

Christina Basin High Flow TMDLs Fact Sheet

Location		Nitrogen			Phosphorus			enterococci Bacteria *		
Delaware Subwatersheds	Subbasin	Baseline Load (Kg/day)	TMDL	% Reduction	Baseline Load (Kg/day)	TMDL	% Reduction	Baseline Load (in trillion [10 ¹²] cfu/year) **	TMDL	% Reduction
Brandywine Creek East Branch	B17	159.42	156.243	2.0%	8.227	8.066	2.0%			
Brandywine Creek East Branch	B18							111	5.85	94.7%
Brandywine Creek East Branch	B19							55.7	6.68	88.0%
Brandywine Creek East Branch	***B34							823	268	67.4%
Red Clay Creek	R04	74.184	38.135	48.6%	39.583	34.984	11.6%	58.9	12	79.6%
Burroughs Run	R06	52.248	39.718	24.0%	11.289	1.289	88.6%	15.1	10.7	29.1%
Red Clay Creek	R05	63.45	31.828	49.8%	4.598	4.598	0.0%	22.5	8.34	62.9%
Hoopes Reservoir	R07	3.015	3.015	0.0%	0.424	0.424	0.0%	6.05	1.83	69.8%
Red Clay Creek	R08	44.117	44.117	0.0%	1.727	1.727	0.0%	76.1	8.73	88.5%
Red Clay Creek	R09	13.423	13.423	0.0%	0.43	0.43	0.0%	28.3	3.04	89.3%
White Clay Creek East Branch	W09	141.427	70.759	50.0%	16.034	7.24	54.8%			
White Clay Creek East Branch	W10	59.065	29.533	50.0%	5.098	2.294	55.0%			
White Clay Creek East Branch	W11	71.329	71.329	0.0%	5.736	5.736	0.0%	40.7	10.5	74.2%
White Clay Creek East Branch	W12	97.017	97.017	0.0%	4.587	4.587	0.0%	149	18.9	87.3%
Muddy Run	W15	34.814	34.814	0.0%	0.495	0.495	0.0%	28.5	9.42	66.9%
Pike Creek	W16	39.049	39.049	0.0%	0.833	0.833	0.0%	102	13.9	86.4%
White Clay Creek East Branch	W13	23.795	23.795	0.0%	1.174	1.174	0.0%	30.1	4.11	86.3%
Mill Creek	W17	84.315	84.315	0.0%	2.158	2.158	0.0%	241	35.2	85.4%
White Clay Creek East Branch	W14	25.388	25.388	0.0%	0.755	0.755	0.0%	38.2	4.2	89.0%
Christina River	C01							35.1	13.4	61.8%
Christina River	C02							81.6	26	68.1%
Christina River	C03							66.4	9.84	85.2%
Christina River	C04							86.9	7.09	91.8%
Christina River	***C05							221	42.3	80.9%
Christina River	C06							74.5	17.3	76.8%
Christina River	C07							71.6	11.4	84.1%
Christina River	C08							128	17.6	86.3%
Christina River	***C09							684	135	80.3%

Pennsylvania and Maryland Reductions for Comparison										
Location		Nitrogen			Phosphorus			enterococci Bacteria *		
State line monitoring sites		Baseline Load (Kg/day)	Other State's Allocation (Kg/day)	% Reduction	Baseline Load (Kg/day)	Other State's Allocation (Kg/day)	% Reduction	Baseline Load (in trillion [10 ¹²] cfu/year) **	TMDL	% Reduction
Brandywine Creek (at PA-DE Line)		6981	4002.7	42.7%	368.2	355.2	3.5%	3120	201	93.6%
White Clay Creek (at PA-DE Line)		1166.7	818.4	29.9%	111.1	111.1	0.0%	686	206	70.0%
Red Clay Creek (at PA-DE Line)		438.9	320.6	27.0%	57.6	34.4	40.3%	258	108	58.1%
Burroughs Run (at PA-DE Line)		34.2	34.2	0.0%	0.7	0.7	0.0%	18.5	13	29.7%
Christina River West Branch (at MD_DE Line)		68.7	26.2	61.9%	3.8	2	47.4%	18.6	7.73	58.4%

Pennsylvania Sediment Allocations Near PA-DE Line				
Location	Subbasin	Baseline Load (ton/yr)	PA TMDL	Percent Reduction
Red Clay Creek West Branch	R02	6203.38	3006.01	52.3%
Red Clay Creek East Branch	R03	7224.97	3966.51	45.1%
White Clay Creek East Branch	W09	2808.95	2072.42	26.1%
White Clay Creek Middle Branch	W03	3168.54	1921.1	39.4%

* Enterococci bacteria are used as an indicator for the presence of human sewage. They have a greater correlation with swimming associated gastrointestinal illness than fecal coliform bacteria and are less likely to die off in saltwater.

**cfu/year = colony forming units/year

*** CSO loads are included for the bacteria data at these sites