0	21.0	10.0	31.0	9
LNWR	Interior	LOXA137	10.4	3.7	10.8	3.2	9.0	9.0	12.0	8.0	17.0	9

Table 1. Continued.

Area	Class	Station	Geometric Mean	Geometric Standard Deviation	Arithmetic Mean	Standard Deviation	25th Quartile	Median	75th Quartile	Minimum	Maximum	n
LNWR	Interior	LOXA138	6.6	3.1	6.8	1.5	6.0	6.0	7.5	5.0	9.0	8
LNWR	Interior	LOXA139	8.9	3.6	9.4	3.4	7.8	8.5	10.0	6.0	17.0	8
LNWR	Interior	LOXA140	10.8	3.9	11.8	5.8	8.3	10.0	12.8	6.0	26.0	10
LNWR	Interior	X1	21.1	4.5	22.3	8.0	17.0	18.0	28.0	13.0	35.0	9
LNWR	Interior	X4	8.3	3.3	8.4	1.4	7.5	8.0	9.5	6.0	10.0	11
LNWR	Interior	Z1	23.5	4.6	25.1	10.2	17.5	23.0	29.5	15.0	49.0	10
LNWR	Interior	Z2	12.7	3.9	13.2	4.1	11.0	11.0	15.0	8.0	22.0	18
LNWR	Interior	Z3	7.9	3.4	8.3	3.0	7.0	7.5	9.0	5.0	17.0	24
LNWR	Interior	Z4	7.2	3.2	7.4	2.1	6.8	7.0	7.0	6.0	14.0	24
LNWR	Outflow[b]	G94B	29.1	5.1	30.0	8.4	24.5	29.0	31.5	22.0	47.0	7
LNWR	Outflow[a]	G94B	47.0	---	47.0	---	47.0	47.0	47.0	47.0	47.0	1
LNWR	Outflow[b]	S10A	11.3	3.6	11.5	2.1	10.0	11.0	13.3	8.0	15.0	16
LNWR	Outflow[a]	S10A	11.5	3.7	11.7	2.4	9.5	12.0	13.5	9.0	15.0	7
LNWR	Outflow[b]	S10C	11.5	3.8	11.7	2.1	10.3	12.0	12.0	8.0	16.0	14
LNWR	Outflow[a]	S10C	12.9	3.7	13.0	1.7	12.0	12.0	13.5	12.0	15.0	3
LNWR	Outflow[b]	S10D	15.4	4.1	15.8	3.5	14.8	15.0	17.3	10.0	24.0	12
LNWR	Outflow[a]	S10D	18.0	---	18.0	---	18.0	18.0	18.0	18.0	18.0	1
LNWR	Outflow[b]	S39	12.6	4.0	13.2	4.5	10.0	12.0	15.0	8.0	25.0	26
LNWR	Outflow[a]	S39	14.7	4.1	15.4	4.9	11.3	15.0	18.5	10.0	25.0	14
LNWR	Rim	LOXA104	20.6	4.4	21.6	7.4	16.0	18.5	25.5	15.0	38.0	12
LNWR	Rim	LOXA135	23.8	4.5	24.7	7.0	18.8	22.5	28.8	17.0	38.0	12
LNWR	Rim	Z0	16.8	4.0	16.9	2.3	16.0	16.0	18.0	13.0	22.0	24
WCA-2	Inflow[b]	G335	14.2	4.2	15.4	6.6	11.0	13.8	18.4	6.0	38.0	74
WCA-2	Inflow[a]	G335	14.6	4.1	15.7	6.2	11.0	13.5	18.8	7.5	32.0	59
WCA-2	Inflow[b]	G436	16.4	4.1	16.8	3.8	14.5	16.0	19.5	9.5	28.0	61
WCA-2	Inflow[a]	G436	16.4	4.1	16.8	3.9	14.5	16.0	19.6	9.5	28.0	56
WCA-2	Inflow[b]	S10A	11.3	3.6	11.5	2.1	10.0	11.0	13.3	8.0	15.0	16
WCA-2	Inflow[a]	S10A	11.5	3.7	11.7	2.4	9.5	12.0	13.5	9.0	15.0	7
WCA-2	Inflow[b]	S10C	11.5	3.8	11.7	2.1	10.3	12.0	12.0	8.0	16.0	14
WCA-2	Inflow[a]	S10C	12.9	3.7	13.0	1.7	12.0	12.0	13.5	12.0	15.0	3
WCA-2	Inflow[b]	S10D	15.4	4.1	15.8	3.5	14.8	15.0	17.3	10.0	24.0	12
WCA-2	Inflow[a]	S10D	18.0	---	18.0	---	18.0	18.0	18.0	18.0	18.0	1
WCA-2	Inflow[b]	S7	16.1	4.0	16.6	4.5	13.0	15.3	20.0	10.0	28.0	42
WCA-2	Inflow[a]	S7	15.4	4.0	15.9	4.2	12.1	14.3	19.8	10.0	24.0	30
WCA-2	Interior	2AN.25	16.3	4.1	16.8	4.5	13.5	16.0	19.3	12.0	25.0	12

Table 1. Continued.

Area	Class	Station	Geometric Mean	Geometric Standard Deviation	Arithmetic Mean	Standard Deviation	25th Quartile	Median	75th Quartile	Minimum	Maximum	n
WCA-2	Interior	2AN1	15.0	4.3	16.6	9.1	10.8	15.0	17.5	9.0	40.0	10
WCA-2	Interior	2AN2	9.2	3.5	9.4	2.3	7.5	9.0	10.0	7.0	14.0	10
WCA-2	Interior	2AN4	6.4	3.1	6.5	1.4	6.0	7.0	7.0	4.0	9.0	11
WCA-2	Interior	2AN6	5.4	2.9	5.4	0.9	5.0	5.0	6.0	4.0	7.0	9
WCA-2	Interior	404C2	6.8	3.3	7.2	2.7	5.3	7.0	7.0	5.0	14.0	10
WCA-2	Interior	404Z1	20.4	4.5	22.0	10.4	15.3	19.0	23.3	13.0	48.0	10
WCA-2	Interior	C0.25	12.6	4.0	13.5	5.0	10.8	11.5	18.0	5.0	21.0	12
WCA-2	Interior	CA217	4.8	2.8	4.9	1.1	4.0	4.5	5.3	4.0	7.0	8
WCA-2	Interior	CA222	5.1	3.0	5.4	2.1	4.0	4.5	6.0	4.0	10.0	8
WCA-2	Interior	CA223	20.7	4.7	23.8	16.9	16.0	16.0	20.5	15.0	58.0	6
WCA-2	Interior	CA224	6.2	3.1	6.3	1.6	5.0	6.0	7.0	4.0	9.0	9
WCA-2	Interior	CA26	4.2	2.8	4.4	1.0	4.0	5.0	5.0	2.0	5.0	11
WCA-2	Interior	CA27	6.7	3.1	6.8	1.6	6.0	6.0	7.0	5.0	10.0	12
WCA-2	Interior	CA28	16.8	4.1	17.3	4.4	14.3	16.5	18.5	12.0	27.0	10
WCA-2	Interior	CA29	4.5	2.9	4.8	1.9	4.0	4.0	5.0	3.0	10.0	11
WCA-2	Interior	FS0.25	16.8	4.1	17.4	4.8	16.0	17.0	18.0	11.0	27.0	10
WCA-2	Interior	FS1	15.7	4.1	16.3	4.6	12.3	16.0	20.3	11.0	23.0	10
WCA-2	Interior	S145	8.2	3.8	9.6	6.0	6.0	7.0	11.0	4.0	22.0	20
WCA-2	Interior	U1	7.0	3.4	7.5	3.4	6.0	6.5	7.0	4.0	15.0	10
WCA-2	Interior	U3	5.1	3.3	5.8	3.9	4.0	5.0	6.0	3.0	17.0	11
WCA-2	Interior	WCA-2C4	6.0	3.2	6.4	3.1	5.0	5.5	6.0	4.0	15.0	10
WCA-2	Interior	WCA-2C5	5.6	3.0	5.8	1.7	5.0	5.0	6.8	4.0	9.0	10
WCA-2	Interior	WCA-2F1	25.9	4.7	27.7	11.1	19.3	24.0	36.3	17.0	43.0	6
WCA-2	Interior	WCA-2F2	22.8	5.2	30.9	32.2	13.8	20.0	25.5	11.0	107.0	8
WCA-2	Interior	WCA-2F4	9.2	3.4	9.3	1.8	8.0	8.5	9.8	8.0	13.0	10
WCA-2	Interior	WCA-2F5	6.2	3.1	6.4	1.9	5.0	6.0	7.0	5.0	10.0	9
WCA-2	Outflow[b]	S11A	9.0	3.6	10.8	7.3	6.0	7.0	12.0	4.0	30.0	21
WCA-2	Outflow[a]	S11A	6.1	3.2	6.4	2.3	5.3	6.0	6.8	4.0	12.0	10
WCA-2	Outflow[b]	S11B	11.2	3.8	11.9	4.4	9.0	11.0	13.0	7.0	24.0	21
WCA-2	Outflow[a]	S11B	10.7	3.7	11.2	3.5	8.5	10.0	12.5	7.0	17.0	19
WCA-2	Outflow[b]	S11C	13.7	3.9	14.5	6.2	11.0	13.0	14.0	10.0	31.0	10
WCA-2	Outflow[a]	S11C	12.0	3.6	12.0	1.4	11.5	12.0	12.5	11.0	13.0	2
WCA-2	Outflow[b]	S34	9.2	---	9.6	2.9	8.0	9.0	11.3	5.0	17.0	16
WCA-2	Outflow[a]	S34	---	---	---	---	---	---	---	---	---	0
WCA-2	Outflow[b]	S38	9.1	4.0	10.8	7.4	6.0	7.5	12.0	5.0	33.0	26
WCA-2	Outflow[a]	S38	9.2	4.0	11.0	7.7	6.0	7.5	13.0	5.0	33.0	24

Table 1. Continued.

Area	Class	Station	Geometric Mean	Geometric Standard Deviation	Arithmetic Mean	Standard Deviation	25th Quartile	Median	75th Quartile	Minimum	Maximum	n
WCA-3	Inflow[b]	G123	9.3	---	9.7	2.9	8.3	9.0	11.3	6.0	14.0	6
WCA-3	Inflow[a]	G123	---	---	---	---	---	---	---	---	---	0
WCA-3	Inflow[b]	G204	109.6	---	133.8	73.9	109.3	148.5	173.0	32.0	206.0	4
WCA-3	Inflow[a]	G204	---	---	---	---	---	---	---	---	---	0
WCA-3	Inflow[b]	G205	127.8	---	181.8	142.4	111.8	165.5	235.5	27.0	369.0	4
WCA-3	Inflow[a]	G205	---	---	---	---	---	---	---	---	---	0
WCA-3	Inflow[b]	G206	34.1	---	40.0	25.8	21.0	34.0	53.0	18.0	74.0	4
WCA-3	Inflow[a]	G206	---	---	---	---	---	---	---	---	---	0
WCA-3	Inflow[b]	G344E	30.5	4.8	31.1	6.0	27.3	31.0	35.4	19.0	47.0	58
WCA-3	Inflow[a]	G344E	36.2	4.7	36.5	5.2	34.0	36.5	39.0	28.0	47.0	13
WCA-3	Inflow[b]	G344F	26.8	4.5	27.3	5.0	24.0	28.0	31.0	17.0	38.0	60
WCA-3	Inflow[a]	G344F	27.4	4.5	27.6	3.5	25.6	28.0	29.0	22.0	33.0	14
WCA-3	Inflow[b]	G344G	30.6	4.7	31.8	8.9	26.0	29.0	37.0	19.0	61.0	65
WCA-3	Inflow[a]	G344G	28.6	4.6	29.1	5.7	25.8	28.0	33.3	20.0	41.0	20
WCA-3	Inflow[b]	G344H	28.3	4.5	28.9	6.5	24.1	28.3	32.9	19.0	46.0	62
WCA-3	Inflow[a]	G344H	27.1	4.5	27.4	4.7	24.5	26.0	30.0	20.0	40.5	17
WCA-3	Inflow[b]	G344I	24.3	4.5	25.1	6.9	21.0	24.0	28.0	14.5	54.0	49
WCA-3	Inflow[a]	G344I	24.0	4.6	25.1	8.4	22.4	25.5	28.3	14.5	35.0	4
WCA-3	Inflow[b]	G344J	27.6	4.6	28.6	7.6	23.0	27.0	32.0	18.0	51.0	58
WCA-3	Inflow[a]	G344J	28.4	4.7	29.5	8.5	23.3	29.5	35.5	18.0	49.3	15
WCA-3	Inflow[b]	G344K	24.6	4.4	25.4	6.4	20.0	25.0	29.0	16.0	43.0	59
WCA-3	Inflow[a]	G344K	23.4	4.4	24.1	5.8	18.9	24.3	29.0	16.0	34.0	16
WCA-3	Inflow[b]	G352B	25.7	5.0	27.9	13.9	20.5	24.0	29.8	13.0	84.0	47
WCA-3	Inflow[a]	G352B	35.0	5.0	37.7	16.6	26.8	33.0	40.5	23.0	84.0	20
WCA-3	Inflow[b]	G354C	27.8	5.4	33.6	26.6	21.0	25.3	36.5	8.0	138.0	50
WCA-3	Inflow[a]	G354C	37.5	5.4	45.5	35.4	25.4	30.0	45.9	19.0	138.0	20
WCA-3	Inflow[b]	G393B	27.3	---	34.4	33.5	18.0	24.0	34.0	12.0	200.0	53
WCA-3	Inflow[a]	G393B	---	---	---	---	---	---	---	---	---	0
WCA-3	Inflow[b]	G407	58.5	---	59.3	12.0	53.5	60.0	65.5	47.0	71.0	3
WCA-3	Inflow[a]	G407	---	---	---	---	---	---	---	---	---	0
WCA-3	Inflow[b]	L3BRS	23.1	---	25.1	12.6	18.0	22.0	27.0	13.0	80.0	53
WCA-3	Inflow[a]	L3BRS	---	---	---	---	---	---	---	---	---	0
WCA-3	Inflow[b]	S11A	9.0	3.6	10.8	7.3	6.0	7.0	12.0	4.0	30.0	21
WCA-3	Inflow[a]	S11A	6.1	3.2	6.4	2.3	5.3	6.0	6.8	4.0	12.0	10
WCA-3	Inflow[b]	S11B	11.2	3.8	11.9	4.4	9.0	11.0	13.0	7.0	24.0	21

Table 1. Continued.

Area	Class	Station	Geometric Mean	Geometric Standard Deviation	Arithmetic Mean	Standard Deviation	25th Quartile	Median	75th Quartile	Minimum	Maximum	n
WCA-3	Inflow[a]	S11B	10.7	3.7	11.2	3.5	8.5	10.0	12.5	7.0	17.0	19
WCA-3	Inflow[b]	S11C	13.7	3.9	14.5	6.2	11.0	13.0	14.0	10.0	31.0	10
WCA-3	Inflow[a]	S11C	12.0	3.6	12.0	1.4	11.5	12.0	12.5	11.0	13.0	2
WCA-3	Inflow[b]	S140	53.8	5.8	75.8	157.2	38.0	47.5	62.0	26.5	1296.0	65
WCA-3	Inflow[a]	S140	57.0	5.9	83.1	173.4	40.0	51.5	68.5	26.5	1296.0	53
WCA-3	Inflow[b]	S150	18.0	---	18.0	---	18.0	18.0	18.0	18.0	18.0	1
WCA-3	Inflow[a]	S150	---	---	---	---	---	---	---	---	---	0
WCA-3	Inflow[b]	S190	41.5	6.1	52.4	42.0	25.8	30.5	69.4	20.0	183.0	60
WCA-3	Inflow[a]	S190	68.3	6.1	82.3	49.8	41.5	70.5	120.3	21.0	183.0	23
WCA-3	Inflow[b]	S8	15.0	4.1	15.9	6.4	13.0	14.0	17.0	10.0	44.0	60
WCA-3	Inflow[a]	S8	15.4	4.0	15.8	4.3	13.0	14.5	17.0	11.0	28.0	29
WCA-3	Inflow[b]	S9	10.5	3.7	10.8	2.7	9.0	10.0	12.0	8.0	21.5	63
WCA-3	Inflow[a]	S9	11.6	3.7	12.0	3.4	10.0	11.5	12.9	8.0	21.5	26
WCA-3	Inflow[b]	S9A	10.7	3.5	10.9	2.2	9.5	10.5	12.0	7.0	17.5	60
WCA-3	Inflow[a]	S9A	10.2	3.5	10.4	1.7	9.5	10.0	11.0	7.0	17.5	50
WCA-3	Interior	3ASMESO	4.3	2.8	4.5	1.6	3.3	4.0	5.5	3.0	8.0	10
WCA-3	Interior	CA311	4.2	3.0	4.7	2.9	3.0	4.0	4.5	3.0	11.0	7
WCA-3	Interior	CA314	3.8	2.6	3.9	1.0	3.0	4.0	4.3	3.0	6.0	12
WCA-3	Interior	CA315	3.7	2.9	4.0	1.6	3.0	4.0	4.5	2.0	7.0	11
WCA-3	Interior	CA316	6.2	3.2	6.4	1.9	5.0	6.0	8.0	4.0	10.0	9
WCA-3	Interior	CA317	4.7	3.1	5.1	2.2	4.0	4.0	5.5	2.0	9.0	12
WCA-3	Interior	CA318	7.1	3.4	7.5	2.5	6.5	8.0	8.0	4.0	13.0	11
WCA-3	Interior	CA319	4.1	2.8	4.3	1.6	4.0	4.0	4.8	2.0	8.0	10
WCA-3	Interior	CA32	6.8	3.2	7.0	2.1	6.0	6.5	7.0	5.0	11.0	6
WCA-3	Interior	CA324	14.4	3.8	14.5	2.4	12.8	14.5	16.3	12.0	17.0	4
WCA-3	Interior	CA325	4.3	2.7	4.4	0.7	4.0	4.5	5.0	3.0	5.0	8
WCA-3	Interior	CA33	10.0	3.5	10.1	1.8	9.0	9.0	12.0	8.0	12.0	7
WCA-3	Interior	CA34	5.1	3.0	5.3	1.4	4.8	5.0	6.3	3.0	7.0	8
WCA-3	Interior	CA35	6.3	3.1	6.4	1.4	5.8	6.0	6.5	5.0	9.0	8
WCA-3	Interior	CA36	23.5	5.0	28.4	21.9	15.5	18.0	31.5	13.0	74.0	7
WCA-3	Interior	CA38	4.2	2.7	4.3	1.2	4.0	4.0	5.0	3.0	7.0	9
WCA-3	Interior	CA39	5.5	2.8	5.5	0.5	5.0	5.5	6.0	5.0	6.0	10
WCA-3	Interior	CA3B1	4.0	2.7	4.1	1.2	3.0	4.0	4.0	3.0	6.0	9
WCA-3	Interior	CA3B2	4.4	2.8	4.5	1.2	4.0	4.0	4.8	3.0	7.0	10
WCA-3	Interior	S345B6	3.9	2.7	4.1	1.1	3.5	4.0	5.0	2.0	6.0	11

Table 1. Continued.

Area	Class	Station	Geometric Mean	Geometric Standard Deviation	Arithmetic Mean	Standard Deviation	25th Quartile	Median	75th Quartile	Minimum	Maximum	n
WCA-3	Outflow[b]	S12A	15.5	4.2	20.1	18.2	9.0	12.0	24.0	6.0	192.0	359
WCA-3	Outflow[a]	S12A	9.3	3.9	12.9	25.2	8.0	8.0	9.0	6.0	192.0	78
WCA-3	Outflow[b]	S12B	7.8	3.3	8.4	3.9	6.0	7.0	8.3	6.0	19.0	16
WCA-3	Outflow[a]	S12B	6.8	3.1	6.8	1.1	6.0	7.0	7.0	6.0	10.0	13
WCA-3	Outflow[b]	S12C	9.7	3.7	10.4	4.2	7.0	8.0	12.8	6.0	19.0	22
WCA-3	Outflow[a]	S12C	9.6	3.7	10.3	4.2	7.0	8.0	12.3	6.0	19.0	20
WCA-3	Outflow[b]	S12D	10.0	4.0	10.8	5.3	8.0	9.0	11.0	6.0	35.0	33
WCA-3	Outflow[a]	S12D	12.9	4.0	13.9	6.6	10.0	12.0	16.0	8.0	35.0	15
WCA-3	Outflow[b]	S142	14.0	---	16.4	10.6	9.0	12.0	18.8	7.0	36.0	12
WCA-3	Outflow[a]	S142	---	---	---	---	---	---	---	---	---	0
WCA-3	Outflow[b]	S31	10.6	---	10.9	2.8	9.0	11.0	11.8	7.0	18.0	14
WCA-3	Outflow[a]	S31	---	---	---	---	---	---	---	---	---	0
WCA-3	Outflow[b]	S333	15.0	4.6	18.0	12.3	10.0	12.0	22.0	7.0	61.0	299
WCA-3	Outflow[a]	S333	16.6	4.7	20.4	13.5	9.0	14.0	31.0	7.0	61.0	190
WCA-3	Outflow[b]	S334	13.6	---	14.8	6.5	9.8	14.0	19.0	7.0	29.0	28
WCA-3	Outflow[a]	S334	---	---	---	---	---	---	---	---	---	0
WCA-3	Outflow[b]	S344	19.4	---	21.1	9.2	18.5	21.0	21.5	8.0	39.0	7
WCA-3	Outflow[a]	S344	---	---	---	---	---	---	---	---	---	0
WCA-3	Outflow[b]	S355A	13.2	---	14.4	6.7	10.0	12.0	18.0	7.0	32.0	26
WCA-3	Outflow[a]	S355A	---	---	---	---	---	---	---	---	---	0
WCA-3	Outflow[b]	S355B	14.3	---	15.8	7.9	10.3	12.5	18.8	6.0	38.0	26
WCA-3	Outflow[a]	S355B	---	---	---	---	---	---	---	---	---	0
WCA-3	Outflow[b]	US41-25	17.3	4.3	20.4	13.9	12.0	14.5	24.3	7.0	57.0	28
WCA-3	Outflow[a]	US41-25	13.0	4.0	13.8	5.2	11.8	12.5	14.5	7.0	25.5	16
ENP	Inflow[b]	S12A	15.5	4.2	20.1	18.2	9.0	12.0	24.0	6.0	192.0	359
ENP	Inflow[a]	S12A	9.3	3.9	12.9	25.2	8.0	8.0	9.0	6.0	192.0	78
ENP	Inflow[b]	S12B	7.8	3.3	8.4	3.9	6.0	7.0	8.3	6.0	19.0	16
ENP	Inflow[a]	S12B	6.8	3.1	6.8	1.1	6.0	7.0	7.0	6.0	10.0	13
ENP	Inflow[b]	S12C	9.7	3.7	10.4	4.2	7.0	8.0	12.8	6.0	19.0	22
ENP	Inflow[a]	S12C	9.6	3.7	10.3	4.2	7.0	8.0	12.3	6.0	19.0	20
ENP	Inflow[b]	S12D	10.0	4.0	10.8	5.3	8.0	9.0	11.0	6.0	35.0	33
ENP	Inflow[a]	S12D	12.9	4.0	13.9	6.6	10.0	12.0	16.0	8.0	35.0	15
ENP	Inflow[b]	S18C	4.8	3.5	6.7	11.0	3.0	4.0	7.0	2.0	88.0	62
ENP	Inflow[a]	S18C	4.9	3.5	7.1	12.4	3.0	3.8	6.5	2.0	88.0	48
ENP	Inflow[b]	S332DX	7.2	3.2	7.6	2.9	5.5	6.0	9.0	4.0	22.0	360

Table 1. Continued.

Area	Class	Station	Geometric Mean	Geometric Standard Deviation	Arithmetic Mean	Standard Deviation	25th Quartile	Median	75th Quartile	Minimum	Maximum	n
ENP	Inflow[a]	S332DX	6.0	3.1	6.2	1.8	5.0	6.0	6.0	4.0	16.0	225
ENP	Inflow[b]	S333	15.0	4.6	18.0	12.3	10.0	12.0	22.0	7.0	61.0	299
ENP	Inflow[a]	S333	16.6	4.7	20.4	13.5	9.0	14.0	31.0	7.0	61.0	190
ENP	Inflow[b]	S355A	13.2	---	14.4	6.7	10.0	12.0	18.0	7.0	32.0	26
ENP	Inflow[a]	S355A	---	---	---	---	---	---	---	---	---	0
ENP	Inflow[b]	S355B	14.3	---	15.8	7.9	10.3	12.5	18.8	6.0	38.0	26
ENP	Inflow[a]	S355B	---	---	---	---	---	---	---	---	---	0
ENP	Interior	CR2	3.5	2.4	3.5	0.5	3.0	3.5	4.0	3.0	4.0	6
ENP	Interior	EP	3.0	2.6	3.2	1.2	2.0	3.0	4.0	2.0	5.0	9
ENP	Interior	G-3273	3.1	2.6	3.3	1.2	2.3	3.5	4.0	2.0	5.0	6
ENP	Interior	NE1	4.6	2.9	4.8	1.5	4.0	4.0	6.0	3.0	8.0	11
ENP	Interior	NP201	3.5	2.7	3.8	1.7	3.0	3.0	4.0	2.0	8.0	9
ENP	Interior	P33	4.4	3.0	4.9	3.3	3.8	4.0	4.3	3.0	15.0	12
ENP	Interior	P34	4.3	3.4	5.5	5.5	3.0	4.0	4.3	2.0	19.0	8
ENP	Interior	P35	8.6	3.7	9.4	5.0	7.0	8.0	8.0	5.0	21.0	9
ENP	Interior	P36	4.0	2.7	4.1	1.0	3.0	4.0	5.0	3.0	6.0	11
ENP	Interior	P37	2.4	2.2	2.5	0.8	2.0	2.0	3.0	2.0	4.0	8
ENP	Interior	RG1	4.4	2.9	4.6	1.5	3.5	4.0	5.5	3.0	7.0	7
ENP	Interior	SRS1B	7.5	3.2	7.6	1.1	7.0	8.0	8.0	6.0	9.0	5
ENP	Interior	SRS1C	4.0	2.7	4.1	1.2	3.0	4.0	5.0	3.0	6.0	7
ENP	Interior	SRS2	3.6	2.6	3.7	1.0	3.0	4.0	4.5	2.0	5.0	11
ENP	Interior	TSB	3.7	2.6	3.8	1.2	3.0	3.5	4.0	3.0	6.0	6

a. When recorded flow

b. All data was used (flow and non-flow)

Table 2. Summary of annual total nitrogen concentrations [milligrams per liter (mg/L)] at the inflow, Rim Canal, interior marsh, and outflow monitoring stations in the EPA during WY2015. [Note: n – sample size.]

Area	Class	Station	Geometric Mean	Geometric Standard Deviation	Arithmetic Mean	Standard Deviation	25th Quartile	Median	75th Quartile	Minimum	Maximum	n
LNWR	Inflow[b]	ENR012	1.80	1.81	1.83	0.36	1.66	1.79	1.99	1.05	2.61	49
LNWR	Inflow[a]	ENR012	1.64	1.73	1.67	0.32	1.49	1.75	1.91	1.05	2.16	23
LNWR	Inflow[b]	G310	1.92	1.79	1.94	0.25	1.80	1.92	2.04	1.47	2.36	25
LNWR	Inflow[a]	G310	1.97	1.82	1.98	0.25	1.91	1.98	2.12	1.47	2.36	20
LNWR	Inflow[b]	G338	1.94	2.20	2.14	1.00	1.31	1.80	2.82	1.12	5.03	60
LNWR	Inflow[a]	G338	---	---	---	---	---	---	---	---	---	0
LNWR	Inflow[b]	S362	1.67	1.70	1.69	0.28	1.57	1.71	1.85	1.12	2.23	24
LNWR	Inflow[a]	S362	1.65	1.69	1.68	0.28	1.56	1.67	1.84	1.12	2.23	19
LNWR	Interior	LOX10	0.80	0.93	0.80	0.12	0.70	0.79	0.86	0.69	1.01	7
LNWR	Interior	LOX11	0.97	1.13	0.98	0.14	0.90	0.94	1.13	0.78	1.15	8
LNWR	Interior	LOX12	0.87	1.03	0.88	0.14	0.78	0.84	1.00	0.72	1.15	12
LNWR	Interior	LOX13	0.86	1.00	0.87	0.12	0.79	0.84	0.95	0.70	1.10	9
LNWR	Interior	LOX14	0.76	1.04	0.79	0.23	0.63	0.73	0.83	0.56	1.25	12
LNWR	Interior	LOX15	1.19	1.27	1.19	0.11	1.12	1.20	1.22	1.00	1.43	12
LNWR	Interior	LOX16	0.69	0.79	0.69	0.11	0.60	0.69	0.78	0.55	0.88	9
LNWR	Interior	LOX3	2.05	1.93	2.09	0.42	1.82	1.83	2.30	1.74	2.73	5
LNWR	Interior	LOX4	1.31	1.44	1.33	0.23	1.20	1.26	1.34	1.15	1.86	8
LNWR	Interior	LOX5	1.60	1.70	1.63	0.35	1.47	1.48	1.76	1.25	2.16	5
LNWR	Interior	LOX6	1.14	1.38	1.16	0.28	0.94	1.11	1.27	0.90	1.78	10
LNWR	Interior	LOX7	1.19	1.33	1.20	0.18	1.03	1.15	1.32	0.99	1.51	9
LNWR	Interior	LOX8	1.30	1.48	1.32	0.25	1.17	1.33	1.50	0.91	1.67	9
LNWR	Interior	LOX9	1.27	1.50	1.30	0.30	1.13	1.32	1.40	0.94	1.80	7
LNWR	Interior	LOXA104.5	1.37	1.66	1.43	0.46	1.09	1.24	1.62	1.06	2.25	8
LNWR	Interior	LOXA105	1.05	1.24	1.06	0.19	0.97	1.05	1.14	0.75	1.35	8
LNWR	Interior	LOXA106	0.97	1.16	0.98	0.18	0.83	0.95	1.08	0.78	1.33	8
LNWR	Interior	LOXA107	0.99	1.19	1.00	0.17	0.96	1.06	1.10	0.76	1.13	4
LNWR	Interior	LOXA107U	1.37	1.56	1.40	0.27	1.34	1.47	1.53	1.00	1.63	4
LNWR	Interior	LOXA108	1.58	1.65	1.60	0.26	1.57	1.64	1.68	1.19	1.90	5
LNWR	Interior	LOXA136	1.59	1.58	1.60	0.18	1.52	1.55	1.63	1.39	2.00	8
LNWR	Interior	LOXA137	1.45	1.50	1.46	0.18	1.32	1.46	1.56	1.23	1.75	8
LNWR	Interior	LOXA138	1.79	1.78	1.81	0.29	1.74	1.86	1.99	1.19	2.15	8
LNWR	Interior	LOXA139	2.24	1.98	2.27	0.36	2.13	2.15	2.37	1.77	2.95	7
LNWR	Interior	Z1	1.41	1.61	1.45	0.37	1.20	1.30	1.62	1.03	2.26	10
LNWR	Interior	Z2	0.99	1.10	1.00	0.10	0.97	0.99	1.07	0.78	1.10	18

Table 2. Continued.

Area	Class	Station	Geometric Mean	Geometric Standard Deviation	Arithmetic Mean	Standard Deviation	25th Quartile	Median	75th Quartile	Minimum	Maximum	n
LNWR	Interior	Z3	0.75	0.90	0.76	0.13	0.67	0.72	0.82	0.57	1.06	22
LNWR	Interior	Z4	0.91	1.07	0.92	0.15	0.83	0.89	0.98	0.72	1.26	22
LNWR	Outflow[b]	G94B	1.65	1.67	1.66	0.28	1.46	1.62	1.80	1.37	2.13	7
LNWR	Outflow[a]	G94B	2.13	---	2.13	---	2.13	2.13	2.13	2.13	2.13	1
LNWR	Outflow[b]	S10A	1.24	1.33	1.25	0.13	1.17	1.24	1.30	1.04	1.60	16
LNWR	Outflow[a]	S10A	1.32	1.39	1.32	0.15	1.24	1.30	1.37	1.15	1.60	7
LNWR	Outflow[b]	S10C	1.45	1.48	1.46	0.16	1.40	1.43	1.50	1.18	1.87	14
LNWR	Outflow[a]	S10C	1.61	1.62	1.62	0.22	1.50	1.56	1.71	1.44	1.87	3
LNWR	Outflow[b]	S10D	1.53	1.56	1.54	0.20	1.45	1.52	1.59	1.32	2.08	12
LNWR	Outflow[a]	S10D	1.63	---	1.63	---	1.63	1.63	1.63	1.63	1.63	1
LNWR	Outflow[b]	S39	1.20	1.32	1.21	0.16	1.13	1.20	1.24	0.95	1.56	26
LNWR	Outflow[a]	S39	1.26	1.34	1.27	0.14	1.19	1.22	1.28	1.10	1.56	14
LNWR	Rim	LOXA104	1.61	1.74	1.65	0.38	1.30	1.71	1.95	1.10	2.18	11
LNWR	Rim	LOXA135	1.67	1.68	1.69	0.27	1.55	1.66	1.72	1.34	2.33	11
LNWR	Rim	Z0	1.53	1.54	1.54	0.17	1.43	1.49	1.63	1.31	1.92	24
WCA-2	Inflow[b]	G335	1.59	1.73	1.63	0.37	1.48	1.63	1.88	1.03	2.28	25
WCA-2	Inflow[a]	G335	1.61	1.73	1.65	0.35	1.48	1.63	1.91	1.03	2.23	19
WCA-2	Inflow[b]	G436	1.74	1.76	1.77	0.33	1.53	1.75	1.97	1.22	2.57	27
WCA-2	Inflow[a]	G436	1.70	1.72	1.73	0.30	1.53	1.72	1.94	1.22	2.32	23
WCA-2	Inflow[b]	S10A	1.24	1.33	1.25	0.13	1.17	1.24	1.30	1.04	1.60	16
WCA-2	Inflow[a]	S10A	1.32	1.39	1.32	0.15	1.24	1.30	1.37	1.15	1.60	7
WCA-2	Inflow[b]	S10C	1.45	1.48	1.46	0.16	1.40	1.43	1.50	1.18	1.87	14
WCA-2	Inflow[a]	S10C	1.61	1.62	1.62	0.22	1.50	1.56	1.71	1.44	1.87	3
WCA-2	Inflow[b]	S10D	1.53	1.56	1.54	0.20	1.45	1.52	1.59	1.32	2.08	12
WCA-2	Inflow[a]	S10D	1.63	---	1.63	---	1.63	1.63	1.63	1.63	1.63	1
WCA-2	Inflow[b]	S7	1.53	1.67	1.56	0.35	1.30	1.57	1.75	1.03	2.48	42
WCA-2	Inflow[a]	S7	1.48	1.63	1.52	0.31	1.24	1.57	1.74	1.03	2.06	30
WCA-2	Interior	2AN.25	1.70	1.79	1.74	0.40	1.49	1.70	2.01	1.14	2.48	12
WCA-2	Interior	2AN1	1.59	1.82	1.66	0.56	1.25	1.59	1.73	1.09	2.88	10
WCA-2	Interior	2AN2	1.47	1.66	1.51	0.37	1.20	1.51	1.81	1.03	2.00	10
WCA-2	Interior	2AN4	1.45	1.65	1.49	0.36	1.29	1.35	1.77	1.05	2.06	10
WCA-2	Interior	2AN6	1.42	1.59	1.45	0.31	1.18	1.43	1.69	1.05	1.89	8
WCA-2	Interior	404C2	1.47	1.63	1.50	0.34	1.26	1.42	1.82	1.06	2.02	9
WCA-2	Interior	C0.25	1.54	1.65	1.56	0.31	1.27	1.58	1.73	1.20	2.02	9
WCA-2	Interior	CA27	1.57	1.63	1.59	0.28	1.39	1.51	1.74	1.25	2.02	10

Table 2. Continued.

Area	Class	Station	Geometric Mean	Geometric Standard Deviation	Arithmetic Mean	Standard Deviation	25th Quartile	Median	75th Quartile	Minimum	Maximum	n
WCA-2	Interior	CA28	1.75	1.75	1.77	0.28	1.68	1.87	1.96	1.22	2.03	7
WCA-2	Interior	CA29	1.75	1.73	1.77	0.30	1.57	1.63	1.93	1.43	2.31	9
WCA-2	Interior	FS0.25	1.69	1.77	1.72	0.36	1.51	1.74	2.01	1.19	2.24	9
WCA-2	Interior	FS1	1.65	1.78	1.70	0.39	1.35	1.79	2.04	1.15	2.19	9
WCA-2	Interior	S145	1.48	1.68	1.53	0.40	1.23	1.52	1.71	1.02	2.62	20
WCA-2	Interior	U3	1.77	1.78	1.80	0.35	1.53	1.69	2.06	1.39	2.32	8
WCA-2	Interior	WCA-2C4	1.43	1.61	1.46	0.34	1.27	1.33	1.70	1.06	2.03	8
WCA-2	Interior	WCA-2C5	1.52	1.55	1.52	0.19	1.40	1.58	1.66	1.27	1.71	5
WCA-2	Interior	WCA-2F1	1.52	1.48	1.52	0.10	1.44	1.49	1.57	1.42	1.66	5
WCA-2	Interior	WCA-2F2	1.40	1.47	1.41	0.19	1.33	1.39	1.43	1.18	1.69	5
WCA-2	Interior	WCA-2F4	1.11	1.20	1.11	0.11	1.02	1.09	1.13	1.01	1.29	5
WCA-2	Outflow[b]	S11A	1.51	1.62	1.53	0.31	1.33	1.51	1.63	1.12	2.32	21
WCA-2	Outflow[a]	S11A	1.46	1.57	1.48	0.26	1.28	1.52	1.59	1.12	1.98	10
WCA-2	Outflow[b]	S11B	1.57	1.64	1.59	0.26	1.46	1.61	1.77	1.02	1.99	21
WCA-2	Outflow[a]	S11B	1.56	1.63	1.58	0.26	1.41	1.61	1.74	1.02	1.99	19
WCA-2	Outflow[b]	S11C	1.52	1.64	1.55	0.28	1.38	1.68	1.72	1.01	1.87	10
WCA-2	Outflow[a]	S11C	1.72	1.57	1.72	0.05	1.70	1.72	1.73	1.68	1.75	2
WCA-2	Outflow[b]	S34	1.52	1.62	1.55	0.30	1.34	1.46	1.76	1.20	2.17	16
WCA-2	Outflow[a]	S34	---	---	---	---	---	---	---	---	---	0
WCA-2	Outflow[b]	S38	1.42	1.66	1.47	0.44	1.15	1.32	1.75	0.95	2.61	26
WCA-2	Outflow[a]	S38	1.43	1.68	1.48	0.45	1.14	1.33	1.82	0.95	2.61	24
WCA-3	Inflow[b]	G123	1.47	1.54	1.48	0.23	1.31	1.42	1.60	1.27	1.85	6
WCA-3	Inflow[a]	G123	---	---	---	---	---	---	---	---	---	0
WCA-3	Inflow[b]	G204	2.97	2.31	3.02	0.62	2.78	2.93	3.18	2.36	3.85	4
WCA-3	Inflow[a]	G204	---	---	---	---	---	---	---	---	---	0
WCA-3	Inflow[b]	G205	3.11	2.72	3.36	1.46	2.61	3.22	3.97	1.74	5.25	4
WCA-3	Inflow[a]	G205	---	---	---	---	---	---	---	---	---	0
WCA-3	Inflow[b]	G206	2.21	2.21	2.31	0.74	1.88	2.38	2.81	1.39	3.07	4
WCA-3	Inflow[a]	G206	---	---	---	---	---	---	---	---	---	0
WCA-3	Inflow[b]	G344E	1.69	1.62	1.70	0.16	1.62	1.65	1.73	1.43	2.10	18
WCA-3	Inflow[a]	G344E	1.73	1.64	1.74	0.16	1.64	1.69	1.78	1.60	2.04	7
WCA-3	Inflow[b]	G344F	1.62	1.64	1.64	0.26	1.45	1.62	1.73	1.34	2.36	17
WCA-3	Inflow[a]	G344F	1.52	1.54	1.53	0.17	1.39	1.52	1.68	1.34	1.73	6
WCA-3	Inflow[b]	G344G	1.69	1.73	1.72	0.34	1.45	1.58	2.02	1.32	2.40	22
WCA-3	Inflow[a]	G344G	1.47	1.45	1.47	0.09	1.43	1.44	1.54	1.32	1.58	7

Table 2. Continued.

Area	Class	Station	Geometric Mean	Geometric Standard Deviation	Arithmetic Mean	Standard Deviation	25th Quartile	Median	75th Quartile	Minimum	Maximum	n
WCA-3	Inflow[b]	G344H	1.67	1.68	1.69	0.27	1.48	1.54	1.87	1.35	2.23	22
WCA-3	Inflow[a]	G344H	1.51	1.49	1.51	0.12	1.44	1.51	1.52	1.39	1.76	7
WCA-3	Inflow[b]	G344I	1.75	1.78	1.78	0.35	1.73	1.78	1.87	1.25	2.42	9
WCA-3	Inflow[a]	G344I	1.55	1.69	1.57	0.35	1.45	1.57	1.70	1.32	1.82	2
WCA-3	Inflow[b]	G344J	1.54	1.69	1.58	0.38	1.30	1.39	1.79	1.08	2.57	18
WCA-3	Inflow[a]	G344J	1.35	1.46	1.36	0.22	1.29	1.34	1.38	1.08	1.89	9
WCA-3	Inflow[b]	G344K	1.49	1.62	1.52	0.32	1.31	1.39	1.83	1.07	2.09	17
WCA-3	Inflow[a]	G344K	1.32	1.45	1.33	0.23	1.23	1.32	1.34	1.07	1.84	8
WCA-3	Inflow[b]	G352B	1.36	1.45	1.38	0.19	1.29	1.34	1.41	1.11	1.94	14
WCA-3	Inflow[a]	G352B	1.36	1.45	1.37	0.21	1.28	1.33	1.40	1.11	1.94	12
WCA-3	Inflow[b]	G354C	1.28	1.44	1.30	0.25	1.12	1.28	1.38	1.01	1.95	16
WCA-3	Inflow[a]	G354C	1.29	1.46	1.31	0.26	1.12	1.33	1.39	1.01	1.95	14
WCA-3	Inflow[b]	G393B	1.18	1.40	1.20	0.28	1.03	1.14	1.28	0.91	1.94	18
WCA-3	Inflow[a]	G393B	---	---	---	---	---	---	---	---	---	0
WCA-3	Inflow[b]	L3BRS	1.43	1.50	1.44	0.20	1.28	1.37	1.62	1.18	1.78	27
WCA-3	Inflow[a]	L3BRS	---	---	---	---	---	---	---	---	---	0
WCA-3	Inflow[b]	S11A	1.51	1.62	1.53	0.31	1.33	1.51	1.63	1.12	2.32	21
WCA-3	Inflow[a]	S11A	1.46	1.57	1.48	0.26	1.28	1.52	1.59	1.12	1.98	10
WCA-3	Inflow[b]	S11B	1.57	1.64	1.59	0.26	1.46	1.61	1.77	1.02	1.99	21
WCA-3	Inflow[a]	S11B	1.56	1.63	1.58	0.26	1.41	1.61	1.74	1.02	1.99	19
WCA-3	Inflow[b]	S11C	1.52	1.64	1.55	0.28	1.38	1.68	1.72	1.01	1.87	10
WCA-3	Inflow[a]	S11C	1.72	1.57	1.72	0.05	1.70	1.72	1.73	1.68	1.75	2
WCA-3	Inflow[b]	S140	1.27	1.34	1.28	0.13	1.21	1.26	1.32	1.12	1.72	23
WCA-3	Inflow[a]	S140	1.29	1.35	1.29	0.13	1.23	1.27	1.32	1.14	1.72	19
WCA-3	Inflow[b]	S150	2.11	---	2.11	---	2.11	2.11	2.11	2.11	2.11	1
WCA-3	Inflow[a]	S150	---	---	---	---	---	---	---	---	---	0
WCA-3	Inflow[b]	S190	1.17	1.34	1.18	0.22	1.00	1.16	1.24	0.96	1.69	17
WCA-3	Inflow[a]	S190	1.25	1.38	1.26	0.18	1.17	1.24	1.33	0.99	1.53	8
WCA-3	Inflow[b]	S8	1.45	1.51	1.46	0.20	1.31	1.42	1.57	1.19	1.97	35
WCA-3	Inflow[a]	S8	1.45	1.51	1.46	0.20	1.30	1.43	1.56	1.19	1.97	26
WCA-3	Inflow[b]	S9	1.43	1.44	1.43	0.11	1.34	1.44	1.51	1.20	1.64	29
WCA-3	Inflow[a]	S9	1.41	1.43	1.42	0.12	1.33	1.40	1.50	1.20	1.64	21
WCA-3	Inflow[b]	S9A	1.42	1.44	1.42	0.12	1.36	1.44	1.50	1.15	1.59	16
WCA-3	Inflow[a]	S9A	1.44	1.44	1.44	0.10	1.38	1.46	1.53	1.25	1.59	14
WCA-3	Interior	CA311	1.20	1.47	1.24	0.36	1.05	1.10	1.21	1.00	1.96	6

Table 2. Continued.

Area	Class	Station	Geometric Mean	Geometric Standard Deviation	Arithmetic Mean	Standard Deviation	25th Quartile	Median	75th Quartile	Minimum	Maximum	n
WCA-3	Interior	CA315	0.95	1.10	0.96	0.14	0.83	0.97	1.08	0.77	1.14	9
WCA-3	Interior	CA316	1.60	1.54	1.61	0.11	1.56	1.58	1.66	1.43	1.81	9
WCA-3	Interior	CA317	1.60	1.57	1.61	0.16	1.49	1.56	1.67	1.46	1.98	11
WCA-3	Interior	CA318	1.31	1.34	1.32	0.09	1.26	1.30	1.35	1.20	1.50	11
WCA-3	Interior	CA32	1.32	1.57	1.35	0.34	1.25	1.35	1.40	0.90	1.86	5
WCA-3	Interior	CA33	1.10	1.22	1.11	0.13	1.03	1.04	1.15	1.02	1.26	3
WCA-3	Interior	CA34	0.88	1.05	0.89	0.15	0.81	0.85	0.93	0.75	1.10	4
WCA-3	Interior	CA35	1.05	1.18	1.05	0.13	1.01	1.05	1.10	0.96	1.15	2
WCA-3	Interior	CA36	1.51	1.70	1.55	0.39	1.27	1.51	1.79	1.16	2.01	4
WCA-3	Interior	CA38	1.02	1.15	1.02	0.12	0.94	1.04	1.12	0.89	1.13	4
WCA-3	Outflow[b]	S12A	0.97	1.24	1.00	0.34	0.82	0.89	1.11	0.67	4.67	357
WCA-3	Outflow[a]	S12A	0.92	1.23	0.98	0.57	0.84	0.86	0.89	0.76	4.67	78
WCA-3	Outflow[b]	S12B	0.94	1.12	0.96	0.19	0.87	0.92	0.94	0.78	1.51	15
WCA-3	Outflow[a]	S12B	0.91	1.03	0.92	0.12	0.88	0.92	0.94	0.78	1.27	13
WCA-3	Outflow[b]	S12C	1.05	1.23	1.07	0.19	0.99	1.08	1.10	0.76	1.69	22
WCA-3	Outflow[a]	S12C	1.05	1.17	1.05	0.12	0.99	1.08	1.10	0.80	1.39	20
WCA-3	Outflow[b]	S142	1.64	1.69	1.67	0.31	1.44	1.56	1.81	1.30	2.24	12
WCA-3	Outflow[a]	S142	---	---	---	---	---	---	---	---	---	0
WCA-3	Outflow[b]	S31	1.33	1.40	1.33	0.15	1.24	1.35	1.42	1.13	1.61	14
WCA-3	Outflow[a]	S31	---	---	---	---	---	---	---	---	---	0
WCA-3	Outflow[b]	S333	1.38	1.51	1.40	0.25	1.22	1.33	1.58	0.91	2.23	298
WCA-3	Outflow[a]	S333	1.44	1.54	1.46	0.25	1.28	1.36	1.62	1.01	2.23	190
WCA-3	Outflow[b]	S344	1.13	1.45	1.17	0.34	0.97	1.05	1.30	0.90	1.55	3
WCA-3	Outflow[a]	S344	---	---	---	---	---	---	---	---	---	0
WCA-3	Outflow[b]	US41-25	0.91	1.07	0.92	0.15	0.84	0.87	0.98	0.78	1.43	22
WCA-3	Outflow[a]	US41-25	0.86	0.93	0.87	0.07	0.83	0.86	0.87	0.78	1.00	12
ENP	Inflow[b]	S12A	0.97	1.24	1.00	0.34	0.82	0.89	1.11	0.67	4.67	357
ENP	Inflow[a]	S12A	0.92	1.23	0.98	0.57	0.84	0.86	0.89	0.76	4.67	78
ENP	Inflow[b]	S12B	0.94	1.12	0.96	0.19	0.87	0.92	0.94	0.78	1.51	15
ENP	Inflow[a]	S12B	0.91	1.03	0.92	0.12	0.88	0.92	0.94	0.78	1.27	13
ENP	Inflow[b]	S12C	1.05	1.23	1.07	0.19	0.99	1.08	1.10	0.76	1.69	22
ENP	Inflow[a]	S12C	1.05	1.17	1.05	0.12	0.99	1.08	1.10	0.80	1.39	20
ENP	Inflow[b]	S18C	0.69	1.07	0.74	0.33	0.54	0.59	0.75	0.45	1.72	50
ENP	Inflow[a]	S18C	0.70	1.09	0.75	0.34	0.54	0.59	0.83	0.45	1.72	47
ENP	Inflow[b]	S332DX	0.97	1.24	1.00	0.24	0.81	0.93	1.20	0.64	1.61	356

Table 2. Continued.

Area	Class	Station	Geometric Mean	Geometric Standard Deviation	Arithmetic Mean	Standard Deviation	25th Quartile	Median	75th Quartile	Minimum	Maximum	n
ENP	Inflow[a]	S332DX	0.85	0.99	0.86	0.13	0.77	0.82	0.93	0.64	1.40	221
ENP	Inflow[b]	S333	1.38	1.51	1.40	0.25	1.22	1.33	1.58	0.91	2.23	298
ENP	Inflow[a]	S333	1.44	1.54	1.46	0.25	1.28	1.36	1.62	1.01	2.23	190
ENP	Interior	EP	0.79	0.92	0.79	0.13	0.72	0.75	0.82	0.67	1.00	5
ENP	Interior	NE1	1.36	1.45	1.37	0.20	1.28	1.32	1.41	1.16	1.82	8
ENP	Interior	NP201	1.15	1.25	1.15	0.13	1.11	1.14	1.19	0.97	1.35	6
ENP	Interior	P33	1.43	1.48	1.44	0.17	1.34	1.43	1.53	1.17	1.73	9
ENP	Interior	P34	0.89	1.20	0.92	0.30	0.79	0.80	0.93	0.66	1.55	7
ENP	Interior	P35	0.88	1.12	0.90	0.21	0.73	0.82	1.03	0.70	1.22	6
ENP	Interior	P36	1.22	1.46	1.25	0.32	1.07	1.14	1.33	0.93	1.89	7
ENP	Interior	P37	0.65	0.74	0.65	0.11	0.60	0.63	0.69	0.54	0.80	4
ENP	Interior	TSB	0.65	0.64	0.65	0.05	0.63	0.66	0.67	0.57	0.69	5

a. When recorded flow

b. All data was used (flow and non-flow)

Table 3. Annual geometric mean TP trend analysis results for stations within the EPA from WY1979–WY2015.

Area	Class	Station	Number of Years	Statistic	Kendall's τ	ρ value	Sen's Slope Estimator
LNWR	Inflow	ACME1DS	20	1.00	-0.80	0.08	-5.267
LNWR	Inflow	ENR012	15	91.00	-0.04	0.82	-0.088
LNWR	Inflow	G310	6	29.00	-0.45	<0.05	-2.673
LNWR	Inflow	G94D	20	3.00	-0.60	0.14	-4.490
LNWR	Inflow	S5A	17	77.00	-0.19	0.26	-1.805
LNWR	Inflow	S6	11	56.00	-0.18	0.35	-0.772
LNWR	Inflow	S362	3	21.00	-0.24	0.36	-3.147
LNWR	Interior	1-8T	4	0.00	-1.00	0.33	-0.812
LNWR	Interior	A3	18	3.00	0.00	1.00	-0.065
LNWR	Interior	LOX10	21	45.00	-0.41	<0.05	-0.158
LNWR	Interior	LOX11	22	58.00	-0.45	<0.05	-0.215
LNWR	Interior	LOX12	21	108.00	-0.06	0.70	-0.013
LNWR	Interior	LOX13	22	80.00	-0.24	0.14	-0.116
LNWR	Interior	LOX14	22	93.00	-0.19	0.22	-0.066
LNWR	Interior	LOX15	22	102.00	-0.12	0.47	-0.049
LNWR	Interior	LOX16	13	88.00	-0.24	0.13	-0.075
LNWR	Interior	LOX3	20	26.00	-0.33	0.13	-0.144
LNWR	Interior	LOX4	16	90.00	-0.05	0.77	-0.031
LNWR	Interior	LOX5	21	45.00	-0.25	0.19	-0.191
LNWR	Interior	LOX6	22	60.00	-0.43	<0.05	-0.137
LNWR	Interior	LOX7	22	88.00	-0.24	0.13	-0.052
LNWR	Interior	LOX8	18	139.00	0.20	0.20	0.105
LNWR	Interior	LOX9	6	57.00	-0.25	0.15	-0.131
LNWR	Interior	X1	8	2.00	-0.73	0.06	-2.458
LNWR	Interior	X4	8	7.00	-0.50	0.11	-0.301
LNWR	Interior	LOXA101	7	9.00	-0.36	0.28	-0.237
LNWR	Interior	LOXA104.5	9	9.00	-0.14	0.77	-0.363
LNWR	Interior	LOXA105	7	22.00	0.22	0.48	0.252
LNWR	Interior	LOXA106	3	11.00	0.05	1.00	0.172
LNWR	Interior	LOXA107	5	3.00	1.00	0.33	0.514
LNWR	Interior	LOXA107U	7	7.00	0.40	0.48	0.200
LNWR	Interior	LOXA108	10	13.00	0.24	0.56	0.085
LNWR	Interior	LOXA124	4	17.00	-0.24	0.38	-0.321
LNWR	Interior	LOXA129	10	-1.73	-1.00	0.08	-5.504
LNWR	Interior	LOXA130	8	9.00	-0.60	<0.05	-0.561
LNWR	Interior	LOXA136	9	10.00	-0.29	0.40	-0.392

Table 3. Continued.

Area	Class	Station	Number of Years	Statistic	Kendall's τ	ρ value	Sen's Slope Estimator
LNWR	Interior	LOXA137	8	11.00	-0.39	0.18	-0.428
LNWR	Interior	LOXA138	7	9.00	-0.36	0.28	-0.288
LNWR	Interior	LOXA139	9	12.00	0.14	0.77	0.056
LNWR	Interior	LOXA140	7	15.00	-0.17	0.61	-0.160
LNWR	Interior	Z1	3	11.00	0.05	1.00	0.431
LNWR	Interior	Z2	3	3.00	1.00	0.33	0.894
LNWR	Interior	Z3	3	2.00	0.33	1.00	0.431
LNWR	Interior	Z4	5	3.00	1.00	0.33	0.869
LNWR	Outflow	G94B	6	4.00	-0.20	0.82	-1.390
LNWR	Outflow	S10A	14	-2.51	-1.00	<0.05	-1.381
LNWR	Outflow	S10C	20	-2.46	-0.52	<0.05	-0.998
LNWR	Outflow	S10D	10	-3.80	-0.64	<0.05	-2.656
LNWR	Outflow	S10E	25	-1.49	-0.40	0.14	-3.587
LNWR	Outflow	S39	6	84.00	-0.44	<0.05	-0.801
LNWR	Rim	ENR004	12	4.00	-0.47	0.27	-4.100
LNWR	Rim	S5AD	8	49.00	0.48	<0.05	5.505
LNWR	Rim	S6D	9	17.00	0.21	0.55	0.667
LNWR	Rim	LOXA104	4	9.00	-0.50	0.08	-3.307
LNWR	Rim	LOXA129	9	-1.73	-1.00	0.08	-5.504
LNWR	Rim	LOXA135	3	6.00	-0.67	<0.05	-6.134
LNWR	Rim	Z0	14	1.00	-0.33	1.00	-2.562
WCA-2	Inflow	G335	6	36.00	-0.21	0.33	-0.188
WCA-2	Inflow	S10A	14	-2.51	-1.00	<0.05	-1.381
WCA-2	Inflow	S10C	20	-2.46	-0.52	<0.05	-0.998
WCA-2	Inflow	S10D	10	-3.80	-0.64	<0.05	-2.656
WCA-2	Inflow	S10E	35	-1.49	-0.40	0.14	-3.587
WCA-2	Inflow	S7	3	99.00	-0.67	<0.05	-2.501
WCA-2	Inflow	G436	4	1.00	-0.33	1.00	-0.356
WCA-2	Interior	217	6	4.00	0.33	0.75	1.127
WCA-2	Interior	2AN3.5	6	6.00	-0.20	0.72	-6.620
WCA-2	Interior	2AN4.5	6	6.00	-0.20	0.72	-5.137
WCA-2	Interior	2AN6.4	3	8.00	0.07	1.00	0.145
WCA-2	Interior	B2	3	3.00	1.00	0.33	29.919
WCA-2	Interior	B5	17	2.00	0.33	1.00	0.481
WCA-2	Interior	CA215	14	56.00	-0.18	0.35	-0.125
WCA-2	Interior	CA217	9	11.00	-0.76	<0.05	-0.243
WCA-2	Interior	CA26	21	5.00	-0.72	<0.05	-0.227
WCA-2	Interior	CA27	21	56.00	-0.47	<0.05	-0.145

Table 3. Continued.

Area	Class	Station	Number of Years	Statistic	Kendall's τ	ρ value	Sen's Slope Estimator
WCA-2	Interior	CA28	21	36.00	-0.66	<0.05	-3.446
WCA-2	Interior	CA29	3	59.00	-0.44	<0.05	-0.124
WCA-2	Interior	E5	17	0.00	-1.00	0.33	-0.285
WCA-2	Interior	S144	34	77.00	0.13	0.49	0.159
WCA-2	Interior	S145	16	253.00	-0.10	0.43	-0.044
WCA-2	Interior	S146	12	68.00	0.13	0.51	0.165
WCA-2	Interior	SITE-D	4	50.00	0.52	<0.05	1.364
WCA-2	Interior	SL	9	4.00	0.33	0.75	6.110
WCA-2	Interior	U1	9	10.00	-0.44	0.12	-0.197
WCA-2	Interior	U3	19	12.00	-0.33	0.26	-0.086
WCA-2	Interior	WCA-2F1	21	28.00	-0.67	<0.05	-3.122
WCA-2	Interior	WCA-2F2	21	40.00	-0.62	<0.05	-1.949
WCA-2	Interior	WCA-2F4	9	76.00	-0.28	0.09	-0.265
WCA-2	Interior	WCA-2F5	8	15.00	-0.17	0.61	-0.131
WCA-2	Interior	2AN.25	8	8.00	-0.43	0.18	-0.885
WCA-2	Interior	2AN1	5	10.00	-0.29	0.40	-0.617
WCA-2	Interior	2AN2	6	1.00	-0.80	0.08	-1.603
WCA-2	Interior	2AN4	3	3.00	-0.60	0.14	-0.265
WCA-2	Interior	2AN6	7	0.00	-1.00	0.33	-0.679
WCA-2	Interior	404C2	7	4.00	-0.62	0.07	-0.326
WCA-2	Interior	404Z1	8	8.00	-0.24	0.56	-0.193
WCA-2	Interior	C0.25	8	8.00	-0.43	0.18	-1.182
WCA-2	Interior	CA222	4	17.00	0.21	0.55	0.017
WCA-2	Interior	CA223	8	1.00	-0.67	0.33	-1.059
WCA-2	Interior	CA224	3	10.00	-0.29	0.40	-0.141
WCA-2	Interior	FS0.25	7	1.00	-0.33	1.00	-1.154
WCA-2	Interior	FS1	3	8.00	-0.24	0.56	-0.185
WCA-2	Interior	FS2	3	2.00	0.33	1.00	1.309
WCA-2	Interior	WCA-2C4	3	1.00	-0.33	1.00	-0.226
WCA-2	Interior	WCA-2C5	42	3.00	1.00	0.33	0.218
WCA-2	Outflow	S11A	34	-3.39	-0.37	<0.05	-0.326
WCA-2	Outflow	S11B	42	-5.24	-0.65	<0.05	-0.774
WCA-2	Outflow	S11C	13	-6.52	-0.71	<0.05	-1.226
WCA-2	Outflow	S34	28	30.00	-0.23	0.31	-0.264
WCA-2	Outflow	S38	3	156.00	-0.17	0.20	-0.103
WCA-3	Inflow	G123	3	1.00	-0.33	1.00	-0.212
WCA-3	Inflow	G393B	4	0.00	-1.00	0.33	-9.442
WCA-3	Inflow	G606	42	4.00	0.33	0.75	6.376

Table 3. Continued.

Area	Class	Station	Number of Years	Statistic	Kendall's τ	ρ value	Sen's Slope Estimator
WCA-3	Inflow	S11A	34	-3.39	-0.37	<0.05	-0.326
WCA-3	Inflow	S11B	42	-5.24	-0.65	<0.05	-0.774
WCA-3	Inflow	S11C	37	-6.52	-0.71	<0.05	-1.226
WCA-3	Inflow	S140	21	247.00	-0.26	<0.05	-0.804
WCA-3	Inflow	S150	21	41.00	-0.61	<0.05	-1.871
WCA-3	Inflow	S190	36	65.00	-0.38	<0.05	-1.443
WCA-3	Inflow	S8	34	110.00	-0.65	<0.05	-3.162
WCA-3	Inflow	S9	12	263.00	-0.06	0.62	-0.025
WCA-3	Inflow	S9A	3	17.00	-0.48	<0.05	-0.231
WCA-3	Inflow	G344E	3	3.00	1.00	0.33	1.638
WCA-3	Inflow	G344F	5	1.00	-0.33	1.00	-2.529
WCA-3	Inflow	G352B	21	2.00	-0.60	0.23	-3.729
WCA-3	Interior	CA311	8	90.00	-0.14	0.39	-0.043
WCA-3	Interior	CA314	21	6.00	-0.57	0.06	-0.244
WCA-3	Interior	CA315	15	69.00	-0.34	<0.05	-0.078
WCA-3	Interior	CA316	15	27.00	-0.49	<0.05	-0.189
WCA-3	Interior	CA317	15	43.00	-0.18	0.38	-0.081
WCA-3	Interior	CA318	8	59.00	0.12	0.56	0.059
WCA-3	Interior	CA319	20	7.00	-0.50	0.11	-0.224
WCA-3	Interior	CA32	20	42.00	-0.56	<0.05	-0.184
WCA-3	Interior	CA33	21	66.00	-0.31	0.06	-0.151
WCA-3	Interior	CA34	13	66.00	-0.37	<0.05	-0.164
WCA-3	Interior	CA35	17	32.00	-0.18	0.44	-0.120
WCA-3	Interior	CA36	20	60.00	-0.12	0.54	-0.185
WCA-3	Interior	CA38	8	54.00	-0.43	<0.05	-0.140
WCA-3	Interior	CA39	4	13.00	-0.07	0.90	-0.059
WCA-3	Interior	WCA-3C4	8	4.00	0.33	0.75	0.999
WCA-3	Interior	3ASMESO	6	12.00	-0.14	0.72	-0.219
WCA-3	Interior	CA325	8	6.00	-0.20	0.72	-0.060
WCA-3	Interior	CA3B1	8	6.00	-0.57	0.06	-0.230
WCA-3	Interior	CA3B2	8	11.00	-0.21	0.55	-0.243
WCA-3	Interior	S345B6	56	13.00	-0.07	0.90	-0.025
WCA-3	Outflow	S12A	58	-1.47	-0.14	0.14	-0.072
WCA-3	Outflow	S12B	72	-1.77	-0.16	0.08	-0.051
WCA-3	Outflow	S12C	72	-2.57	-0.21	<0.05	-0.105
WCA-3	Outflow	S12D	12	-2.22	-0.18	<0.05	-0.080
WCA-3	Outflow	S31	64	20.00	-0.39	0.09	-0.432
WCA-3	Outflow	S333	17	-1.30	-0.11	0.19	-0.067

Table 3. Continued.

Area	Class	Station	Number of Years	Statistic	Kendall's τ	ρ value	Sen's Slope Estimator
WCA-3	Outflow	US41-25	56	95.00	0.40	<0.05	0.154
ENP	Inflow	S12A	58	-1.47	-0.14	0.14	-0.072
ENP	Inflow	S12B	72	-1.77	-0.16	0.08	-0.051
ENP	Inflow	S12C	72	-2.57	-0.21	<0.05	-0.105
ENP	Inflow	S12D	3	-2.22	-0.18	<0.05	-0.080
ENP	Inflow	S175	31	3.00	1.00	0.33	0.476
ENP	Inflow	S18C	18	172.00	-0.26	<0.05	-0.072
ENP	Inflow	S332	7	84.00	0.10	0.60	0.108
ENP	Inflow	S332D	64	7.00	-0.33	0.38	-0.220
ENP	Inflow	S333	8	-1.30	-0.11	0.19	-0.067
ENP	Inflow	S332DX	20	9.00	-0.36	0.28	-0.173
ENP	Interior	EP	27	52.00	-0.45	<0.05	-0.097
ENP	Interior	NE1	27	94.00	-0.46	<0.05	-0.164
ENP	Interior	NP201	28	135.00	-0.23	0.10	-0.070
ENP	Interior	P33	21	166.00	-0.12	0.38	-0.041
ENP	Interior	P34	26	78.00	-0.26	0.11	-0.060
ENP	Interior	P35	28	120.00	-0.26	0.06	-0.128
ENP	Interior	P36	18	105.00	-0.44	<0.05	-0.207
ENP	Interior	P37	22	29.00	-0.62	<0.05	-0.117
ENP	Interior	TSB	6	58.00	-0.50	<0.05	-0.133
ENP	Interior	CR2	5	2.00	-0.73	0.06	-0.344
ENP	Interior	G-3273	6	1.00	-0.80	0.08	-0.520
ENP	Interior	RG1	4	0.00	-1.00	<0.05	-1.574
ENP	Interior	SRS1C	8	3.00	0.00	1.00	0.043
ENP	Interior	SRS2	0	5.00	-0.64	<0.05	-0.164