

Appendix 3-2a: Non-ECP Water Quality Sampling Sites, Monitoring Schedule, and Flow Volumes

Table 1. Water quality monitoring schedule for non-Everglades Construction Project (non-ECP) discharge structures and additional upstream monitoring locations.

AREA	Non-ECP PERMIT STRUCTURE	WATER QUALITY SAMPLING SITE	WATER QUALITY MONITORING SCHEDULE						WATER QUALITY COMMENTS	
			Physical	Nutrients	Major Ions	Trace Metals	Pesticides Water	Pesticides Sediment		
INTO	ACME1DS	ACME1DS	BWF/M	BWF/M	QTR	SA	QTR	SA		
	ACME1 + (Upstream of ACME1DS)	VOW1		Weekly Flowing (autosampler)					Sampling conducted by Village of Wellington. TP collected by autosampler.	
	G-94D	G94D	BWF/M	BWF/M	QTR	SA	QTR	SA		
	ACME2 + (Upstream of G94D)	VOW2		Weekly Flowing (autosampler)					Sampling conducted by Village of Wellington. TP collected by autosampler.	
	G-123	G123	BWF/M	BWF/M (autosampler)	QTR	SA	QTR	SA		
	S-9	S9	BWF/M	Weekly Flowing (autosampler)	QTR	SA	QTR	SA	TP collected by autosampler.	
	S-9A	S9A	BWF/M	BWF/M except TP-WF/M Grab (autosampler)	QTR				New station, sampling started in WY2003	
	S-14	S14	BWF	BWF	QTRF	SAF				
	S-18C	S18C	BWF/M	BWF/M (autosampler)	QTR	SA	QTR	SA		
	S-140	S140	BWF/M	BWF/M (autosampler)	QTR	SA	QTR	SA	TP collected by autosampler, nitrogen species collected by grab	
	S-175	S175	BWF/M	BWF/M	QTR	SA				
	S-190	S190	BWF/M	BWF/M (autosampler)	QTR	SA	QTR	SA	TP collected by autosampler, nitrogen species collected by grab	
	S-332	S332	BWF/M	BWF/M	QTR	SA	QTR	SA		
	NSID1	NSIDSP01	BWF	BWF	QTRF	SAF	QTRF	SAF	TP collected by autosampler	
S38B		BWF	BWF	QTRF	SAF	QTRF	SAF			
WITHIN	G-64	G64	BWF	BWF	QTRF *				Monitoring Fe, Mg, Ca phased out *	
	G-69	G69	BWF	BWF	QTRF *				Monitoring Fe, Mg, Ca phased out *	
	G-71, S-346, S-347	S12D	BWF/M	BWF/M	QTR *				Monitoring Fe, Mg, Ca phased out *	
	S-10E	S10E	BWF/M	BWF/M	QTR *				Monitoring Fe, Mg, Ca phased out *	
	S-141	S34	BWF/M	BWF/M	QTR *				Monitoring Fe, Mg, Ca phased out *	
	S-142	S142	BWF/M	BWF/M	QTR *		QTRF	SAF	Monitoring Fe, Mg, Ca phased out *	
	S-143	S11A	BWF/M	BWF/M	QTR *				Monitoring Fe, Mg, Ca phased out *	
	S-144	S144							Discontinued sampling in favor of surrogate location at S-145 *	
	S-145	S145	BWF/M	BWF/M	QTR *				Monitoring Fe, Mg, Ca phased out *	
	S-146	S146							Discontinued sampling in favor of surrogate location at S-145 *	
	S-151	S151	BWF/M	BWF/M	QTR *				Monitoring Fe, Mg, Ca phased out *	
	S-339, S-340	C123SR84	BWF/M	BWF/M	QTR *				Monitoring Fe, Mg, Ca phased out *	
	FROM	G-94A, G-94B, G-94C	G94B	BWF/M	BWF/M	QTR *				Monitoring Fe, Mg, Ca phased out *
		S-31	S31	BWF/M	BWF/M	QTR *		QTR	SA	Monitoring Fe, Mg, Ca phased out *
S-34		S34	BWF/M	BWF/M	QTR *				Monitoring Fe, Mg, Ca phased out *	
S-38		S38	BWF/M	BWF/M	QTR *				Monitoring Fe, Mg, Ca phased out *	
S-39		S39	BWF/M	BWF/M	QTR *				Monitoring Fe, Mg, Ca phased out *	
S-197		S197	BWF	BWF	QTRF *				Monitoring Fe, Mg, Ca phased out *	
S-333		S333	BWF/M	BWF/M	QTR	SA				
S-334		S334	BWF/M	BWF/M	QTR *				Monitoring Fe, Mg, Ca phased out *	
S-337		S31	BWF/M	BWF/M	QTR *				Monitoring Fe, Mg, Ca phased out *	
S-343A, S-343B		US41-25	BWF/M	BWF/M	QTR *				Monitoring Fe, Mg, Ca phased out *	
S-344		S344	QTR	QTR	QTR *				Monitoring Fe, Mg, Ca phased out *	
C-111 BASIN	S-174 +	S176	BWF/M	BWF/M	QTR	SA	QTR	SA		
	S-177 +	S177	BWF/M	BWF/M	QTR	SA	QTR	SA		
	S-178 +	S178	BWF/M	BWF/M	QTR	SA	QTR	SA		
	S-331 +, S-173 +	S331-173	BWF/M	BWF/M	QTR	SA				
		S331					QTR	SA	S173 is not listed in Permit, but is adjacent to and flows in same direction as S331	
S-332D	S332D		Weekly (autosampler & Grab) and only TP					S-332D is not listed in Permit, but it needs to provide information		

Notes: 1) Water quality sample site is located on upstream side of permitted structure, unless otherwise noted with different representative sampling location.
 2) Structure names with a "+" are upstream of Non-ECP INTO structures and are additional monitoring locations.
 3) * indicates monitoring requirement eliminated in the November 1999 Non-ECP Permit Modification.
 4) Table Legend:

BWF/M = Biweekly if Flowing/Otherwise Monthly
 BWF = Biweekly if Flowing
 QTR = Quarterly
 QTRF = Quarterly if Flowing
 SA = Semiannually
 SAF = Semiannually if Flowing
 1 WS - 1 DS = 1 Wet Season and 1 Dry Season

Table 2. Flow volume and annual flow-weighted mean total phosphorus (TP) concentrations for non-ECP structures during Water Year 2004 (WY2004) (May 1, 2003 through April 30, 2004).

AREA	NON-ECP PERMIT STRUCTURE	WATER QUALITY SAMPLING SITE	FLOW		Monthly Flow Volumes (acre-ft) (May 1, 2003 - April 30, 2004)												Total Flow Volume (acre-ft)	Annual Flow Weighted Mean TP (ppb)
			STATION	DBKEY	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr		
INTO	ACME1DS	ACME1DS	n/a	n/a	See flow data from ACME 1												n/a	72
	ACME1 + (Upstream of ACME1DS)	VOW1	ACME1	OH647	569	2,079	179	3,407	1,177	137	964	642	113	590	158	0	10,018	77
	G-94D	G94D	n/a	n/a	See flow data from ACME 2												n/a	91
	ACME2 + (Upstream of G94D)	VOW2	ACME2	OH648	527	1,985	108	2,945	1,716	112	1,049	757	71	477	118	2	9,871	101
	G-123	G123	G123_P	K5481	942	1,315	0	0	0	0	0	0	41	0	0	0	2,299	16
	S-9	S9	S9_P	K5483	35,435	33,221	57	28,222	22,352	4,784	10,619	4,966	1,708	8,282	0	0	149,708	18
	S-9A	S9A	S-9A	PC168	433	6,509	17,175	14,324	16,352	19,615	14,446	6,934	3,439	4,915	1,847	1,576	107,609	13
	S-14	S14	S14_C	K5485	0	0	0	0	0	0	0	0	0	0	0	0	0	NPF
	S-18C	S18C	S18C_S	15760	11,543	30,826	11,458	25,652	25,372	13,839	20,457	13,046	796	5,265	379	128	158,813	9
	S-140	S140	S140_TOT	06754	6,146	19,250	12,845	21,410	32,116	21,194	6,461	3,835	3,703	6,072	2,983	81	136,152	42
	S-175	S175	S175_C	15752	1	0	1	0	0	0	0	0	0	0	0	0	2	5
	S-190	S190	S190_S	K5501	1,638	9,345	7,946	34,519	35,295	21,831	1,458	1,056	557	3,289	711	4	117,699	99
	S-332	S332	S332_P	15753	0	1	1	0	0	0	0	0	0	1	0	0	3	13
	NSID (S38B)	NSIDSP01	NSPRNG_C2A	PS225	0	0	0	0	0	0	0	0	0	0	0	0	0	nd
S38B		NSPRNG_C2A	PS225	0	0	0	0	0	0	0	0	0	0	0	0	0	nd	
WITHIN	G-64	G64	G64_C	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
	G-69	G69	G69_C	K5480	352	497	534	563	594	620	593	580	355	-28	-222	42	4,898	NPF
	G-71, S-346, S-347	S12D	S12D_S	FE774	11,928	27,719	35,858	38,170	49,987	50,667	44,405	38,021	14,771	5,994	10,425	7,260	335,054	11
	S-10E	S10E	S10E_C	K5484	0	0	0	0	0	0	0	1	0	0	0	0	7	nd
	S-141	S34	S141_W	K5493	0	-491	-345	-2258	-15264	-3231	0	0	0	0	4737	0	5854	22
	S-142	S142	S142_C	K5494	-382	3,155	8,200	10,458	11,148	17,743	14,682	7,827	2,321	13,787	9,449	2,341	101,909	22
	S-143	S11A	S143_C	K5495	8,507	0	0	3,550	10,064	0	0	14,061	10,730	0	0	0	46,931	17
	S-144	S144	S144_C	K5497	1,323	5,803	6,240	0	0	0	1,706	4,922	295	0	0	0	20,460	nd
	S-145	S145	S145_C	K5498	2,037	6,693	7,175	0	0	0	1,854	5,803	86	0	0	0	23,825	9
	S-146	S146	S146_C	K5499	126	5,639	5,551	0	0	0	1,500	3,441	-481	3,376	2,419	0	22,721	nd
	S-151	S151	S151_C	K5500	0	0	0	0	0	2,694	4,233	0	0	12,278	18,684	1,504	39,410	11
	S-333	S333	S333_S	15042	30,851	5,456	17,307	5,317	18	1,121	21,375	21,906	5,233	25,813	28,992	11,841	174,849	11
	S-339	C123SR84	S339_S	K5506	6,562	0	0	5,088	43,677	32,858	17,547	0	0	0	0	0	105,776	42
	S-340	C123SR84	S340_S	K5507	15,815	0	0	3,700	39,829	40,332	26,578	1,668	234	175	0	0	128,384	41

- Notes: 1) Water quality sample site is located on upstream side of permitted structure, unless otherwise noted with different sampling location.
 2) n/a indicates that flow and/or stage data is not available, or that structure is not appropriately instrumented to capture information.
 3) Structure names with a "+" are upstream of Non-ECP INTO structures and are additional monitoring locations.
 4) ACME1DS and G-94D are not instrumented for flow calculation. Flow-weighted mean TP concentration was determined by considering the TP data from these sites with the flow data from the upstream pump stations (ACME 1 and ACME 2, respectively).
 5) G-123 structure is not monitored for flow (reported volume is an estimate), arithmetic mean TP was calculated by considering all samples collected.
 6) S-14 is not instrumented for flow calculation, however operational records indicate no operation during the water year.
 7) NPF indicates either structure closed or that no positive flow was recorded on sampling days, thus a flow-weighted mean could not be calculated.

Table 2. Continued.

AREA	NON-ECP PERMIT STRUCTURE	WATER QUALITY SAMPLING SITE	FLOW		Monthly Flow Volumes (acre-ft) (May 1, 2003 - April 30, 2004)												Total Flow Volume (acre-ft)	Annual Flow Weighted Mean TP (ppb)	
			STATION	DBKEY	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr			
FROM	G-94A	G94B	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	G-94B	G94B	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	G-94C	G94B	G94C_C	OR446	765	82	1,303	0	1,694	8,514	0	0	0	6,196	7,284	-7	25,893	120	
	S-31	S31	S31_C	K5486	0	0	0	0	0	0	0	0	3719	12388	15614	0	31734	nd	
	S-34	S34	S34_C	K5487	9,930	0	8,802	9,184	15,018	22,769	18,488	22,335	12,294	18,280	12,225	1,883	151,220	23	
	S-38	S38	S38_C	K5488	11,420	0	10,357	8,972	12,585	19,094	15,933	18,001	7,317	14,873	20,538	4,934	143,928	13	
	S-39	S39	S39_S	K5489	10,123	24,058	12,066	19,488	14,798	17,539	0	585	2,619	19,216	12,320	3,612	136,233	25	
	S-197	S197	S197_C	15763	0	0	0	1,809	1,616	0	0	0	0	0	0	0	3,426	3	
	S-334	S334	S334_S	FB752	19,991	5,134	16,895	4,760	0	1,232	23,295	22,572	21	20	2,184	22	96,168	11	
	S-337	S31	S337_C	K5505	0	0	0	0	0	0	0	0	0	0	0	1,660	1,660	nd	
	S-343A	US41-25	S343A_C	K5508	0	0	234	1,082	1,569	3,139	0	0	0	0	0	0	6,027	9	
	S-343B	US41-25	S343B_C	K5509	0	0	408	1,923	2,020	3,327	6	0	0	0	0	0	7,689	9	
	S-344	S344	S344_C	K5511	0	0	207	1,150	1,173	1,745	0	0	0	0	0	0	4,276	9	
	C-111 BASIN	S-174 +	S176	S174_S	15769	0	0	0	3	0	0	0	0	3,737	77	1,053	653	5,483	6
S-177 +		S177	S177_S	15772	8,275	26,829	4,159	21,201	19,774	11,882	14,731	9,085	213	2,269	794	2,498	121,701	4	
S-178 +		S178	S178_C	03952	0	6	0	1,076	0	0	-674	0	-955	-522	0	0	-1,069	0	
S-331 +		S331-173	S331_P	P6935	16,204	18,612	46,988	18,844	13,826	18,370	37,805	38,249	53	3,610	1,092	66	213,804	7	
S-173 +		S331-173	S173_C	FB759	873	66	0	0	4	0	0	0	4,631	3,065	3,840	4,895	17,226	5	
S-332D +		S332D	S-332D	MS947	7,592	7,398	8,877	24,683	18,407	14,221	25,385	16,804	1,814	1,605	1,154	7	128,001	6	

- Notes: 1) Water quality sample site is located on upstream side of permitted structure, unless otherwise noted with different sampling location.
2) n/a indicates that flow and/or stage data is not available, or that structure is not appropriately instrumented to capture information.
3) Structure names with a "+" are upstream of Non-ECP INTO structures and are additional monitoring locations.
4) G-94A, G-94B, G-94C are not instrumented for flow calculations. Estimate provided for March 2001 when G-94C backflowed into WCA-1.
5) S-331 and S-173 flow records were combined to determine the annual flow-weighted mean TP.
6) NPF indicates either structure closed or that no positive flow was recorded on sampling days, thus a flow-weighted mean could not be calculated.