

APPENDIX D

**2008 EFFLUENT MONITORING
AND 2007 LOADING DATA**

Special Nitrogen Monitoring Project
 NPDES Major Dischargers Chattahoochee River Basin Buford Dam to Franklin
 October 13-28, 2008

**Buford
 Southside**

Richland Creek Jan-Sept Monthly Average Flow 1.2 MGD

Parameter	10/13	10/14	10/15	10/16	10/17	10/18	10/19	10/20	10/21	10/22	10/23	10/24	10/25	10/26	10/27	10/28	AVG
NO3-NO2	12.00	14.40	16.60	18.30	18.90	20.00	19.90	31.20	22.60	23.40	24.20	25.20	23.60	23.20	23.60	25.30	21.4
TKN	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.1	<0.5	<0.5	<0.5	1.1
Ammonia	0.300	0.410	0.560	0.310	0.350	0.329	0.203	0.498	0.435	0.594	0.328	0.365	0.480	0.273	0.281	0.297	0.376

Permit
 Limit

5.0 mg

Fulton County Cauley Creek

Cauley Creek Jan-Sept Monthly Average Flow 4.0 MGD

Parameter	10/13	10/14	10/15	10/16	10/17	10/18	10/19	10/20	10/21	10/22	10/23	10/24	10/25	10/26	10/27	10/28	AVG
NO3-NO2	4.65	4.03	7.77	7.7	5.7	3.9	3.6	3.7	4.2	5.4	5.6	4.7	5.7	5.4	4.4	4.6	5.066
TKN	0.8	0.9	1.1	1.6	1.2	1.7	2.7	1.2	2.3	3.6	2.6	3.8	2.3	2.8	3.0	7.3	2.431
Ammonia	0.4	0.2	0.3	0.6	0.1	0.3	0.2	0.3	0.2	0.2	0.2	0.4	0.4	0.7	0.4	0.2	0.319

0.5 mg

Gwinnett County Crooked Creek

Chattahoochee River Jan-Sept Monthly Average Flow 30.2 MGD

Parameter	10/13	10/14	10/15	10/16	10/17	10/18	10/19	10/20	10/21	10/22	10/23	10/24	10/25	10/26	10/27	10/28	AVG
NO3-NO2	7.3	8.4	9.0	10	9.3	11.8	9.4	9.16	8.32	11.3	12.7	12.2	12.4	8.61	7.53	9.91	9.833
TKN	0.48	0.45	0.72	0.38	0.31	0.36	0.32	0.47	0.25	0.51	0.54	0.56	0.54	0.49	0.4	0.59	0.461
Ammonia	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06

111
 kg/day

Fulton County Johns Creek

Chattahoochee River Jan-Sept Monthly Average Flow 3.7 MGD

Parameter	10/13	10/14	10/15	10/16	10/17	10/18	10/19	10/20	10/21	10/22	10/23	10/24	10/25	10/26	10/27	10/28	AVG
NO3-NO2	14.6	13.3	13.3	13.8	13.2	15.4	16.0	15.5	14.2	13.5	15.6	15.6	11.7	14.8	14.8	12.7	14.25
TKN	1.9	1.8	1.1	1.1	0.9	0.7	1.3	1.4	0.5	0.8	0.6	<0.5	0.4	1.1	0.8	0.3	0.98
Ammonia	0.6	0.795	0.428	0.59	0.792	0.073	0.168	0.75	0.288	0.8	0.227	0.428	0.19	0.24	0.295	0.261	0.433

3.7 mg

Tyson Foods

Orr Creek to Big Creek Jan-Sept Monthly Average Flow

Parameter	10/13	10/14	10/15	10/16	10/17	10/18	10/19	10/20	10/21	10/22	10/23	10/24	10/25	10/26	10/27	10/28	AVG
NO3-NO2	18.30	17.50	24.40	17.10	12.90	11.50	9.36	4.26	3.66	4.16	7.33	16.20	17.50	16.40	11.60	No	12.81
TKN	0.68	2.50	1.55	4.37	1.18	1.66	1.73	1.60	1.46	1.37	1.93	1.54	1.38	1.35	1.56	Data	1.724
Ammonia	0.11	0.06	<0.02	0.07	0.20	0.52	0.72	0.33	0.34	0.62	0.36	0.05	0.04	0.06	0.27	Submitted	0.27

2.0 mg

Cumming

Big Creek Jan-Sept Monthly Average Flow 1.8 MGD

Parameter	10/13	10/14	10/15	10/16	10/17	10/18	10/19	10/20	10/21	10/22	10/23	10/24	10/25	10/26	10/27	10/28	AVG
NO3-NO2	12.4	12.4	17.7	16.2	13.2	13.9	13.5	13.6	13.3	14.0	14.4	15.0	14.4	12.3	11.3	11.9	13.72
TKN	4.41	4.16	5.65	4.89	<0.3	1.31	1.37	3.27	0.71	0.69	0.69	0.97	1.48	1.41	1.54	1.64	2.279
Ammonia	0.021	0.018	0.02	0.167	0.011	0.02	0.016	0.05	0.011	0.018	0.025	0.011	0.01	0.012	0.014	0.013	0.027

5.0 mg

Note: Permit limit is monthly average unless otherwise specified

Special Nitrogen Monitoring Project
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Fulton County Big Creek Chattahoochee River Jan-Sept Monthly Average Flow 20.3 MGD

Parameter	10/13	10/14	10/15	10/16	10/17	10/18	10/19	10/20	10/21	10/22	10/23	10/24	10/25	10/26	10/27	10/28	AVG
NO3-NO2	7.26	9.26	10.5	12.4	12.5	9.2	9.5	9.72	11.8	15.0	13.7	14.9	10.6	11.7	12.0	13.8	11.49
TKN	3.8	4.4	1.6	1.9	2.3	1.9	1.6	3.6	1.5	1.2	1.9	0.9	1.0	1.0	1.4	0.8	1.925
Ammonia	3.04	4.38	1.85	1.63	2.13	1.71	0.992	2.42	0.789	0.559	1.3	0.369	0.251	0.256	0.283	0.781	1.421

1.4 mg/l

Cobb County R L Sutton Chattahoochee River Jan-Sept Monthly Average Flow 23.9 MGD

Parameter	10/13	10/14	10/15	10/16	10/17	10/18	10/19	10/20	10/21	10/22	10/23	10/24	10/25	10/26	10/27	10/28	AVG
NO3-NO2	16.7	17.3	16.5	17.2	16.8	16.4	16.0	16.3	16.6	16.4	16.7	16.4	16.3	14.1	16.0	No	16.38
TKN	1.08	1.16	0.89	1.31	1.21	1.07	1.00	1.15	1.16	1.02	0.9	0.92	0.89	0.92	0.97	Data	1.043
Ammonia	0.02	0.02	0.04	0.03	0.04	0.04	0.03	0.02	0.03	0.03	0.03	0.03	0.05	< 0.02	< 0.02	Submitted	0.032

0.5 mg/l

Atlanta R M Clayton Chattahoochee River Jan-Sept Monthly Average Flow 71.0 MGD

Parameter	10/13	10/14	10/15	10/16	10/17	10/18	10/19	10/20	10/21	10/22	10/23	10/24	10/25	10/26	10/27	10/28	AVG
NO3-NO2	11.9	12.5	12.5	13.4	12.7	10.7	9.09	12.4	14.3	15.4	14.6	12.7	10.5	9.68	10.8	12.4	12.22
TKN	1.52	0.9	1.51	< 0.31	0.35	2.04	1.62	1.21	2.05	0.48	1.52	< 0.31	0.79	0.95	0.45	0.6	1.142
Ammonia	0.04	< 0.03	0.04	0.06	0.03	0.89	0.08	0.05	0.08	0.1	0.07	0.05	0.05	0.03	0.07	0.03	0.111

6.0 mg/l

USAF Lockheed Nickajack Creek Jan-Sept Monthly Average Flow

Parameter	10/13	10/14	10/15	10/16	10/17	10/18	10/19	10/20	10/21	10/22	10/23	10/24	10/25	10/26	10/27	10/28	AVG
NO3-NO2	47.60	45.70	47.10	44.60	42.40	7.27	7.33	7.63	7.29	7.19	7.56	27.40	41.80	40.10	37.60	34.90	28.34
TKN	0.53	0.53	0.53	0.53	< 0.5	< 0.6	0.53	0.70	< 0.5	< 0.5	< 0.5	0.53	< 0.5	< 0.5	< 0.5	0.53	0.551
Ammonia	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Daily Max
2.3 mg/l

Cobb County South Cobb Chattahoochee River Jan-Sept Monthly Average Flow 22.5 MGD

Parameter	10/13	10/14	10/15	10/16	10/17	10/18	10/19	10/20	10/21	10/22	10/23	10/24	10/25	10/26	10/27	10/28	AVG
NO3-NO2	17.3	17.6	19.0	18.5	22.2	20.5	17.8	18.0	19.2	18.5	20.0	20.3	18.5	18.0	17.9	No	18.89
TKN	1.12	1.28	1.49	1.5	1.79	2.02	1.39	1.27	1.32	0.83	1.13	1.31	1.4	1.39	1.38	Data	1.375
Ammonia	0.03	< 0.02	0.05	0.04	0.04	0.05	0.02	0.02	< 0.02	0.03	0.05	0.04	0.02	< 0.02	< 0.02	Submitted	0.035

1.8 mg/l

Atlanta Utoy Creek Chattahoochee River Jan-Sept Monthly Average Flow 18.3 MGD

Parameter	10/13	10/14	10/15	10/16	10/17	10/18	10/19	10/20	10/21	10/22	10/23	10/24	10/25	10/26	10/27	10/28	AVG
NO3-NO2	13.0	11.6	11.6	12.0	10.8	11.4	9.69	9.32	11.5	11.6	12.2	11.7	13.1	9.14	9.96	11.9	11.28
TKN	< 0.31	< 0.31	0.38	< 0.31	< 0.31	< 0.31	0.84	0.54	0.43	0.35	0.35	< 0.31	< 0.31	< 0.31	0.5	< 0.31	0.484
Ammonia	0.05	< 0.03	0.04	0.06	0.03	0.05	< 0.03	0.05	0.03	0.08	0.05	0.04	0.03	0.04	0.06	0.03	0.046

6.0 mg/l

Note: Permit limit is monthly average unless otherwise specified

Special Nitrogen Monitoring Project
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Villa Rica Sweetwater Creek

Jan-Sept Monthly Average Flow 0.4
MGD

Parameter	10/13	10/14	10/15	10/16	10/17	10/18	10/19	10/20	10/21	10/22	10/23	10/24	10/25	10/26	10/27	10/28	AVG
NO3-NO2	27.2	21.5	19.7	19	21.5	19.5	21.5	22.2	17.2	20.2	21.7	26	20.7	24.5	18	22.2	21.41
TKN	0.66	0.79	0.77	0.95	1.27	0.78	0.65	0.5	0.8	0.91	0.84	1.58	1.08	1.08	0.89	1.39	0.934
Ammonia	0.24	0.39	0.24	0.23	0.23	0.24	0.25	0.17	0.27	0.25	0.22	0.27	0.32	0.28	0.2	0.38	0.261

5.0 mg/l

Douglasville Sweetwater

Chattahoochee River

Jan-Sept Monthly Average Flow 2.3
MGD

Parameter	10/13	10/14	10/15	10/16	10/17	10/18	10/19	10/20	10/21	10/22	10/23	10/24	10/25	10/26	10/27	10/28	AVG
NO3-NO2	10.8	7.63	8.87	8.3	8.26	8.38	13.1	14.7	13.8	15.5	13.5	14.0	18.4	21.6	24.0	11.4	13.27
TKN	< 0.05	< 0.05	1.1	1.1	1.0	0.7	0.5	0.7	1.0	1.0	1.1	0.9	1.0	< 0.5	< 0.5	1.8	0.992
Ammonia	0.16	0.3	0.16	0.32	0.23	0.16	0.17	0.16	0.22	0.4	0.41	0.18	0.2	0.26	0.22	0.55	0.256

2.0 mg/l

Fulton County Camp Creek

Chattahoochee River

Jan-Sept Monthly Average Flow 14.6
MGD

Parameter	10/13	10/14	10/15	10/16	10/17	10/18	10/19	10/20	10/21	10/22	10/23	10/24	10/25	10/26	10/27	10/28	AVG
NO3-NO2	11.0	10.4	9.98	10.5	8.94	12.2	10.0	10.1	9.83	10.9	10.3	7.24	6.42	7.78	10.1	7.86	9.597
TKN	0.3	1.2	<0.5	0.5	0.8	0.9	1.0	0.4	0.8	0.8	0.4	1.0	1.0	1.0	0.8	0.7	0.773
Ammonia	0.254	0.298	0.607	0.338	0.459	0.168	0.15	0.182	0.178	0.108	0.096	0.216	0.236	0.286	0.236	0.085	0.244

2.0 mg/l

Douglasville South Central

Chattahoochee River

Sept Monthly Average Flow 2.9 MGD

Parameter	10/13	10/14	10/15	10/16	10/17	10/18	10/19	10/20	10/21	10/22	10/23	10/24	10/25	10/26	10/27	10/28	AVG
NO3-NO2	4.18	4.28	5.26	6.18	7.41	11.3	11.5	9.87	8.82	8.5	8.86	9.46	13.7	14.2	10.5	13.3	9.208
TKN	0.9	0.9	0.9	1.2	0.9	0.9	1	0.8	1	0.8	0.7	0.9	0.7	0.5	0.8	0.9	0.863
Ammonia	0.1	0.12	0.14	0.13	0.15	0.13	0.14	0.14	0.15	0.13	0.11	0.12	0.15	0.15	0.11	0.12	0.131

2.0 mg/l

Newan Wahoo Creek

Wahoo Creek

Jan-Sept Monthly Average Flow 2.2
MGD

Parameter (units)	10/13	10/14	10/15	10/16	10/17	10/18	10/19	10/20	10/21	10/22	10/23	10/24	10/25	10/26	10/27	10/28	AVG
NO3-NO2	4.4	3.6	5.7	6.3	6.0	7.8	5.8	5.0	3.9	2.1	2.8	2.7	3.3	3.4	2.6		4.36
TKN	1.7	1.2	0.8	1.0	1.0	1.2	1.6										1.22
Ammonia	0.76	0.67	0.38	0.39	0.34	0.62	0.23	0.63	0.72	0.65	0.57	0.55	0.54	0.60	0.48		0.542

1.7 mg/l

Note: Permit limit is monthly average unless otherwise specified

Percent of Actual 2007 Maximum Monthly Average Loading Below Permit Limits

Facility	2007 Maximum Monthly Average						Monthly Average Permit Limits						BOD5 Percent Below Permit Limits	NH3 Percent Below Permit Limits	UOD Percent Below Permit Limits
	Flow (MGD)	BOD5 (mg/L)	NH3 (mg/L)	BOD5 (lbs/day)	NH3 (lbs/day)	UOD Load (lbs/day)	Flow (MGD)	BOD5 (mg/L)	NH3 (mg/L)	BOD5 (lbs/day)	NH3 (lbs/day)	UOD Load (lbs/day)			
Fulton County - Cauley Creek WPCP	4.6	1.0	0.23	38	9	232	5	2.9	0.5	121	21	700	68.3%	57.7%	66.8%
Gwinnett County - Crooked Creek WPCP	31.0	1.3	0.13	336	34	1,834	36	2.9	0.77	871	231	5,410	61.4%	85.5%	66.1%
Fulton County - Johns Creek WPCP	4.6	2.0	0.80	77	31	524	15	2.9	0.50	363	63	2,100	78.9%	50.9%	75.1%
Fulton County - Big Creek WPCP	22.2	1.8	1.20	333	222	2,679	24	9.1	1.40	1821	280	10,388	81.7%	20.8%	74.2%
Atlanta - R.M. Clayton WPCP	79.0	2.3	0.85	1515	560	10,136	100	16.0	20	13344	16680	142,948	88.6%	96.6%	92.9%
Cobb County - R.L. Sutton WPCP	28.3	2.6	0.07	614	17	3,144	40	10.0	9.40	3336	3136	31,011	81.6%	99.5%	89.9%
Cobb County - South Cobb WPCP	26.4	3.4	0.41	749	90	4,156	40	13.0	1.80	4337	600	24,428	82.7%	85.0%	83.0%
Atlanta - Utoy Creek WPCP	27.0	2.2	0.09	495	20	2,570	40	16.0	20	5338	6672	57,179	90.7%	99.7%	95.5%
Atlanta - South River WPCP	36.2	6.0	1.68	1811	507	11,375	48	16.0	20	6405	8006	68,615	71.7%	93.7%	83.4%
Douglasville - Sweetwater Creek WPCP	2.4	8.0	1.30	162	26	931	3	10.0	2.00	250	50	1,480	35.2%	47.4%	37.1%
Fulton County - Camp Creek WPCP	15.6	1.0	0.16	130	21	746	24	2.9	0.50	580	100	3,360	77.6%	79.2%	77.8%
Total:	277			6,261	1,537	38,326	375			36,766	35,840	347,617			
Percent below permit limits	26%												83%	96%	89%

Percent of Actual 2007 Monthly Average Loading Below Permit Limits

Facility	2007 Monthly Average						Monthly Average Permit Limits						BOD5 Percent Below Permit Limits	NH3 Percent Below Permit Limits	UOD Percent Below Permit Limits
	Flow (MGD)	BOD5 (mg/L)	NH3 (mg/L)	BOD5 (lbs/day)	NH3 (lbs/day)	UOD Load (lbs/day)	Flow (MGD)	BOD5 (mg/L)	NH3 (mg/L)	BOD5 (lbs/day)	NH3 (lbs/day)	UOD Load (lbs/day)			
Fulton County - Cauley Creek WPCP	4.2	1.0	0.15	35	5	196	5	2.9	0.5	121	21	700	71.3%	75.9%	72.0%
Gwinnett County - Crooked Creek WPCP	28.7	1.0	0.06	239	14	1,262	36	2.9	0.77	871	231	5,410	72.5%	93.8%	76.7%
Fulton County - Johns Creek WPCP	4.2	1.5	0.38	52	13	319	15	2.9	0.50	363	63	2,100	85.8%	78.6%	84.8%
Fulton County - Big Creek WPCP	20.1	1.3	0.38	214	63	1,355	24	9.1	1.40	1821	280	10,388	88.3%	77.6%	87.0%
Atlanta - R.M. Clayton WPCP	69.3	2.1	0.24	1184	139	6,555	100	16.0	20	13344	16680	142,948	91.1%	99.2%	95.4%
Cobb County - R.L. Sutton WPCP	25.3	2.1	0.05	452	10	2,306	40	10.0	9.40	3336	3136	31,011	86.5%	99.7%	92.6%
Cobb County - South Cobb WPCP	22.6	2.7	0.11	506	21	2,627	40	13.0	1.80	4337	600	24,428	88.3%	96.6%	89.2%
Atlanta - Utoy Creek WPCP	24.2	2.1	0.05	415	9	2,117	40	16.0	20	5338	6672	57,179	92.2%	99.9%	96.3%
Atlanta - South River WPCP	26.1	2.5	0.39	545	84	3,109	48	16.0	20	6405	8006	68,615	91.5%	99.0%	95.5%
Douglasville - Sweetwater Creek WPCP	2.2	5.7	0.72	106	13	592	3	10.0	2.00	250	50	1,480	57.6%	73.2%	60.0%
Fulton County - Camp Creek WPCP	14.4	0.3	0.04	40	5	224	24	2.9	0.50	580	100	3,360	93.1%	94.7%	93.3%
Total:	241			3,787	378	20,663	375			36,766	35,840	347,617			
Percent below permit limits	36%												90%	99%	94%

Percent of Actual 2007 Maximum Loading Below Permit Limits

Facility	2007 Daily Maximum						Monthly Average Permit Limits						BOD5 Percent Below Permit Limits	NH3 Percent Below Permit Limits	UOD Percent Below Permit Limits
	Flow (MGD)	BOD5 (mg/L)	NH3 (mg/L)	BOD5 (lbs/day)	NH3 (lbs/day)	UOD Load (lbs/day)	Flow (MGD)	BOD5 (mg/L)	NH3 (mg/L)	BOD5 (lbs/day)	NH3 (lbs/day)	UOD Load (lbs/day)			
Fulton County - Cauley Creek WPCP	8.0	1.0	0.38	67	25	450	5	2.9	0.5	121	21	700	44.8%	-21.8%	35.7%
Gwinnett County - Crooked Creek WPCP	33.1	2.2	0.34	597	93	3,412	36	2.9	0.77	871	231	5,410	31.4%	59.8%	36.9%
Fulton County - Johns Creek WPCP	5.2	3.0	1.10	130	48	869	15	2.9	0.50	363	63	2,100	64.1%	23.7%	58.6%
Fulton County - Big Creek WPCP	24.6	3.0	1.30	617	267	4,305	24	9.1	1.40	1821	280	10,388	66.1%	4.6%	58.6%
Atlanta - R.M. Clayton WPCP	91.0	2.7	1.80	2049	1366	16,489	100	16.0	20	13344	16680	142,948	84.6%	91.8%	88.5%
Cobb County - R.L. Sutton WPCP	30.2	3.6	0.75	897	189	5,347	40	10.0	9.40	3336	3136	31,011	73.1%	94.0%	82.8%
Cobb County - South Cobb WPCP	28.4	5.7	2.70	1350	640	9,673	40	13.0	1.80	4337	600	24,428	68.9%	-6.5%	60.4%
Atlanta - Utoy Creek WPCP	31.0	3.0	0.15	776	39	4,055	40	16.0	20	5338	6672	57,179	85.5%	99.4%	92.9%
Atlanta - South River WPCP	39.9	13.0	3.91	4326	1301	27,576	48	16.0	20	6405	8006	68,615	32.5%	83.7%	59.8%
Douglasville - Sweetwater Creek WPCP	2.6	9.0	2.50	195	54	1,224	3	10.0	2.00	250	50	1,480	22.0%	-8.3%	17.3%
Fulton County - Camp Creek WPCP	16.8	2.4	0.60	336	84	2,066	24	2.9	0.50	580	100	3,360	42.1%	16.0%	38.5%
Total:	311			11,340	4,106	75,464	375			36,766	35,840	347,617			
Percent below permit limits	17%												69%	89%	78%