

Calibration and Verification
of Upper Potomac River Model
Volume III

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FINAL REPORT

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Volume III

Appendix L- Calibration PRM Input Data: October 1984
filename: PRM84068.INP

Appendix M- Calibration PRM Input Data: September 1986
filename: PRM85069.INP

Appendix N- Verification PRM Input Data: September 1985
filename: PRM86069.INP

Appendix O- Verification PRM Input Data: July 1987
filename: PRM87068.INP

Appendix L- Calibration PRM Input Data: October 1984
Wasp4 input file: PRM84068.INP

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Data Group A- Simulation Control data: October 1984

SegNo	GEOM84.WQ1	Upstr Riv Mi miles	Dwnstr Riv Mi miles	Seg Cntr Riv Mi miles	Segment Depth meters	Segment Sfc A (xy) sq meters	Segment Volume cu meters
SG001	Westvaco	340.0	338.7	339.35	0.584	76148.5	44470.7
SG002	Georges Ck	338.7	338.2	338.45	0.688	36917.6	25399.3
SG003	UPRC STP	338.2	336.3	337.25	0.652	123564.6	80564.1
SG004	Stony Run	336.3	332.7	334.50	0.729	222250.9	162020.9
SG005	Keyser	332.7	331.4	332.05	0.800	77919.0	62335.2
SG006	21st Br	331.4	328.5	329.95	1.240	193996.9	240556.1
SG007	Dawson	328.5	326.0	327.25	1.240	167238.6	207375.9
SG008	Black Oak	326.0	322.0	324.00	1.240	267581.9	331801.5
SG009	Rawlings	322.0	318.3	320.15	1.240	247513.2	306916.4
SG010	Pinto	318.3	314.1	316.20	1.150	277494.5	319118.7
SG011	Cresaptown	314.1	313.4	313.75	2.190	56380.7	123473.7
SG012	Celanese	313.4	309.6	311.50	1.080	231712.2	250249.2
SG013	Md.Junctn.	309.6	307.3	308.45	2.280	179544.6	409361.7
SG014	Wills Ck	307.3	305.2	306.25	0.898	182101.4	163527.1
SG015	Wiley Ford	305.2	304.0	304.60	1.500	75890.3	113835.4
SG016	Cumbrlnd STP	304.0	298.5	301.25	1.700	439639.4	747386.9
SG017	Mexico Field	298.5	294.1	296.30	1.360	292353.5	397600.8
SG018	Pattersn Ck	294.1	285.1	289.60	1.480	606768.8	898017.8
SG019	So. Branch	285.1	282.6	283.85	1.590	249489.3	396688.0
SG020	Town Ck	282.6	279.8	281.20	1.610	269698.3	434214.3
SG021	L Cacapon R	279.8	276.5	278.15	1.620	338298.8	548044.0
SG022	Paw Paw	276.5	255.2	265.85	1.250	2260242.4	2825303.0
SG023	15 Mile Ck	255.2	251.3	253.25	0.971	602285.8	584819.5
SG024	SidelingH.Ck	251.3	247.7	249.50	0.979	551413.0	539833.3
SG025	Cacapon R	247.7	238.6	243.15	0.986	1431933.1	1411886.0
SG026	Hancock	238.6	231.2	234.90	1.030	1107685.4	1140916.0
SG027	Licking Ck	231.2	227.1	229.15	1.050	602028.0	632129.4
SG028	Ft Frederick	227.1	217.4	222.25	2.070	3405958.9	7050335.0
SG029	Dam #5	217.4	210.8	214.10	1.310	1578049.6	2067245.0
SG030	Conocochg Ck	210.8	201.9	206.35	1.360	2294612.5	3120673.0
SG031	Opequon Ck	201.9	195.3	198.60	2.060	2728260.2	5620216.0
SG032	Dam #4	195.3	183.6	189.45	1.020	2936318.6	2995045.0
SG033	Sheperdstown	183.6	179.3	181.45	1.030	1068682.5	1100743.0
SG034	Antietam Ck	179.3	173.1	176.20	2.110	2693900.5	5684130.0
SG035	Pleasantv.Dam	173.1	171.5	172.30	0.632	745118.2	470914.7
SG036	Shenandoah R	171.5	165.8	168.65	0.757	2822126.8	2136350.0
SG037	Brunswick	165.8	163.4	164.60	1.010	1130469.3	1141774.0
SG038	CatoctinCkMD	163.4	159.5	161.45	1.020	1883296.1	1920962.0
SG039	Pt of Rocks	159.5	153.1	156.30	0.930	3144332.3	2924229.0
SG040	Monacacy R	153.1	147.1	150.10	0.956	3001863.0	2869781.0
SG041	Whites Ferry	147.1	142.2	144.65	1.100	2985943.6	3284538.0
SG042	Goose Ck	142.2	133.9	138.05	1.120	5141525.9	5758509.0
SG043	Seneca Ck	133.9	129.1	131.50	1.120	2917262.5	3267334.0
SG044	Watts Branch	129.1	126.3	127.70	3.110	1664772.0	5177441.0
SG045	Gr Falls Dam	126.3	118.4	122.35	1.730	3363791.9	5819360.0
SG046	Ruppert Isl.	118.4	117.4	117.90	3.100	531409.0	1647368.0
SG047	L. Falls Dam	117.4	115.9	116.65	1.510	596060.9	900051.9
SG048	Dummy Sed.Layer	340.0	115.9	227.95	0.010	57801845.0	578018.4

Data Group B- Exchange Coefficients: October 1984

GEOM84.WQ1	From Seg#	To Seg#	X-Area sq meters	Char L meters	Kx sq m/sec
SG000 Upstream BC	0	1	21.26	1046.07	45.0
SG001 Westvaco	1	2	21.26	1448.41	45.0
SG002 Georges Ck	2	3	26.35	1931.21	45.0
SG003 UPRC STP	3	4	26.35	4425.70	45.0
SG004 Stony Run	4	5	27.97	3942.89	45.0
SG005 Keyser	5	6	29.79	3379.62	45.0
SG006 21st Br	6	7	51.54	4345.23	30.0
SG007 Dawson	7	8	51.54	5230.37	30.0
SG008 Black Oak	8	9	51.54	6195.97	30.0
SG009 Rawlings	9	10	47.21	6356.91	30.0
SG010 Pinto	10	11	46.68	3942.89	45.0
SG011 Cresaptown	11	12	40.92	3621.02	30.0
SG012 Celanese	12	13	40.92	4908.50	30.0
SG013 Md.Junctn.	13	14	48.38	3540.56	45.0
SG014 Willis Ck	14	15	48.39	2655.42	45.0
SG015 Wiley Ford	15	16	58.94	5391.30	80.0
SG016 Cumbrlnd STP	16	17	56.15	7966.25	80.0
SG017 Mexico Field	17	18	56.15	10782.60	80.0
SG018 Pattersn Ck	18	19	62.00	9253.73	30.0
SG019 So. Branch	19	20	96.36	4264.76	30.0
SG020 Town Ck	20	21	96.36	4908.50	30.0
SG021 L Cacapon R	21	22	82.42	19794.93	80.0
SG022 Paw Paw	22	23	82.42	20277.73	80.0
SG023 15 Mile Ck	23	24	93.18	6035.04	60.0
SG024 SidelingH.Ck	24	25	93.18	10219.33	60.0
SG025 Cacapon R	25	26	95.80	13277.09	60.0
SG026 Hancock	26	27	95.80	9253.73	60.0
SG027 Licking Ck	27	28	95.80	11104.47	30.0
SG028 Ft Frederick	28	29	194.63	13116.15	100.0
SG029 Dam #5	29	30	190.88	12472.42	45.0
SG030 Conocochoy Ck	30	31	217.88	12472.42	45.0
SG031 Opequon Ck	31	32	159.06	14725.50	45.0
SG032 Dam #4	32	33	159.06	12874.75	80.0
SG033 Sheperdstown	33	34	159.06	8449.06	60.0
SG034 Antietam Ck	34	35	182.88	6276.44	60.0
SG035 Pleasntv.Dam	35	36	182.88	5874.11	45.0
SG036 Shenandoah R	36	37	232.89	6517.84	45.0
SG037 Brunswick	37	38	295.61	5069.43	45.0
SG038 CatoctinCkMD	38	39	283.91	8288.12	45.0
SG039 Pt of Rocks	39	40	283.91	9977.93	30.0
SG040 Monacacy R	40	41	297.20	8770.93	30.0
SG041 Whites Ferry	41	42	416.51	10621.67	80.0
SG042 Goose Ck	42	43	422.96	10541.20	30.0
SG043 Seneca Ck	43	44	422.96	6115.51	30.0
SG044 Watts Branch	44	45	457.72	8609.99	80.0
SG045 Gr Falls Dam	45	46	457.72	7161.58	30.0
SG046 Ruppert Isl.	46	47	372.84	2011.68	80.0
SG047 L. Falls Dam	47	0	372.84	1207.01	80.0
SG048 Dummy Sediment Layer					

Data Group C- Segment Volumes: October 1984

GEOM84.WQ1	Volume cu meters	Coeff "a" AMULT	Expon "b" VEXP	Coeff "c" DMULT	Expon "d" DXP
SG001 Westvaco	44470.7	0.1430	0.5570	0.3020	0.2690
SG002 Georges Ck	25399.3	0.1010	0.5570	0.3590	0.2690
SG003 UPRC STP	80564.1	0.1210	0.5570	0.3330	0.2690
SG004 Stony Run	162020.9	0.1140	0.5570	0.3720	0.2690
SG005 Keyser	62335.2	0.1070	0.5570	0.4070	0.2690
SG006 21st Br	240556.1	0.1410	0.2430	0.2610	0.6200
SG007 Dawson	207375.9	0.1410	0.2430	0.2610	0.6200
SG008 Black Oak	331801.5	0.1410	0.2430	0.2610	0.6200
SG009 Rawlings	306916.4	0.1410	0.2430	0.2610	0.6200
SG010 Pinto	319118.7	0.0852	0.4780	0.4220	0.4000
SG011 Cresaptown	123473.7	0.0367	0.4780	0.7990	0.4000
SG012 Celanese	250249.2	0.0983	0.4780	0.3930	0.4000
SG013 Md.Jnctn.	409361.7	0.0119	0.8970	2.0220	0.0480
SG014 Wills Ck	163527.1	0.1150	0.3840	0.2730	0.4500
SG015 Wiley Ford	113835.4	0.0944	0.3840	0.4550	0.4500
SG016 Cumbrind STP	747386.9	0.0659	0.3840	0.5000	0.4500
SG017 Mexico Field	397600.8	0.0991	0.3840	0.3940	0.4500
SG018 Pattersn Ck	898017.8	0.0991	0.3840	0.3940	0.4500
SG019 So. Branch	396688.0	0.0788	0.3840	0.3480	0.4620
SG020 Town Ck	434214.3	0.0788	0.3840	0.3480	0.4620
SG021 L Cacapon R	548044.0	0.0788	0.3840	0.3480	0.4620
SG022 Paw Paw	2825303.0	0.0719	0.4770	0.3330	0.3920
SG023 15 Mile Ck	584819.5	0.0636	0.4770	0.2590	0.3920
SG024 SidelingH.Ck	539833.3	0.0636	0.4770	0.2590	0.3920
SG025 Cacapon R	1411886.0	0.0636	0.4770	0.2590	0.3920
SG026 Hancock	1140916.0	0.0462	0.5710	0.3270	0.3220
SG027 Licking Ck	632129.4	0.0462	0.5710	0.3270	0.3220
SG028 Ft Frederick	7050335.0	0.0098	0.5710	0.6240	0.3220
SG029 Dam #5	2067245.0	0.0238	0.5710	0.3940	0.3220
SG030 Conocochg Ck	3120673.0	0.0238	0.5710	0.3940	0.3220
SG031 Opequon Ck	5620216.0	0.0098	0.5710	0.5860	0.3220
SG032 Dam #4	2995045.0	0.0326	0.5710	0.2880	0.3220
SG033 Sheperdstown	1100743.0	0.0326	0.5710	0.2880	0.3220
SG034 Antietam Ck	5684130.0	0.0174	0.4180	0.3210	0.4660
SG035 Pleasntv.Dam	470914.7	0.0542	0.4180	0.0960	0.4660
SG036 Shenandoah R	2136350.0	0.0542	0.4180	0.0960	0.4660
SG037 Brunswick	1141774.0	0.0427	0.4180	0.1280	0.4660
SG038 CatoctinCkMD	1920962.0	0.0427	0.4180	0.1280	0.4660
SG039 Pt of Rocks	2924229.0	0.0192	0.6160	0.2370	0.3070
SG040 Monacacy R	2869781.0	0.0192	0.6160	0.2370	0.3070
SG041 Whites Ferry	3284538.0	0.0137	0.6160	0.2730	0.3070
SG042 Goose Ck	5758509.0	0.0137	0.6160	0.2730	0.3070
SG043 Seneca Ck	3267334.0	0.0137	0.6160	0.2730	0.3070
SG044 Watts Branch	5177441.0	0.0049	0.6160	0.7650	0.3070
SG045 Gr Falls Dam	5819360.0	0.0123	0.6160	0.4280	0.3070
SG046 Ruppert Isl.	1647368.0	0.0055	0.6160	0.7650	0.3070
SG047 L. Falls Dam	900051.9	0.0151	0.6160	0.3730	0.3070
SG048 Dummy Sediment	578018.4	0.0151	0.6160	0.3730	0.3070

Data Group D- Flows and Transport: Oct 1984, Sept 1985, Sept 1986, July 1987

- A - Flow Balance Between Mainstem gages
- B - Boundary Flow Summary by Segment
- C - Inventory of all Flows

Upper Potomac River Model: Vol. 3 Appendices

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Data Group D, Part A

Flow Balance Between Mainstem Gages

Flow Balance Description	River Mile	Flow MGD Oct 84	Flow MGD Sep 85	Flow MGD Sep 86	Flow Gauge MGD Jul 87	Gauge Group#
A MAIN: No.Br.Potomac@BC	341.1	265.4000	224.2402	215.1253	186.8145	G00
Sum :DIVR/MUNI/INDU/TRBG		-19.7950	-17.4150	-17.9950	-20.7080	G00
Sum :TRBU Missing		-0.0000	0.0000	-0.0000	0.0000	G00
Sum :TRBU/River Mile		-0.0000	0.0000	-0.0000	0.0000	G00
No. :TRBU		1.0000	1.0000	1.0000	1.0000	G00
Unit:Flow/TRBU/Group		-0.0000	0.0000	-0.0000	0.0000	G00
A MAIN: No.Br.Potomac@Luk	340.8	245.6050	206.8252	197.1303	166.1065	G01
Sum :DIVR/MUNI/INDU/TRBG		69.5313	38.6829	37.2669	58.1968	G01
Sum :TRBU Missing		6.7355	3.9748	6.6835	2.5582	G01
Sum :TRBU/River Mile		0.1861	0.1098	0.1846	0.0707	G01
No. :TRBU		8.0000	8.0000	8.0000	8.0000	G01
Unit:Flow/TRBU/Group		0.8419	0.4969	0.8354	0.3198	G01
A MAIN: No.Br.Potomac@Cum	304.6	321.8718	249.4829	241.0807	226.8614	G02
Sum :DIVR/MUNI/INDU/TRBG		177.5579	101.6124	106.3160	153.2017	G02
Sum :TRBU Missing		138.4969	49.6285	35.8763	72.3670	G02
Sum :TRBU/River Mile		5.0180	1.7981	1.2999	2.6220	G02
No. :TRBU		11.0000	11.0000	11.0000	11.0000	G02
Unit:Flow/TRBU/Group		12.5906	4.5117	3.2615	6.5788	G02
A MAIN: Potomac River @Pa	277.0	637.9266	400.7239	383.2730	452.4302	G03
Sum :DIVR/MUNI/INDU/TRBG		0.0000	0.0000	0.0000	0.0000	G03
Sum :TRBU Missing		53.6453	4.5243	93.0714	133.1437	G03
Sum :TRBU/River Mile		1.3970	0.1178	2.4237	3.4673	G03
No. :TRBU		8.0000	8.0000	8.0000	8.0000	G03
Unit:Flow/TRBU/Group		6.7057	0.5655	11.6339	16.6430	G03
A MAIN: Potomac River @Ha	238.6	691.5719	405.2482	476.3444	585.5739	G04
Sum :DIVR/MUNI/INDU/TRBG		156.5662	92.2227	83.3484	183.7614	G04
Sum :TRBU Missing		289.4007	100.3833	64.0146	542.7123	G04
Sum :TRBU/River Mile		5.2618	1.8252	1.1639	9.8675	G04
No. :TRBU		14.0000	14.0000	14.0000	14.0000	G04
Unit:Flow/TRBU/Group		20.6715	7.1702	4.5725	38.7652	G04
A MAIN: Potomac River @Sh	183.6	1137.5388	597.8542	623.7073	1312.0476	G05
Sum :DIVR/MUNI/INDU/TRBG		704.5974	443.1113	353.8799	802.6761	G05
Sum :TRBU Missing		103.3136	38.4037	-1.6307	-78.7878	G05
Sum :TRBU/River Mile		4.2869	1.5935	-0.0677	-3.2692	G05
No. :TRBU		10.0000	10.0000	10.0000	10.0000	G05
Unit:Flow/TRBU/Group		10.3314	3.8404	-0.1631	-7.8788	G05
A MAIN: Potomac River @Pt	159.5	1945.4498	1079.3692	975.9566	2035.9359	G06
Sum :DIVR/MUNI/INDU/TRBG		-50.0521	-248.4940	-188.4386	-130.6730	G06
Sum :TRBU Missing		271.3546	258.1878	-57.4395	432.2746	G06
Sum :TRBU/River Mile		6.4455	6.1327	-1.3644	10.2678	G06
No. :TRBU		16.0000	16.0000	16.0000	16.0000	G06
Unit:Flow/TRBU/Group		16.9597	16.1367	-3.5900	27.0172	G06
A MAIN: Potomac River nr	117.4	2166.7523	1089.0630	730.0785	2337.5374	G07
Sum :DIVR/MUNI/INDU/TRBG		-98.5000	-80.7900	-127.7000	-43.0700	G07
Sum :TRBU Missing		0.0000	-0.0000	-0.0000	-0.0000	G07
Sum :TRBU/River Mile		0.0000	-0.0000	-0.0000	-0.0000	G07
No. :TRBU		1.0000	1.0000	1.0000	1.0000	G07
Unit:Flow/TRBU/Group		0.0000	-0.0000	-0.0000	-0.0000	G07
A MAIN: Potomac River BC	117.4	2068.2523	1008.2730	602.3785	2294.4674	G08
Sum :DIVR/MUNI/INDU/TRBG		0.0000	0.0000	0.0000	0.0000	G08
Sum :TRBU Missing		0.0000	0.0000	0.0000	0.0000	G08
Sum :TRBU/River Mile		0.0000	0.0000	0.0000	0.0000	G08
No. :TRBU		1.0000	1.0000	1.0000	1.0000	G08
Unit:Flow/TRBU/Group		0.0000	0.0000	0.0000	0.0000	G08

Data Group D, Part B
Boundary Flow Summary by Segment

Boundary Flow Summary #BC Seg# Description		Oct 1984		Oct 1984		Sep 1985		Sep 1985		Sep 1986		Sep 1986		Jul 1987		Jul 1987	
		Upstream	Oct 1984 Inflow	Oct 1984 Downstream	Upstream	Sep 1985 Inflow	Sep 1985 Downstream	Upstream	Sep 1985 Inflow	Sep 1985 Downstream	Upstream	Sep 1986 Inflow	Sep 1986 Downstream	Upstream	Jul 1987 Inflow	Jul 1987 Downstream	
1	0 Upstream BC	0.00	265.40	265.40	0.00	224.24	224.24	0.00	215.13	215.13	0.00	186.81	186.81	0.00	186.81	186.81	
2	4 1 Mustvaco	265.40	-19.80	245.61	224.24	-17.42	206.83	215.13	-18.00	197.13	186.81	-20.71	166.11	186.81	-20.71	166.11	
3	2 2 Georges Ck	245.61	10.34	255.95	206.83	3.88	210.70	197.13	3.23	200.36	166.11	8.40	174.51	200.36	8.40	174.51	
4	3 3 UPRC STP	255.95	21.49	277.44	210.70	18.42	229.13	200.36	19.68	220.04	174.51	21.36	195.87	220.04	21.36	195.87	
5	2 4 Stony Run	277.44	0.85	278.29	229.13	0.51	229.63	220.04	0.85	220.89	195.87	0.33	196.20	220.89	0.33	196.20	
6	3 5 Keyser	278.29	2.78	281.08	229.63	2.09	231.73	220.89	2.77	223.66	196.20	1.74	197.94	223.66	1.74	197.94	
7	2 8 Black Oak	281.08	0.87	281.94	231.73	0.52	232.25	223.66	0.86	224.52	197.94	0.35	198.28	224.52	0.35	198.28	
8	2 9 Rawlings	281.94	0.89	282.84	232.25	0.62	232.87	224.52	0.91	225.43	198.28	0.40	198.68	225.43	0.40	198.68	
9	3 12 Celanese	282.84	1.32	284.16	232.87	0.87	233.75	225.43	1.20	226.64	198.68	0.71	199.40	226.64	0.71	199.40	
10	4 14 Mills Ck	284.16	37.71	321.87	233.75	15.74	249.48	226.64	14.45	241.08	199.40	27.47	226.86	241.08	27.47	226.86	
11	2 16 Cumberlnd STP	321.87	20.30	342.17	249.48	11.43	260.92	241.08	11.29	252.37	226.86	13.58	240.44	252.37	13.58	240.44	
12	3 17 Mexico Field	342.17	12.67	354.84	260.92	4.53	265.44	252.37	3.34	255.71	240.44	6.66	247.10	255.71	6.66	247.10	
13	6 18 Patterson Ck	354.84	75.54	430.38	265.44	27.07	292.51	255.71	19.57	275.28	247.10	39.47	286.57	275.28	39.47	286.57	
14	3 19 So. Branch	430.38	184.82	615.20	292.51	99.51	392.02	275.28	100.89	376.17	286.57	152.12	438.69	376.17	152.12	438.69	
15	1 20 Town Ck	615.20	10.13	625.34	392.02	4.19	396.21	376.17	3.84	380.01	438.69	7.16	445.85	380.01	7.16	445.85	
16	1 21 L Cacapon R	625.34	12.59	637.93	396.21	4.51	400.72	380.01	3.26	383.27	445.85	6.58	452.43	383.27	6.58	452.43	
17	6 22 Paw Paw	637.93	26.82	664.75	400.72	2.26	402.99	383.27	46.54	429.81	452.43	66.57	519.00	429.81	66.57	519.00	
18	2 24 Sidelingl.Ck	664.75	13.41	678.16	402.99	1.13	404.12	429.81	23.27	453.08	519.00	33.29	552.29	453.08	33.29	552.29	
19	2 25 Cacapon R	678.16	13.41	691.57	404.12	1.13	405.25	453.08	23.27	476.34	552.29	33.29	585.57	476.34	33.29	585.57	
20	6 26 Hancock	691.57	124.03	815.60	405.25	43.02	448.27	476.34	27.44	503.78	585.57	232.59	818.17	503.78	232.59	818.17	
21	3 27 Licking Ck	815.60	41.36	856.96	448.27	14.36	462.63	503.78	9.20	512.97	818.17	77.58	895.75	512.97	77.58	895.75	
22	4 28 Ft Frederlck	856.96	82.69	939.64	462.63	28.68	491.31	512.97	18.29	531.26	895.75	155.06	1050.81	531.26	155.06	1050.81	
23	1 29 Dam #5	939.64	20.67	960.31	491.31	7.17	498.48	531.26	4.57	535.84	1050.81	38.77	1089.57	535.84	38.77	1089.57	
24	5 30 Conocochoq Ck	960.31	103.56	1063.87	498.48	62.48	560.95	535.84	53.57	589.40	1089.57	105.51	1195.08	589.40	105.51	1195.08	
25	2 31 Upaquon Ck	1063.87	73.67	1137.54	560.95	36.90	597.85	589.40	34.30	623.71	1195.08	116.97	1312.05	623.71	116.97	1312.05	
26	4 32 Dam #4	1137.54	20.60	1158.14	597.85	7.62	605.48	623.71	-0.39	623.32	1312.05	-15.82	1296.23	623.32	-15.82	1296.23	
27	6 33 Shepherdstown	1158.14	20.58	1178.72	605.48	7.88	613.36	623.32	-0.37	622.95	1296.23	-15.87	1280.36	622.95	-15.87	1280.36	
28	2 34 Antietam Ck	1178.72	122.79	1301.51	613.36	74.94	688.29	622.95	61.88	684.83	1280.36	100.70	1381.07	688.29	100.70	1381.07	
29	7 36 Shenandoah R	1301.51	614.86	1916.37	688.29	377.57	1065.87	684.83	290.82	975.65	1381.07	661.93	2043.00	975.65	661.93	2043.00	
30	4 37 Brunswick	1916.37	20.68	1937.05	1065.87	7.69	1073.55	975.65	-0.34	975.31	2043.00	-15.47	2027.53	975.31	-15.47	2027.53	
31	1 38 CatotincKMD	1937.05	8.40	1945.45	1073.55	5.82	1079.37	975.31	0.65	975.96	2027.53	8.40	2035.94	975.96	8.40	2035.94	
32	4 39 Pt of Rocks	1945.45	15.51	1960.96	1079.37	14.68	1094.05	975.96	-5.04	970.92	2035.94	25.59	2061.53	970.92	25.59	2061.53	
33	3 40 Monacacy R	1960.96	181.28	2142.24	1094.05	111.77	1205.82	970.92	67.15	1038.07	2061.53	286.07	2347.60	1038.07	286.07	2347.60	
34	7 42 Goose Ck	2142.24	120.34	2262.58	1205.82	80.03	1285.85	1038.07	-17.96	1285.50	2347.60	157.05	2504.65	1285.85	157.05	2504.65	
35	5 43 Seneca Ck	2262.58	-70.20	2192.38	1285.85	-129.04	1156.81	1020.11	-181.62	838.50	2504.65	-130.51	2374.14	838.50	-130.51	2374.14	
36	3 44 Halls Branch	2192.38	-127.76	2064.62	1156.81	-164.94	991.87	838.50	-87.25	751.25	2374.14	-199.08	2175.06	751.25	-199.08	2175.06	
37	7 45 Gr Falls Dam	2064.62	102.13	2166.75	991.87	97.19	1089.06	751.25	-21.17	1089.08	2175.06	162.48	2337.54	1089.06	162.48	2337.54	
38	1 47 L. Falls Dam	2166.75	-98.50	2068.25	1089.06	-80.79	1008.27	730.08	-127.70	602.38	2337.54	-43.07	2294.47	602.38	-43.07	2294.47	
39	1 48 Downstream BC	2068.25	0.00	2068.25	1008.27	1008.27	0.00	602.38	602.38	0.00	2294.47	2294.47	0.00	2294.47	2294.47	0.00	0.00

Data Group D, Part C
Inventory of all Flows

PRM Case # ---->

					Oct 84	Sep 85	Sep 86	Jul 87
0 A MAIN:	No.Br.Potomac@Luke MD	1598500	USGS Gauge	POTOMAC RIVER	245.6050	206.8252	197.1303	166.1065
16 A MAIN:	No.Br.Potomac@Cumberland MD	1603000	USGS Gauge	POTOMAC RIVER	321.8718	249.4829	241.0807	226.8614
22 A MAIN:	Potomac River @Paw Paw WV	1610000	USGS Gauge	POTOMAC RIVER	637.9266	400.7239	383.2730	452.4302
26 A MAIN:	Potomac River @Hancock MD	1613000	USGS Gauge	POTOMAC RIVER	691.5719	405.2482	476.3444	585.5739
32 A MAIN:	Potomac River @Shepherdstown WV	1618000	USGS Gauge	POTOMAC RIVER	1137.5388	597.8542	623.7073	1312.0476
39 A MAIN:	Potomac River @Pt Rocks MD	1638500	USGS Gauge	POTOMAC RIVER	1945.4498	1079.3692	975.9566	2035.9359
47 A MAIN:	Potomac River nr Wash DC	1646500	USGS Gauge	POTOMAC RIVER	2166.7523	1089.0630	730.0785	2337.5374
1 B TRBG:	N Br.Potomac BC		Computed BC	POTOMAC RIVER	265.4000	224.2402	215.1253	186.8145
2 B TRBG:	Savage River nr Bloom		USGS Gauge	SAVAGE RIVER	0.0000	0.0000	0.0000	0.0000
2 B TRBG:	Georges Ck @ Franklin	1597500	USGS Gauge	GEORGES CREEK	10.3413	3.8780	3.2316	8.4023
14 B TRBG:	Wills Ck nr Cumberland	1601500	USGS Gauge	WILLS CREEK	37.4871	15.5119	14.2192	26.4995
19 B TRBG:	S.Br.Potomac nr Spring	1608500	USGS Gauge	S. BR. POTOMAC RIVER	159.6432	90.4860	94.3640	138.9607
20 B TRBG:	Town Ck nr Oldtown MD	1609000	est O-Will Ck/3.7	TOWN CREEK	10.1316	4.1924	3.8430	7.1620
30 B TRBG:	Conococheague Ck @Fair	1614500	USGS Gauge	CONOCOCHEAQUE CREEK	106.6443	65.9255	57.5233	109.2296
31 B TRBG:	Opequon Ck @Martinsbur	1616500	USGS Gauge	OPEQUON CREEK, WV	52.9990	29.7311	29.7311	78.2058
34 B TRBG:	Antietam Ck nr Sharpsb	1619500	USGS Gauge	ANTTIETAM CREEK	112.4612	71.0962	62.0476	108.5832
36 B TRBG:	Shenandoah R @Millvill	1636500	USGS Gauge	SHENANDOAH RIVER	583.6350	365.8221	290.8480	685.1086
38 B TRBG:	Catoctin Ck MD	1637500	USGS Gauge	CATOCTIN CREEK, MD	8.4023	5.8170	0.6463	8.4023
38 B TRBG:	Catoctin Ck VA	1638480	USGS Gauge	CATOCTIN CREEK, VA	0.0000	0.0000	0.0000	0.0000
40 B TRBG:	Monacacy R @Jug Br nr	1643000	USGS Gauge	MONACACY RIVER	147.3630	79.4984	74.3278	232.0321
42 B TRBG:	Goose Ck nr Leesburg	1644000	USGS Gauge	GOOSE CREEK, VA	36.8407	0.6463	1.2927	23.2678
43 B TRBG:	Seneca Ck @Dawsonville	1645000	USGS Gauge	SENECA CREEK	29.7311	14.2192	9.6949	35.5481
47 B TRBG:	Potomac River BC		Computed BC	POTOMAC RIVER	2068.2523	1008.2730	602.3785	2294.4674
1 C DIVR:	Westvaco Corporatio		WATER SUPPLY INTK.	POTOMAC RIVER, NB	-23.7100	-21.3300	-22.2100	-24.9200
22 C DIVR:	City of Paw Paw		WATER SUPPLY INTK.	POTOMAC RIVER	-0.0600	-0.0600	-0.0600	-0.0600
30 C DIVR:	City of Hagerstown		WATER SUPPLY INTK.	POTOMAC RIVER	-5.2200	-5.7000	-6.2000	-6.2000
32 C DIVR:	City of Sharpsburg		WATER SUPPLY INTK.	POTOMAC RIVER	-0.1000	-0.1000	-0.1000	-0.1000
33 C DIVR:	City of Shephardsto		WATER SUPPLY INTK.	POTOMAC RIVER	-0.3500	-0.3500	-0.3500	-0.3500
33 C DIVR:	City of Harpers Fer		WATER SUPPLY INTK.	POTOMAC RIVER	-0.3500	-0.3500	-0.3500	-0.3500
36 C DIVR:	City of Lovettsvill		WATER SUPPLY INTK.	POTOMAC RIVER	0.0000	0.0000	0.0000	0.0000
37 C DIVR:	City of Brunswick		WATER SUPPLY INTK.	POTOMAC RIVER	-0.3000	-0.3000	-0.3000	-0.3000
39 C DIVR:	Point of Rocks		WATER SUPPLY INTK.	POTOMAC RIVER	-1.5000	-1.5000	-1.5000	-1.5000
42 C DIVR:	City of Leesburg		WATER SUPPLY INTK.	POTOMAC RIVER	-1.3000	-1.3000	-1.3000	-1.3000
43 C DIVR:	Fairfax Co FCMA		WATER SUPPLY INTK.	POTOMAC RIVER	-27.5000	-41.7000	-49.5000	-54.7000
43 C DIVR:	WSSC		WATER SUPPLY INTK.	POTOMAC RIVER	-106.3500	-133.8300	-134.6300	-165.3900
44 C DIVR:	WAG Great Falls		WATER SUPPLY INTK.	POTOMAC RIVER	-122.5700	-158.9500	-81.3300	-192.2700
44 C DIVR:	City of Rockville		WATER SUPPLY INTK.	POTOMAC RIVER	-5.1900	-5.9900	-5.9200	-6.8100
47 C DIVR:	WAG Little Falls		WATER SUPPLY INTK.	POTOMAC RIVER	-98.5000	-80.7900	-127.7000	-43.0700
1 D INDU:	WESTVACO CORP LUKE		NA	POTOMAC RIVER	3.9000	3.9000	4.2000	4.2000
3 D INDU:	UPPER POTOMAC RIVER		1990 Effl Data	POTOMAC RIVER, NB	19.8100	17.4300	18.0100	20.7200
8 D INDU:	JEFFERSON COUNTY BR		NA	POTOMAC RIVER, NB	0.0250	0.0250	0.0250	0.0250
14 D INDU:	HERCULES, INC.		NA	POTOMAC RIVER, NB	0.1000	0.1000	0.1000	0.1000
14 D INDU:	USDA-APPALACHIAN FR		NA	POTOMAC RIVER	0.0060	0.0060	0.0060	0.0060
17 D INDU:	PPG D INDUSTRIES INC		ACTIVATED SLUDGE	POTOMAC RIVER, NB	0.0010	0.0010	0.0010	0.0010
30 D INDU:	POTOMAC EDISON PAUL		NA	POTOMAC RIVER	1.2000	1.2000	1.2000	1.2000
45 D INDU:	FIRST AMERICAN LAND		NA	POTOMAC RIVER	0.3720	0.3720	0.3720	0.3720
1 E MUNI:	BLOOMINGTON WMTF		ACTIVATED SLUDGE	POTOMAC RIVER, NB	0.0150	0.0150	0.0150	0.0120
4 E MUNI:	TRI TOWN PLAZA		EXTENDED AERATION	POTOMAC RIVER, NB	0.0100	0.0100	0.0100	0.0100
5 E MUNI:	KEYSER, CITY OF		NA	POTOMAC RIVER, NB	1.1000	1.1000	1.1000	1.1000
9 E MUNI:	RAWLINGS, TOWN OF		LAGOON	POTOMAC RIVER, NB	0.0520	0.1250	0.0760	0.0800
12 E MUNI:	ALLEGANY COUNTY-BOW		RBC	POTOMAC RIVER, NB	0.2290	0.1650	0.1430	0.1680
12 E MUNI:	ALLEGANY COUNTY-CRE		RBC	POTOMAC RIVER, NB	0.2510	0.2120	0.2260	0.2260
14 E MUNI:	RIDGELEY, TOWN OF		NA	POTOMAC RIVER, NB	0.1200	0.1200	0.1200	0.8600
16 E MUNI:	CUMBERLAND CITY OF		ACTIVATED SLUDGE	POTOMAC RIVER, NB	7.7040	8.9200	8.0280	6.9980
17 E MUNI:	MEXICO FARMS		LAGOON	POTOMAC RIVER, NB	0.0780	0.0130	0.0800	0.0800
22 E MUNI:	PAW PAW, TOWN OF		LAGOON	POTOMAC RIVER	0.0600	0.0600	0.0600	0.0600
27 E MUNI:	FAIRVIEW BCH. SAN.		OXIDATION DITCH	POTOMAC RIVER	0.0120	0.0160	0.0500	0.0500
30 E MUNI:	HONEYWOOD		ACTIVATED SLUDGE	POTOMAC RIVER	0.0140	0.0500	0.0200	0.0200
32 E MUNI:	WSSC SUBDIV 1-HALFW		TRICKLING FILTER	POTOMAC RIVER	0.9170	1.0000	1.0240	1.2560
32 E MUNI:	RIVERBEND		OXIDATION DITCH	POTOMAC RIVER	0.0400	0.0400	0.0400	0.0400
33 E MUNI:	SHEPHERDSTOWN STP		ACTIVATED SLUDGE	POTOMAC RIVER	0.2160	0.5000	0.2550	0.1900
33 E MUNI:	SHEPHERDSTOWN WPCF		NA	POTOMAC RIVER	0.4000	0.4000	0.4000	0.4000
36 E MUNI:	HARPERS FERRY TOWN		SHENANDOAH RIVER	POTOMAC RIVER	0.1600	0.1600	0.1600	0.1600
36 E MUNI:	HARPERS FERRY-BOLIV		SHENANDOAH RIVER	POTOMAC RIVER	0.0730	0.3000	0.3000	0.3000
37 E MUNI:	BRUNSWICK SEWAGE TR		ACTIVATED SLUDGE	POTOMAC RIVER	0.3130	0.3060	0.2830	0.5920
39 E MUNI:	POINT OF ROCKS FRED		ACTIVATED SLUDGE	POTOMAC RIVER	0.0510	0.0400	0.0770	0.0770
44 E MUNI:	ROCKVILLE, FLOW-O		NA	POTOMAC RIVER, UT	0.0000	0.0000	0.0000	0.0000
1 TRBU:	Montgomery Run		Seg 01: Savage R	POTOMAC RIVER	-0.0000	0.0000	-0.0000	0.0000
3 TRBU:	Powder House Run		Seg 01: Savage R	POTOMAC RIVER	0.8419	0.4969	0.8354	0.3198
3 TRBU:	Slaughterhouse Run		Seg 01: Savage R	POTOMAC RIVER	0.8419	0.4969	0.8354	0.3198
4 TRBU:	Thunderbill Run		Seg 01: Savage R	POTOMAC RIVER	0.8419	0.4969	0.8354	0.3198
5 TRBU:	Limestone Run		Seg 01: Savage R	POTOMAC RIVER	0.8419	0.4969	0.8354	0.3198
5 TRBU:	New Creek		Seg 01: Savage R	POTOMAC RIVER	0.8419	0.4969	0.8354	0.3198
8 TRBU:	Ashcabin Run		Seg 01: Savage R	POTOMAC RIVER	0.8419	0.4969	0.8354	0.3198
9 TRBU:	Mill Run		Seg 01: Savage R	POTOMAC RIVER	0.8419	0.4969	0.8354	0.3198
12 TRBU:	Warrior Run		Seg 01: Savage R	POTOMAC RIVER	0.8419	0.4969	0.8354	0.3198
16 TRBU:	Evitts Creek		Seg 19: S BrPot	POTOMAC RIVER	12.5906	4.5117	3.2615	6.5788
17 TRBU:	Collier Run		Seg 19: S BrPot	POTOMAC RIVER	12.5906	4.5117	3.2615	6.5788
18 TRBU:	Brice Hollow Run		Seg 19: S BrPot	POTOMAC RIVER	12.5906	4.5117	3.2615	6.5788
18 TRBU:	Broad Hollow Run		Seg 19: S BrPot	POTOMAC RIVER	12.5906	4.5117	3.2615	6.5788
18 TRBU:	Green Spring Run		Seg 19: S BrPot	POTOMAC RIVER	12.5906	4.5117	3.2615	6.5788
18 TRBU:	Mill Run		Seg 19: S BrPot	POTOMAC RIVER	12.5906	4.5117	3.2615	6.5788
18 TRBU:	Round Bottom Hollow		Seg 19: S BrPot	POTOMAC RIVER	12.5906	4.5117	3.2615	6.5788
18 TRBU:	Spring Run		Seg 19: S BrPot	POTOMAC RIVER	12.5906	4.5117	3.2615	6.5788
19 TRBU:	Seven Spring Run		Seg 19: S BrPot	POTOMAC RIVER	12.5906	4.5117	3.2615	6.5788
19 TRBU:	Stony Run		Seg 19: S BrPot	POTOMAC RIVER	12.5906	4.5117	3.2615	6.5788
21 TRBU:	Purslane Run		Seg 20: Town Ck	POTOMAC RIVER	12.5906	4.5117	3.2615	6.5788
22 TRBU:	Big Run		Seg 20: Town Ck	POTOMAC RIVER	6.7057	0.5655	11.6339	16.6430
22 TRBU:	Dawson Run		Seg 20: Town Ck	POTOMAC RIVER	6.7057	0.5655	11.6339	16.6430
22 TRBU:	Little Steer Run		Seg 20: Town Ck	POTOMAC RIVER	6.7057	0.5655	11.6339	16.6430
22 TRBU:	Steer Run		Seg 20: Town Ck	POTOMAC RIVER	6.7057	0.5655	11.6339	16.6430
24 TRBU:	Rockwell Run		Seg 20: Town Ck	POTOMAC RIVER	6.7057	0.5655	11.6339	16.6430
24 TRBU:	Willlett Run		Seg 20: Town Ck	POTOMAC RIVER	6.7057	0.5655	11.6339	16.6430
25 TRBU:	Little Tonoloway Cr		Seg 20: Town Ck	POTOMAC RIVER	6.7057	0.5655	11.6339	16.6430
25 TRBU:	Sir Johns Run		Seg 20: Town Ck	POTOMAC RIVER	6.7057	0.5655	11.6339	16.6430
26 TRBU:	Ditch Run		Seg 20: Town Ck	POTOMAC RIVER	20.6715	7.1702	4.5725	38.7652
26 TRBU:	Dry Run		Seg 20: Town Ck	POTOMAC RIVER	20.6715	7.1702	4.5725	38.7652
26 TRBU:	Sleepy Creek		Seg 20: Town Ck	POTOMAC RIVER	20.6715	7.1702	4.5725	38.7652
26 TRBU:	Stoney Run		Seg 20: Town Ck	POTOMAC RIVER	20.6715	7.1702	4.5725	38.7652

Upper Potomac River Model: Vol. 3 Appendices

FINAL REPORT

Data Group D, Part C (Continued)
Inventory of all Flows

			PRM Case # ---->	Oct 84	Sep 85	Sep 86	Jul 87
26 F TRBU: Tonoloway Creek	TRBPSDUM.INF	TRBD20C.F84	Seg 20:Town Ck WQ POTOMAC RIVER	20.6715	7.1702	4.5725	38.7652
26 F TRBU: Warm Spring Run	TRBPSDUM.INF	TRBD20C.F84	Seg 20:Town Ck WQ POTOMAC RIVER	20.6715	7.1702	4.5725	38.7652
27 F TRBU: Big Run	TRBPSDUM.INF	TRBD19B.F84	Seg 19:S BrPot WQ POTOMAC RIVER	20.6715	7.1702	4.5725	38.7652
27 F TRBU: Cherry Run	TRBPSDUM.INF	TRBD19B.F84	Seg 19:S BrPot WQ POTOMAC RIVER	20.6715	7.1702	4.5725	38.7652
28 F TRBU: Back Creek	TRBPSDUM.INF	TRBD19B.F84	Seg 19:S BrPot WQ POTOMAC RIVER	20.6715	7.1702	4.5725	38.7652
28 F TRBU: Green Spring Run	TRBPSDUM.INF	TRBD19B.F84	Seg 19:S BrPot WQ POTOMAC RIVER	20.6715	7.1702	4.5725	38.7652
28 F TRBU: Harlan Run	TRBPSDUM.INF	TRBD19B.F84	Seg 19:S BrPot WQ POTOMAC RIVER	20.6715	7.1702	4.5725	38.7652
28 F TRBU: Jordan Run	TRBPSDUM.INF	TRBD19B.F84	Seg 19:S BrPot WQ POTOMAC RIVER	20.6715	7.1702	4.5725	38.7652
29 F TRBU: Little Conococheagu	TRBPSDUM.INF	TRBD30A.F84	Seg 30:Conococheagu POTOMAC RIVER	20.6715	7.1702	4.5725	38.7652
31 F TRBU: Downey Branch	TRBPSDUM.INF	TRBD31A.F84	Seg 31:Opequon Ck POTOMAC RIVER	20.6715	7.1702	4.5725	38.7652
32 F TRBU: Marsh Run	TRBPSDUM.INF	TRBD31B.F84	Seg 31:Opequon Ck POTOMAC RIVER	10.3314	3.8404	-0.1631	-7.8788
32 F TRBU: Rockymarsh Run	TRBPSDUM.INF	TRBD31B.F84	Seg 31:Opequon Ck POTOMAC RIVER	10.3314	3.8404	-0.1631	-7.8788
33 F TRBU: Rattlesnake Run	TRBPSDUM.INF	TRBD31B.F84	Seg 31:Opequon Ck POTOMAC RIVER	10.3314	3.8404	-0.1631	-7.8788
33 F TRBU: Town Run	TRBPSDUM.INF	TRBD31B.F84	Seg 31:Opequon Ck POTOMAC RIVER	10.3314	3.8404	-0.1631	-7.8788
34 F TRBU: Elk Branch	TRBPSDUM.INF	TRBD34A.F84	Seg 34:Antietam Ck POTOMAC RIVER	10.3314	3.8404	-0.1631	-7.8788
36 F TRBU: Dutchman Creek	TRBPSDUM.INF	TRBD34A.F84	Seg 34:Antietam Ck POTOMAC RIVER	10.3314	3.8404	-0.1631	-7.8788
36 F TRBU: Isreal Creek	TRBPSDUM.INF	TRBD34A.F84	Seg 34:Antietam Ck POTOMAC RIVER	10.3314	3.8404	-0.1631	-7.8788
36 F TRBU: Piney Run	TRBPSDUM.INF	TRBD34A.F84	Seg 34:Antietam Ck POTOMAC RIVER	10.3314	3.8404	-0.1631	-7.8788
37 F TRBU: Little Catoctin Cre	TRBPSDUM.INF	TRBD34A.F84	Seg 34:Antietam Ck POTOMAC RIVER	10.3314	3.8404	-0.1631	-7.8788
37 F TRBU: Quarter Branch	TRBPSDUM.INF	TRBD34A.F84	Seg 34:Antietam Ck POTOMAC RIVER	10.3314	3.8404	-0.1631	-7.8788
39 F TRBU: Tuscarora Creek	TRBPSDUM.INF	TRBD40A.F84	Seg 40:Monocacy WQ POTOMAC RIVER	16.9597	16.1367	-3.5900	27.0172
40 F TRBU: Limestone Branch	TRBPSDUM.INF	TRBD40A.F84	Seg 40:Monocacy WQ POTOMAC RIVER	16.9597	16.1367	-3.5900	27.0172
40 F TRBU: Little Monocacy	TRBPSDUM.INF	TRBD40A.F84	Seg 40:Monocacy WQ POTOMAC RIVER	16.9597	16.1367	-3.5900	27.0172
42 F TRBU: Broad Run	TRBPSDUM.INF	TRBD42A.F84	Seg 42:GooseCk WQ POTOMAC RIVER	16.9597	16.1367	-3.5900	27.0172
42 F TRBU: Cabin Branch	TRBPSDUM.INF	TRBD42A.F84	Seg 42:GooseCk WQ POTOMAC RIVER	16.9597	16.1367	-3.5900	27.0172
42 F TRBU: Chriell Branch	TRBPSDUM.INF	TRBD42A.F84	Seg 42:GooseCk WQ POTOMAC RIVER	16.9597	16.1367	-3.5900	27.0172
42 F TRBU: Horsepen Branch	TRBPSDUM.INF	TRBD42A.F84	Seg 42:GooseCk WQ POTOMAC RIVER	16.9597	16.1367	-3.5900	27.0172
42 F TRBU: Sugarland Run	TRBPSDUM.INF	TRBD42A.F84	Seg 42:GooseCk WQ POTOMAC RIVER	16.9597	16.1367	-3.5900	27.0172
43 F TRBU: Muddy Branch	TRBPSDUM.INF	TRBD43A.F84	Seg 43:SenecaCk WQ POTOMAC RIVER	16.9597	16.1367	-3.5900	27.0172
43 F TRBU: Nichols Run	TRBPSDUM.INF	TRBD43A.F84	Seg 43:SenecaCk WQ POTOMAC RIVER	16.9597	16.1367	-3.5900	27.0172
45 F TRBU: Bullneck Run	TRBPSDUM.INF	TRBD45A.F84	Seg 45:Cabin John POTOMAC RIVER	16.9597	16.1367	-3.5900	27.0172
45 F TRBU: Dean Run	TRBPSDUM.INF	TRBD45A.F84	Seg 45:Cabin John POTOMAC RIVER	16.9597	16.1367	-3.5900	27.0172
45 F TRBU: Difficult Run	TRBPSDUM.INF	TRBD45A.F84	Seg 45:Cabin John POTOMAC RIVER	16.9597	16.1367	-3.5900	27.0172
45 F TRBU: Rock Run	TRBPSDUM.INF	TRBD45A.F84	Seg 45:Cabin John POTOMAC RIVER	16.9597	16.1367	-3.5900	27.0172
45 F TRBU: Scott Run	TRBPSDUM.INF	TRBD45A.F84	Seg 45:Cabin John POTOMAC RIVER	16.9597	16.1367	-3.5900	27.0172
45 F TRBU: Turkey Run	TRBPSDUM.INF	TRBD45A.F84	Seg 45:Cabin John POTOMAC RIVER	16.9597	16.1367	-3.5900	27.0172
-99 X_ENDF: *endfile*	PRM84FLO.WQ1	PRM84FLO.WQ1	XX0000000 ENDF: *endfile* ENDF: *endfile*	-9999.0000	-9999.0000	-9999.0000	-9999.0000

Data Group E- Boundary Conditions: October 1984

- A - Individual Boundary Condition Flows and Concentrations
- B - Individual Boundary Condition Flows and Mass Load
- C - Sum of Boundary Condition Flows and Mass Loads by Segment
- D - Weighted Sum Boundary Condition Concentrations by Segment

FINAL REPORT

[illegible]

Upper Potomac River Model: Vol. 3 Appendices

FINAL REPORT

Data Group E, Part A (continued): Individual BC Flows & Conc. by Wasp4 BC Input No. Avg. over time:

10/01/1984 0000 JD= 275.00																
JWK	NSEG	Seg#	BC	Input	-----Flow	NH3 N	NO3+NO2 N	O PO4	PHYT#1	CBOD 5	DISS O2	ORG N	ORG P	Total N	Total P	
					----- (mgd)	mg N/L	mg N/L	mg P/L	ug Chl/L	mg 800/L	mg O2/L	mg N/L	mg P/L	mg N/L	mg P/L	
98	128	28	F	TRBU: Green Spring Run	20.671	0.0200	0.1300	0.0100	2.0000	1.4000	11.5000	0.3400	0.0400	0.4900	0.0500	
99	128	28	F	TRBU: Harlan Run	20.671	0.0200	0.1300	0.0100	2.0000	1.4000	11.5000	0.3400	0.0400	0.4900	0.0500	
100	128	28	F	TRBU: Jordan Run	20.671	0.0200	0.1300	0.0100	2.0000	1.4000	11.5000	0.3400	0.0400	0.4900	0.0500	
101	128	29	F	TRBU: Little Conocochea	20.671	0.0200	4.8000	0.2400	2.0000	1.2000	9.6000	0.6300	0.0400	5.4500	0.2800	
102	128	31	F	TRBU: Downey Branch	20.671	0.0700	0.2700	0.1880	2.0000	1.2000	9.4000	0.2700	0.0310	0.6100	0.2190	
103	128	32	F	TRBU: Marsh Run	10.331	0.0700	0.2700	0.1880	2.0000	1.2000	9.4000	0.2700	0.0310	0.6100	0.2190	
104	128	32	F	TRBU: Rockymarsh Run	10.331	0.0700	0.2700	0.1880	2.0000	1.2000	9.4000	0.2700	0.0310	0.6100	0.2190	
105	128	33	F	TRBU: Rattlesnake Run	10.331	0.0700	0.2700	0.1880	2.0000	1.2000	9.4000	0.2700	0.0310	0.6100	0.2190	
106	128	33	F	TRBU: Town Run	10.331	0.0700	0.2700	0.1880	2.0000	1.2000	9.4000	0.2700	0.0310	0.6100	0.2190	
107	128	34	F	TRBU: Elk Branch	10.331	0.0400	4.5000	0.3100	2.0000	1.4000	9.2000	0.5100	0.0600	5.0500	0.3700	
108	128	36	F	TRBU: Dutchman Creek	10.331	0.0400	4.5000	0.3100	2.0000	1.4000	9.2000	0.5100	0.0600	5.0500	0.3700	
109	128	36	F	TRBU: Isreal Creek	10.331	0.0400	4.5000	0.3100	2.0000	1.4000	9.2000	0.5100	0.0600	5.0500	0.3700	
110	128	36	F	TRBU: Piney Run	10.331	0.0400	4.5000	0.3100	2.0000	1.4000	9.2000	0.5100	0.0600	5.0500	0.3700	
111	128	37	F	TRBU: Little Catoclin C	10.331	0.0400	4.5000	0.3100	2.0000	1.4000	9.2000	0.5100	0.0600	5.0500	0.3700	
112	128	37	F	TRBU: Quarter Branch	10.331	0.0400	4.5000	0.3100	2.0000	1.4000	9.2000	0.5100	0.0600	5.0500	0.3700	
113	128	39	F	TRBU: Tuscarora Creek	16.960	0.1400	2.8000	0.1600	2.7300	6.5000	8.2000	0.7600	0.0800	3.7000	0.2400	
114	128	40	F	TRBU: Limestone Branch	16.960	0.1400	2.8000	0.1600	2.7300	6.5000	8.2000	0.7600	0.0800	3.7000	0.2400	
115	128	40	F	TRBU: Little Monocacy	16.960	0.1400	2.8000	0.1600	2.7300	6.5000	8.2000	0.7600	0.0800	3.7000	0.2400	
116	128	42	F	TRBU: Broad Run	16.960	0.2500	0.5550	0.0900	4.5000	2.0000	9.5000	0.4000	0.0100	1.2050	0.1000	
117	128	42	F	TRBU: Cabin Branch	16.960	0.2500	0.5550	0.0900	4.5000	2.0000	9.5000	0.4000	0.0100	1.2050	0.1000	
118	128	42	F	TRBU: Chriel Branch	16.960	0.2500	0.5550	0.0900	4.5000	2.0000	9.5000	0.4000	0.0100	1.2050	0.1000	
119	128	42	F	TRBU: Horsepen Branch	16.960	0.2500	0.5550	0.0900	4.5000	2.0000	9.5000	0.4000	0.0100	1.2050	0.1000	
120	128	42	F	TRBU: Sugarland Run	16.960	0.2500	0.5550	0.0900	4.5000	2.0000	9.5000	0.4000	0.0100	1.2050	0.1000	
121	128	43	F	TRBU: Muddy Branch	16.960	0.0400	2.1000	0.1800	4.5000	4.2000	9.5000	0.6600	0.0700	2.8000	0.2500	
122	128	43	F	TRBU: Nichols Run	16.960	0.0400	2.1000	0.1800	4.5000	4.2000	9.5000	0.6600	0.0700	2.8000	0.2500	
123	128	45	F	TRBU: Bullneck Run	16.960	0.0300	0.1900	0.0800	2.8900	4.2000	10.1000	0.7200	0.0220	0.9400	0.1020	
124	128	45	F	TRBU: Dean Run	16.960	0.0300	0.1900	0.0800	2.8900	4.2000	10.1000	0.7200	0.0220	0.9400	0.1020	
125	128	45	F	TRBU: Difficult Run	16.960	0.0300	0.1900	0.0800	2.8900	4.2000	10.1000	0.7200	0.0220	0.9400	0.1020	
126	128	45	F	TRBU: Rock Run	16.960	0.0300	0.1900	0.0800	2.8900	4.2000	10.1000	0.7200	0.0220	0.9400	0.1020	
127	128	45	F	TRBU: Scott Run	16.960	0.0300	0.1900	0.0800	2.8900	4.2000	10.1000	0.7200	0.0220	0.9400	0.1020	
128	128	45	F	TRBU: Turkey Run	16.960	0.0300	0.1900	0.0800	2.8900	4.2000	10.1000	0.7200	0.0220	0.9400	0.1020	

FINAL REPORT

10/01/1984 0000 JD= 275.00
JWK NSEG Seq# BC Input

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Upper Potomac River Model: Vol. 3 Appendices

FINAL REPORT

Data Group E, Part B (Continued): Individual BC Flows & Mass Load by Wasp4 BC Input No.
Avg. over time

10/01/1984 0000 JD= 275.00				-----Flow		NH3 N	NO3+NO2 N	O PO4	PHYT#1	CBOD 5	DISS O2	ORG N	ORG P	Total N	Total P
JWK	NSEG	Seg#	BC Input	----- (mgd)		kg N/d	kg N/d	kg P/d	kg Chl/d	kg BOD/d	kg O2/d	kg N/d	kg P/d	kg N/d	kg P/d
98	128	28	F TRBU: Green Spring Run	20.671	1.56	10.17	0.78	0.16	109.55	899.87	26.60	3.13	38.34	3.91	
99	128	28	F TRBU: Harlan Run	20.671	1.56	10.17	0.78	0.16	109.55	899.87	26.60	3.13	38.34	3.91	
100	128	28	F TRBU: Jordan Run	20.671	1.56	10.17	0.78	0.16	109.55	899.87	26.60	3.13	38.34	3.91	
101	128	29	F TRBU: Little Conocochea	20.671	1.56	375.60	18.78	0.16	93.90	751.20	49.30	3.13	426.46	21.91	
102	128	31	F TRBU: Downey Branch	20.671	5.48	21.13	14.71	0.16	93.90	735.55	21.13	2.43	47.73	17.14	
103	128	32	F TRBU: Marsh Run	10.331	2.74	10.56	7.35	0.08	46.93	367.62	10.56	1.21	23.86	8.56	
104	128	32	F TRBU: Rockymarsh Run	10.331	2.74	10.56	7.35	0.08	46.93	367.62	10.56	1.21	23.86	8.56	
105	128	33	F TRBU: Rattlesnake Run	10.331	2.74	10.56	7.35	0.08	46.93	367.62	10.56	1.21	23.86	8.56	
106	128	33	F TRBU: Town Run	10.331	2.74	10.56	7.35	0.08	46.93	367.62	10.56	1.21	23.86	8.56	
107	128	34	F TRBU: Elk Branch	10.331	1.56	175.99	12.12	0.08	54.75	359.80	19.95	2.35	197.50	14.47	
108	128	36	F TRBU: Dutchman Creek	10.331	1.56	175.99	12.12	0.08	54.75	359.80	19.95	2.35	197.50	14.47	
109	128	36	F TRBU: Isreal Creek	10.331	1.56	175.99	12.12	0.08	54.75	359.80	19.95	2.35	197.50	14.47	
110	128	36	F TRBU: Piney Run	10.331	1.56	175.99	12.12	0.08	54.75	359.80	19.95	2.35	197.50	14.47	
111	128	37	F TRBU: Little Catocotin C	10.331	1.56	175.99	12.12	0.08	54.75	359.80	19.95	2.35	197.50	14.47	
112	128	37	F TRBU: Quarter Branch	10.331	1.56	175.99	12.12	0.08	54.75	359.80	19.95	2.35	197.50	14.47	
113	128	39	F TRBU: Tuscarora Creek	16.960	8.99	179.76	10.27	0.18	417.30	526.43	48.79	5.14	237.54	15.41	
114	128	40	F TRBU: Limestone Branch	16.960	8.99	179.76	10.27	0.18	417.30	526.43	48.79	5.14	237.54	15.41	
115	128	40	F TRBU: Little Monocacy	16.960	8.99	179.76	10.27	0.18	417.30	526.43	48.79	5.14	237.54	15.41	
116	128	42	F TRBU: Broad Run	16.960	16.05	35.63	5.78	0.29	128.40	609.89	25.68	0.64	77.36	6.42	
117	128	42	F TRBU: Cabin Branch	16.960	16.05	35.63	5.78	0.29	128.40	609.89	25.68	0.64	77.36	6.42	
118	128	42	F TRBU: Chriest Branch	16.960	16.05	35.63	5.78	0.29	128.40	609.89	25.68	0.64	77.36	6.42	
119	128	42	F TRBU: Horsepen Branch	16.960	16.05	35.63	5.78	0.29	128.40	609.89	25.68	0.64	77.36	6.42	
120	128	42	F TRBU: Sugarland Run	16.960	16.05	35.63	5.78	0.29	128.40	609.89	25.68	0.64	77.36	6.42	
121	128	43	F TRBU: Muddy Branch	16.960	2.57	134.82	11.56	0.29	269.64	609.89	42.37	4.49	179.76	16.05	
122	128	43	F TRBU: Nichols Run	16.960	2.57	134.82	11.56	0.29	269.64	609.89	42.37	4.49	179.76	16.05	
123	128	45	F TRBU: Bullneck Run	16.960	1.93	12.20	5.14	0.19	269.64	648.41	46.22	1.41	60.35	6.55	
124	128	45	F TRBU: Dean Run	16.960	1.93	12.20	5.14	0.19	269.64	648.41	46.22	1.41	60.35	6.55	
125	128	45	F TRBU: Difficult Run	16.960	1.93	12.20	5.14	0.19	269.64	648.41	46.22	1.41	60.35	6.55	
126	128	45	F TRBU: Rock Run	16.960	1.93	12.20	5.14	0.19	269.64	648.41	46.22	1.41	60.35	6.55	
127	128	45	F TRBU: Scott Run	16.960	1.93	12.20	5.14	0.19	269.64	648.41	46.22	1.41	60.35	6.55	
128	128	45	F TRBU: Turkey Run	16.960	1.93	12.20	5.14	0.19	269.64	648.41	46.22	1.41	60.35	6.55	

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10/01/1984 0000 JD= 275.00

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FINAL REPORT

Data Group E, Part D: Weighted Sum BC Conc by Wasp4 Segment No. Avg. over time increment:

10/01/1984 0000 JD= 275.00		JSM NOPS Wasp Segment		-----Flow	NH3 N	NO3+NO2 N	O P04	PHYT#1	CBOD 5	DISS O2	ORG N	ORG P	Total N	Total P
---	#BC	Seg#	Descriptn	---- (mgd)	mg N/L	mg N/L	mg P/L	ug Chl/L	mg BOD/L	mg O2/L	mg N/L	mg P/L	mg N/L	mg P/L
1	5	1	Westvaco	245.605	0.1063	0.5480	0.0187	2.0453	1.1588	9.8451	0.2795	0.0704	0.9337	0.0890
2	2	2	Georges Ck	10.341	0.0750	0.8600	0.0100	2.0000	1.4000	10.6000	0.4000	0.0500	1.3350	0.0600
3	3	3	UPRC STP	21.494	0.0937	0.2521	0.4616	0.1567	24.6729	8.9136	1.3201	0.0953	1.6659	0.5569
4	2	4	Stony Run	0.852	0.1254	0.6966	0.0803	1.9765	2.0235	10.2001	0.4072	0.0513	1.2292	0.1316
5	3	5	Keyser	2.784	3.5684	2.8705	2.3769	1.2097	12.0762	8.6694	1.2967	0.4193	7.7356	2.7962
6	2	8	Black Oak	0.867	0.2790	0.7935	0.1827	1.9423	2.8075	10.1346	0.4469	0.0677	1.5194	0.2504
7	2	9	Rawlings	0.894	0.5424	0.9598	0.3585	1.8837	2.9773	10.1657	0.5150	0.0958	2.0172	0.4543
8	3	12	Celanese	1.322	3.2808	2.6889	2.1851	1.2738	18.7154	8.9140	1.2224	0.3886	7.1920	2.5736
9	4	14	Willis Ck	37.713	0.0788	0.2067	0.0459	1.9880	1.5714	11.7628	0.4635	0.0458	0.7490	0.0916
10	2	16	Cumbrind STP	20.295	3.4289	2.4722	2.2839	1.2408	3.4499	9.0325	1.2359	0.4044	7.1369	2.6883
11	3	17	Mexico Field	12.670	0.0760	0.1685	0.0474	1.9875	1.4501	11.4602	0.3547	0.0460	0.5992	0.0933
12	6	18	Patterson Ck	75.544	0.0200	0.1300	0.0100	2.0000	1.4000	11.5000	0.3400	0.0400	0.4900	0.0500
13	3	19	So. Branch	184.824	0.0200	0.1300	0.0100	2.0000	1.4000	11.5000	0.3400	0.0400	0.4900	0.0500
14	1	20	Town Ck	10.132	0.0200	0.1800	0.0060	2.0000	1.4000	11.3000	0.4800	0.0240	0.6800	0.0300
15	1	21	L Cacapon R	12.591	0.0200	0.1800	0.0060	2.0000	1.4000	11.3000	0.4800	0.0240	0.6800	0.0300
16	6	22	Paw Paw	26.823	0.0400	0.1929	0.0193	1.9973	1.4582	11.2884	0.4850	0.0261	0.7180	0.0454
17	2	24	SidelingH.Ck	13.411	0.0200	0.1800	0.0060	2.0000	1.4000	11.3000	0.4800	0.0240	0.6800	0.0300
18	2	25	Cacapon R	13.411	0.0200	0.1800	0.0060	2.0000	1.4000	11.3000	0.4800	0.0240	0.6800	0.0300
19	6	26	Hancock	124.029	0.0200	0.1800	0.0060	2.0000	1.4000	11.3000	0.4800	0.0240	0.6800	0.0300
20	3	27	Licking Ck	41.355	0.0226	0.1318	0.0117	1.9994	1.4007	11.4981	0.3407	0.0403	0.4951	0.0520
21	4	28	Ft Frederick	82.686	0.0200	0.1300	0.0100	2.0000	1.4000	11.5000	0.3400	0.0400	0.4900	0.0500
22	1	29	Dam #5	20.671	0.0200	4.8000	0.2400	2.0000	1.2000	9.6000	0.6300	0.0400	5.4500	0.2800
23	5	30	Conocochoy Ck	103.555	0.1021	4.9165	0.2995	1.9992	1.3859	9.5947	0.6469	0.0481	5.6655	0.3475
24	2	31	Opequon Ck	73.671	0.0700	0.2700	0.1880	2.0000	1.2000	9.4000	0.2700	0.0310	0.6100	0.2190
25	4	32	Dam #4	20.603	0.0874	0.2743	0.1998	2.0000	1.2423	9.3958	0.2734	0.0328	0.6351	0.2326
26	6	33	Shepherdstown	20.579	0.3376	0.3985	0.3656	1.9673	1.8325	9.3452	0.3336	0.0594	1.0697	0.4250
27	2	34	Antietam Ck	122.793	0.0400	4.5000	0.3100	2.0000	1.4000	9.2000	0.5100	0.0600	5.0500	0.3700
28	7	36	Shenandoah R	614.859	0.0908	0.5994	0.0255	1.9993	1.4063	9.2938	0.4349	0.0043	1.1251	0.0298
29	4	37	Brunswick	20.676	0.1754	4.5664	0.3995	1.9813	1.4834	9.2132	0.5427	0.0744	5.2845	0.4739
30	1	38	CatoctinCkMD	8.402	0.0200	0.8000	0.1200	2.0000	1.2000	9.5000	0.1800	0.0500	1.0000	0.1700
31	4	39	Pt of Rocks	15.511	0.1798	2.9179	0.1850	2.8690	6.7643	8.0226	0.7823	0.0859	3.8800	0.2709
32	3	40	Monacacy R	181.282	0.1400	2.8000	0.1600	2.7300	6.5000	8.2000	0.7600	0.0800	3.7000	0.2400
33	7	42	Goose Ck	120.339	0.2517	0.5351	0.0891	4.5162	1.9838	9.5162	0.3977	0.0092	1.1845	0.0984
34	5	43	Seneca Ck	-70.199	0.1353	2.6720	0.1609	1.6399	2.8653	6.6399	0.5647	0.0891	3.3720	0.2500
35	3	44	Watts Branch	-127.760	0.0900	2.4000	0.1700	3.0000	3.5000	8.0000	0.6100	0.0800	3.1000	0.2500
36	7	45	Gr Falls Dam	102.130	0.0627	0.2123	0.1016	2.8795	4.2211	10.0860	0.7272	0.0256	1.0021	0.1271
37	2	47	L. Falls Dam	1969.752	0.0295	1.2568	0.0602	16.3700	0.9400	9.5050	0.5038	0.0288	1.7900	0.0890
37	128	37	Total:All BC Seg:Flow & K	4136.505	1216.08	17388.96	1293.52	139.93	24288.04	153667.50	7508.99	508.68	26114.04	1802.20

Data Group F- Point Sources

DUMMY DATA OF ZERO LOADS USED FOR SEGMENT #1
All Point Source Loads Accounted for as Boundary Conditions

Data Group G- Spatial Forcing Functions: October 1984

<u>Label</u>	<u>Units</u>	<u>Description</u>
Seg#		PRM Segment No.
Temp(C)	Deg C	Water temperature
FNH4	mgN/sq m-d	Sed NH4 flux
FPO4	mgP/sq m-d	Sed PO4 flux
SOD1D	gO2/sq m-d	Sed Oxy Demand
FNO3	mgN/sq m-d	Sed NO3 flux
SOD(U,T)	gO2/sq m-d	SOD(vel,temp)
SODMax	gO2/sq m-d	SOD Max
BNit(U,T)	mgN/sq m-d	Benth nitrific (U,T)
BNit(20)	mgN/sq m-d	Benth nitrific (T=20)
BNO3 (T)	mgN/sq m-d	Benth NO3 loss (T)
BNO3 (20)	mgN/sq m-d	Benth NO3 loss (T=20)
BProdMax	gC/sq m-d	Benth Algae Production Max
BProd(U,T)	gC/sq m-d	Benth Algae Production (U,T)
B_NH4_U	mgN/sq m-d	Benth Algae NH4 uptake
B_NO3_U	mgN/sq m-d	Benth Algae NO3 uptake
B_PO4_U	mgP/sq m-d	Benth Algae PO4 uptake
B_OXY_U	gO2/sq m-d	Benth Algae Net Oxygen Prod
P/R ratio		Benth Algae Production/Resp
NPS_NO3	mgN/sq m-d	Non Point Input: NO3
NPS_PO4	mgP/sq m-d	Non Point Input: PO4

Upper Potomac River Model: Vol. 3 Appendices

FINAL REPORT

Data Group G (Continued)

Case84290	Seg	Temp(C)	Wasp4 Data G Input	FNH4	FP04	S0010	>> S00 Functions	<Ben Nitrification	<Ben Nitrate Loss>	Benthic Periphyton Gross	Production/N,P,O2	Uptake	P/R>	<NPS NO3 and P04>	NPS_NO3	NPS_P04
							FNO3 S00(U,T) S00Max	BNit(U,T)BNit(20)	BN03 (T) BN03 (20)	BProdMax BProd(U,T B_NH4 U	B_NO3_U B_P04_U	B_OXY U	P/R			
1	13.0	-108.11	1.32	4.58	-18.58	3.43	6.00	-13.71	-25.00	-22.80	-30.00	1.50	0.87	-165.43	-51.15	-21.66
2	16.0	-116.37	-0.66	4.01	-19.62	2.03	6.00	-14.32	-25.00	-25.64	-30.00	1.50	0.89	-171.37	-49.96	-22.13
3	16.0	-139.82	-2.59	5.27	-30.85	2.80	6.00	-18.25	-25.00	-25.64	-30.00	1.50	1.13	-216.88	-65.12	-28.20
4	16.0	-129.27	-2.16	4.95	-33.04	2.60	6.00	-17.27	-25.00	-25.64	-30.00	1.50	1.07	-200.48	-66.33	-26.68
5	17.0	-116.89	-1.96	4.98	-44.03	2.40	6.00	-17.77	-25.00	-26.67	-30.00	1.50	1.09	-195.71	-76.79	-27.25
6	17.0	-14.65	10.75	1.08	5.57	1.26	6.00	-7.33	-25.00	-26.67	-30.00	1.00	0.30	-58.16	-16.76	-7.49
7	17.0	-14.02	10.75	1.08	4.94	1.26	6.00	-7.33	-25.00	-26.67	-30.00	1.00	0.30	-57.53	-17.39	-7.49
8	16.0	-16.84	10.30	1.01	6.06	1.26	6.00	-6.78	-25.00	-25.64	-30.00	1.00	0.28	-53.14	-16.74	-6.99
9	16.0	-16.05	10.30	1.01	5.27	1.26	6.00	-6.78	-25.00	-25.64	-30.00	1.00	0.28	-52.35	-17.54	-6.99
10	15.0	-23.50	9.45	0.92	4.51	1.40	6.00	-1.40	-25.00	-24.66	-30.00	1.00	0.31	-56.57	-19.87	-7.64
11	15.0	6.47	12.00	0.45	14.42	0.64	6.00	-1.40	-25.00	-24.66	-30.00	1.00	0.06	-10.53	-3.99	-1.45
12	15.0	-33.47	8.43	1.11	-1.26	1.70	6.00	-9.71	-25.00	-24.66	-30.00	1.00	0.40	-72.84	-27.98	-10.08
13	15.0	9.11	12.34	0.45	15.22	0.64	6.00	-1.07	-25.00	-24.66	-30.00	1.00	0.04	-8.22	-2.86	-1.11
14	14.8	-29.06	8.87	1.00	2.25	1.55	6.00	-8.39	-25.00	-24.47	-30.00	1.00	0.35	-63.84	-23.34	-8.72
15	16.0	-14.17	10.30	0.89	3.39	1.26	6.00	-6.78	-25.00	-25.64	-30.00	1.00	0.28	-50.47	-19.41	-6.99
16	16.0	-18.31	8.93	0.89	1.01	0.91	6.00	-3.12	-25.00	-25.64	-30.00	2.00	0.26	-46.25	-18.14	-6.44
17	12.5	-92.82	2.38	1.24	10.38	1.40	6.00	-6.08	-25.00	-22.35	-30.00	2.00	0.51	-113.47	-15.01	-12.85
18	15.0	-118.19	0.10	1.64	3.04	1.55	6.00	-8.52	-25.00	-24.66	-30.00	2.00	0.71	-154.30	-22.49	-17.68
19	15.0	-13.40	10.57	0.82	-19.00	1.40	6.00	0.00	0.00	-49.32	-60.00	1.00	0.26	-53.83	-11.36	-6.52
20	10.5	-24.01	8.53	0.60	-12.37	1.40	6.00	0.00	0.00	-41.34	-60.00	1.00	0.22	-43.20	-12.70	-5.59
21	14.0	-20.27	9.14	0.74	-22.52	1.40	6.00	0.00	0.00	-47.42	-60.00	1.00	0.29	-54.53	-16.77	-7.13
22	16.0	-28.17	8.38	1.08	-39.55	1.86	6.00	0.00	0.00	-51.29	-60.00	1.00	0.49	-91.64	-29.92	-12.16
23	16.0	-11.76	9.34	0.91	-39.96	1.55	6.00	0.00	0.00	-51.29	-60.00	1.00	0.38	-64.42	-30.34	-9.48
24	16.0	-19.34	8.00	0.87	-45.70	1.55	6.00	0.00	0.00	-51.29	-60.00	1.00	0.43	-71.99	-36.08	-10.81
25	16.0	-17.26	8.00	0.87	-47.78	1.55	6.00	0.00	0.00	-51.29	-60.00	1.00	0.43	-69.92	-38.16	-10.81
26	16.0	-9.57	8.38	1.08	-58.15	1.86	6.00	0.00	0.00	-51.29	-60.00	1.00	0.49	-73.04	-48.52	-12.16
27	15.0	-17.61	6.71	1.70	-62.06	1.86	6.00	0.00	0.00	-49.32	-60.00	1.00	0.50	-71.40	-54.41	-12.58
28	15.0	22.51	14.04	0.71	-11.47	0.94	10.00	0.00	0.00	-49.32	-60.00	1.00	0.03	-4.52	-3.82	-0.83
29	14.0	23.20	14.05	1.26	-22.06	1.70	10.00	0.00	0.00	-47.42	-60.00	1.00	0.14	-18.40	-16.31	-3.47
30	12.8	16.78	44.55	1.17	106.83	1.70	10.00	0.00	0.00	-45.24	-60.00	1.00	0.13	-17.34	-14.60	-3.19
31	12.5	13.63	44.18	0.60	141.54	0.94	10.00	0.00	0.00	-22.35	-30.00	1.00	0.03	-4.24	-2.77	-0.70
32	15.0	21.97	45.10	2.12	106.01	2.58	10.00	0.00	0.00	-24.66	-30.00	1.00	0.35	-52.39	-36.00	-8.84
33	17.0	41.36	47.46	1.82	100.61	2.58	10.00	0.00	0.00	-26.67	-30.00	1.00	0.41	-62.19	-39.38	-10.16
34	13.7	16.84	128.00	0.61	419.22	0.94	10.00	0.00	0.00	-78.11	-100.00	1.00	0.03	-4.95	-2.67	-0.76
35	14.0	12.03	127.62	1.38	394.74	2.33	10.00	0.00	0.00	-79.03	-100.00	1.00	0.29	-45.08	-26.23	-7.13
36	14.0	2.28	126.26	1.62	382.22	2.83	10.00	0.00	0.00	-82.19	-100.00	1.00	0.42	-67.04	-38.74	-10.58
37	15.0	16.12	128.52	1.34	397.35	2.11	10.00	0.00	0.00	-81.55	-100.00	1.00	0.26	-44.73	-20.46	-6.52
38	14.8	14.47	128.35	1.32	398.55	2.11	10.00	0.00	0.00	-81.55	-100.00	1.00	0.26	-44.39	-19.90	-6.43
39	15.4	17.92	128.86	1.51	391.99	2.33	10.00	0.00	0.00	-83.49	-100.00	1.00	0.31	-54.07	-24.52	-7.86
40	14.1	-22.04	165.12	5.77	390.21	2.58	10.00	0.00	0.00	-238.03	-300.00	1.50	0.50	-86.12	-38.43	-12.45
41	17.2	23.93	170.77	4.14	373.23	1.90	10.00	0.00	0.00	-258.80	-300.00	1.50	0.32	-54.87	-24.64	-7.95
42	13.0	-1.62	167.68	3.12	420.26	1.90	10.00	0.00	0.00	-227.98	-300.00	1.50	0.24	-40.94	-18.44	-5.94
43	14.9	6.25	43.81	3.55	-426.59	1.90	10.00	0.00	0.00	-573.10	-700.00	1.50	0.27	-47.60	-20.16	-6.78
44	14.0	14.92	5.87	1.02	-544.41	0.94	10.00	0.00	0.00	-553.22	-700.00	1.50	0.05	-7.99	-3.69	-1.17
45	12.5	-11.49	1.94	2.14	-525.06	1.02	6.00	0.00	0.00	-521.61	-700.00	1.50	0.19	-30.97	-15.95	-4.69
46	12.0	3.50	3.92	0.35	-502.77	0.56	6.00	0.00	0.00	-511.48	-700.00	1.50	0.04	-6.37	-3.79	-1.02
47	13.9	-19.95	0.20	0.87	-567.41	1.14	6.00	0.00	0.00	-551.05	-700.00	1.50	0.30	-47.34	-28.86	-7.62
48	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
49	-99.0	-99.00	-99.00	-99.00	-99.00	-99.00	0.00	-99.00	-99.00	-99.00	-99.00	-99.00	-99.00	-99.00	-99.00	-99.00

Data Group H- Chemical and Kinetic Constants

NO.	CONST	Units	PRM Value	Sys#	Description	Data Source
011	K12C	1/day	0.5000	1	Nitrification rate @20C	Bowie et al. (1985); EPA Draft WLA Book II (1990)
012	K12T	no units	1.0850	1	Nitrification temperature coeff.	Bowie et al. (1985); EPA WLA Book II (1990)
013	KNIT	mg O2/l	2.0000	1	Half saturation: nitrif. O2 limit	Ambrose et al. 1988; Stenstrom & Poduska 1980
014	ATM_NH3	mgN/sq m-day	0.9490	1	Atmospheric deposition of NH3	HydroQual (1987) Ches Bay Model
021	K20C	1/day	0.0450	2	Denitrification rate @ 20C	Ambrose et al. 1988; Thomann and Mueller 1987
022	K20T	no units	1.0450	2	Denitrification temperature coeff.	Ambrose et al. 1988 pp 80
023	KN03	mg O2/l	0.1000	2	Half saturation: Denitrif. O2 limit	Ambrose et al. 1988 pp 80
024	ATM_NO3	mgN/sq m-day	2.3590	2	Atmospheric deposition of NO3	HydroQual (1987) Ches Bay Model
031	ATM_PO4	mgP/sq m-day	0.0530	3	Atmospheric deposition of O_PO4_P	HydroQual (1987) Ches Bay Model
041	K1C	1/day	2.5000	4	Phyt#1 max growth rate @20C	Canale & Vogel 1974; Eppley 1972; Thomann & Mueller 1987
042	K1T	no units	1.0680	4	Phyt#1 growth temperature coeff.	Ambrose et al. 1988; Eppley 1972; Thomann & Mueller 1987
043	LGHTS	1-Smith; 2-DiToro	2.0000	4	Phyt#1 light formulation switch	Ambrose et al. 1988; Thomann & Fitzpatrick 1982
044	PHIMX	mgC/mole photon	720.0000	4	Phyt#1 max quantum yield constant	Ambrose et al. 1988; used only when LGHTS = 1
045	XKC	(sq m/mg chl)	0.0170	4	Phyt#1 self shading extinction	Ambrose et al. 1988; Parsons & Takahashi 1973 pp 87
046	CCHL1	ug C/ug Chl-a	70.0000	4	Phyt#1 Carbon/chlorophyll ratio	Thomann and Mueller 1987; Bowie et al 1985
047	ISI	1/day	350.0000	4	Phyt#1 optimal light saturation	Ryther 1956; Thomann & Mueller 1987; Bowie et al 1985
048	KMG1	mg/l	0.0280	4	Phyt#1: Half Sat. Constant for N	Thomann & Mueller 1987 pp 427; Bowie et al (1985)
049	KMPG1	mg/l	0.0020	4	Phyt#1: Half-Sat. Constant for P	Thomann & Mueller 1987; Bowie et al 1985
050	K1RC	1/day	0.1750	4	Phyt#1 endogenous respiration @20C	Thomann & Mueller 1987; Bowie et al 1985
051	K1RT	unitless	1.0800	4	Phyt#1: respiration temp. coeff.	Di Toro et al. 1977; Thomann & Mueller 1987
052	K1D	1/day	0.0200	4	Phyt#1 death rate: non-zoo predation	Ambrose et al. 1988; Kremer & Nixon 1978
053	K1G	1/mg C-day	1.0000	4	Phyt#1 zooplankton grazing rate	Di Toro et al. 1977; Thomann & Mueller 1987
054	NUTLIM	0-min; 1-mult	0.0000	4	Nutrient limitation option 0-1	Ambrose et al 1988; Lehman et al 1975
055	KPZDC	1/day	0.0200	4	Phyt#1 decay rate in sediments @20C	Ambrose et al. 1988; Thomann & Fitzpatrick 1982
056	KPZDT	unitless	1.0800	4	Phyt#1 temp coeff sediment decay	Ambrose et al. 1988; Thomann & Fitzpatrick 1982
057	PCRB	mg P/mg C	0.0250	3	Phyt#1 Carbon/phosphorous ratio	Bowie et al. 1985; O'Connor et al 1973
058	NCRB1	mg N/mg C	0.2500	1	Phyt#1 Carbon/nitrogen ratio	Bowie et al (1985); O'Connor et al. (1973)
059	KMPHYT	mg C/l	1.0000	7	Phyt#1 Half-Sat for recycle of N,P	Ambrose et al. 1988; Thomann & Fitzpatrick 1982
071	KDC	1/day	0.0870	5	CBOD decay rate @20C; U/5=2.84	Leo et al. (1984); Thomann & Mueller (1987)
072	KDT	no units	1.0470	5	CBOD oxidation temperature coeff	Bowie et al (1985)
073	KDSC	1/day	0.0004	5	CBOD decay rate in sediments @20C	Ambrose et al. 1988 pp 93
074	KDST	no units	1.0800	5	CBOD sediment decay temp. coeff.	Ambrose et al. 1988 pp 93
075	KBOD	mg O2/l	0.5000	5	CBOD Half-sat. for O2 limitation	Ambrose et al. 1988 pp. 87
081	QCRB	mg O2/mg C	2.6700	6	Oxygen/carbon stoichiometric ratio	Ambrose et al. 1988 C + O2 = CO2 (2.67 * 2*16/12)
082	K2	1/day	0.0000	6	atmospheric reaeration rate	Ambrose et al. 1988; Thomann & Mueller 1987
091	K71C	1/day	0.0050	7	mineralization rate of DON @20C	Ambrose et al. 1988; Thomann & Fitzpatrick 1982
092	K71T	no units	1.0800	7	DON mineralization temp. coeff	Ambrose et al. 1988; Thomann & Fitzpatrick 1982
093	KONDC	1/day	0.0004	7	Org N decay rate in sediments @20C	Ambrose et al. 1988
094	KONDT	no units	1.0800	7	Org N sediment decay temp. coeff	Ambrose et al. 1988
095	FON	fraction	0.5000	7	fract. phyt. death recycled to OrgN	Ambrose et al. 1988; Thomann & Fitzpatrick 1982
096	ATM_ON	mgN/sq m-day	2.8010	1	Atmospheric deposition of Org N	HydroQual (1987) Ches Bay Model
096a	NPS_ON	mgN/sq m-day	40.0000	1	Non Point Load of Org N: 1984, 1987	PRM calibration
096b	NPS_ON	mgN/sq m-day	20.0000	1	Non Point Load of Org N: 1985, 1986	PRM calibration
100	K83C	1/day	0.2000	8	mineralization rate of DOP @20C	Ambrose et al. 1988 pp. 75
101	K83T	no units	1.0450	8	Org P mineralization temp. coeff	Ambrose et al. 1988 pp. 75
102	KOPDC	1/day	0.0000	8	Org P decay rate in sediments	Ambrose et al. 1988; Thomann & Fitzpatrick 1982
103	KOPDT	no units	1.0800	8	Org P sediment decay temp. coeff	Ambrose et al. 1988; Thomann & Fitzpatrick 1982
104	FOP	fraction	0.5000	8	fract. phyt. death recycled to OrgP	Ambrose et al. 1988; Thomann & Fitzpatrick 1982
105	ATM_ON	mgP/sq m-day	0.2470	1	Atmospheric deposition of Org N	HydroQual (1987) Ches Bay Model
105a	NPS_ON	mgP/sq m-day	4.0000	1	Non Point Load of Org P: 1984, 1987	PRM calibration
105b	NPS_ON	mgP/sq m-day	2.0000	1	Non Point Load of Org P: 1985, 1986	PRM calibration

Data Group I- Time Varying Forcing Functions: 1984-87

Wasp4 Time Function	Units	Oct-84	Sep-85	Sep-86	Jul-87	
TEM#1 FT#01-Temp #1	multiplier	1.00	1.00	1.00	1.00	PRM_TEMP.INI
TEM#2 FT#02-Temp #2	multiplier	1.00	1.00	1.00	1.00	PRM_TEMP.INI
TEM#3 FT#03-Temp #3	multiplier	1.00	1.00	1.00	1.00	PRM_TEMP.INI
TEM#4 FT#04-Temp #4	multiplier	1.00	1.00	1.00	1.00	PRM_TEMP.INI
SOLAR FT#05-Solar Radiation	Ly/day	223.00	394.00	335.00	527.00	PRM_SOLR.INI
PHOTO FT#06-Photoperiod	F 24h	0.25	0.33	0.25	0.39	PRM_SOLR.INI
WIND FT#07-Wind Velocity	Meter/sec	3.91	3.69	3.69	3.69	PRM_SOLR.INI
KE#01 FT#08-Ke #1	multiplier	1.00	1.00	1.00	1.00	PRM_EXTI.INI
KE#02 FT#09-Ke #2	multiplier	1.00	1.00	1.00	1.00	PRM_EXTI.INI
KE#03 FT#10-Ke #3	multiplier	1.00	1.00	1.00	1.00	PRM_EXTI.INI
KE#04 FT#11-Ke #4	multiplier	1.00	1.00	1.00	1.00	PRM_EXTI.INI
KE#05 FT#12-Ke #5	multiplier	1.00	1.00	1.00	1.00	PRM_EXTI.INI
TFNH4 FT#13-NH4 flux	multiplier	1.00	1.00	1.00	1.00	PRM_FSED.INI
TFP04 FT#14-P04 flux	multiplier	1.00	1.00	1.00	1.00	PRM_FSED.INI
VEL#1 FT#15-VELN(1)	multiplier	1.00	1.00	1.00	1.00	PRM_VELN.INI
VEL#2 FT#16-VELN(2)	multiplier	1.00	1.00	1.00	1.00	PRM_VELN.INI
VEL#3 FT#17-VELN(3)	multiplier	1.00	1.00	1.00	1.00	PRM_VELN.INI
VEL#4 FT#18-VELN(4)	multiplier	1.00	1.00	1.00	1.00	PRM_VELN.INI
ZOOPL FT#19-Zoopl Biomass	multiplier	1.00	1.00	1.00	1.00	PRM_FSED.INI
SALFN FT#20-SALFN	multiplier	1.00	1.00	1.00	1.00	PRM_FSED.INI
AIRT FT#21-Air Temperature	Deg C	18.50	22.30	21.70	28.30	PRM_TEMP.INI
TFSOD FT#22-SOD flux	multiplier	1.00	1.00	1.00	1.00	PRM_FSED.INI
TFN03 FT#23-N03 flux	multiplier	1.00	1.00	1.00	1.00	PRM_FSED.INI

Data Group J- Initial Conditions: October 1984

NH3-N	mg/l	Sys#01	CX84_NH3.IC	3	1.	999.	IC(xyz): J 06/04/91
SG001	0.095	1.000SG002	0.085	1.000SG003	0.078	1.000	
SG004	0.061	1.000SG005	0.050	1.000SG006	0.056	1.000	
SG007	0.062	1.000SG008	0.070	1.000SG009	0.079	1.000	
SG010	0.085	1.000SG011	0.087	1.000SG012	0.089	1.000	
SG013	0.091	1.000SG014	0.093	1.000SG015	0.094	1.000	
SG016	0.096	1.000SG017	0.100	1.000SG018	0.080	1.000	
SG019	0.068	1.000SG020	0.060	1.000SG021	0.045	1.000	
SG022	0.038	1.000SG023	0.030	1.000SG024	0.027	1.000	
SG025	0.023	1.000SG026	0.020	1.000SG027	0.027	1.000	
SG028	0.032	1.000SG029	0.038	1.000SG030	0.043	1.000	
SG031	0.049	1.000SG032	0.055	1.000SG033	0.060	1.000	
SG034	0.051	1.000SG035	0.047	1.000SG036	0.042	1.000	
SG037	0.037	1.000SG038	0.033	1.000SG039	0.030	1.000	
SG040	0.075	1.000SG041	0.090	1.000SG042	0.075	1.000	
SG043	0.064	1.000SG044	0.058	1.000SG045	0.049	1.000	
SG046	0.042	1.000SG047	0.039	1.000SG048	0.000	1.000	
N03+N02-N	mg/l	Sys#02	CX84_N03.IC	5	1.	999.	IC(xyz): J 06/04/91
SG001	0.555	1.000SG002	0.536	1.000SG003	0.521	1.000	
SG004	0.487	1.000SG005	0.465	1.000SG006	0.475	1.000	
SG007	0.484	1.000SG008	0.496	1.000SG009	0.510	1.000	
SG010	0.520	1.000SG011	0.541	1.000SG012	0.554	1.000	
SG013	0.573	1.000SG014	0.586	1.000SG015	0.595	1.000	
SG016	0.615	1.000SG017	0.650	1.000SG018	0.645	1.000	
SG019	0.602	1.000SG020	0.570	1.000SG021	0.515	1.000	
SG022	0.514	1.000SG023	0.512	1.000SG024	0.511	1.000	
SG025	0.511	1.000SG026	0.510	1.000SG027	0.729	1.000	
SG028	0.889	1.000SG029	1.078	1.000SG030	1.258	1.000	
SG031	1.438	1.000SG032	1.650	1.000SG033	1.800	1.000	
SG034	1.772	1.000SG035	1.755	1.000SG036	1.740	1.000	
SG037	1.723	1.000SG038	1.710	1.000SG039	1.700	1.000	
SG040	2.225	1.000SG041	2.400	1.000SG042	2.055	1.000	
SG043	1.805	1.000SG044	1.660	1.000SG045	1.456	1.000	
SG046	1.287	1.000SG047	1.219	1.000SG048	0.000	1.000	
O-P04	mg/l	Sys#03	CX84_P04.IC	5	1.	999.	IC(xyz): J 06/04/91
SG001	0.010	0.700SG002	0.012	0.700SG003	0.014	0.700	
SG004	0.018	0.700SG005	0.020	0.700SG006	0.020	0.700	
SG007	0.020	0.700SG008	0.020	0.700SG009	0.020	0.700	
SG010	0.020	0.700SG011	0.021	0.700SG012	0.021	0.700	
SG013	0.022	0.700SG014	0.023	0.700SG015	0.023	0.700	
SG016	0.024	0.700SG017	0.025	0.700SG018	0.027	0.700	
SG019	0.029	0.700SG020	0.029	0.700SG021	0.030	0.700	
SG022	0.033	0.700SG023	0.036	0.700SG024	0.037	0.700	
SG025	0.039	0.700SG026	0.040	0.700SG027	0.047	0.700	
SG028	0.052	0.700SG029	0.058	0.700SG030	0.063	0.700	
SG031	0.069	0.700SG032	0.075	0.700SG033	0.080	0.700	
SG034	0.086	0.700SG035	0.089	0.700SG036	0.092	0.700	
SG037	0.095	0.700SG038	0.098	0.700SG039	0.100	0.700	
SG040	0.153	0.700SG041	0.170	0.700SG042	0.137	0.700	
SG043	0.113	0.700SG044	0.099	0.700SG045	0.080	0.700	
SG046	0.064	0.700SG047	0.057	0.700SG048	0.000	0.700	
Phyt#1	ug chl/l	Sys#04	CX84_CHL.IC	4	1.	999.	IC(xyz): J 06/04/91
SG001	2.000	0.000SG002	1.993	0.000SG003	1.988	0.000	
SG004	1.976	0.000SG005	1.965	0.000SG006	1.956	0.000	
SG007	1.944	0.000SG008	1.929	0.000SG009	1.912	0.000	
SG010	1.895	0.000SG011	1.884	0.000SG012	1.874	0.000	
SG013	1.860	0.000SG014	1.851	0.000SG015	1.843	0.000	
SG016	1.829	0.000SG017	1.807	0.000SG018	1.777	0.000	
SG019	1.752	0.000SG020	1.740	0.000SG021	1.726	0.000	
SG022	1.672	0.000SG023	1.616	0.000SG024	1.600	0.000	

Data Group J (Continued) - Initial Conditions: October 1984

SG025	1.572	0.000SG026	1.535	0.000SG027	1.510	0.000
SG028	1.479	0.000SG029	1.443	0.000SG030	1.409	0.000
SG031	1.375	0.000SG032	1.334	0.000SG033	1.299	0.000
SG034	1.276	0.000SG035	1.258	0.000SG036	1.242	0.000
SG037	1.224	0.000SG038	1.210	0.000SG039	1.200	0.000
SG040	2.543	0.000SG041	2.990	0.000SG042	7.120	0.000
SG043	10.109	0.000SG044	11.843	0.000SG045	14.285	0.000
SG046	16.315	0.000SG047	17.000	0.000SG048	0.000	0.000
CBOD-U	mg/l	Sys#05 CX84_BOD.IC	3	1.	999. IC(xyz): J 06/04/91	
SG001	11.340	0.800SG002	11.334	0.800SG003	11.329	0.800
SG004	11.318	0.800SG005	11.309	0.800SG006	11.301	0.800
SG007	11.290	0.800SG008	11.277	0.800SG009	11.262	0.800
SG010	11.247	0.800SG011	11.237	0.800SG012	11.228	0.800
SG013	11.216	0.800SG014	11.208	0.800SG015	11.201	0.800
SG016	11.188	0.800SG017	11.169	0.800SG018	11.143	0.800
SG019	11.120	0.800SG020	11.110	0.800SG021	11.098	0.800
SG022	11.049	0.800SG023	11.000	0.800SG024	10.985	0.800
SG025	10.961	0.800SG026	10.928	0.800SG027	10.906	0.800
SG028	10.879	0.800SG029	10.847	0.800SG030	10.816	0.800
SG031	10.786	0.800SG032	10.750	0.800SG033	10.719	0.800
SG034	10.698	0.800SG035	10.683	0.800SG036	10.669	0.800
SG037	10.653	0.800SG038	10.640	0.800SG039	10.631	0.800
SG040	10.100	0.800SG041	9.923	0.800SG042	8.840	0.800
SG043	8.057	0.800SG044	7.603	0.800SG045	6.963	0.800
SG046	6.431	0.800SG047	6.237	0.800SG048	0.000	0.800
Diss O2	mg/l	Sys#06 CX84_OXY.IC	5	1.	999. IC(xyz): J 06/04/91	
SG001	9.700	1.000SG002	9.551	1.000SG003	9.436	1.000
SG004	9.173	1.000SG005	9.000	1.000SG006	9.000	1.000
SG007	9.000	1.000SG008	9.000	1.000SG009	9.000	1.000
SG010	9.000	1.000SG011	9.113	1.000SG012	9.185	1.000
SG013	9.283	1.000SG014	9.353	1.000SG015	9.406	1.000
SG016	9.513	1.000SG017	9.700	1.000SG018	9.300	1.000
SG019	9.596	1.000SG020	9.817	1.000SG021	10.200	1.000
SG022	10.030	1.000SG023	9.831	1.000SG024	9.772	1.000
SG025	9.672	1.000SG026	9.600	1.000SG027	9.413	1.000
SG028	9.277	1.000SG029	9.115	1.000SG030	8.962	1.000
SG031	8.809	1.000SG032	8.628	1.000SG033	8.500	1.000
SG034	8.913	1.000SG035	9.149	1.000SG036	9.371	1.000
SG037	9.616	1.000SG038	9.807	1.000SG039	9.950	1.000
SG040	8.488	1.000SG041	8.000	1.000SG042	8.416	1.000
SG043	8.717	1.000SG044	8.892	1.000SG045	9.137	1.000
SG046	9.342	1.000SG047	9.420	1.000SG048	0.000	1.000
Org-N	mg/l	Sys#07 CX84_TON.IC	3	1.	999. IC(xyz): J 06/04/91	
SG001	0.280	0.800SG002	0.353	0.800SG003	0.410	0.800
SG004	0.540	0.800SG005	0.625	0.800SG006	0.628	0.800
SG007	0.630	0.800SG008	0.633	0.800SG009	0.637	0.800
SG010	0.640	0.800SG011	0.617	0.800SG012	0.603	0.800
SG013	0.583	0.800SG014	0.569	0.800SG015	0.559	0.800
SG016	0.537	0.800SG017	0.500	0.800SG018	0.495	0.800
SG019	0.482	0.800SG020	0.472	0.800SG021	0.455	0.800
SG022	0.462	0.800SG023	0.470	0.800SG024	0.473	0.800
SG025	0.477	0.800SG026	0.480	0.800SG027	0.490	0.800
SG028	0.498	0.800SG029	0.506	0.800SG030	0.515	0.800
SG031	0.523	0.800SG032	0.533	0.800SG033	0.540	0.800
SG034	0.556	0.800SG035	0.565	0.800SG036	0.573	0.800
SG037	0.582	0.800SG038	0.590	0.800SG039	0.595	0.800
SG040	0.606	0.800SG041	0.610	0.800SG042	0.586	0.800
SG043	0.569	0.800SG044	0.559	0.800SG045	0.545	0.800
SG046	0.533	0.800SG047	0.529	0.800SG048	0.000	0.800

Data Group J (Continued) - Initial Conditions: October 1984

Org-P	mg/l	Sys#08	CX84	TOP	IC	3	1.	999.	IC(xyz):	J	06/04/91
SG001	0.070	0.100SG002	0.062	0.100SG003	0.055	0.100					
SG004	0.040	0.100SG005	0.030	0.100SG006	0.032	0.100					
SG007	0.034	0.100SG008	0.036	0.100SG009	0.038	0.100					
SG010	0.040	0.100SG011	0.040	0.100SG012	0.040	0.100					
SG013	0.040	0.100SG014	0.040	0.100SG015	0.040	0.100					
SG016	0.040	0.100SG017	0.040	0.100SG018	0.040	0.100					
SG019	0.040	0.100SG020	0.040	0.100SG021	0.040	0.100					
SG022	0.040	0.100SG023	0.040	0.100SG024	0.040	0.100					
SG025	0.040	0.100SG026	0.040	0.100SG027	0.042	0.100					
SG028	0.043	0.100SG029	0.044	0.100SG030	0.046	0.100					
SG031	0.047	0.100SG032	0.049	0.100SG033	0.050	0.100					
SG034	0.050	0.100SG035	0.050	0.100SG036	0.050	0.100					
SG037	0.050	0.100SG038	0.050	0.100SG039	0.050	0.100					
SG040	0.073	0.100SG041	0.080	0.100SG042	0.070	0.100					
SG043	0.063	0.100SG044	0.059	0.100SG045	0.053	0.100					
SG046	0.049	0.100SG047	0.047	0.100SG048	0.000	0.100					

Appendix M- Calibration PRM Input Data: September 1986
Wasp4 Input file: PRM86069.INP

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Data Group A- Simulation Control data: Sept 1986

SegNo	GEOM86.WQ1	Upstr Riv Mi miles	Dwnstr Riv Mi miles	Seg Cntr Riv Mi miles	Segment Depth meters	Segment Sfc A (xy) sq meters	Segment Volume cu meters
SG001	Westvaco	340.0	338.7	339.35	0.552	77065.7	42540.3
SG002	Georges Ck	338.7	338.2	338.45	0.644	37342.8	24048.8
SG003	UPRC STP	338.2	336.3	337.25	0.613	122806.4	75280.3
SG004	Stony Run	336.3	332.7	334.50	0.685	223950.2	153405.9
SG005	Keyser	332.7	331.4	332.05	0.752	78484.9	59020.7
SG006	21st Br	331.4	328.5	329.95	1.070	204324.4	218627.1
SG007	Dawson	328.5	326.0	327.25	1.070	176141.8	188471.7
SG008	Black Oak	326.0	322.0	324.00	1.080	279217.3	301554.7
SG009	Rawlings	322.0	318.3	320.15	1.080	258276.0	278938.1
SG010	Pinto	318.3	314.1	316.20	1.050	289139.1	303596.1
SG011	Cresaptown	314.1	313.4	313.75	2.000	58733.9	117467.7
SG012	Celanese	313.4	309.6	311.50	0.984	241947.7	238076.5
SG013	Md.Jnctn.	309.6	307.3	308.45	2.260	179360.0	405353.7
SG014	Wills Ck	307.3	305.2	306.25	0.789	190752.0	150503.3
SG015	Wiley Ford	305.2	304.0	304.60	1.310	79976.6	104769.3
SG016	CumbrInd STP	304.0	298.5	301.25	1.480	464772.3	687863.0
SG017	Mexico Field	298.5	294.1	296.30	1.180	310114.2	365934.8
SG018	Pattersn Ck	294.1	285.1	289.60	1.210	581956.9	704167.8
SG019	So. Branch	285.1	282.6	283.85	1.270	235788.2	299451.0
SG020	Town Ck	282.6	279.8	281.20	1.280	262019.6	335385.1
SG021	L Cacapon R	279.8	276.5	278.15	1.280	308808.8	395275.3
SG022	Paw Paw	276.5	255.2	265.85	1.050	2038851.4	2140794.0
SG023	15 Mile Ck	255.2	251.3	253.25	0.819	541063.0	443130.6
SG024	SidelingH.Ck	251.3	247.7	249.50	0.836	489286.6	409043.6
SG025	Cacapon R	247.7	238.6	243.15	0.852	1367401.4	1165026.0
SG026	Hancock	238.6	231.2	234.90	0.886	1099910.8	974521.0
SG027	Licking Ck	231.2	227.1	229.15	0.891	605990.2	539937.3
SG028	Ft Frederick	227.1	217.4	222.25	1.720	3552062.8	6109548.0
SG029	Dam #5	217.4	210.8	214.10	1.090	1570377.1	1711711.0
SG030	Conocochoy Ck	210.8	201.9	206.35	1.120	1918038.4	2148203.0
SG031	Opequon Ck	201.9	195.3	198.60	1.700	2618912.4	4452151.0
SG032	Dam #4	195.3	183.6	189.45	0.836	2869411.5	2398828.0
SG033	Sheperdstown	183.6	179.3	181.45	0.835	1055832.8	881620.4
SG034	Antietam Ck	179.3	173.1	176.20	1.570	2668080.3	4188886.0
SG035	Pleasantv.Dam	173.1	171.5	172.30	0.468	741533.8	347037.8
SG036	Shenandoah R	171.5	165.8	168.65	0.552	2792268.1	1541332.0
SG037	Brunswick	165.8	163.4	164.60	0.737	1117728.6	823766.0
SG038	CatoctinCkMD	163.4	159.5	161.45	0.737	1804746.3	1330098.0
SG039	Pt of Rocks	159.5	153.1	156.30	0.751	3055238.3	2294484.0
SG040	Monacacy R	153.1	147.1	150.10	0.765	2891665.4	2212124.0
SG041	Whites Ferry	147.1	142.2	144.65	0.881	2873817.3	2531833.0
SG042	Goose Ck	142.2	133.9	138.05	0.881	5029062.4	4430604.0
SG043	Seneca Ck	133.9	129.1	131.50	0.877	2783851.8	2441438.0
SG044	Watts Branch	129.1	126.3	127.70	2.310	1606016.5	3709898.0
SG045	Gr Falls Dam	126.3	118.4	122.35	1.250	3335892.0	4169865.0
SG046	Ruppert Isl.	118.4	117.4	117.90	2.220	549245.5	1219325.0
SG047	L. Falls Dam	117.4	115.9	116.65	1.080	616840.5	666187.7
SG048	Dummy Sed.Layer	340.0	115.9	227.95	0.010	56254103.9	562541.0

Data Group B- Exchange Coefficients: Sept 1986

APP M 02.TBL GEOM86.WQ1	From Seg#	To Seg#	X-Area sq meters	Char L meters	Kx sq m/sec
SG000 Upstream BC	0	1	20.33	1046.07	45.0
SG001 Westvaco	1	2	20.33	1448.41	45.0
SG002 Georges Ck	2	3	24.95	1931.21	45.0
SG003 UPRC STP	3	4	24.95	4425.70	45.0
SG004 Stony Run	4	5	26.48	3942.89	45.0
SG005 Keyser	5	6	28.21	3379.62	45.0
SG006 21st Br	6	7	46.84	4345.23	30.0
SG007 Dawson	7	8	46.84	5230.37	30.0
SG008 Black Oak	8	9	46.84	6195.97	30.0
SG009 Rawlings	9	10	44.92	6356.91	30.0
SG010 Pinto	10	11	44.92	3942.89	45.0
SG011 Cresaptown	11	12	38.93	3621.02	30.0
SG012 Celanese	12	13	38.93	4908.50	30.0
SG013 Md.Junctn.	13	14	44.53	3540.56	45.0
SG014 Wills Ck	14	15	44.53	2655.42	45.0
SG015 Wiley Ford	15	16	54.25	5391.30	80.0
SG016 Cumbrlnd STP	16	17	51.68	7966.25	80.0
SG017 Mexico Field	17	18	48.62	10782.60	80.0
SG018 Pattersn Ck	18	19	48.62	9253.73	30.0
SG019 So. Branch	19	20	74.43	4264.76	30.0
SG020 Town Ck	20	21	74.43	4908.50	30.0
SG021 L Cacapon R	21	22	62.45	19794.93	80.0
SG022 Paw Paw	22	23	62.45	20277.73	80.0
SG023 15 Mile Ck	23	24	70.60	6035.04	60.0
SG024 SidelingH.Ck	24	25	70.60	10219.33	60.0
SG025 Cacapon R	25	26	79.55	13277.09	60.0
SG026 Hancock	26	27	86.83	9253.73	60.0
SG027 Licking Ck	27	28	86.83	11104.47	30.0
SG028 Ft Frederick	28	29	161.15	13116.15	100.0
SG029 Dam #5	29	30	161.83	12472.42	45.0
SG030 Conocochg Ck	30	31	168.83	12472.42	45.0
SG031 Opequon Ck	31	32	127.46	14725.50	45.0
SG032 Dam #4	32	33	127.40	12874.75	80.0
SG033 Sheperdstown	33	34	127.40	8449.06	60.0
SG034 Antietam Ck	34	35	134.77	6276.44	60.0
SG035 Pleasntv.Dam	35	36	168.02	5874.11	45.0
SG036 Shenandoah R	36	37	168.02	6517.84	45.0
SG037 Brunswick	37	38	211.92	5069.43	45.0
SG038 CatoctinCkMD	38	39	211.92	8288.12	45.0
SG039 Pt of Rocks	39	40	222.77	9977.93	30.0
SG040 Monacacy R	40	41	229.09	8770.93	30.0
SG041 Whites Ferry	41	42	312.09	10621.67	80.0
SG042 Goose Ck	42	43	316.05	10541.20	30.0
SG043 Seneca Ck	43	44	316.05	6115.51	30.0
SG044 Watts Branch	44	45	327.98	8609.99	80.0
SG045 Gr Falls Dam	45	46	327.98	7161.58	30.0
SG046 Ruppert Isl.	46	47	275.97	2011.68	80.0
SG047 L. Falls Dam	47	0	275.97	1207.01	80.0
SG048 Dummy Sediment Layer					

Data Group C- Segment Volumes: Sept 1986

APP M 03.TBL GEOM86.WQ1	Volume cu meters	Coeff "a" AMULT	Expon "b" VEXP	Coeff "c" DMULT	Expon "d" DXP
SG001 Westvaco	42540.3	0.1430	0.5570	0.3020	0.2690
SG002 Georges Ck	24048.8	0.1010	0.5570	0.3590	0.2690
SG003 UPRC STP	75280.3	0.1210	0.5570	0.3330	0.2690
SG004 Stony Run	153405.9	0.1140	0.5570	0.3720	0.2690
SG005 Keyser	59020.7	0.1070	0.5570	0.4070	0.2690
SG006 21st Br	218627.1	0.1410	0.2430	0.2610	0.6200
SG007 Dawson	188471.7	0.1410	0.2430	0.2610	0.6200
SG008 Black Oak	301554.7	0.1410	0.2430	0.2610	0.6200
SG009 Rawlings	278938.1	0.1410	0.2430	0.2610	0.6200
SG010 Pinto	303596.1	0.0852	0.4780	0.4220	0.4000
SG011 Cresaptown	117467.7	0.0367	0.4780	0.7990	0.4000
SG012 Celanese	238076.5	0.0983	0.4780	0.3930	0.4000
SG013 Md.Jcnctn.	405353.7	0.0119	0.8970	2.0220	0.0480
SG014 Wills Ck	150503.3	0.1150	0.3840	0.2730	0.4500
SG015 Wiley Ford	104769.3	0.0944	0.3840	0.4550	0.4500
SG016 CumbrInd STP	687863.0	0.0659	0.3840	0.5000	0.4500
SG017 Mexico Field	365934.8	0.0991	0.3840	0.3940	0.4500
SG018 Pattersn Ck	704167.8	0.0991	0.3840	0.3940	0.4500
SG019 So. Branch	299451.0	0.0788	0.3840	0.3480	0.4620
SG020 Town Ck	335385.1	0.0788	0.3840	0.3480	0.4620
SG021 L Cacapon R	395275.3	0.0788	0.3840	0.3480	0.4620
SG022 Paw Paw	2140794.0	0.0719	0.4770	0.3330	0.3920
SG023 15 Mile Ck	443130.6	0.0636	0.4770	0.2590	0.3920
SG024 SidelingH.Ck	409043.6	0.0636	0.4770	0.2590	0.3920
SG025 Cacapon R	1165026.0	0.0636	0.4770	0.2590	0.3920
SG026 Hancock	974521.0	0.0462	0.5710	0.3270	0.3220
SG027 Licking Ck	539937.3	0.0462	0.5710	0.3270	0.3220
SG028 Ft Frederick	6109548.0	0.0098	0.5710	0.6240	0.3220
SG029 Dam #5	1711711.0	0.0238	0.5710	0.3940	0.3220
SG030 Conocochg Ck	2148203.0	0.0238	0.5710	0.3940	0.3220
SG031 Opequon Ck	4452151.0	0.0098	0.5710	0.5860	0.3220
SG032 Dam #4	2398828.0	0.0326	0.5710	0.2880	0.3220
SG033 Sheperdstown	881620.4	0.0326	0.5710	0.2880	0.3220
SG034 Antietam Ck	4188886.0	0.0174	0.4180	0.3210	0.4660
SG035 Pleasntv.Dam	347037.8	0.0542	0.4180	0.0960	0.4660
SG036 Shenandoah R	1541332.0	0.0542	0.4180	0.0960	0.4660
SG037 Brunswick	823766.0	0.0427	0.4180	0.1280	0.4660
SG038 CatoctinCkMD	1330098.0	0.0427	0.4180	0.1280	0.4660
SG039 Pt of Rocks	2294484.0	0.0192	0.6160	0.2370	0.3070
SG040 Monacacy R	2212124.0	0.0192	0.6160	0.2370	0.3070
SG041 Whites Ferry	2531833.0	0.0137	0.6160	0.2730	0.3070
SG042 Goose Ck	4430604.0	0.0137	0.6160	0.2730	0.3070
SG043 Seneca Ck	2441438.0	0.0137	0.6160	0.2730	0.3070
SG044 Watts Branch	3709898.0	0.0049	0.6160	0.7650	0.3070
SG045 Gr Falls Dam	4169865.0	0.0123	0.6160	0.4280	0.3070
SG046 Ruppert Isl.	1219325.0	0.0055	0.6160	0.7650	0.3070
SG047 L. Falls Dam	666187.7	0.0151	0.6160	0.3730	0.3070
SG048 Dummy Sediment	562541.0	0.0151	0.6160	0.3730	0.3070

Data Group D- Flows and Transport

Note: All Flow and Transport Data for Sept 1986 calibration
presented in Appendix L

Data Group E- Boundary Conditions: Sept 1986

- A - Individual Boundary Condition Flows and Concentrations
- B - Individual Boundary Condition Flows and Mass Load
- C - Sum of Boundary Condition Flows and Mass Loads by Segment
- D - Weighted Sum Boundary Condition Concentrations by Segment

Upper Potomac River Model: Vol. 3 Appendix M

FINAL REPORT

Data Group E, Part A: Individual Boundary Condition Flows & Conc. by WASP4 BC Input No. Avg over Time
09/01/1986 0000 JD= 244.00

JWK	NSEG	Seg#	BC Input	-----Flow -----(mgd)	NH3 N mg N/L	NO3+NO2 N mg N/L	O.PQ4 mg P/L	PHYT#1 ug Chl/L	CBOD 5 mg BOD/L	DISS O2 mg O2/L	ORG N mg N/L	ORG P mg P/L	Total N mg N/L	Total P mg P/L
1	128	1	B TRBG: N Br.Potomac BC	215.125	0.1000	0.7800	0.0040	2.0000	4.0000	9.7900	0.2800	0.0160	1.1600	0.0200
2	128	2	B TRBG: Savage River nr B	0.000	0.0100	0.5100	0.0040	2.0000	4.0000	9.6000	0.3400	0.0160	0.8600	0.0200
3	128	2	B TRBG: Georges Ck @ Fran	3.232	0.0700	1.1900	0.0400	2.0000	4.0000	10.3000	0.3300	0.0800	1.5900	0.1200
4	128	14	B TRBG: Willis Ck nr Cumbe	14.219	0.0200	0.2200	0.0080	2.0000	4.0000	10.0000	0.2300	0.0120	0.4700	0.0200
5	128	19	B TRBG: S.Br.Potomac nr S	94.364	0.0100	0.0300	0.0040	2.0000	4.0000	8.3000	0.3400	0.0060	0.3800	0.0100
6	128	20	B TRBG: Town Ck nr Oldtow	3.843	0.0100	0.0400	0.0040	2.0000	4.0000	8.3000	0.3400	0.0260	0.3900	0.0300
7	128	30	B TRBG: Conococheague Ck	57.523	0.0300	2.0900	0.2000	7.3800	4.0000	8.3000	0.6200	0.1000	2.7400	0.3000
8	128	31	B TRBG: Opequon Ck @Mart1	29.731	0.0700	0.2700	0.1880	2.0000	1.2000	9.4000	0.2700	0.0310	0.6100	0.2190
9	128	34	B TRBG: Antietam Ck nr Sh	62.048	0.0300	4.6400	0.3000	2.0000	4.0000	7.6000	0.6500	0.0700	5.3200	0.3700
10	128	36	B TRBG: Shenandoah R @Mil	290.848	0.0200	0.3300	0.0700	1.5000	4.0000	9.5000	0.3500	0.0450	0.7000	0.1150
11	128	38	B TRBG: Catoctin Ck MD	0.646	0.0200	0.1000	0.0440	1.0000	4.0000	7.3000	0.3300	0.0360	0.4500	0.0800
12	128	39	B TRBG: Catoctin Ck VA	0.000	0.1000	0.1100	0.0100	4.0000	1.0000	8.8000	0.3000	0.0100	0.5100	0.0200
13	128	40	B TRBG: Monacacy R @Jug B	74.328	0.0300	0.1620	0.1340	4.0000	4.9000	7.9000	0.5600	0.0560	0.7520	0.1900
14	128	42	B TRBG: Goose Ck nr Leesb	1.293	0.9500	6.7850	0.0450	2.0000	5.5000	8.1500	0.8000	0.0450	8.5350	0.0900
15	128	43	B TRBG: Seneca Ck @Dawson	9.695	0.0200	2.3260	0.2190	2.0000	3.7000	9.2000	0.5800	0.0910	2.9260	0.3100
16	128	47	B TRBG: Potomac River BC	602.378	0.0500	0.4700	0.0200	3.7500	1.6000	8.2000	0.4500	0.0400	0.9700	0.0600
17	128	1	C DIVR: Westvaco Corporat	-22.210	0.1000	0.7800	0.0040	1.3000	4.0000	9.8000	0.2800	0.0160	1.1600	0.0200
18	128	22	C DIVR: City of Paw Paw	-0.060	0.0200	0.4300	0.0160	1.3000	4.0000	8.2000	0.3800	0.0440	0.8300	0.0600
19	128	30	C DIVR: City of Hagerstow	-6.200	0.0650	0.9000	0.0610	1.3000	4.0000	9.0000	0.5150	0.0340	1.4800	0.0950
20	128	32	C DIVR: City of Sharpsbur	-0.100	0.0650	0.9000	0.0610	1.3000	4.0000	9.0000	0.5150	0.0340	1.4800	0.0950
21	128	33	C DIVR: City of Shephardson	-0.350	0.0650	0.9000	0.0610	1.3000	4.0000	9.0000	0.5150	0.0340	1.4800	0.0950
22	128	33	C DIVR: City of Harpers F	-0.350	0.0650	0.9000	0.0610	1.3000	4.0000	9.0000	0.5150	0.0340	1.4800	0.0950
23	128	36	C DIVR: City of Lovettsvi	0.000	0.0650	0.9000	0.0610	1.3000	4.0000	9.0000	0.5150	0.0340	1.4800	0.0950
24	128	37	C DIVR: City of Brunswick	-0.300	0.0650	0.9000	0.0610	1.3000	4.0000	9.0000	0.5150	0.0340	1.4800	0.0950
25	128	39	C DIVR: Point of Rocks	-1.500	0.0300	0.8500	0.0540	3.6000	8.0500	8.5000	0.9350	0.0860	1.8150	0.1400
26	128	42	C DIVR: City of Leesburg	-1.300	0.0500	0.8350	0.0430	3.8700	5.9000	7.7000	1.0400	0.0820	1.9250	0.1250
27	128	43	C DIVR: Fairfax Co FCMA	-49.500	0.0500	0.8350	0.0430	3.8700	5.9000	7.7000	1.0400	0.0820	1.9250	0.1250
28	128	43	C DIVR: WSSC	-134.630	0.0500	0.8350	0.0430	3.8700	5.9000	7.7000	1.0400	0.0820	1.9250	0.1250
29	128	44	C DIVR: WAD Great Falls	-81.330	0.0500	0.8350	0.0430	3.8700	5.9000	7.7000	1.0400	0.0820	1.9250	0.1250
30	128	44	C DIVR: City of Rockville	-5.920	0.0500	0.8350	0.0430	3.8700	5.9000	7.7000	1.0400	0.0820	1.9250	0.1250
31	128	47	C DIVR: WAD Little Falls	-127.700	0.0480	0.4860	0.0150	5.1600	3.6500	8.7000	0.4540	0.0360	0.9880	0.0510
32	128	1	D INDU: WESTVACO CORP LUK	4.200	0.8000	0.0900	0.2311	0.0000	2.0000	6.2500	0.2400	0.0355	1.1300	0.2667
33	128	3	D INDU: UPPER POTOMAC RIV	18.010	0.1000	0.2200	0.5000	0.0000	30.0000	5.7000	1.4000	0.1000	1.7200	0.6000
34	128	8	D INDU: JEFFERSON COUNTY	0.025	9.0000	6.3000	2.6000	0.0000	30.0000	6.2500	2.7000	0.4000	18.0000	3.0000
35	128	14	D INDU: HERCULES, INC.	0.100	9.0000	6.3000	2.6000	0.0000	30.0000	6.2500	2.7000	0.4000	18.0000	3.0000
36	128	14	D INDU: APPALACHIAN	0.006	9.0000	6.3000	2.6000	0.0000	29.9000	6.2500	2.7000	0.4000	18.0000	3.0000
37	128	17	D INDU: PPG D INDUSTRIES	0.001	9.0000	6.3000	2.6000	0.0000	27.5000	6.2500	2.7000	0.4000	18.0000	3.0000
38	128	30	D INDU: POTOMAC EDISON PA	1.200	0.3100	0.6400	0.0896	0.0000	4.6300	6.2500	0.0930	0.0138	1.0430	0.1033
39	128	45	D INDU: FIRST AMERICAN LA	0.372	9.0000	6.3000	2.6000	0.0000	10.0000	6.2500	2.7000	0.4000	18.0000	3.0000
40	128	1	E MUNI: BLOOMINGTON WTP	0.015	9.0000	6.3000	2.6000	0.0000	6.5970	6.9800	2.7000	0.4000	18.0000	3.0000
41	128	4	E MUNI: TRI TOWN PLAZA	0.010	9.0000	6.3000	2.6000	0.0000	30.0000	6.2500	2.7000	0.4000	18.0000	3.0000
42	128	5	E MUNI: KEYSER, CITY OF	1.100	9.0000	6.3000	2.6000	0.0000	27.5000	6.2500	2.7000	1.0000	18.0000	7.0000
43	128	9	E MUNI: RAWLINGS, TOWN OF	0.076	9.0000	6.3000	2.6000	0.0000	21.5910	7.5910	2.7000	0.4000	18.0000	3.0000
44	128	12	E MUNI: ALLEGANY COUNTY-B	0.143	9.0000	6.3000	2.6000	0.0000	103.0000	6.0000	2.7000	0.4000	18.0000	3.0000
45	128	12	E MUNI: ALLEGANY COUNTY-C	0.226	9.0000	6.3000	2.6000	0.0000	86.8000	5.4000	2.7000	0.4000	18.0000	3.0000
46	128	14	E MUNI: RIDGELEY, TOWN OF	0.120	9.0000	6.3000	2.6000	0.0000	30.0000	5.0000	2.7000	0.4000	18.0000	3.0000
47	128	16	E MUNI: CUMBERLAND, CITY O	8.028	9.0000	6.3000	2.6000	0.0000	4.8000	6.2000	2.7000	0.4000	18.0000	3.0000
48	128	17	E MUNI: MEXICO FARMS	0.080	9.0000	6.3000	2.6000	0.0000	30.0000	5.0000	2.7000	0.4000	18.0000	3.0000
49	128	22	E MUNI: PAW PAW, TOWN OF	0.060	9.0000	6.3000	2.6000	0.0000	30.0000	5.0000	2.7000	0.4000	18.0000	3.0000
50	128	27	E MUNI: FAIRVIEW BCH. SAN	0.050	9.0000	6.3000	2.6000	0.0000	30.0000	5.0000	2.7000	0.4000	18.0000	3.0000
51	128	30	E MUNI: HONEYWOOD	0.020	9.0000	6.3000	2.6000	0.0000	30.0000	5.0000	2.7000	0.4000	18.0000	3.0000
52	128	30	E MUNI: WSSC SUBDIV 1-HAL	1.024	13.9330	2.8670	1.9000	0.0000	25.0000	7.6000	4.1799	0.6000	20.9799	4.5000
53	128	32	E MUNI: RIVERBEND	0.040	9.0000	6.3000	2.6000	0.0000	30.0000	5.0000	2.7000	0.4000	18.0000	3.0000
54	128	33	E MUNI: SHEPHERDSTOWN STP	0.255	9.0000	6.3000	2.6000	0.0000	41.1000	10.3000	2.7000	0.4000	18.0000	3.0000
55	128	33	E MUNI: SHEPHERDSTOWN WPC	0.400	9.0000	6.3000	2.6000	0.0000	30.0000	6.2500	2.7000	0.4000	18.0000	3.0000
56	128	36	E MUNI: HARPERS FERRY TOW	0.160	9.0000	6.3000	2.6000	0.0000	13.0000	6.2500	2.7000	0.4000	18.0000	3.0000
57	128	36	E MUNI: HARPERS FERRY-BOL	0.300	9.0000	6.3000	2.6000	0.0000	30.0000	6.2500	2.7000	0.4000	18.0000	3.0000
58	128	37	E MUNI: BRUNSWICK SEWAGE	0.283	9.0000	6.3000	2.6000	0.0000	3.0000	7.6500	2.7000	0.4000	18.0000	3.0000
59	128	39	E MUNI: POINT OF ROCKS FR	0.054	9.0000	6.3000	2.6000	0.0000	16.0000	4.2500	2.7000	0.4000	18.0000	3.0000
60	128	44	E MUNI: ROCKVILLE, FLOW-O	0.000	13.5000	2.0000	6.0000	0.0000	27.5000	4.0000	3.0000	1.0000	18.5000	7.0000
61	128	1	F TRBU: Montgomery Run	0.000	0.0100	0.5100	0.0040	2.0000	4.0000	9.6000	0.3400	0.0160	0.8600	0.0200
62	128	3	F TRBU: Powder House Run	0.835	0.0100	0.5100	0.0040	2.0000	4.0000	9.6000	0.3400	0.0160	0.8600	0.0200
63	128	3	F TRBU: Slaughterhouse Ru	0.835	0.0100	0.5100	0.0040	2.0000	4.0000	9.6000	0.3400	0.0160	0.8600	0.0200
64	128	4	F TRBU: Thunderbill Run	0.835	0.0100	0.5100	0.0040	2.0000	4.0000	9.6000	0.3400	0.0160	0.8600	0.0200
65	128	5	F TRBU: Limestone Run	0.835	0.0100	0.5100	0.0040	2.0000	4.0000	9.6000	0.3400	0.0160	0.8600	0.0200
66	128	5	F TRBU: New Creek	0.835	0.0100	0.5100	0.0040	2.0000	4.0000	9.6000	0.3400	0.0160	0.8600	0.0200
67	128	8	F TRBU: Ashcabin Run	0.835	0.0100	0.5100	0.0040	2.0000	4.0000	9.6000	0.3400	0.0160	0.8600	0.0200
68	128	9	F TRBU: Mill Run	0.835	0.0100	0.5100	0.0040	2.0000	4.0000	9.6000	0.3400	0.0160	0.8600	0.0200
69	128	12	F TRBU: Warrior Run	0.835	0.0100	0.5100	0.0040	2.0000	4.0000	9.6000	0.3400	0.0160	0.8600	0.0200
70	128	16	F TRBU: Evitts Creek	3.261	0.0100	0.0300	0.0040	2.0000	4.0000	8.3000	0.3400	0.0060	0.3800	0.0100
71	128	17	F TRBU: Collier Run	3.261	0.0100	0.0300	0.0040	2.0000	4.0000	8.3000	0.3400	0.0060	0.3800	0.0100
72	128	18	F TRBU: Brice Hollow Run	3.261	0.0100	0.0300	0.0040	2.0000	4.0000	8.3000	0.3400	0.0060	0.3800	0.0100
73	128	18	F TRBU: Broad Hollow Run	3.261	0.0100	0.0300	0.0040	2.0000	4.0000	8.3000	0.3400	0.0060	0.3800	0.0100
74	128	18	F TRBU: Green Spring Run	3.261	0.0100	0.0300	0.0040	2.0000	4.0000	8.3000	0.3400	0.0060	0.3800	0.0100
75	128	18	F TRBU: Mill Run	3.261	0.0100	0.0300	0.0040	2.0000	4.0000	8.3000</				

Data Group E, Part A (Continued): Individual BC Flows & Conc.by Wasp4 BC Input No. Avg. over time

09/01/1986 0000 JD= 244.00																
JWK	NSRG	Seg#	BC	Input	-----Flow ----- (mgd)	NH3 N mg N/L	NO3+NO2 N mg N/L	O P04 mg P/L	PHYT#1 ug Chl/L	CBOD 5 mg BOD/L	DISS O2 mg O2/L	ORG N mg N/L	ORG P mg P/L	Total N mg N/L	Total P mg P/L	
98	128	28	F	TRBU:	4.573	0.0100	0.0300	0.0040	2.0000	4.0000	8.3000	0.3400	0.0060	0.3800	0.0100	
99	128	28	F	TRBU:	4.573	0.0100	0.0300	0.0040	2.0000	4.0000	8.3000	0.3400	0.0060	0.3800	0.0100	
100	128	28	F	TRBU:	4.573	0.0100	0.0300	0.0040	2.0000	4.0000	8.3000	0.3400	0.0060	0.3800	0.0100	
101	128	29	F	TRBU:	4.573	0.0300	2.0900	0.2000	7.3800	4.0000	8.3000	0.6200	0.1000	2.7400	0.3000	
102	128	31	F	TRBU:	4.573	0.0700	0.2700	0.1880	2.0000	1.2000	9.4000	0.2700	0.0310	0.6100	0.2190	
103	128	32	F	TRBU:	-0.163	0.0700	0.2700	0.1880	2.0000	1.2000	9.4000	0.2700	0.0310	0.6100	0.2190	
104	128	32	F	TRBU:	-0.163	0.0700	0.2700	0.1880	2.0000	1.2000	9.4000	0.2700	0.0310	0.6100	0.2190	
105	128	33	F	TRBU:	-0.163	0.0700	0.2700	0.1880	2.0000	1.2000	9.4000	0.2700	0.0310	0.6100	0.2190	
106	128	33	F	TRBU:	-0.163	0.0700	0.2700	0.1880	2.0000	1.2000	9.4000	0.2700	0.0310	0.6100	0.2190	
107	128	34	F	TRBU:	-0.163	0.0300	4.6400	0.3000	2.0000	4.0000	7.6000	0.6500	0.0700	5.3200	0.3700	
108	128	36	F	TRBU:	-0.163	0.0300	4.6400	0.3000	2.0000	4.0000	7.6000	0.6500	0.0700	5.3200	0.3700	
109	128	36	F	TRBU:	-0.163	0.0300	4.6400	0.3000	2.0000	4.0000	7.6000	0.6500	0.0700	5.3200	0.3700	
110	128	36	F	TRBU:	-0.163	0.0300	4.6400	0.3000	2.0000	4.0000	7.6000	0.6500	0.0700	5.3200	0.3700	
111	128	37	F	TRBU:	-0.163	0.0300	4.6400	0.3000	2.0000	4.0000	7.6000	0.6500	0.0700	5.3200	0.3700	
112	128	37	F	TRBU:	-0.163	0.0300	4.6400	0.3000	2.0000	4.0000	7.6000	0.6500	0.0700	5.3200	0.3700	
113	128	39	F	TRBU:	-3.590	0.0300	0.1620	0.1340	4.0000	4.9000	7.9000	0.5600	0.0560	0.7520	0.1900	
114	128	40	F	TRBU:	-3.590	0.0300	0.1620	0.1340	4.0000	4.9000	7.9000	0.5600	0.0560	0.7520	0.1900	
115	128	40	F	TRBU:	-3.590	0.0300	0.1620	0.1340	4.0000	4.9000	7.9000	0.5600	0.0560	0.7520	0.1900	
3	7	42	F	TRBU:	-3.590	0.0200	2.3260	0.2190	2.0000	3.7000	9.2000	0.5800	0.0910	2.9260	0.3100	
4	7	42	F	TRBU:	-3.590	0.0200	2.3260	0.2190	2.0000	3.7000	9.2000	0.5800	0.0910	2.9260	0.3100	
5	7	42	F	TRBU:	-3.590	0.0200	2.3260	0.2190	2.0000	3.7000	9.2000	0.5800	0.0910	2.9260	0.3100	
6	7	42	F	TRBU:	-3.590	0.0200	2.3260	0.2190	2.0000	3.7000	9.2000	0.5800	0.0910	2.9260	0.3100	
7	7	42	F	TRBU:	-3.590	0.0200	2.3260	0.2190	2.0000	3.7000	9.2000	0.5800	0.0910	2.9260	0.3100	
121	128	43	F	TRBU:	-3.590	0.0200	2.3260	0.2190	2.0000	3.7000	9.2000	0.5800	0.0910	2.9260	0.3100	
122	128	43	F	TRBU:	-3.590	0.0200	2.3260	0.2190	2.0000	3.7000	9.2000	0.5800	0.0910	2.9260	0.3100	
123	128	45	F	TRBU:	-3.590	0.0200	2.3260	0.2190	2.0000	3.7000	9.2000	0.5800	0.0910	2.9260	0.3100	
124	128	45	F	TRBU:	-3.590	0.0200	2.3260	0.2190	2.0000	3.7000	9.2000	0.5800	0.0910	2.9260	0.3100	
125	128	45	F	TRBU:	-3.590	0.0200	2.3260	0.2190	2.0000	3.7000	9.2000	0.5800	0.0910	2.9260	0.3100	
126	128	45	F	TRBU:	-3.590	0.0200	2.3260	0.2190	2.0000	3.7000	9.2000	0.5800	0.0910	2.9260	0.3100	
127	128	45	F	TRBU:	-3.590	0.0200	2.3260	0.2190	2.0000	3.7000	9.2000	0.5800	0.0910	2.9260	0.3100	
128	128	45	F	TRBU:	-3.590	0.0200	2.3260	0.2190	2.0000	3.7000	9.2000	0.5800	0.0910	2.9260	0.3100	

FINAL REPORT

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09/01/1986 0000 JD=      244.00
JWK  NSEG  Seg# BC Input
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JWK	NSEG	Seg#	BC	Input	-----Flow ---- (mgd)	NH3 N kg N/d	NO3+NO2 N kg N/d	O P04 kg P/d	PHYT#1 kg Chl/d	CBOD 5 kg BOD/d	DISS O2 kg O2/d	ORG N kg N/d	ORG P kg P/d	Total N kg N/d	Total P kg P/d	
97	128	28	F	TRBU: Back Creek	4.573	0.17	0.52	0.07	0.03	69.23	143.66	5.88	0.10	6.58	0.17	
98	128	28	F	TRBU: Green Spring Run	4.573	0.17	0.52	0.07	0.03	69.23	143.66	5.88	0.10	6.58	0.17	
99	128	28	F	TRBU: Harlan Run	4.573	0.17	0.52	0.07	0.03	69.23	143.66	5.88	0.10	6.58	0.17	
100	128	28	F	TRBU: Jordan Run	4.573	0.17	0.52	0.07	0.03	69.23	143.66	5.88	0.10	6.58	0.17	
101	128	29	F	TRBU: Little Conocochea	4.573	0.52	36.18	3.46	0.13	69.23	143.66	10.73	1.73	47.43	5.19	
102	128	31	F	TRBU: Downey Branch	4.573	1.21	4.67	3.25	0.03	20.77	162.70	4.67	0.54	10.56	3.79	
103	128	32	F	TRBU: Marsh Run	-0.163	-0.04	-0.17	-0.12	0.00	-0.74	-5.80	-0.17	-0.02	-0.38	-0.14	
104	128	32	F	TRBU: Rockymarsh Run	-0.163	-0.04	-0.17	-0.12	0.00	-0.74	-5.80	-0.17	-0.02	-0.38	-0.14	
105	128	33	F	TRBU: Rattlesnake Run	-0.163	-0.04	-0.17	-0.12	0.00	-0.74	-5.80	-0.17	-0.02	-0.38	-0.14	
106	128	33	F	TRBU: Town Run	-0.163	-0.04	-0.17	-0.12	0.00	-0.74	-5.80	-0.17	-0.02	-0.38	-0.14	
107	128	34	F	TRBU: Elk Branch	-0.163	-0.02	-2.86	-0.19	0.00	-2.47	-4.69	-0.40	-0.04	-3.28	-0.23	
108	128	36	F	TRBU: Dutchman Creek	-0.163	-0.02	-2.86	-0.19	0.00	-2.47	-4.69	-0.40	-0.04	-3.28	-0.23	
109	128	36	F	TRBU: Isreal Creek	-0.163	-0.02	-2.86	-0.19	0.00	-2.47	-4.69	-0.40	-0.04	-3.28	-0.23	
110	128	36	F	TRBU: Piney Run	-0.163	-0.02	-2.86	-0.19	0.00	-2.47	-4.69	-0.40	-0.04	-3.28	-0.23	
111	128	37	F	TRBU: Little Catoctin C	-0.163	-0.02	-2.86	-0.19	0.00	-2.47	-4.69	-0.40	-0.04	-3.28	-0.23	
112	128	37	F	TRBU: Quarter Branch	-0.163	-0.02	-2.86	-0.19	0.00	-2.47	-4.69	-0.40	-0.04	-3.28	-0.23	
113	128	39	F	TRBU: Tuscarora Creek	-3.590	-0.41	-2.20	-1.82	-0.05	-66.59	-107.36	-7.61	-0.76	-10.22	-2.58	
114	128	40	F	TRBU: Limestone Branch	-3.590	-0.41	-2.20	-1.82	-0.05	-66.59	-107.36	-7.61	-0.76	-10.22	-2.58	
115	128	40	F	TRBU: Little Monocacy	-3.590	-0.41	-2.20	-1.82	-0.05	-66.59	-107.36	-7.61	-0.76	-10.22	-2.58	
3	4	7	42	F	TRBU: Broad Run	-3.590	-0.27	-31.61	-2.98	-0.03	-50.28	-125.02	-7.88	-1.24	-39.76	-4.21
4	7	42	F	TRBU: Cabin Branch	-3.590	-0.27	-31.61	-2.98	-0.03	-50.28	-125.02	-7.88	-1.24	-39.76	-4.21	
5	7	42	F	TRBU: Chriell Branch	-3.590	-0.27	-31.61	-2.98	-0.03	-50.28	-125.02	-7.88	-1.24	-39.76	-4.21	
6	7	42	F	TRBU: Horsepen Branch	-3.590	-0.27	-31.61	-2.98	-0.03	-50.28	-125.02	-7.88	-1.24	-39.76	-4.21	
7	7	42	F	TRBU: Sugarland Run	-3.590	-0.27	-31.61	-2.98	-0.03	-50.28	-125.02	-7.88	-1.24	-39.76	-4.21	
121	128	43	F	TRBU: Muddy Branch	-3.590	-0.27	-31.61	-2.98	-0.03	-50.28	-125.02	-7.88	-1.24	-39.76	-4.21	
122	128	43	F	TRBU: Nichols Run	-3.590	-0.27	-31.61	-2.98	-0.03	-50.28	-125.02	-7.88	-1.24	-39.76	-4.21	
123	128	45	F	TRBU: Bullneck Run	-3.590	-0.27	-31.61	-2.98	-0.03	-50.28	-					

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Data Group E, Part D: Weighted Sum BC Conc by Wasp4 Segment No. Avg. over time increment:

[illegible]

Data Group F- Point Sources

DUMMY DATA OF ZERO LOADS USED FOR SEGMENT #1

All Point Source Loads Accounted for as Boundary Conditions

Data Group G- Spatial Forcing Functions: Sept 1986

<u>Label Units</u>		<u>Description</u>
Seg#		PRM Segment No.
Temp(C) Deg C		Water temperature
FNH4 mgN/sq m-d		Sed NH4 flux
FPO4 mgP/sq m-d		Sed PO4 flux
SOD1D gO2/sq m-d		Sed Oxy Demand
FNO3 mgN/sq m-d		Sed NO3 flux
SOD(U,T) gO2/sq m-d		SOD(vel,temp)
SODMax gO2/sq m-d		SOD Max
BNit(U,T) mgN/sq m-d		Benth nitrific (U,T)
BNit(20) mgN/sq m-d		Benth nitrific (T=20)
BNO3 (T) mgN/sq m-d		Benth NO3 loss (T)
BNO3 (20) mgN/sq m-d		Benth NO3 loss (T=20)
BProdMax gC/sq m-d		Benth Algae Production Max
BProd(U,T) gC/sq m-d		Benth Algae Production (U,T)
B_NH4_U mgN/sq m-d		Benth Algae NH4 uptake
B_NO3_U mgN/sq m-d		Benth Algae NO3 uptake
B_PO4_U mgP/sq m-d		Benth Algae PO4 uptake
B_OXY_U gO2/sq m-d		Benth Algae Net Oxygen Prod
P/R ratio		Benth Algae Production/Resp
NPS_NO3 mgN/sq m-d		Non Point Input: NO3
NPS_PO4 mgP/sq m-d		Non Point Input: PO4

Upper Potomac River Model: Vol. 3 Appendix M

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Data Group G (Continued) - Spatial Forcing Functions: Sept 1986

Case#	6259	Temp	Wasp4 Data	G Input	<= SOD Functions <Ben Nitrification<Ben Nitrate Loss>				Benthic Periphyton Gross Production				N,P,O2 Uptake	P/R	<NPS NO3	and PO4				
Seg		Temp(C)	FMH4	FPO4	SOD10	FNO3 SOD(U,T)	SODMax	BNit(U,T)	BNit(20)	BN03 (T)	BN03 (20)	8ProdMax	8Prod(U,T	B_NH4_U	B_NO3_U	B_PO4_U	B_OXY_U	P/R	NPS_NO3	NPS_PO4
1	14.0	-172.50	-10.36	3.65	-29.04	1.40	3.00	-15.65	-25.00	-23.71	-30.00	1.50	0.98	-191.08	-54.31	-24.54	-2.62	0.50	33.33	8.33
2	14.0	-99.68	-2.22	2.13	-10.96	0.85	3.00	-8.99	-25.00	-23.71	-30.00	1.50	0.56	-111.48	-29.58	-14.11	-1.51	0.50	33.33	8.33
3	15.0	-167.01	-9.66	3.48	-26.76	1.20	3.00	-15.23	-25.00	-24.66	-30.00	1.50	0.95	-186.46	-50.66	-23.71	-2.53	0.50	33.33	8.33
4	15.0	-152.85	-8.67	3.25	-29.30	1.11	3.00	-14.31	-25.00	-24.66	-30.00	1.50	0.89	-170.52	-52.29	-22.28	-2.38	0.50	33.33	8.33
5	16.0	-140.53	-8.27	3.22	-38.46	1.02	3.00	-14.32	-25.00	-25.64	-30.00	1.50	0.89	-160.87	-60.47	-22.13	-2.36	0.50	33.33	8.33
6	16.0	-33.02	5.55	0.47	1.31	0.57	3.00	-5.71	-25.00	-25.64	-30.00	1.00	0.24	-46.70	-12.08	-5.88	0.00	1.00	33.33	8.33
7	17.0	-32.70	5.55	0.50	-0.78	0.57	3.00	-6.16	-25.00	-26.67	-30.00	1.00	0.25	-49.41	-13.60	-6.30	0.00	1.00	33.33	8.33
8	17.0	-32.08	5.55	0.50	-1.40	0.57	3.00	-6.16	-25.00	-26.67	-30.00	1.00	0.25	-48.79	-14.22	-6.30	0.00	1.00	33.33	8.33
9	18.0	-30.91	5.59	0.53	-4.06	0.57	3.00	-6.66	-25.00	-27.74	-30.00	1.00	0.27	-51.24	-16.31	-6.75	0.00	1.00	33.33	8.33
10	18.0	-27.09	6.04	0.47	-4.87	0.63	3.00	-6.66	-25.00	-27.74	-30.00	1.00	0.27	-50.42	-17.12	-6.75	0.12	1.20	33.33	8.33
11	17.0	2.29	9.03	0.25	4.44	0.32	3.00	-1.25	-25.00	-26.67	-30.00	1.00	0.05	-9.27	-3.47	-1.27	0.02	1.20	33.33	8.33
12	16.0	-43.42	3.94	0.43	-6.98	0.70	3.00	-7.95	-25.00	-25.64	-30.00	1.00	0.33	-59.32	-22.62	-8.19	0.15	1.20	33.33	8.33
13	15.0	1.14	8.84	0.19	7.30	0.28	3.00	-0.80	-25.00	-24.66	-30.00	1.00	0.03	-6.17	-2.18	-0.83	0.01	1.20	33.33	8.33
14	14.5	-42.20	4.08	0.40	-3.87	0.70	3.00	-7.09	-25.00	-24.18	-30.00	1.00	0.30	-53.72	-20.11	-7.38	0.13	1.20	33.33	8.33
15	15.0	-21.06	6.50	0.35	0.67	0.57	3.00	-4.38	-25.00	-24.66	-30.00	1.00	0.18	-33.10	-12.39	-4.55	0.08	1.20	33.33	8.33
16	15.0	-42.44	3.10	0.50	-8.86	0.41	3.00	-2.30	-25.00	-24.66	-30.00	3.00	0.29	-51.86	-19.84	-7.17	-0.19	0.80	33.33	8.33
17	15.0	-136.48	-5.10	0.92	-1.09	0.63	3.00	-5.28	-25.00	-24.66	-30.00	3.00	0.66	-149.45	-15.04	-16.45	-0.44	0.80	33.33	8.33
18	15.5	-139.00	-5.48	0.96	-3.30	0.63	3.00	-5.49	-25.00	-25.15	-30.00	3.00	0.68	-153.34	-16.97	-17.03	-0.45	0.80	33.33	8.33
19	20.2	7.72	10.73	0.76	-5.19	0.95	5.00	0.00	0.00	-30.24	-30.00	1.00	0.26	-57.01	-8.28	-6.53	0.20	1.40	33.33	8.33
20	15.0	-10.44	8.30	0.55	1.00	0.95	5.00	0.00	0.00	-24.66	-30.00	1.00	0.18	-37.81	-7.67	-4.55	0.14	1.40	33.33	8.33
21	15.0	-10.17	8.30	0.55	0.73	0.95	5.00	0.00	0.00	-24.66	-30.00	1.00	0.18	-37.54	-7.95	-4.55	0.14	1.40	33.33	8.33
22	16.0	-27.31	6.48	0.66	-7.18	1.17	5.00	0.00	0.00	-25.64	-30.00	1.00	0.33	-67.07	-14.87	-8.19	0.25	1.40	33.33	8.33
23	18.0	-10.28	7.74	0.68	-14.45	1.05	5.00	0.00	0.00	-27.74	-30.00	1.00	0.32	-60.26	-20.05	-8.03	0.25	1.40	33.33	8.33
24	20.0	1.41	8.77	0.77	-20.77	1.05	5.00	0.00	0.00	-30.00	-30.00	1.00	0.37	-68.19	-24.10	-9.23	0.28	1.40	33.33	8.33
25	24.0	20.18	9.21	0.71	-35.87	0.84	4.00	0.00	0.00	-35.10	-30.00	1.00	0.49	-87.78	-34.10	-12.19	0.37	1.40	33.33	8.33
26	25.0	36.86	10.16	0.76	-43.30	0.84	4.00	0.00	0.00	-36.50	-30.00	1.00	0.52	-90.52	-40.13	-13.07	0.40	1.40	33.33	8.33
27	24.0	24.90	9.21	1.41	-40.60	0.84	4.00	0.00	0.00	-35.10	-30.00	1.00	0.49	-83.05	-38.83	-12.19	-0.33	0.80	33.33	8.33
28	24.0	34.29	12.27	0.45	-5.53	0.33	4.00	0.00	0.00	-35.10	-30.00	1.00	0.05	-7.83	-3.76	-1.16	-0.03	0.80	33.33	8.33
29	23.0	32.46	11.59	0.67	86.55	0.48	4.00	0.00	0.00	-33.75	-30.00	1.00	0.13	-19.68	-13.04	-3.27	-0.09	0.80	33.33	8.33
30	22.7	36.44	37.20	0.73	87.41	0.54	4.00	0.00	0.00	-33.35	-30.00	1.00	0.13	-19.47	-12.57	-3.20	-0.09	0.80	133.33	33.33
31	22.0	23.22	36.25	0.40	97.83	0.33	4.00	0.00	0.00	-32.45	-30.00	1.00	0.04	-7.03	-3.05	-1.01	-0.03	0.80	133.33	33.33
32	22.0	23.13	35.39	0.93	79.76	0.68	4.00	0.00	0.00	-32.45	-30.00	1.00	0.24	-39.43	-21.12	-6.05	-0.16	0.80	133.33	33.33
33	21.0	16.17	34.80	0.55	349.16	0.68	4.00	0.00	0.00	-31.20	-30.00	1.00	0.23	-36.85	-19.64	-5.65	0.17	1.40	133.33	33.33
34	20.7	18.08	102.39	0.32	88.75	0.33	4.00	0.00	0.00	-308.35	-300.00	1.00	0.04	-6.31	-2.90	-0.92	0.03	1.40	400.00	100.00
35	20.0	3.73	99.80	0.48	76.80	0.68	4.00	0.00	0.00	-300.00	-300.00	1.00	0.26	-41.20	-23.20	-6.44	0.20	1.40	400.00	100.00
36	20.0	6.30	99.97	0.61	-28.24	0.84	4.00	0.00	0.00	-400.00	-400.00	1.00	0.31	-49.38	-28.24	-7.76	0.24	1.40	400.00	100.00
37	20.0	12.93	100.97	0.52	-20.69	0.68	4.00	0.00	0.00	-400.00	-400.00	1.00	0.21	-32.00	-20.69	-5.27	0.16	1.40	400.00	100.00
38	19.3	8.92	100.67	0.50	-8.26	0.68	4.00	0.00	0.00	-389.17	-400.00	1.00	0.20	-31.09	-19.09	-5.02	0.15	1.40	400.00	100.00
39	19.6	12.20	101.16	0.47	74.36	0.61	4.00	0.00	0.00	-443.00	-450.00	1.00	0.17	-25.37	-15.97	-4.13	0.13	1.40	400.00	100.00
40	18.3	24.78	136.30	3.47	85.17	1.36	8.00	0.00	0.00	-420.97	-450.00	1.50	0.28	-43.04	-27.18	-7.02	-2.25	0.25	533.33	133.33
41	22.0	59.89	140.21	2.56	29.31	0.96	8.00	0.00	0.00	-486.72	-450.00	1.50	0.18	-28.47	-17.30	-4.58	-1.47	0.25	533.33	133.33
42	22.0	58.14	140.21	2.56	-314.85	0.96	8.00	0.00	0.00	-432.64	-400.00	1.50	0.18	-30.23	-15.54	-4.58	-1.47	0.25	533.33	133.33
43	16.3	12.90	35.68	1.75	-42.35	0.96	8.00	0.00	0.00	-43.25	-50.00	1.50	0.12	-21.50	-9.30	-3.08	-0.99	0.25	133.33	33.33
44	18.0	21.44	5.73	0.78	-38.75	0.58	8.00	0.00	0.00	-45.23	-50.00	1.50	0.03	-5.87	-2.52	-0.84	-0.27	0.25	10.00	2.50
45	20.0	11.92	4.04	1.18	-47.39	0.42	4.00	0.00	0.00	-50.00	-50.00	1.50	0.09	-16.15	-7.39	-2.35	-0.75	0.25	10.00	2.50
46	21.0	18.65	4.91	0.36	-45.36	0.33	4.00	0.00	0.00	-52.00	-50.00	1.50	0.04	-6.98	-1.36	-1.03	-0.01	0.90	10.00	2.50
47	23.0	26.81	5.23	0.63	-68.90	0.48	4.00	0.00	0.00	-56.24	-50.00	1.50	0.15	-25.33	-12.66	-3.80	-0.05	0.90	10.00	2.50
48	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
-99	-99.0	-99.00	-99.00	-99.00	-99.00	-99.00	0.00	-99.00	-99.00	-0.93	-99.00	-99.00	-99.00	-99.00	-99.00	-99.00	-99.00	-99.00	-99.00	-24.75

Data Group H- Chemical and Kinetic Constants

Note: All Chemical Constants Data for Sept 1986 calibration
presented in Appendix L

Data Group I- Time Varying Forcing Functions

Note: All Time Varying Forcing Function Data for Sept 1986 calibration presented in Appendix L

Data Group J- Initial Conditions: Sept 1986

NH3-N	mg/l	Sys#01	CX86_NH3.IC	3	1.	999.	IC(xyz): J 06/04/91
SG001	0.100	1.000SG002	0.072	1.000SG003	0.059	1.000	
SG004	0.029	1.000SG005	0.010	1.000SG006	0.012	1.000	
SG007	0.014	1.000SG008	0.016	1.000SG009	0.018	1.000	
SG010	0.020	1.000SG011	0.023	1.000SG012	0.025	1.000	
SG013	0.028	1.000SG014	0.030	1.000SG015	0.032	1.000	
SG016	0.035	1.000SG017	0.040	1.000SG018	0.020	1.000	
SG019	0.020	1.000SG020	0.020	1.000SG021	0.020	1.000	
SG022	0.045	1.000SG023	0.075	1.000SG024	0.084	1.000	
SG025	0.099	1.000SG026	0.110	1.000SG027	0.102	1.000	
SG028	0.097	1.000SG029	0.090	1.000SG030	0.084	1.000	
SG031	0.078	1.000SG032	0.070	1.000SG033	0.065	1.000	
SG034	0.055	1.000SG035	0.049	1.000SG036	0.044	1.000	
SG037	0.038	1.000SG038	0.033	1.000SG039	0.030	1.000	
SG040	0.045	1.000SG041	0.050	1.000SG042	0.047	1.000	
SG043	0.045	1.000SG044	0.043	1.000SG045	0.042	1.000	
SG046	0.040	1.000SG047	0.040	1.000SG048	0.000	1.000	
N03+N02-N	mg/l	Sys#02	CX86_N03.IC	5	1.	999.	IC(xyz): J 06/04/91
SG001	0.780	1.000SG002	0.723	1.000SG003	0.697	1.000	
SG004	0.639	1.000SG005	0.600	1.000SG006	0.589	1.000	
SG007	0.579	1.000SG008	0.566	1.000SG009	0.551	1.000	
SG010	0.540	1.000SG011	0.574	1.000SG012	0.596	1.000	
SG013	0.625	1.000SG014	0.646	1.000SG015	0.662	1.000	
SG016	0.694	1.000SG017	0.750	1.000SG018	0.760	1.000	
SG019	0.652	1.000SG020	0.571	1.000SG021	0.430	1.000	
SG022	0.481	1.000SG023	0.541	1.000SG024	0.558	1.000	
SG025	0.588	1.000SG026	0.610	1.000SG027	0.659	1.000	
SG028	0.695	1.000SG029	0.738	1.000SG030	0.778	1.000	
SG031	0.819	1.000SG032	0.866	1.000SG033	0.900	1.000	
SG034	0.888	1.000SG035	0.881	1.000SG036	0.874	1.000	
SG037	0.867	1.000SG038	0.861	1.000SG039	0.852	1.000	
SG040	0.840	1.000SG041	0.835	1.000SG042	0.824	1.000	
SG043	0.817	1.000SG044	0.812	1.000SG045	0.806	1.000	
SG046	0.801	1.000SG047	0.800	1.000SG048	0.000	1.000	
O-P04	mg/l	Sys#03	CX86_P04.IC	5	1.	999.	IC(xyz): J 06/04/91
SG001	0.004	0.700SG002	0.006	0.700SG003	0.007	0.700	
SG004	0.009	0.700SG005	0.010	0.700SG006	0.010	0.700	
SG007	0.011	0.700SG008	0.011	0.700SG009	0.012	0.700	
SG010	0.012	0.700SG011	0.015	0.700SG012	0.016	0.700	
SG013	0.018	0.700SG014	0.020	0.700SG015	0.021	0.700	
SG016	0.024	0.700SG017	0.028	0.700SG018	0.036	0.700	
SG019	0.029	0.700SG020	0.025	0.700SG021	0.016	0.700	
SG022	0.021	0.700SG023	0.028	0.700SG024	0.030	0.700	
SG025	0.033	0.700SG026	0.035	0.700SG027	0.039	0.700	
SG028	0.043	0.700SG029	0.046	0.700SG030	0.050	0.700	
SG031	0.054	0.700SG032	0.058	0.700SG033	0.061	0.700	
SG034	0.059	0.700SG035	0.058	0.700SG036	0.057	0.700	
SG037	0.056	0.700SG038	0.055	0.700SG039	0.054	0.700	
SG040	0.046	0.700SG041	0.043	0.700SG042	0.035	0.700	
SG043	0.030	0.700SG044	0.027	0.700SG045	0.022	0.700	
SG046	0.018	0.700SG047	0.018	0.700SG048	0.000	0.700	
Phyt#1	ug chl/l	Sys#04	CX86_CHL.IC	4	1.	999.	IC(xyz): J 06/04/91
SG001	2.000	0.000SG002	2.000	0.000SG003	2.000	0.000	
SG004	2.000	0.000SG005	2.000	0.000SG006	2.000	0.000	
SG007	2.000	0.000SG008	2.000	0.000SG009	2.000	0.000	
SG010	2.000	0.000SG011	2.000	0.000SG012	2.000	0.000	
SG013	2.000	0.000SG014	2.000	0.000SG015	2.000	0.000	
SG016	2.000	0.000SG017	2.000	0.000SG018	2.000	0.000	
SG019	2.000	0.000SG020	2.000	0.000SG021	2.000	0.000	
SG022	2.000	0.000SG023	2.000	0.000SG024	2.000	0.000	
SG025	2.000	0.000SG026	2.000	0.000SG027	2.000	0.000	

Data Group J (Continued) - Initial Conditions: Sept 1986

SG028	2.000	0.000SG029	2.000	0.000SG030	2.000	0.000
SG031	2.000	0.000SG032	2.000	0.000SG033	2.000	0.000
SG034	2.000	0.000SG035	2.000	0.000SG036	2.000	0.000
SG037	2.000	0.000SG038	2.000	0.000SG039	2.000	0.000
SG040	2.000	0.000SG041	2.000	0.000SG042	2.000	0.000
SG043	1.300	0.000SG044	1.200	0.000SG045	3.310	0.000
SG046	3.865	0.000SG047	4.120	0.000SG048	0.000	0.000
CBOD-U	mg/l	Sys#05 CX86_BOD.IC	3	1.	999. IC(xyz): J 06/04/91	
SG001	11.340	0.800SG002	11.340	0.800SG003	11.340	0.800
SG004	11.340	0.800SG005	11.340	0.800SG006	11.340	0.800
SG007	11.340	0.800SG008	11.340	0.800SG009	11.340	0.800
SG010	11.340	0.800SG011	11.340	0.800SG012	11.340	0.800
SG013	11.340	0.800SG014	11.340	0.800SG015	11.340	0.800
SG016	11.340	0.800SG017	11.340	0.800SG018	11.340	0.800
SG019	11.340	0.800SG020	11.340	0.800SG021	11.340	0.800
SG022	11.340	0.800SG023	11.340	0.800SG024	11.340	0.800
SG025	11.340	0.800SG026	11.340	0.800SG027	11.340	0.800
SG028	11.340	0.800SG029	11.340	0.800SG030	11.340	0.800
SG031	11.340	0.800SG032	11.340	0.800SG033	11.340	0.800
SG034	11.340	0.800SG035	11.340	0.800SG036	11.340	0.800
SG037	11.340	0.800SG038	11.340	0.800SG039	11.340	0.800
SG040	11.340	0.800SG041	11.340	0.800SG042	11.340	0.800
SG043	11.340	0.800SG044	11.340	0.800SG045	22.822	0.800
SG046	16.726	0.800SG047	16.160	0.800SG048	0.000	0.800
Diss O2	mg/l	Sys#06 CX86_OXY.IC	5	1.	999. IC(xyz): J 06/04/91	
SG001	9.800	1.000SG002	9.485	1.000SG003	9.342	1.000
SG004	9.014	1.000SG005	8.800	1.000SG006	8.764	1.000
SG007	8.729	1.000SG008	8.687	1.000SG009	8.637	1.000
SG010	8.600	1.000SG011	8.535	1.000SG012	8.494	1.000
SG013	8.438	1.000SG014	8.398	1.000SG015	8.368	1.000
SG016	8.307	1.000SG017	8.200	1.000SG018	8.200	1.000
SG019	8.200	1.000SG020	8.200	1.000SG021	8.200	1.000
SG022	8.087	1.000SG023	7.954	1.000SG024	7.915	1.000
SG025	7.848	1.000SG026	7.800	1.000SG027	8.004	1.000
SG028	8.153	1.000SG029	8.329	1.000SG030	8.496	1.000
SG031	8.663	1.000SG032	8.861	1.000SG033	9.000	1.000
SG034	8.858	1.000SG035	8.776	1.000SG036	8.700	1.000
SG037	8.615	1.000SG038	8.549	1.000SG039	8.500	1.000
SG040	7.900	1.000SG041	7.700	1.000SG042	7.822	1.000
SG043	7.910	1.000SG044	7.961	1.000SG045	8.033	1.000
SG046	8.093	1.000SG047	8.100	1.000SG048	0.000	1.000
Org-N	mg/l	Sys#07 CX86_TON.IC	3	1.	999. IC(xyz): J 06/04/91	
SG001	0.280	0.800SG002	0.387	0.800SG003	0.436	0.800
SG004	0.547	0.800SG005	0.620	0.800SG006	0.595	0.800
SG007	0.570	0.800SG008	0.541	0.800SG009	0.506	0.800
SG010	0.480	0.800SG011	0.477	0.800SG012	0.475	0.800
SG013	0.472	0.800SG014	0.470	0.800SG015	0.468	0.800
SG016	0.465	0.800SG017	0.460	0.800SG018	0.530	0.800
SG019	0.481	0.800SG020	0.444	0.800SG021	0.380	0.800
SG022	0.411	0.800SG023	0.448	0.800SG024	0.458	0.800
SG025	0.477	0.800SG026	0.490	0.800SG027	0.494	0.800
SG028	0.497	0.800SG029	0.501	0.800SG030	0.505	0.800
SG031	0.508	0.800SG032	0.512	0.800SG033	0.515	0.800
SG034	0.634	0.800SG035	0.703	0.800SG036	0.767	0.800
SG037	0.838	0.800SG038	0.894	0.800SG039	0.935	0.800
SG040	1.014	0.800SG041	1.040	0.800SG042	0.979	0.800
SG043	0.935	0.800SG044	0.909	0.800SG045	0.873	0.800
SG046	0.843	0.800SG047	0.840	0.800SG048	0.000	0.800
Org-P	mg/l	Sys#08 CX86_TOP.IC	3	1.	999. IC(xyz): J 06/04/91	
SG001	0.016	0.100SG002	0.033	0.100SG003	0.041	0.100
SG004	0.058	0.100SG005	0.070	0.100SG006	0.068	0.100
SG007	0.066	0.100SG008	0.063	0.100SG009	0.060	0.100
SG010	0.058	0.100SG011	0.057	0.100SG012	0.056	0.100
SG013	0.056	0.100SG014	0.055	0.100SG015	0.055	0.100
SG016	0.054	0.100SG017	0.052	0.100SG018	0.074	0.100
SG019	0.064	0.100SG020	0.057	0.100SG021	0.044	0.100

Data Group J (Continued) - Initial Conditions: Sept 1986

SG022	0.041	0.100SG023	0.038	0.100SG024	0.038	0.100
SG025	0.036	0.100SG026	0.035	0.100SG027	0.035	0.100
SG028	0.035	0.100SG029	0.035	0.100SG030	0.034	0.100
SG031	0.034	0.100SG032	0.034	0.100SG033	0.034	0.100
SG034	0.049	0.100SG035	0.057	0.100SG036	0.065	0.100
SG037	0.074	0.100SG038	0.081	0.100SG039	0.086	0.100
SG040	0.083	0.100SG041	0.082	0.100SG042	0.076	0.100
SG043	0.071	0.100SG044	0.069	0.100SG045	0.065	0.100
SG046	0.062	0.100SG047	0.062	0.100SG048	0.000	0.100

Appendix N- Verification PRM Input Data: September 1985
Wasp4 Input File: PRM85069.INP

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Data Group A- Simulation Control data: September 1985

SegNo	APP N 01.TBL GEOM85.WQ1	Upstr Riv Mi miles	Dwnstr Riv Mi miles	Seg Cntr Riv Mi miles	Segment Depth meters	Segment Sfc A (xy) sq meters	Segment Volume cu meters
SG001	Westvaco	340.0	338.7	339.35	0.560	72126.8	40391.0
SG002	Georges Ck	338.7	338.2	338.45	0.682	33602.6	22917.0
SG003	UPRC STP	338.2	336.3	337.25	0.633	114835.7	72691.0
SG004	Stony Run	336.3	332.7	334.50	0.707	207196.6	146488.0
SG005	Keyser	332.7	331.4	332.05	0.773	72760.7	56244.0
SG006	21st Br	331.4	328.5	329.95	1.150	175081.7	201344.0
SG007	Dawson	328.5	326.0	327.25	1.150	150932.2	173572.0
SG008	Black Oak	326.0	322.0	324.00	1.150	241492.2	277716.0
SG009	Rawlings	322.0	318.3	320.15	1.150	223380.0	256887.0
SG010	Pinto	318.3	314.1	316.20	1.110	252520.7	280298.0
SG011	Cresaptown	314.1	313.4	313.75	2.100	51644.3	108453.0
SG012	Celanese	313.4	309.6	311.50	1.030	213403.9	219806.0
SG013	Md.Junctn.	309.6	307.3	308.45	2.270	175778.4	399017.0
SG014	Wills Ck	307.3	305.2	306.25	0.844	163235.8	137771.0
SG015	Wiley Ford	305.2	304.0	304.60	1.410	68018.4	95906.0
SG016	Cumbrlnd STP	304.0	298.5	301.25	1.550	406237.4	629668.0
SG017	Mexico Field	298.5	294.1	296.30	1.220	274570.5	334976.0
SG018	Pattersn Ck	294.1	285.1	289.60	1.330	582649.6	774924.0
SG019	So. Branch	285.1	282.6	283.85	1.380	231239.9	319111.0
SG020	Town Ck	282.6	279.8	281.20	1.380	258988.4	357404.0
SG021	L Cacapon R	279.8	276.5	278.15	1.380	305236.2	421226.0
SG022	Paw Paw	276.5	255.2	265.85	1.070	2111726.2	2259547.0
SG023	15 Mile Ck	255.2	251.3	253.25	0.831	562830.3	467712.0
SG024	SidelingH.Ck	251.3	247.7	249.50	0.831	519535.5	431734.0
SG025	Cacapon R	247.7	238.6	243.15	0.833	1313816.3	1094409.0
SG026	Hancock	238.6	231.2	234.90	0.854	1084072.6	925798.0
SG027	Licking Ck	231.2	227.1	229.15	0.854	600634.7	512942.0
SG028	Ft Frederick	227.1	217.4	222.25	1.670	3531919.2	5898305.0
SG029	Dam #5	217.4	210.8	214.10	1.050	1573835.2	1652527.0
SG030	Conocochg Ck	210.8	201.9	206.35	1.100	2150566.4	2365623.0
SG031	Opequon Ck	201.9	195.3	198.60	1.670	2611021.0	4360405.0
SG032	Dam #4	195.3	183.6	189.45	0.843	2867193.4	2417044.0
SG033	Sheperdstown	183.6	179.3	181.45	0.843	1053754.4	888315.0
SG034	Antietam Ck	179.3	173.1	176.20	1.600	2665696.3	4265114.0
SG035	Pleasantv.Dam	173.1	171.5	172.30	0.479	737688.9	353353.0
SG036	Shenandoah R	171.5	165.8	168.65	0.588	2765702.4	1626233.0
SG037	Brunswick	165.8	163.4	164.60	0.783	1110015.3	869142.0
SG038	CatoctinCkMD	163.4	159.5	161.45	0.788	1806165.0	1423258.0
SG039	Pt of Rocks	159.5	153.1	156.30	0.785	3056422.9	2399292.0
SG040	Monacacy R	153.1	147.1	150.10	0.807	2884804.2	2328037.0
SG041	Whites Ferry	147.1	142.2	144.65	0.929	2868135.6	2664498.0
SG042	Goose Ck	142.2	133.9	138.05	0.951	4884128.3	4644806.0
SG043	Seneca Ck	133.9	129.1	131.50	0.951	2744147.2	2609684.0
SG044	Watts Branch	129.1	126.3	127.70	2.600	1544710.4	4016247.0
SG045	Gr Falls Dam	126.3	118.4	122.35	1.390	3247623.0	4514196.0
SG046	Ruppert Isl.	118.4	117.4	117.90	2.540	516293.7	1311386.0
SG047	L. Falls Dam	117.4	115.9	116.65	1.240	577811.3	716486.0
SG048	Dummy Sed.Layer	340.0	115.9	227.95	0.010	55665181.7	556651.8

Data Group B- Exchange Coefficients: September 1985

APP N 02.TBL GEOM85.WQ1	From Seg#	To Seg#	X-Area sq meters	Char L meters	Kx sq m/sec
SG000 Upstream BC	0	1	19.31	1046.07	45.0
SG001 Westvaco	1	2	19.31	1448.41	45.0
SG002 Georges Ck	2	3	23.77	1931.21	45.0
SG003 UPRC STP	3	4	23.77	4425.70	45.0
SG004 Stony Run	4	5	25.23	3942.89	45.0
SG005 Keyser	5	6	26.88	3379.62	45.0
SG006 21st Br	6	7	43.14	4345.23	30.0
SG007 Dawson	7	8	43.14	5230.37	30.0
SG008 Black Oak	8	9	43.14	6195.97	30.0
SG009 Rawlings	9	10	41.47	6356.91	30.0
SG010 Pinto	10	11	41.47	3942.89	45.0
SG011 Cresaptown	11	12	35.94	3621.02	30.0
SG012 Celanese	12	13	35.94	4908.50	30.0
SG013 Md.Junctn.	13	14	40.77	3540.56	45.0
SG014 Wills Ck	14	15	40.77	2655.42	45.0
SG015 Wiley Ford	15	16	49.66	5391.30	80.0
SG016 Cumbrlnd STP	16	17	47.31	7966.25	80.0
SG017 Mexico Field	17	18	47.31	10782.60	80.0
SG018 Pattersn Ck	18	19	53.50	9253.73	30.0
SG019 So. Branch	19	20	79.31	4264.76	30.0
SG020 Town Ck	20	21	79.31	4908.50	30.0
SG021 L Cacapon R	21	22	65.92	19794.93	80.0
SG022 Paw Paw	22	23	65.92	20277.73	80.0
SG023 15 Mile Ck	23	24	65.92	6035.04	60.0
SG024 SidelingH.Ck	24	25	74.52	10219.33	60.0
SG025 Cacapon R	25	26	74.52	13277.09	60.0
SG026 Hancock	26	27	77.74	9253.73	60.0
SG027 Licking Ck	27	28	77.74	11104.47	30.0
SG028 Ft Frederick	28	29	155.58	13116.15	100.0
SG029 Dam #5	29	30	155.58	12472.42	45.0
SG030 Conococho Ck	30	31	165.16	12472.42	45.0
SG031 Opequon Ck	31	32	128.37	14725.50	45.0
SG032 Dam #4	32	33	128.37	12874.75	80.0
SG033 Sheperdstown	33	34	128.37	8449.06	60.0
SG034 Antietam Ck	34	35	137.23	6276.44	60.0
SG035 Pleasntv.Dam	35	36	137.23	5874.11	45.0
SG036 Shenandoah R	36	37	177.28	6517.84	45.0
SG037 Brunswick	37	38	225.02	5069.43	45.0
SG038 CatoctinCkMD	38	39	226.76	8288.12	45.0
SG039 Pt of Rocks	39	40	232.95	9977.93	30.0
SG040 Monacacy R	40	41	241.10	8770.93	30.0
SG041 Whites Ferry	41	42	337.89	10621.67	80.0
SG042 Goose Ck	42	43	337.83	10541.20	30.0
SG043 Seneca Ck	43	44	337.83	6115.51	30.0
SG044 Watts Branch	44	45	355.06	8609.99	80.0
SG045 Gr Falls Dam	45	46	355.06	7161.58	30.0
SG046 Ruppert Isl.	46	47	296.80	2011.68	80.0
SG047 L. Falls Dam	47	0	296.80	1207.01	80.0
SG048 Dummy Sediment Layer					

Data Group C- Segment Volumes: September 1985

APP N 03.TBL GEOM85.WQ1	Volume cu meters	Coeff "a" AMULT	Expon "b" VEXP	Coeff "c" DMULT	Expon "d" DXP
SG001 Westvaco	40391.0	0.1430	0.5570	0.3020	0.2690
SG002 Georges Ck	22917.0	0.1010	0.5570	0.3590	0.2690
SG003 UPRC STP	72691.0	0.1210	0.5570	0.3330	0.2690
SG004 Stony Run	146488.0	0.1140	0.5570	0.3720	0.2690
SG005 Keyser	56244.0	0.1070	0.5570	0.4070	0.2690
SG006 21st Br	201344.0	0.1410	0.2430	0.2610	0.6200
SG007 Dawson	173572.0	0.1410	0.2430	0.2610	0.6200
SG008 Black Oak	277716.0	0.1410	0.2430	0.2610	0.6200
SG009 Rawlings	256887.0	0.1410	0.2430	0.2610	0.6200
SG010 Pinto	280298.0	0.0852	0.4780	0.4220	0.4000
SG011 Cresaptown	108453.0	0.0367	0.4780	0.7990	0.4000
SG012 Celanese	219806.0	0.0983	0.4780	0.3930	0.4000
SG013 Md.Junctn.	399017.0	0.0119	0.8970	2.0220	0.0480
SG014 Wills Ck	137771.0	0.1150	0.3840	0.2730	0.4500
SG015 Wiley Ford	95906.0	0.0944	0.3840	0.4550	0.4500
SG016 Cumbrlnd STP	629668.0	0.0659	0.3840	0.5000	0.4500
SG017 Mexico Field	334976.0	0.0991	0.3840	0.3940	0.4500
SG018 Pattersn Ck	774924.0	0.0991	0.3840	0.3940	0.4500
SG019 So. Branch	319111.0	0.0788	0.3840	0.3480	0.4620
SG020 Town Ck	357404.0	0.0788	0.3840	0.3480	0.4620
SG021 L Cacapon R	421226.0	0.0788	0.3840	0.3480	0.4620
SG022 Paw Paw	2259547.0	0.0719	0.4770	0.3330	0.3920
SG023 15 Mile Ck	467712.0	0.0636	0.4770	0.2590	0.3920
SG024 SidelingH.Ck	431734.0	0.0636	0.4770	0.2590	0.3920
SG025 Cacapon R	1094409.0	0.0636	0.4770	0.2590	0.3920
SG026 Hancock	925798.0	0.0462	0.5710	0.3270	0.3220
SG027 Licking Ck	512942.0	0.0462	0.5710	0.3270	0.3220
SG028 Ft Frederick	5898305.0	0.0098	0.5710	0.6240	0.3220
SG029 Dam #5	1652527.0	0.0238	0.5710	0.3940	0.3220
SG030 Conococho Ck	2365623.0	0.0238	0.5710	0.3940	0.3220
SG031 Opequon Ck	4360405.0	0.0098	0.5710	0.5860	0.3220
SG032 Dam #4	2417044.0	0.0326	0.5710	0.2880	0.3220
SG033 Sheperdstown	888315.0	0.0326	0.5710	0.2880	0.3220
SG034 Antietam Ck	4265114.0	0.0174	0.4180	0.3210	0.4660
SG035 Pleasntv.Dam	353353.0	0.0542	0.4180	0.0960	0.4660
SG036 Shenandoah R	1626233.0	0.0542	0.4180	0.0960	0.4660
SG037 Brunswick	869142.0	0.0427	0.4180	0.1280	0.4660
SG038 CatoctinCkMD	1423258.0	0.0427	0.4180	0.1280	0.4660
SG039 Pt of Rocks	2399292.0	0.0192	0.6160	0.2370	0.3070
SG040 Monacacy R	2328037.0	0.0192	0.6160	0.2370	0.3070
SG041 Whites Ferry	2664498.0	0.0137	0.6160	0.2730	0.3070
SG042 Goose Ck	4644806.0	0.0137	0.6160	0.2730	0.3070
SG043 Seneca Ck	2609684.0	0.0137	0.6160	0.2730	0.3070
SG044 Watts Branch	4016247.0	0.0049	0.6160	0.7650	0.3070
SG045 Gr Falls Dam	4514196.0	0.0123	0.6160	0.4280	0.3070
SG046 Ruppert Isl.	1311386.0	0.0055	0.6160	0.7650	0.3070
SG047 L. Falls Dam	716486.0	0.0151	0.6160	0.3730	0.3070
SG048 Dummy Sediment	556651.8	0.0151	0.6160	0.3730	0.3070

Data Group D- Flows and Transport

Note: All Flow and Transport Data for Sept 1985 verification
presented in Appendix L

Data Group E- Boundary Conditions: September 1985

- A - Individual Boundary Condition Flows and Concentrations
- B - Individual Boundary Condition Flows and Mass Load
- C - Sum of Boundary Condition Flows and Mass Load by Segment
- D - Weighted Sum Boundary Condition Concentrations by Segment

Data Group E, Part A: Individual BC Flows & Conc.by Wasp4 BC Input No. Avg. over time:

09/01/1985	0000	JD=	244.00												
JWK	NSEG	Seg#	BC	Input	-----Flow (mgd)	MH3 N mg N/L	N03+N02 N mg N/L	O P04 mg P/L	PHYT#1 ug Chl/L	C800 5 mg BOD7L	DISS O2 mg O2/L	ORG N mg N/L	ORG P mg P/L	Total N mg N/L	Total P mg P/L
1	128	1	B	TBRG: N Br.Potomac BC	224.240	0.1000	0.6500	0.0100	2.0000	2.0000	10.2000	0.3300	0.0100	1.0800	0.0200
2	128	2	B	TBRG: Savage River nr B	0.000	0.0000	0.0000	0.0100	2.0000	2.0000	10.2500	0.3800	0.0400	1.0300	0.0500
3	128	2	B	TBRG: Georges Ck @ Fran	3.878	0.0500	0.9600	0.0200	2.0000	2.0000	10.2000	0.4000	0.0500	1.4100	0.0700
4	128	4	B	TBRG: Willis Ck nr Cumbe	15.512	0.0400	0.1600	0.0100	2.0000	2.0000	6.7500	0.3100	0.0400	0.5100	0.0500
5	128	19	B	TBRG: S.Br.Potomac nr S	90.486	0.0400	0.2700	0.0100	2.0000	2.0000	8.1000	0.2900	0.0300	0.6000	0.0400
6	128	20	B	TBRG: Town Ck nr Oldtow	4.192	0.0200	0.0200	0.0100	2.0000	2.0000	8.1000	0.4800	0.0400	0.5200	0.0500
7	128	30	B	TBRG: Conococheague Ck	65.925	0.0300	2.6800	0.2700	2.0000	2.0000	7.4000	0.5700	0.0100	3.2800	0.2800
8	128	31	B	TBRG: Opequon Ck @Marti	29.731	0.0700	0.2700	0.1880	2.0000	1.2000	9.4000	0.2700	0.0310	0.6100	0.2190
9	128	34	B	TBRG: Antietam Ck nr Sh	71.096	0.0300	4.9900	0.6500	2.0000	2.0000	8.1000	0.8100	0.0300	5.8300	0.6800
10	128	36	B	TBRG: Shenandoah R @Mil	365.822	0.0500	0.6100	0.1100	2.0000	2.0000	7.2000	0.4500	0.0100	1.1100	0.1200
11	128	38	B	TBRG: Catoctin Ck MD	5.817	0.0200	0.2400	0.1200	2.0000	2.0000	8.4000	0.4000	0.0300	0.6600	0.1500
12	128	39	B	TBRG: Catocctin Ck VA	0.000	0.1000	0.0500	0.0200	2.0000	1.0000	7.9000	0.4000	0.0800	0.5500	0.1000
13	128	40	B	TBRG: Monacacy R @Jug B	79.498	0.0800	1.8500	0.4600	2.0000	0.5000	6.3000	0.7700	0.0310	2.7000	0.4910
14	128	42	B	TBRG: Goose Ck nr Leesb	0.646	0.9500	1.6250	0.3850	4.0000	2.0000	7.0000	0.7500	0.0150	3.3250	0.4000
15	128	43	B	TBRG: Seneca Ck @Dawson	14.219	0.0200	5.1000	0.3800	4.0000	1.9000	8.2000	0.6300	0.3130	5.7500	0.6930
16	128	47	B	TBRG: Potomac River BC	1008.273	0.0400	0.8400	0.0900	1.7000	1.0000	8.1500	0.4400	0.0200	1.3200	0.1100
17	128	1	C	DIVR: Westvaco Corporat	-21.330	0.1000	0.6500	0.0100	1.2000	4.0000	10.2000	0.3300	0.0100	1.0800	0.0200
18	128	22	C	DIVR: City of Paw Paw	-0.060	0.0300	0.4300	0.0200	1.2000	4.0000	5.6500	0.5000	0.0200	1.3600	0.0800
19	128	30	C	DIVR: City of Hagerstow	-5.700	0.0500	0.8100	0.0600	1.2000	4.0000	8.0000	0.5000	0.0200	1.3600	0.0800
20	128	32	C	DIVR: City of Sharpsbur	-0.100	0.0500	0.8100	0.0600	1.2000	4.0000	8.0000	0.5000	0.0200	1.3600	0.0800
21	128	33	C	DIVR: City of Shephards	-0.350	0.0500	0.8100	0.0600	1.2000	4.0000	8.0000	0.5000	0.0200	1.3600	0.0800
22	128	33	C	DIVR: City of Harpers F	-0.350	0.0500	0.8100	0.0600	1.2000	4.0000	8.0000	0.5000	0.0200	1.3600	0.0800
23	128	36	C	DIVR: City of Lovettsvl	0.000	0.0500	0.8100	0.0600	1.2000	4.0000	8.0000	0.5000	0.0200	1.3600	0.0800
24	128	37	C	DIVR: City of Brunswick	-0.300	0.0500	0.8100	0.0600	1.2000	4.0000	8.0000	0.5000	0.0200	1.3600	0.0800
25	128	39	C	DIVR: Point of Rocks	-1.500	0.0350	0.8750	0.1000	1.2000	2.3500	7.9000	0.5650	0.0250	1.4750	0.1250
26	128	42	C	DIVR: City of Leesburg	-1.300	0.0900	0.8700	0.1300	3.0000	0.8000	6.2000	0.5400	0.0500	1.5000	0.1800
27	128	43	C	DIVR: Fairfax Co FCWA	-41.700	0.0900	0.8700	0.1300	3.0000	0.8000	6.2000	0.5400	0.0500	1.5000	0.1800
28	128	43	C	DIVR: WSSC	-133.830	0.0900	0.8700	0.1300	3.0000	0.8000	6.2000	0.5400	0.0500	1.5000	0.1800
29	128	44	C	DIVR: WAD Great Falls	-158.950	0.0900	0.8700	0.1300	3.0000	0.8000	6.2000	0.5400	0.0500	1.5000	0.1800
30	128	44	C	DIVR: City of Rockville	-5.990	0.0900	0.8700	0.1300	3.0000	0.8000	6.2000	0.5400	0.0390	1.3360	0.1200
31	128	47	C	DIVR: WAD Little Falls	-80.790	0.0480	0.8140	0.0810	17.0000	1.5500	7.9670	0.4740	0.0889	1.1300	0.6222
32	128	1	D	INDU: WESTVACO CORP LUK	3.900	0.8000	0.0900	0.5333	0.0000	2.0000	6.2500	0.2400	0.0889	1.1300	0.6222
33	128	3	D	INDU: UPPER POTOMAC RIV	17.430	0.1000	0.2200	0.5000	0.0000	24.0000	5.9000	1.4000	0.1000	1.7200	0.6000
34	128	8	D	INDU: JEFFERSON COUNTY	0.025	9.0000	6.3000	6.0000	0.0000	30.0000	6.2500	2.7000	1.0000	18.0000	7.0000
35	128	14	D	INDU: HERCULES INC	0.100	9.0000	6.3000	6.0000	0.0000	30.0000	6.2500	2.7000	1.0000	18.0000	7.0000
36	128	14	D	INDU: USDO-APPALACHIAN	0.006	9.0000	6.3000	6.0000	0.0000	29.9000	6.2500	2.7000	1.0000	18.0000	7.0000
37	128	17	D	INDU: PPG O INDUSTRIES	0.001	9.0000	6.3000	6.0000	0.0000	27.5000	6.2500	2.7000	1.0000	18.0000	7.0000
38	128	30	D	INDU: POTOMAC EDISON PA	1.200	0.3100	0.6400	0.2067	0.0000	4.6330	6.2500	0.0930	0.0344	1.0430	0.2411
39	128	45	D	INDU: FIRST AMERICAN LA	0.372	9.0000	6.3000	6.0000	0.0000	10.0000	6.2500	2.7000	1.0000	18.0000	7.0000
40	128	1	E	MUNI: BLOOMINGTON WHTP	0.015	9.0000	6.3000	6.0000	0.0000	6.5970	6.9800	2.7000	1.0000	18.0000	7.0000
41	128	4	E	MUNI: TRI TOWN PLAZA	0.010	9.0000	6.3000	6.0000	0.0000	7.0000	6.0000	2.7000	1.0000	18.0000	7.0000
42	128	5	E	MUNI: KEYSER CITY OF	1.100	9.0000	6.3000	6.0000	0.0000	27.5000	6.2500	2.7000	1.0000	18.0000	7.0000
43	128	9	E	MUNI: RAWLINGS, TOWN OF	0.125	9.0000	6.3000	6.0000	0.0000	14.8000	5.5330	2.7000	1.0000	18.0000	7.0000
44	128	12	E	MUNI: ALLEGANY COUNTY-B	0.165	9.0000	6.3000	6.0000	0.0000	83.0000	5.4000	2.7000	1.0000	18.0000	7.0000
45	128	12	E	MUNI: ALLEGANY COUNTY-C	0.212	9.0000	6.3000	6.0000	0.0000	32.0000	6.5000	2.7000	1.0000	18.0000	7.0000
46	128	14	E	MUNI: RIDGLEY, TOWN OF	0.120	9.0000	6.3000	6.0000	0.0000	30.0000	5.5000	2.7000	1.0000	18.0000	7.0000
47	128	16	E	MUNI: CUMBERLAND, CITY O	6.920	9.0000	6.3000	6.0000	0.0000	4.3000	5.0000	2.7000	1.0000	18.0000	7.0000
48	128	17	E	MUNI: MEXICO FARMS	0.013	9.0000	6.3000	6.0000	0.0000	6.9000	2.6000	2.7000	1.0000	18.0000	7.0000
49	128	22	E	MUNI: PAW PAW, TOWN OF	0.060	9.0000	6.3000	6.0000	0.0000	30.0000	5.0000	2.7000	1.0000	18.0000	7.0000
50	128	27	E	MUNI: FAIRVIEW BCH, SAN	0.016	9.0000	6.3000	6.0000	0.0000	13.5000	3.5000	2.7000	1.0000	18.0000	7.0000
51	128	30	E	MUNI: HONEYWOOD	0.050	9.0000	6.3000	6.0000	0.0000	11.1000	5.2000	2.7000	1.0000	18.0000	7.0000
52	128	30	E	MUNI: WSSC SUBDIV 1-HAL	1.000	9.0000	6.3000	6.0000	0.0000	22.7000	7.3000	2.7000	1.0000	18.0000	7.0000
53	128	32	E	MUNI: RIVERBEND	0.040	9.0000	6.3000	6.0000	0.0000	30.0000	5.0000	2.7000	1.0000	18.0000	7.0000
54	128	33	E	MUNI: SHEPHERDSTOWN STP	0.500	9.0000	6.3000	6.0000	0.0000	30.0000	6.2500	2.7000	1.0000	18.0000	7.0000
55	128	33	E	MUNI: SHEPHERDSTOWN WPC	0.400	9.0000	6.3000	6.0000	0.0000	30.0000	6.2500	2.7000	1.0000	18.0000	7.0000
56	128	36	E	MUNI: HARPERS FERRY TOW	0.160	9.0000	6.3000	6.0000	0.0000	13.0000	6.2500	2.7000	1.0000	18.0000	7.0000
57	128	36	E	MUNI: HARPERS FERRY-BOL	0.070	9.0000	6.3000	6.0000	0.0000	30.0000	6.2500	2.7000	1.0000	18.0000	7.0000
58	128	37	E	MUNI: BRUNSWICK SEWAGE	0.306	9.0000	6.3000	6.0000	0.0000	9.0000	6.2000	2.7000	1.0000	18.0000	7.0000
59	128	39	E	MUNI: POINT OF ROCKS FR	0.040	9.0000	6.3000	6.0000	0.0000	5.0000	7.8000	2.7000	1.0000	18.0000	7.0000
60	128	44	E	MUNI: ROCKVILLE, FLOW-O	0.000	13.5000	2.0000	6.0000	0.0000	27.5000	4.0000	3.0000	1.0000	18.5000	7.0000
61	128	1	F	TRBU: Montgomery Run	0.000	0.0200	0.6300	0.0100	2.0000	2.0000	10.2500	0.3800	0.0400	1.0300	0.0500
62	128	3	F	TRBU: Powder House Run	0.497	0.0200	0.6300	0.0100	2.0000	2.0000	10.2500	0.3800	0.0400	1.0300	0.0500
63	128	3	F	TRBU: Slaughterhouse Ru	0.497	0.0200	0.6300	0.0100	2.0000	2.0000	10.2500	0.3800	0.0400	1.0300	0.0500
64	128	4	F	TRBU: Thunckerbill Run	0.497	0.0200	0.6300	0.0100	2.0000	2.0000	10.2500	0.3800	0.0400	1.0300	0.0500
65	128	5	F	TRBU: Limestone Run	0.497	0.0200	0.6300	0.0100	2.0000	2.0000	10.2500	0.3800	0.0400	1.0300	0.0500
66	128	5	F	TRBU: New Creek	0.497	0.0200	0.6300	0.0100	2.0000	2.0000	10.2500	0.3800	0.0400	1.0300	0.0500
67	128	8	F	TRBU: Ashcagin Run	0.497	0.0200	0.6300	0.0100	2.0000	2.0000	10.2500	0.3800	0.0400	1.0300	0.0500
68	128	9	F	TRBU: Mill Run	0.497	0.0200	0.6300	0.0100	2.0000	2.0000	10.2500	0.3800	0.0400	1.0300	0.0500
69	128	12	F	TRBU: Warrior Run	0.497	0.0200	0.6300	0.0100	2.0000	2.0000	10.2500	0.3800	0.0400	1.0300	0.0500
70	128	16	F	TRBU: Evitts Creek	4.512	0.0400	0.2700	0.0100	2.0000	2.0000	8.1000	0.2900	0.0300	0.6000	0.0400
71	128	17	F	TRBU: Collier Run	4.512	0.0400	0.2700	0.0100	2.0000	2.0000	8.1000	0.2900	0.0300	0.6000	0.0400
72	128	18	F	TRBU: Brice Hollow Run	4.512	0.0400	0.2700	0.0100	2.0000	2.0000	8.1000	0.2900	0.0300	0.6000	0.0400
73	128	18	F	TRBU: Broad Hollow Run	4.512	0.0400	0.2700	0.0100	2.0000	2.0000	8.1000	0.2900	0.0300	0.6000	0.0400
74	128	18	F	TRBU: Green Spring Run	4.512	0.0400	0.2700	0.010							

Upper Potomac River Model: Vol.3 Appendix N

FINAL REPORT

Data Group E, Part A (Continued): Individual BC Flows & Conc.by Wasp4 BC Input No. Avg. over time:

JWK	NSEG	Seg#	BC Input	Flow (mgd)	NH3 N mg N/L	NO3+NO2 N mg N/L	O PO4 mg P/L	PHYT#1 ug Chl/L	CBOD 5 mg BOD/L	DISS O2 mg O2/L	ORG N mg N/L	ORG P mg P/L	Total N mg N/L	Total P mg P/L
95	128	27	F TRBU: Big Run	7.170	0.0400	0.2700	0.0100	2.0000	2.0000	8.1000	0.2900	0.0300	0.6000	0.0400
96	128	27	F TRBU: Cherry Run	7.170	0.0400	0.2700	0.0100	2.0000	2.0000	8.1000	0.2900	0.0300	0.6000	0.0400
97	128	28	F TRBU: Back Creek	7.170	0.0400	0.2700	0.0100	2.0000	2.0000	8.1000	0.2900	0.0300	0.6000	0.0400
98	128	28	F TRBU: Green Spring Run	7.170	0.0400	0.2700	0.0100	2.0000	2.0000	8.1000	0.2900	0.0300	0.6000	0.0400
99	128	28	F TRBU: Harlan Run	7.170	0.0400	0.2700	0.0100	2.0000	2.0000	8.1000	0.2900	0.0300	0.6000	0.0400
100	128	28	F TRBU: Jordan Run	7.170	0.0400	0.2700	0.0100	2.0000	2.0000	8.1000	0.2900	0.0300	0.6000	0.0400
101	128	29	F TRBU: Little Conocochea	7.170	0.0300	2.6800	0.2700	2.0000	2.0000	7.4000	0.5700	0.0100	3.2800	0.2800
102	128	31	F TRBU: Downey Branch	7.170	0.0700	0.2700	0.1880	2.0000	1.2000	9.4000	0.2700	0.0310	0.6100	0.2190
103	128	32	F TRBU: Marsh Run	3.840	0.0700	0.2700	0.1880	2.0000	1.2000	9.4000	0.2700	0.0310	0.6100	0.2190
104	128	32	F TRBU: Rockymarsh Run	3.840	0.0700	0.2700	0.1880	2.0000	1.2000	9.4000	0.2700	0.0310	0.6100	0.2190
105	128	33	F TRBU: Rattlesnake Run	3.840	0.0700	0.2700	0.1880	2.0000	1.2000	9.4000	0.2700	0.0310	0.6100	0.2190
106	128	33	F TRBU: Town Run	3.840	0.0700	0.2700	0.1880	2.0000	1.2000	9.4000	0.2700	0.0310	0.6100	0.2190
107	128	34	F TRBU: Elk Branch	3.840	0.0300	4.9900	0.6500	2.0000	2.0000	8.1000	0.8100	0.0300	5.8300	0.6800
108	128	36	F TRBU: Dutchman Creek	3.840	0.0300	4.9900	0.6500	2.0000	2.0000	8.1000	0.8100	0.0300	5.8300	0.6800
109	128	36	F TRBU: Isreal Creek	3.840	0.0300	4.9900	0.6500	2.0000	2.0000	8.1000	0.8100	0.0300	5.8300	0.6800
110	128	36	F TRBU: Piney Run	3.840	0.0300	4.9900	0.6500	2.0000	2.0000	8.1000	0.8100	0.0300	5.8300	0.6800
111	128	37	F TRBU: Little Catoctin C	3.840	0.0300	4.9900	0.6500	2.0000	2.0000	8.1000	0.8100	0.0300	5.8300	0.6800
112	128	37	F TRBU: Quarter Branch	3.840	0.0300	4.9900	0.6500	2.0000	2.0000	8.1000	0.8100	0.0300	5.8300	0.6800
113	128	39	F TRBU: Tuscarora Creek	16.137	0.0800	1.8500	0.4600	2.0000	0.5000	6.3000	0.7700	0.0310	2.7000	0.4910
114	128	40	F TRBU: Limestone Branch	16.137	0.0800	1.8500	0.4600	2.0000	0.5000	6.3000	0.7700	0.0310	2.7000	0.4910
115	128	40	F TRBU: Little Monocacy	16.137	0.0800	1.8500	0.4600	2.0000	0.5000	6.3000	0.7700	0.0310	2.7000	0.4910
116	128	42	F TRBU: Broad Run	16.137	0.9500	1.6250	0.3850	4.0000	2.0000	7.0000	0.7500	0.0150	3.3250	0.4000
117	128	42	F TRBU: Cabin Branch	16.137	0.9500	1.6250	0.3850	4.0000	2.0000	7.0000	0.7500	0.0150	3.3250	0.4000
118	128	42	F TRBU: Chriel Branch	16.137	0.9500	1.6250	0.3850	4.0000	2.0000	7.0000	0.7500	0.0150	3.3250	0.4000
119	128	42	F TRBU: Horsepen Branch	16.137	0.9500	1.6250	0.3850	4.0000	2.0000	7.0000	0.7500	0.0150	3.3250	0.4000
120	128	42	F TRBU: Sugarland Run	16.137	0.9500	1.6250	0.3850	4.0000	2.0000	7.0000	0.7500	0.0150	3.3250	0.4000
121	128	43	F TRBU: Muddy Branch	16.137	0.0200	5.1000	0.3800	4.0000	1.9000	8.2000	0.6300	0.3130	5.7500	0.6930
122	128	43	F TRBU: Nichols Run	16.137	0.0200	5.1000	0.3800	4.0000	1.9000	8.2000	0.6300	0.3130	5.7500	0.6930
123	128	45	F TRBU: Bullneck Run	16.137	0.0200	5.1000	0.3800	4.0000	1.9000	8.2000	0.6300	0.3130	5.7500	0.6930
124	128	45	F TRBU: Dean Run	16.137	0.0200	5.1000	0.3800	4.0000	1.9000	8.2000	0.6300	0.3130	5.7500	0.6930
125	128	45	F TRBU: Difficult Run	16.137	0.0200	5.1000	0.3800	4.0000	1.9000	8.2000	0.6300	0.3130	5.7500	0.6930
126	128	45	F TRBU: Rock Run	16.137	0.0200	5.1000	0.3800	4.0000	1.9000	8.2000	0.6300	0.3130	5.7500	0.6930
127	128	45	F TRBU: Scott Run	16.137	0.0200	5.1000	0.3800	4.0000	1.9000	8.2000	0.6300	0.3130	5.7500	0.6930
128	128	45	F TRBU: Turkey Run	16.137	0.0200	5.1000	0.3800	4.0000	1.9000	8.2000	0.6300	0.3130	5.7500	0.6930

Data Group E, Part B: Individual BC Flows & Mass Load by Wasp4 BC Input No. Avg. over time

09/01/1985 0000 JD= 244.00
JWK NSEG Seg# BC Input

					-----Flow	NH3 N	NO3+NO2 N	O P04	PHYT#1	CBOD 5	DISS O2	ORG N	ORG P	Total N	Total P	
					(mgd)	kg N/d	kg N/d	kg P/d	kg Chl/d	kg BOD/d	kg O2/d	kg N/d	kg P/d	kg N/d	kg P/d	
1	128	1	B	TRBG:	N Br. Potomac BC	224.240	84.88	551.75	8.49	1.70	1697.68	8658.16	280.12	8.49	916.75	16.98
2	128	2	B	TRBG:	Savage River nr 8	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	128	2	B	TRBG:	Georges Ck @ Fran	3.878	0.73	14.09	0.29	0.03	29.36	149.73	5.87	0.73	20.70	1.03
4	128	4	B	TRBG:	Willis Ck nr Cumbe	15.512	2.35	9.39	0.59	0.12	117.44	396.35	18.20	2.35	29.95	2.94
5	128	19	B	TRBG:	S.Br. Potomac nr S	90.486	13.70	92.48	3.43	0.69	685.05	2774.46	99.33	10.28	205.52	13.70
6	128	20	B	TRBG:	Town Ck nr Oldtow	4.192	0.32	0.32	0.16	0.03	31.74	128.55	7.62	0.63	8.25	0.79
7	128	30	B	TRBG:	Conococheague Ck	65.925	7.49	668.81	67.38	0.50	499.11	1846.70	142.25	2.50	818.54	69.78
8	128	31	B	TRBG:	Opequon Ck @ Marti	29.731	7.88	30.39	21.16	0.23	135.05	1057.91	30.39	3.49	68.65	24.65
9	128	34	B	TRBG:	Antietam Ck nr Sh	71.096	8.07	1342.95	174.93	0.54	538.26	2179.93	217.99	8.07	1569.01	183.07
10	128	36	B	TRBG:	Shenandoah R @ Mill	365.822	69.24	844.72	152.33	2.77	2769.57	9970.44	623.15	13.85	1537.11	166.17
11	128	38	B	TRBG:	Catoctin Ck MD	5.817	0.44	5.28	2.64	0.04	44.04	184.97	8.81	0.66	14.53	3.30
12	128	39	B	TRBG:	Catoctin Ck VA	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	128	40	B	TRBG:	Monocacy R @ Jug 8	79.498	24.07	556.73	138.43	0.60	150.47	1895.88	231.72	9.33	812.52	147.76
14	128	42	B	TRBG:	Goose Ck nr Leesb	0.646	2.32	3.98	0.94	0.01	4.89	17.13	1.83	0.04	8.13	0.99
15	128	43	B	TRBG:	Seneca Ck @ Dawson	14.219	1.08	274.51	20.45	0.22	102.27	441.37	33.91	16.85	309.50	37.30
16	128	47	B	TRBG:	Potomac River BC	1008.273	152.67	3206.04	343.50	6.49	3816.72	31106.24	1679.36	76.33	5038.07	419.84
17	128	1	C	DIVR:	Westvaco Corporat	-21.330	-8.07	-52.48	-0.81	-0.10	-322.97	-823.57	-26.65	-0.81	-87.20	-1.61
18	128	22	C	DIVR:	City of Paw Paw	-0.060	-0.01	-0.10	0.00	0.00	-0.91	-1.28	-0.10	-0.01	-0.21	-0.02
19	128	30	C	DIVR:	City of Hagerstow	-5.700	-1.08	-17.48	-1.29	-0.03	-86.31	-172.61	-10.79	-0.43	-29.34	-1.73
20	128	32	C	DIVR:	City of Sharpsbur	-0.100	-0.02	-0.31	-0.02	0.00	-1.51	-3.03	-0.19	-0.01	-0.51	-0.03
21	128	33	C	DIVR:	City of Shephards	-0.350	-0.07	-1.07	-0.08	0.00	-5.30	-10.60	-0.66	-0.03	-1.80	-0.11
22	128	33	C	DIVR:	City of Harpers F	-0.350	-0.07	-1.07	-0.08	0.00	-5.30	-10.60	-0.66	-0.03	-1.80	-0.11
23	128	36	C	DIVR:	City of Lovettsvi	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	128	37	C	DIVR:	City of Brunswick	-0.300	-0.06	-0.92	-0.07	0.00	-4.54	-9.08	-0.57	-0.02	-1.54	-0.09
25	128	39	C	DIVR:	Point of Rocks	-1.500	-0.20	-4.97	-0.57	-0.01	-13.34	-44.86	-3.21	-0.14	-8.38	-0.71
26	128	42	C	DIVR:	City of Leesburg	-1.300	-0.44	-4.28	-0.64	-0.01	-3.94	-30.51	-2.66	-0.25	-7.38	-0.89
27	128	43	C	DIVR:	Fairfax Co FCWA	-41.700	-14.21	-137.33	-20.52	-0.47	-126.28	-978.68	-85.24	-7.89	-236.78	-28.41
28	128	43	C	DIVR:	WSSC	-133.830	-45.59	-440.74	-65.86	-1.52	-405.28	-3140.92	-273.56	-25.33	-759.90	-91.19
29	128	44	C	DIVR:	WAD Great Falls	-158.950	-54.15	-523.47	-78.22	-1.81	-481.35	-3730.47	-324.91	-30.08	-902.53	-108.30
30	128	44	C	DIVR:	City of Rockville	-5.990	-2.04	-19.73	-2.95	-0.07	-18.14	-140.58	-12.24	-1.13	-34.01	-4.08
31	128	47	C	DIVR:	WAD Little Falls	-80.790	-14.68	-248.94	-24.77	-5.20	-474.02	-2436.49	-144.96	-11.93	-408.58	-36.70
32	128	1	D	INDU:	WESTVACO CORP LUK	3.900	11.81	1.33	7.87	0.00	29.53	92.27	3.54	1.31	16.68	9.19
33	128	3	D	INDU:	UPPER POTOMAC RIV	17.430	6.60	14.52	32.99	0.00	1583.51	389.28	92.37	6.60	113.48	39.59
34	128	8	D	INDU:	JEFFERSON COUNTY	0.025	0.85	0.60	0.57	0.00	2.84	0.59	0.26	0.09	1.70	0.66
35	128	14	D	INDU:	HERCULES INC.	0.100	3.41	2.38	2.27	0.00	11.36	2.37	1.02	0.38	6.81	2.65
36	128	14	D	INDU:	USDA-APPALACHIAN	0.006	0.20	0.14	0.14	0.00	0.68	0.14	0.06	0.02	0.41	0.16
37	128	17	D	INDU:	PPG D INDUSTRIES	0.001	0.03	0.02	0.02	0.00	0.10	0.02	0.01	0.00	0.07	0.03
38	128	30	D	INDU:	POTOMAC EDISON PA	1.200	1.41	2.91	0.94	0.00	21.05	28.39	0.42	0.16	4.74	1.10
39	128	45	D	INDU:	FIRST AMERICAN LA	0.372	12.67	8.87	8.45	0.00	14.08	8.80	3.80	1.41	25.35	9.86
40	128	1	E	MUNI:	BLOOMINGTON WWT	0.015	0.51	0.36	0.34	0.00	0.37	0.40	0.15	0.06	1.02	0.40
41	128	4	E	MUNI:	TRI TOWN PLAZA	0.010	0.34	0.24	0.23	0.00	0.26	0.23	0.10	0.04	0.68	0.26
42	128	5	E	MUNI:	KEYSER CITY OF	1.100	37.48	26.23	24.98	0.00	114.51	26.02	11.24	4.16	74.95	29.15
43	128	9	E	MUNI:	RAWLINGS, TOWN OF	0.125	4.26	2.98	2.84	0.00	7.00	4.51	1.28	0.47	8.52	3.31
44	128	12	E	MUNI:	ALLEGANY COUNTY-B	0.165	5.62	3.93	3.75	0.00	51.84	3.37	1.69	0.62	11.24	4.37
45	128	12	E	MUNI:	ALLEGANY COUNTY-C	0.212	7.22	5.06	4.82	0.00	25.68	5.22	2.17	0.80	14.45	5.62
46	128	14	E	MUNI:	RIDGELEY TOWN OF	0.120	4.09	2.86	2.73	0.00	13.63	2.27	1.23	0.45	8.18	3.18
47	128	16	E	MUNI:	CUMBERLAND, CITY O	6.920	235.75	165.03	157.17	0.00	112.64	130.97	70.73	26.19	471.51	183.36
48	128	17	E	MUNI:	MEXICO FARMS	0.013	0.44	0.31	0.30	0.00	0.34	0.13	0.13	0.05	0.89	0.34
49	128	22	E	MUNI:	PAW PAW, TOWN OF	0.060	2.04	1.43	1.36	0.00	6.81	1.14	0.61	0.23	4.09	1.59
50	128	27	E	MUNI:	FAIRVIEW BCH, SAN	0.016	0.55	0.38	0.36	0.00	0.82	0.21	0.16	0.06	1.09	0.42
51	128	30	E	MUNI:	HONEYWOOD	0.050	1.70	1.19	1.14	0.00	2.10	0.98	0.51	0.19	3.41	1.32
52	128	30	E	MUNI:	WSSC SUBDIV 1-HAL	1.000	34.07	23.85	22.71	0.00	85.93	27.63	10.22	3.79	68.14	26.50
53	128	32	E	MUNI:	RIVERBEND	0.040	1.36	0.95	0.91	0.00	4.54	0.76	0.41	0.15	2.73	1.06
54	128	33	E	MUNI:	SHEPHERDSTOWN STP	0.500	17.03	11.92	11.36	0.00	56.78	11.83	5.11	1.89	34.07	13.25
55	128	33	E	MUNI:	SHEPHERDSTOWN WPC	0.400	13.63	9.54	9.08	0.00	45.42	9.46	4.09	1.51	27.25	10.60
56	128	36	E	MUNI:	HARPERS FERRY TOW	0.160	5.45	3.82	3.63	0.00	7.87	3.79	1.64	0.61	10.90	4.24
57	128	36	E	MUNI:	HARPERS FERRY-BOL	0.070	2.38	1.67	1.59	0.00	7.95	1.66	0.72	0.26	4.77	1.85
58	128	37	E	MUNI:	BRUNSWICK SEWAGE	0.306	10.42	7.30	6.95	0.00	10.42	7.18	3.13	1.16	20.85	8.11
59	128	39	E	MUNI:	POINT OF ROCKS FR	0.040	1.36	0.95	0.91	0.00	0.76	1.18	0.41	0.15	2.73	1.06
60	128	44	E	MUNI:	ROCKVILLE, FLOW-O	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
61	128	1	F	TRBU:	Montgomery Run	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
62	128	3	F	TRBU:	Powder House Run	0.497	0.04	1.19	0.02	0.00	3.76	19.28	0.71	0.08	1.94	0.09
63	128	3	F	TRBU:	Slaughterhouse Ru	0.497	0.04	1.19	0.02	0.00	3.76	19.28	0.71	0.08	1.94	0.09
64	128	4	F	TRBU:	Thunderbill Run	0.497	0.04	1.19	0.02	0.00	3.76	19.28	0.71	0.08	1.94	0.09
65	128	5	F	TRBU:	Limestone Run	0.497	0.04	1.19	0.02	0.00	3.76	19.28	0.71	0.08	1.94	0.09
66	128	5	F	TRBU:	New Creek	0.497	0.04	1.19	0.02	0.00	3.76	19.28	0.71	0.08	1.94	0.09
67	128	8	F	TRBU:	Ashcabin Run	0.497	0.04	1.19	0.02	0.00	3.76	19.28	0.71	0.08	1.94	0.09
68	128	9	F	TRBU:	Mill Run	0.497	0.04	1.19	0.02	0.00	3.76	19.28	0.71	0.08	1.94	0.09
69	128	12	F	TRBU:	Warrior Run	0.497	0.04	1.19	0.02	0.00	3.76	19.28	0.71	0.08	1.94	0.09
70	128	16	F	TRBU:	Evitts Creek	4.512	0.68	4.61	0.17	0.03	34.16	138.34	4.95	0.51	10.25	0.68
71	128	17	F	TRBU:	Collier Run	4.512	0.68	4.61	0.17	0.03	34.16	138.34	4.95	0.51	10.25	0.68
72	128	18	F	TRBU:	Brice Hollow Run	4.512	0.68	4.61	0.17	0.03	34.16	138.34	4.95	0.51	10.25	0.68
73	128	18	F	TRBU:	Broad Hollow Run	4.512	0.68	4.61	0.17	0.03	34.16	138.34	4.95	0.51	10.25	0.68
74	128	18	F	TRBU:	Green Spring Run	4.512	0.68	4.61	0.17	0.03	34.16	138.34	4.95	0.51	10.25	0.68
75	128	18	F	TRBU:	Mill Run	4.512	0.68	4.61	0.17	0.03	34.16	138.34	4.95	0.51	10.25	0.68
76	128	18	F	TRBU:	Round Bottom Holl	4.512	0.68	4.61	0.17	0.03	34.16	138.34	4.95	0.51	10.25	0.68
77	128	18	F	TRBU:	Spring Run	4.512	0.68	4.61	0.17	0.03	34.16	138.34	4.95	0.51	10.25	0.68
78	128	19	F	TRBU:	Seven Spring Run	4.512	0.68	4.61	0.17	0.03	34.16	138.34	4.95	0.51	10.25	0.68
79	128	19	F	TRBU:	Stony Run	4.512	0.68	4.61	0.17	0.03	34.16	138.34	4.95	0.51	10.25	0.68
80	128	21	F	TRBU:	Purslane Run	4.512	0.34	0.34	0.17	0.03	34.16					

Data Group E, Part B (Continued): Individual BC Flows & Mass Load by Wasp4 BC Input No. Avg. over time

09/01/1985 0000 JD= 244.00														
JWK	NSEG	Seg#	BC Input	-----Flow ----- (mgd)	NH3 N kg N/d	NO3+NO2 N kg N/d	O P04 kg P/d	PHYT#1 kg Chl/d	CBOD 5 kg BOD/d	DISS O2 kg O2/d	ORG N kg N/d	ORG P kg P/d	Total N kg N/d	Total P kg P/d
95	128	27	F TRBU: Big Run	7.170	1.09	7.33	0.27	0.05	54.28	219.85	7.87	0.81	16.29	1.09
96	128	27	F TRBU: Cherry Run	7.170	1.09	7.33	0.27	0.05	54.28	219.85	7.87	0.81	16.29	1.09
97	128	28	F TRBU: Back Creek	7.170	1.09	7.33	0.27	0.05	54.28	219.85	7.87	0.81	16.29	1.09
98	128	28	F TRBU: Green Spring Run	7.170	1.09	7.33	0.27	0.05	54.28	219.85	7.87	0.81	16.29	1.09
99	128	28	F TRBU: Harlan Run	7.170	1.09	7.33	0.27	0.05	54.28	219.85	7.87	0.81	16.29	1.09
100	128	28	F TRBU: Jordan Run	7.170	1.09	7.33	0.27	0.05	54.28	219.85	7.87	0.81	16.29	1.09
101	128	29	F TRBU: Little Conocochea	7.170	0.81	72.74	7.33	0.05	54.28	200.85	15.47	0.27	89.03	7.60
102	128	31	F TRBU: Downey Branch	7.170	1.90	7.33	5.10	0.05	32.57	255.14	7.33	0.84	16.56	5.94
103	128	32	F TRBU: Marsh Run	3.840	1.02	3.93	2.73	0.03	17.44	136.65	3.93	0.45	8.87	3.18
104	128	32	F TRBU: Rockymarsh Run	3.840	1.02	3.93	2.73	0.03	17.44	136.65	3.93	0.45	8.87	3.18
105	128	33	F TRBU: Rattlesnake Run	3.840	1.02	3.93	2.73	0.03	17.44	136.65	3.93	0.45	8.87	3.18
106	128	33	F TRBU: Town Run	3.840	1.02	3.93	2.73	0.03	17.44	136.65	3.93	0.45	8.87	3.18
107	128	34	F TRBU: Elk Branch	3.840	0.44	72.54	9.45	0.03	29.07	117.75	11.78	0.44	84.75	9.89
108	128	36	F TRBU: Dutchman Creek	3.840	0.44	72.54	9.45	0.03	29.07	117.75	11.78	0.44	84.75	9.89
109	128	36	F TRBU: Isreal Creek	3.840	0.44	72.54	9.45	0.03	29.07	117.75	11.78	0.44	84.75	9.89
110	128	36	F TRBU: Piney Run	3.840	0.44	72.54	9.45	0.03	29.07	117.75	11.78	0.44	84.75	9.89
111	128	37	F TRBU: Little Catoclin C	3.840	0.44	72.54	9.45	0.03	29.07	117.75	11.78	0.44	84.75	9.89
112	128	37	F TRBU: Quarter Branch	3.840	0.44	72.54	9.45	0.03	29.07	117.75	11.78	0.44	84.75	9.89
113	128	39	F TRBU: Tuscarora Creek	16.137	4.89	113.01	28.10	0.12	30.54	384.83	47.03	1.89	164.93	29.99
114	128	40	F TRBU: Limestone Branch	16.137	4.89	113.01	28.10	0.12	30.54	384.83	47.03	1.89	164.93	29.99
115	128	40	F TRBU: Little Monocacy	16.137	4.89	113.01	28.10	0.12	30.54	384.83	47.03	1.89	164.93	29.99
116	128	42	F TRBU: Broad Run	16.137	58.03	99.26	23.52	0.24	122.17	427.59	45.81	0.92	203.10	24.43
117	128	42	F TRBU: Cabin Branch	16.137	58.03	99.26	23.52	0.24	122.17	427.59	45.81	0.92	203.10	24.43
118	128	42	F TRBU: Chrirel Branch	16.137	58.03	99.26	23.52	0.24	122.17	427.59	45.81	0.92	203.10	24.43
119	128	42	F TRBU: Horsepen Branch	16.137	58.03	99.26	23.52	0.24	122.17	427.59	45.81	0.92	203.10	24.43
120	128	42	F TRBU: Sugarland Run	16.137	58.03	99.26	23.52	0.24	122.17	427.59	45.81	0.92	203.10	24.43
121	128	43	F TRBU: Muddy Branch	16.137	1.22	311.53	23.21	0.24	116.06	500.89	38.48	19.12	351.23	42.33
122	128	43	F TRBU: Nichols Run	16.137	1.22	311.53	23.21	0.24	116.06	500.89	38.48	19.12	351.23	42.33
123	128	45	F TRBU: Bullneck Run	16.137	1.22	311.53	23.21	0.24	116.06	500.89	38.48	19.12	351.23	42.33
124	128	45	F TRBU: Dean Run	16.137	1.22	311.53	23.21	0.24	116.06	500.89	38.48	19.12	351.23	42.33
125	128	45	F TRBU: Difficult Run	16.137	1.22	311.53	23.21	0.24	116.06	500.89	38.48	19.12	351.23	42.33
126	128	45	F TRBU: Rock Run	16.137	1.22	311.53	23.21	0.24	116.06	500.89	38.48	19.12	351.23	42.33
127	128	45	F TRBU: Scott Run	16.137	1.22	311.53	23.21	0.24	116.06	500.89	38.48	19.12	351.23	42.33
128	128	45	F TRBU: Turkey Run	16.137	1.22	311.53	23.21	0.24	116.06	500.89	38.48	19.12	351.23	42.33

FINAL REPORT

JSM	NQPS	Wasp	Segment	Flow	NH3 N	NO3+NO2 N	O P04	PHYT#1	CBOD_5	DISS O2	ORG N	ORG P	Total N	Total P
---	#BC	Seg#	Description	(mgd)	kg N/d	kg N/d	kg P/d	kg Chl/d	kg BOD/d	kg O2/d	kg N/d	kg P/d	kg N/d	kg P/d
09/01/1985	0000	JD=	244.00											
1	5	1	Westvaco	206.825	89.13	500.95	15.90	1.60	1404.61	7927.25	257.17	9.05	847.25	24.95
2	2	2	Georges Ck	3.878	0.73	14.09	0.29	0.03	29.36	149.73	5.87	0.73	20.70	1.03
3	3	3	UPRC STP	18.424	6.67	16.89	33.03	0.01	1591.03	427.84	93.80	6.75	117.36	39.78
4	3	4	Stony Run	0.507	0.38	1.42	0.25	0.00	4.03	19.51	0.82	0.11	2.82	0.36
5	5	5	Keyser	2.094	37.55	28.60	25.02	0.01	122.03	64.58	12.67	4.31	78.83	29.34
6	5	6	Black Oak	0.522	0.89	1.78	0.39	0.00	5.60	23.79	0.97	0.17	3.64	0.76
7	5	7	Rawlings	0.622	4.30	4.17	2.86	0.00	10.76	27.87	4.99	0.55	10.45	3.41
8	12	8	Celanese	0.874	12.88	10.18	8.58	0.00	81.28	401.13	20.51	1.50	27.63	10.08
9	12	9	Willis Ck	15.738	10.05	14.78	5.72	0.12	143.10	269.31	75.58	5.10	45.35	8.10
10	16	10	Cumbling STP	11.432	236.44	169.64	157.34	0.03	146.80	138.49	5.10	0.57	481.76	184.05
11	17	11	Mexico Field	4.526	4.16	4.95	0.49	0.03	36.60	830.02	29.72	3.07	61.48	4.10
12	18	12	Pattern Ck	27.070	4.10	27.67	1.02	0.20	204.94	3051.13	109.24	11.30	226.01	15.07
13	19	13	So. Branch	99.509	15.07	101.70	3.77	0.75	753.37	128.55	7.62	0.63	8.25	0.79
14	20	14	Town Ck	4.192	0.32	0.32	0.16	0.03	31.74	138.34	8.20	0.68	0.88	0.85
15	21	15	L Cacapon R	4.512	0.34	0.34	0.17	0.03	34.16	69.21	4.62	0.56	8.33	2.00
16	22	16	Paw Paw	2.262	2.21	1.50	1.44	0.02	23.03	34.68	2.06	0.17	2.23	0.21
17	24	17	Sideling H.Ck	1.131	0.09	0.09	0.04	0.01	8.56	34.68	2.06	0.17	2.23	0.21
18	25	18	Cacapon R	1.131	0.09	0.09	0.04	0.01	8.56	34.68	2.06	0.17	2.23	0.21
19	26	19	Hancock	43.021	3.26	3.26	1.63	0.33	325.70	1319.10	78.17	6.51	84.68	8.14
20	27	20	Licking Ck	14.356	2.72	15.04	0.91	0.11	109.39	439.91	15.91	1.69	33.66	2.60
21	4	21	Ft Frederick	28.681	4.34	29.31	1.09	0.22	217.14	879.40	31.48	3.26	65.14	4.34
22	1	22	Dam #5	7.170	0.81	72.74	7.33	0.05	54.28	200.85	15.47	0.27	89.03	7.60
23	5	23	Conocochee Ck	62.475	43.59	679.28	90.87	0.47	521.88	1731.10	142.61	6.20	865.48	97.07
24	2	24	Opequon Ck	36.901	9.78	37.72	26.26	0.28	167.62	1313.05	37.72	4.33	85.21	30.59
25	4	25	Dam #4	7.921	3.38	8.50	6.35	0.06	37.92	271.03	8.07	1.05	19.95	7.40
26	6	26	Shepardstown	7.881	32.56	27.17	25.75	0.05	126.50	273.40	15.72	4.26	75.46	30.00
27	2	27	Antietam Ck	74.937	8.51	1415.49	184.38	0.57	567.33	2297.69	2			

Data Group E, Part D: Weighted Sum BC Conc by Wasp4 Segment No. Avg. over time increment:

09/01/1985	0000	JD=	244.00													
JSM	NQPS	Wasp	Segment	-----Flow	NH3 N	NO3+NO2 N	O P04	PHYT#1	CBOD 5	DISS O2	ORG N	ORG P	Total N	Total P		
---	#BC	Seg#	Descriptn	-----(mgd)	mg N/L	mg N/L	mg P/L	ug Chl/l	mg BOD/L	mg O2/L	mg N/L	mg P/L	mg N/L	mg P/L		
1	5	1	Westvaco	206.825	0.1138	0.6399	0.0203	2.0446	1.7941	10.1253	0.3285	0.0116	1.0822	0.0319		
2	2	2	Georges Ck	3.878	0.0500	0.9600	0.0200	2.0000	2.0000	10.2000	0.4000	0.0500	1.4100	0.0700		
3	3	3	UPRC STP	18.424	0.0957	0.2421	0.4736	0.1079	22.8133	6.1346	1.3450	0.0968	1.6828	0.5703		
4	2	4	Stony Run	0.507	0.1972	0.7419	0.1282	1.9605	2.0986	10.1662	0.4258	0.0589	1.3648	0.1871		
5	3	5	Keyser	2.094	4.7377	3.6088	3.1569	0.9493	15.3967	8.1486	1.5988	0.5443	9.9454	3.7013		
6	2	8	Black Oak	0.522	0.4502	0.9016	0.2969	1.9042	3.3413	10.0584	0.4911	0.0860	1.8429	0.3829		
7	2	9	Rawlings	0.622	1.8250	1.7697	1.2140	1.5980	4.5728	10.1059	0.8463	0.2330	4.4409	1.4469		
8	3	12	Celanese	0.874	3.8940	3.0760	2.5941	1.1372	24.5712	8.4246	1.3808	0.4541	8.3508	3.0482		
9	4	14	Willis Ck	15.738	0.1687	0.2482	0.0360	1.9713	2.4020	6.7333	0.3443	0.0538	0.7612	0.1498		
10	2	16	Cumbrlnd STP	11.432	5.4638	3.9202	0.6960	0.7893	3.3923	6.2235	1.7489	0.6172	11.1328	4.2531		
11	3	17	Mexico Field	4.526	0.0677	0.2887	0.0285	1.9938	2.0197	8.0838	0.2975	0.0330	0.6538	0.0615		
12	6	18	Patterson Ck	27.070	0.0400	0.2700	0.0100	2.0000	2.0000	8.1000	0.2900	0.0300	0.6000	0.0400		
13	3	19	So. Branch	99.509	0.0400	0.2700	0.0100	2.0000	2.0000	8.1000	0.2900	0.0300	0.6000	0.0400		
14	1	20	Town Ck	4.192	0.0200	0.0200	0.0100	2.0000	2.0000	8.1000	0.4800	0.0400	0.5200	0.0500		
15	1	21	L Cacapon R	4.512	0.0200	0.0200	0.0100	2.0000	2.0000	8.1000	0.4800	0.0400	0.5200	0.0500		
16	6	22	Paw Paw	2.262	0.2579	0.1757	0.1686	1.9682	2.6897	8.0828	0.5397	0.0651	0.9733	0.2337		
17	2	24	SidelingH.Ck	1.131	0.0200	0.0200	0.0100	2.0000	2.0000	8.1000	0.4800	0.0400	0.5200	0.0500		
18	2	25	Cacapon R	1.131	0.0200	0.0200	0.0100	2.0000	2.0000	8.1000	0.4800	0.0400	0.5200	0.0500		
19	6	26	Hancock	43.021	0.0200	0.0200	0.0100	2.0000	2.0000	8.1000	0.4800	0.0400	0.5200	0.0500		
20	3	27	Licking Ck	14.356	0.0500	0.2767	0.0167	1.9978	2.0128	8.0949	0.2927	0.0311	0.6194	0.0478		
21	4	28	Ft Frederick	28.681	0.0400	0.2700	0.0100	2.0000	2.0000	8.1000	0.2900	0.0300	0.6000	0.0400		
22	1	29	Dam #5	7.170	0.0300	2.6800	0.2700	2.0000	2.0000	7.4000	0.5700	0.0100	3.2800	0.2800		
23	5	30	Conococho Ck	62.475	0.1843	2.8723	0.3842	2.0010	2.2067	7.3198	0.6030	0.0262	3.6596	0.4104		
24	2	31	Opequon Ck	36.901	0.0700	0.2700	0.1880	2.0000	1.2000	9.4000	0.2700	0.0310	0.6100	0.2190		
25	4	32	Dam #4	7.621	0.1171	0.2946	0.2202	2.0000	1.3144	9.3953	0.2797	0.0362	0.6914	0.2564		
26	6	33	Shepherdstown	7.881	1.0916	0.9107	0.8631	1.8427	4.2403	9.1646	0.5271	0.1426	2.5293	1.0057		
27	2	34	Antietam Ck	74.937	0.0300	4.9900	0.6500	2.0000	2.0000	8.1000	0.8100	0.0300	5.8300	0.6800		
28	7	36	Shenandoah R	377.573	0.0548	0.7471	0.1301	1.9988	2.0099	7.2269	0.4624	0.0112	1.2643	0.1413		
29	4	37	Brunswick	7.687	0.3863	5.2053	0.8860	1.9516	2.2006	8.0283	0.8973	0.0690	6.4889	0.9550		
30	1	38	CatoctinCkMO	5.817	0.0200	0.2400	0.1200	2.0000	2.0000	8.4000	0.4000	0.0300	0.6600	0.1500		
31	4	39	Pt of Rocks	14.677	0.1089	1.9618	0.5119	2.0763	0.3232	6.1406	0.7962	0.0343	2.8669	0.5461		
32	3	40	Monacacy R	111.772	0.0800	1.8500	0.4600	2.0000	0.5000	6.3000	0.7700	0.0310	2.7000	0.4910		
33	7	42	Goose Ck	80.030	0.9640	1.6373	0.3891	4.0162	2.0195	7.0130	0.7534	0.0144	3.3546	0.4036		
34	5	43	Seneca Ck	-129.037	0.1152	0.6541	0.0399	2.6397	0.4037	5.4794	0.5076	0.0448	0.0313	0.0048		
35	3	44	Watts Branch	-164.940	0.0900	0.8700	0.1300	3.0000	0.8000	6.2000	0.5400	0.0500	1.5000	0.1800		
36	7	45	Gr Falls Dam	97.192	0.0544	5.1046	0.4015	3.9847	1.9310	8.1925	0.6379	0.3156	5.7969	0.7171		
37	2	47	L. Falls Dam	927.483	0.0393	0.8423	0.0908	0.3673	0.9521	8.1659	0.4370	0.0183	1.3186	0.1091		
37	128	37	Total:All BC Seg:Flow & K	2016.545	998.85	10411.38	1522.33	9.77	13944.77	63496.82	3695.59	315.58	15105.82	1837.91		

End-of-file: PRM85044.E05

Data Group F- Point Sources

DUMMY DATA OF ZERO LOADS USED FOR SEGMENT #1

All Point Source Loads Accounted for as Boundary Conditions

Data Group G- Spatial Forcing Functions: September 1985

<u>Label</u>	<u>Units</u>	<u>Description</u>
Seg#		PRM Segment No.
Temp(C) Deg C		Water temperature
FNH4 mgN/sq m-d		Sed NH4 flux
FPO4 mgP/sq m-d		Sed PO4 flux
SOD1D gO2/sq m-d		Sed Oxy Demand
FNO3 mgN/sq m-d		Sed NO3 flux
SOD(U,T) gO2/sq m-d		SOD(vel,temp)
SODMax gO2/sq m-d		SOD Max
BNit(U,T) mgN/sq m-d		Benth nitrific (U,T)
BNit(20) mgN/sq m-d		Benth nitrific (T=20)
BNO3 (T) mgN/sq m-d		Benth NO3 loss (T)
BNO3 (20) mgN/sq m-d		Benth NO3 loss (T=20)
BProdMax gC/sq m-d		Benth Algae Production Max
BProd(U,T) gC/sq m-d		Benth Algae Production (U,T)
B_NH4_U mgN/sq m-d		Benth Algae NH4 uptake
B_NO3_U mgN/sq m-d		Benth Algae NO3 uptake
B_PO4_U mgP/sq m-d		Benth Algae PO4 uptake
B_OXY_U gO2/sq m-d		Benth Algae Net Oxygen Prod
P/R ratio		Benth Algae Production/Resp
NPS_NO3 mgN/sq m-d		Non Point Input: NO3
NPS_PO4 mgP/sq m-d		Non Point Input: PO4

Data Group G (Continued): Spatial Forcing Functions Sept 1985

Case#	Seg#	Temp	Wasp4 Data G Input FNH4	FPO4	SOD10	>> SOD Functions FNO3 SOD(U,T)	<Ben Nitrification BNit(U,T)	<Ben Nitrate Loss BNit(20) BNO3 (T)	Benthic Periphyton Gross Production/N.P. BProd(U,T) B_NH4_U B_NO3_U B_PO4_U B_OXY_U	P/R	<NPS NPS_NO3	NPS_PO4	P04								
1	18.5	-206.84	-17.47	2.37	-61.93	1.50	3.00	-22.27	-25.00	-28.29	-30.00	1.50	1.35	-261.94	-75.92	-33.79	-0.90	0.80	20.00	5.00	
2	16.5	-128.48	-8.95	1.24	-35.02	0.85	3.00	-12.26	-25.00	-26.15	-30.00	1.50	0.76	-147.67	-41.13	-18.88	-0.50	0.80	20.00	5.00	
3	18.0	-189.07	-15.73	1.93	-53.80	1.20	3.00	-19.19	-25.00	-27.74	-30.00	1.50	1.17	-226.87	-65.25	-29.21	-0.78	0.80	20.00	5.00	
4	20.0	-185.48	-16.38	2.05	-66.80	1.11	3.00	-21.03	-25.00	-30.00	-30.00	1.50	1.26	-237.60	-77.82	-31.54	-0.84	0.80	20.00	5.00	
5	22.0	-164.71	-16.46	2.15	-90.07	1.02	3.00	-22.73	-25.00	-32.45	-30.00	1.50	1.34	-235.56	-100.35	-33.59	-0.90	0.80	20.00	5.00	
6	22.0	-25.91	2.86	0.26	-23.42	0.57	3.00	-9.05	-25.00	-32.45	-30.00	1.00	0.36	-69.18	-20.02	-8.92	0.42	1.80	20.00	5.00	
7	22.0	-24.68	2.86	0.26	-24.65	0.57	3.00	-9.05	-25.00	-32.45	-30.00	1.00	0.36	-67.95	-21.26	-8.92	0.42	1.80	20.00	5.00	
8	23.0	-19.68	3.17	0.28	-27.96	0.57	3.00	-9.78	-25.00	-33.75	-30.00	1.00	0.38	-71.64	-23.99	-9.56	0.45	1.80	20.00	5.00	
9	23.0	-17.79	3.17	0.28	-29.85	0.57	3.00	-9.78	-25.00	-33.75	-30.00	1.00	0.38	-69.75	-25.88	-9.56	0.45	1.80	20.00	5.00	
10	23.0	-10.00	4.03	0.35	-30.76	0.63	3.00	-9.78	-25.00	-33.75	-30.00	1.00	0.38	-68.83	-26.80	-9.56	0.45	1.80	20.00	5.00	
11	22.0	14.86	7.00	0.28	-16.04	0.32	3.00	-1.83	-25.00	-32.45	-30.00	1.00	0.07	-12.62	-5.42	-1.80	0.09	1.80	20.00	5.00	
12	21.0	-37.69	0.72	0.25	-34.94	0.70	3.00	-11.69	-25.00	-31.20	-30.00	1.00	0.46	-80.57	-35.43	-11.60	0.55	1.80	20.00	5.00	
13	21.0	11.60	6.67	0.24	-13.57	0.28	3.00	-1.28	-25.00	-31.20	-30.00	1.00	0.05	-9.02	-3.65	-1.27	0.06	1.80	20.00	5.00	
14	20.0	-39.77	0.60	0.24	-32.19	0.70	3.00	-10.82	-25.00	-30.00	-30.00	1.00	0.43	-75.20	-33.01	-10.82	0.51	1.80	20.00	5.00	
15	22.0	-6.89	4.38	0.33	-27.24	0.57	3.00	-7.51	-25.00	-32.45	-30.00	1.00	0.30	-51.70	-22.30	-7.40	0.35	1.80	20.00	5.00	
16	23.0	-17.97	2.18	1.40	-35.08	0.41	3.00	-4.26	-25.00	-33.75	-30.00	2.00	0.33	-57.77	-25.59	-8.34	-0.89	0.50	20.00	5.00	
17	24.0	-111.32	-5.71	3.05	-27.84	0.63	3.00	-10.56	-25.00	-35.10	-30.00	2.00	0.82	-181.73	-23.31	-20.50	-2.19	0.50	20.00	5.00	
18	24.0	-144.79	-9.78	3.39	-35.43	0.63	3.00	-13.05	-25.00	-35.79	-30.00	2.00	1.01	-219.69	-32.69	-25.24	-2.70	0.50	20.00	5.00	
19	21.3	-10.96	4.14	1.37	-56.07	0.57	3.00	0.00	0.00	-63.14	-60.00	1.00	0.28	-57.56	-12.93	-7.05	-0.75	0.50	20.00	5.00	
20	25.0	15.11	5.93	1.75	-73.30	0.57	3.00	0.00	0.00	-73.00	-60.00	1.00	0.36	-70.86	-20.30	-9.12	-0.97	0.50	20.00	5.00	
21	25.0	16.14	5.93	1.75	-74.34	0.57	3.00	0.00	0.00	-73.00	-60.00	1.00	0.36	-69.83	-21.34	-9.12	-0.97	0.50	20.00	5.00	
22	25.0	-9.50	2.05	2.60	-90.89	0.70	3.00	0.00	0.00	-73.00	-60.00	1.00	0.61	-107.40	-37.89	-15.32	-1.64	0.50	20.00	5.00	
23	24.0	13.52	4.54	1.91	-85.26	0.63	3.00	0.00	0.00	-70.19	-60.00	1.00	0.41	-67.45	-35.07	-10.25	-1.09	0.50	20.00	5.00	
24	23.0	6.82	4.03	1.79	-81.33	0.63	3.00	0.00	0.00	-67.49	-60.00	1.00	0.38	-61.79	-33.84	-9.56	-1.02	0.50	20.00	5.00	
25	22.0	1.70	3.62	1.67	-77.66	0.63	3.00	0.00	0.00	-64.90	-60.00	1.00	0.36	-56.44	-32.76	-8.92	-0.95	0.50	20.00	5.00	
26	20.9	-0.63	3.26	0.37	-75.70	0.63	3.00	0.00	0.00	-62.16	-60.00	1.00	0.33	-49.10	-33.54	-8.26	0.29	1.50	20.00	5.00	
27	19.5	-3.87	2.93	0.35	-71.49	0.63	3.00	0.00	0.00	-58.83	-60.00	1.00	0.30	-42.32	-32.66	-7.50	0.27	1.50	20.00	5.00	
28	18.7	9.95	6.32	0.21	-39.70	0.25	3.00	0.00	0.00	-57.02	-60.00	1.00	0.02	-3.19	-2.68	-0.59	0.02	1.50	20.00	5.00	
29	18.0	6.39	5.23	0.24	12.12	0.36	3.00	0.00	0.00	-55.47	-60.00	1.00	0.09	-10.70	-12.41	-2.31	0.08	1.50	20.00	5.00	
30	17.3	10.34	20.89	0.33	13.97	0.48	4.00	0.00	0.00	-53.97	-60.00	1.00	0.09	-9.96	-12.05	-2.20	0.08	1.50	80.00	20.00	
31	19.5	14.99	21.98	0.29	47.11	0.33	4.00	0.00	0.00	-29.42	-30.00	1.00	0.03	-5.00	-3.47	-0.85	0.03	1.50	80.00	20.00	
32	21.0	21.34	21.47	0.52	23.99	0.68	4.00	0.00	0.00	-31.20	-30.00	1.00	0.23	-31.67	-24.81	-5.65	0.20	1.50	80.00	20.00	
33	22.5	31.62	22.39	0.57	180.55	0.68	4.00	0.00	0.00	-33.09	-30.00	1.00	0.25	-36.33	-26.36	-6.27	0.22	1.50	80.00	20.00	
34	21.0	19.49	62.50	0.32	-75.26	0.33	4.00	0.00	0.00	-312.00	-300.00	1.00	0.04	-6.15	-3.26	-0.94	0.03	1.50	240.00	60.00	
35	22.0	17.17	60.71	0.51	-113.09	0.68	4.00	0.00	0.00	-324.48	-300.00	1.00	0.30	-45.39	-28.61	-7.40	0.26	1.50	240.00	60.00	
36	23.1	22.48	60.16	0.62	-142.74	0.84	4.00	0.00	0.00	-338.79	-300.00	1.00	0.46	-70.53	-43.96	-11.45	0.41	1.50	240.00	60.00	
37	22.0	23.73	62.05	0.56	-106.20	0.68	4.00	0.00	0.00	-324.48	-300.00	1.00	0.24	-38.83	-21.72	-6.05	0.22	1.50	240.00	60.00	
38	21.0	16.17	61.47	0.52	-91.63	0.68	4.00	0.00	0.00	-312.00	-300.00	1.00	0.23	-36.85	-19.63	-5.65	0.20	1.50	240.00	60.00	
39	23.2	33.73	62.91	0.60	-43.35	0.68	4.00	0.00	0.00	-340.12	-300.00	1.00	0.26	-42.58	-23.24	-6.58	0.23	1.50	240.00	60.00	
40	22.5	74.03	87.91	4.61	-43.05	1.36	8.00	0.00	0.00	-330.91	-300.00	1.50	0.38	-61.89	-32.15	-9.40	-3.01	0.25	320.00	80.00	
41	24.8	108.47	91.54	3.74	-63.19	1.08	8.00	0.00	0.00	-362.14	-300.00	1.50	0.28	-49.81	-21.05	-7.09	-2.27	0.25	320.00	80.00	
42	21.5	50.16	86.46	2.99	-253.01	1.08	8.00	0.00	0.00	-318.18	-300.00	1.50	0.23	-41.50	-14.83	-5.63	-1.80	0.25	320.00	80.00	
43	20.2	32.36	25.05	2.75	-306.26	1.08	8.00	0.00	0.00	-302.36	-300.00	1.50	0.21	-41.56	-9.90	-5.15	-1.65	0.25	80.00	20.00	
44	20.4	38.49	6.87	0.99	-300.72	0.66	8.00	0.00	0.00	-304.74	-300.00	1.50	0.04	-7.94	-1.98	-0.99	-0.32	0.25	6.00	1.50	
45	20.6	10.02	3.05	1.53	-308.26	0.48	4.00	0.00	0.00	-307.14	-300.00	1.50	0.13	-25.03	-7.12	-3.21	-1.03	0.25	6.00	1.50	
46	21.7	17.59	3.79	0.38	-318.31	0.33	4.00	0.00	0.00	-320.68	-300.00	1.50	0.06	-11.19	-3.62	-1.48	-0.02	0.90	6.00	1.50	
47	22.8	10.90	2.50	0.72	-350.55	0.54	4.00	0.00	0.00	-334.82	-300.00	1.50	0.25	-45.93	-15.72	-6.17	-0.07	0.90	6.00	1.50	
48	48.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00
-99	-99.0	-99.00	-99.00	-99.06	-99.00	-99.00	0.00	-99.00	-99.00	0.00	-99.00	-99.00	-99.00	-99.00	-99.00	-99.00	-99.00	891.00	-99.00	-99.00	-99.00

Data Group H- Chemical and Kinetic Constants

Note: All Chemical Constants Data for Sept 1986 calibration
presented in Appendix L

Data Group I- Time Varying Forcing Functions

Note: All Time Varying Forcing Function Data for Sept 1986 calibration
presented in Appendix L

Data Group J- Initial Conditions: September 1985

NH3-N	mg/l	Sys#01	CX85_NH3.IC	3	1.	999. IC(xyz): J 06/04/91
SG001	0.100	1.000SG002	0.081	1.000SG003	0.072	1.000
SG004	0.053	1.000SG005	0.040	1.000SG006	0.036	1.000
SG007	0.033	1.000SG008	0.029	1.000SG009	0.024	1.000
SG010	0.020	1.000SG011	0.020	1.000SG012	0.020	1.000
SG013	0.020	1.000SG014	0.020	1.000SG015	0.020	1.000
SG016	0.020	1.000SG017	0.020	1.000SG018	0.020	1.000
SG019	0.023	1.000SG020	0.026	1.000SG021	0.030	1.000
SG022	0.027	1.000SG023	0.024	1.000SG024	0.023	1.000
SG025	0.021	1.000SG026	0.020	1.000SG027	0.025	1.000
SG028	0.029	1.000SG029	0.033	1.000SG030	0.037	1.000
SG031	0.042	1.000SG032	0.047	1.000SG033	0.050	1.000
SG034	0.046	1.000SG035	0.043	1.000SG036	0.041	1.000
SG037	0.038	1.000SG038	0.036	1.000SG039	0.035	1.000
SG040	0.076	1.000SG041	0.090	1.000SG042	0.081	1.000
SG043	0.074	1.000SG044	0.070	1.000SG045	0.065	1.000
SG046	0.061	1.000SG047	0.060	1.000SG048	0.000	1.000
N03+N02-N	mg/l	Sys#02	CX85_N03.IC	5	1.	999. IC(xyz): J 06/04/91
SG001	0.650	1.000SG002	0.625	1.000SG003	0.613	1.000
SG004	0.587	1.000SG005	0.570	1.000SG006	0.588	1.000
SG007	0.605	1.000SG008	0.626	1.000SG009	0.651	1.000
SG010	0.670	1.000SG011	0.678	1.000SG012	0.683	1.000
SG013	0.690	1.000SG014	0.695	1.000SG015	0.699	1.000
SG016	0.707	1.000SG017	0.720	1.000SG018	0.650	1.000
SG019	0.578	1.000SG020	0.524	1.000SG021	0.430	1.000
SG022	0.427	1.000SG023	0.424	1.000SG024	0.423	1.000
SG025	0.421	1.000SG026	0.420	1.000SG027	0.515	1.000
SG028	0.585	1.000SG029	0.667	1.000SG030	0.745	1.000
SG031	0.823	1.000SG032	0.915	1.000SG033	0.980	1.000
SG034	0.950	1.000SG035	0.933	1.000SG036	0.917	1.000
SG037	0.899	1.000SG038	0.885	1.000SG039	0.875	1.000
SG040	0.871	1.000SG041	0.870	1.000SG042	0.772	1.000
SG043	0.702	1.000SG044	0.661	1.000SG045	0.603	1.000
SG046	0.555	1.000SG047	0.550	1.000SG048	0.000	1.000
O-P04	mg/l	Sys#03	CX85_P04.IC	5	1.	999. IC(xyz): J 06/04/91
SG001	0.010	0.700SG002	0.013	0.700SG003	0.015	0.700
SG004	0.018	0.700SG005	0.020	0.700SG006	0.018	0.700
SG007	0.016	0.700SG008	0.014	0.700SG009	0.012	0.700
SG010	0.010	0.700SG011	0.021	0.700SG012	0.029	0.700
SG013	0.038	0.700SG014	0.045	0.700SG015	0.051	0.700
SG016	0.061	0.700SG017	0.080	0.700SG018	0.070	0.700
SG019	0.054	0.700SG020	0.041	0.700SG021	0.020	0.700
SG022	0.026	0.700SG023	0.032	0.700SG024	0.034	0.700
SG025	0.038	0.700SG026	0.040	0.700SG027	0.043	0.700
SG028	0.046	0.700SG029	0.049	0.700SG030	0.052	0.700
SG031	0.054	0.700SG032	0.058	0.700SG033	0.060	0.700
SG034	0.071	0.700SG035	0.078	0.700SG036	0.084	0.700
SG037	0.091	0.700SG038	0.096	0.700SG039	0.100	0.700
SG040	0.123	0.700SG041	0.130	0.700SG042	0.112	0.700
SG043	0.098	0.700SG044	0.091	0.700SG045	0.080	0.700
SG046	0.071	0.700SG047	0.070	0.700SG048	0.000	0.700
Phyt#1	ug ch1/l	Sys#04	CX85_CHL.IC	4	1.	999. IC(xyz): J 06/04/91
SG001	2.000	0.000SG002	2.000	0.000SG003	2.000	0.000
SG004	2.000	0.000SG005	2.000	0.000SG006	2.000	0.000
SG007	2.000	0.000SG008	2.000	0.000SG009	2.000	0.000
SG010	2.000	0.000SG011	2.000	0.000SG012	2.000	0.000
SG013	2.000	0.000SG014	2.000	0.000SG015	2.000	0.000
SG016	2.000	0.000SG017	2.000	0.000SG018	2.000	0.000
SG019	2.000	0.000SG020	2.000	0.000SG021	2.000	0.000
SG022	2.000	0.000SG023	2.000	0.000SG024	2.000	0.000
SG025	2.000	0.000SG026	2.000	0.000SG027	2.000	0.000

Data Group J (Continued) - Initial Conditions: September 1985

SG028	2.000	0.000SG029	2.000	0.000SG030	2.000	0.000		
SG031	2.000	0.000SG032	2.000	0.000SG033	2.000	0.000		
SG034	2.000	0.000SG035	2.000	0.000SG036	2.000	0.000		
SG037	2.000	0.000SG038	2.000	0.000SG039	2.000	0.000		
SG040	2.000	0.000SG041	2.000	0.000SG042	2.000	0.000		
SG043	2.000	0.000SG044	2.000	0.000SG045	2.000	0.000		
SG046	2.000	0.000SG047	1.700	0.000SG048	0.000	0.000	0.000CBOD-U	mg/l
CX85 BOD.IC	3	1.	999.	IC(xyz): J	06/04/91			Sys#05
SG001	11.340	0.800SG002	11.340	0.800SG003	11.340	0.800		
SG004	11.340	0.800SG005	11.340	0.800SG006	11.340	0.800		
SG007	11.340	0.800SG008	11.340	0.800SG009	11.340	0.800		
SG010	11.340	0.800SG011	11.340	0.800SG012	11.340	0.800		
SG013	11.340	0.800SG014	11.340	0.800SG015	11.340	0.800		
SG016	11.340	0.800SG017	11.340	0.800SG018	11.340	0.800		
SG019	11.340	0.800SG020	11.340	0.800SG021	11.340	0.800		
SG022	11.340	0.800SG023	11.340	0.800SG024	11.340	0.800		
SG025	11.340	0.800SG026	11.340	0.800SG027	11.340	0.800		
SG028	11.340	0.800SG029	11.340	0.800SG030	11.340	0.800		
SG031	11.340	0.800SG032	11.340	0.800SG033	11.340	0.800		
SG034	11.340	0.800SG035	11.340	0.800SG036	11.340	0.800		
SG037	11.340	0.800SG038	11.340	0.800SG039	11.340	0.800		
SG040	11.340	0.800SG041	11.340	0.800SG042	11.340	0.800		
SG043	11.340	0.800SG044	11.340	0.800SG045	6.662	0.800		
SG046	2.268	0.800SG047	5.953	0.800SG048	0.000	0.800		
Diss O2	mg/l	Sys#06	CX85_OXY.IC	5	1.	999.	IC(xyz): J	06/04/91
SG001	10.200	1.000SG002	9.711	1.000SG003	9.490	1.000		
SG004	8.982	1.000SG005	8.650	1.000SG006	8.650	1.000		
SG007	8.650	1.000SG008	8.650	1.000SG009	8.650	1.000		
SG010	8.650	1.000SG011	8.464	1.000SG012	8.345	1.000		
SG013	8.185	1.000SG014	8.070	1.000SG015	7.983	1.000		
SG016	7.807	1.000SG017	7.500	1.000SG018	6.300	1.000		
SG019	6.086	1.000SG020	5.927	1.000SG021	5.650	1.000		
SG022	6.541	1.000SG023	7.586	1.000SG024	7.896	1.000		
SG025	8.423	1.000SG026	8.800	1.000SG027	8.664	1.000		
SG028	8.565	1.000SG029	8.447	1.000SG030	8.336	1.000		
SG031	8.224	1.000SG032	8.093	1.000SG033	8.000	1.000		
SG034	7.972	1.000SG035	7.955	1.000SG036	7.940	1.000		
SG037	7.923	1.000SG038	7.910	1.000SG039	7.900	1.000		
SG040	6.625	1.000SG041	6.200	1.000SG042	6.322	1.000		
SG043	6.410	1.000SG044	6.461	1.000SG045	6.533	1.000		
SG046	6.593	1.000SG047	6.600	1.000SG048	0.000	1.000		
Org-N	mg/l	Sys#07	CX85_TON.IC	3	1.	999.	IC(xyz): J	06/04/91
SG001	0.330	0.800SG002	0.380	0.800SG003	0.403	0.800		
SG004	0.456	0.800SG005	0.490	0.800SG006	0.524	0.800		
SG007	0.557	0.800SG008	0.597	0.800SG009	0.645	0.800		
SG010	0.680	0.800SG011	0.631	0.800SG012	0.601	0.800		
SG013	0.559	0.800SG014	0.529	0.800SG015	0.506	0.800		
SG016	0.460	0.800SG017	0.380	0.800SG018	0.330	0.800		
SG019	0.369	0.800SG020	0.399	0.800SG021	0.450	0.800		
SG022	0.501	0.800SG023	0.561	0.800SG024	0.578	0.800		
SG025	0.608	0.800SG026	0.630	0.800SG027	0.608	0.800		
SG028	0.592	0.800SG029	0.573	0.800SG030	0.555	0.800		
SG031	0.536	0.800SG032	0.515	0.800SG033	0.500	0.800		
SG034	0.518	0.800SG035	0.529	0.800SG036	0.539	0.800		
SG037	0.550	0.800SG038	0.559	0.800SG039	0.565	0.800		
SG040	0.546	0.800SG041	0.540	0.800SG042	0.540	0.800		
SG043	0.540	0.800SG044	0.540	0.800SG045	0.540	0.800		
SG046	0.540	0.800SG047	0.540	0.800SG048	0.000	0.800		
Org-P	mg/l	Sys#08	CX85_TOP.IC	3	1.	999.	IC(xyz): J	06/04/91
SG001	0.020	0.100SG002	0.026	0.100SG003	0.029	0.100		
SG004	0.036	0.100SG005	0.040	0.100SG006	0.052	0.100		
SG007	0.065	0.100SG008	0.080	0.100SG009	0.097	0.100		
SG010	0.110	0.100SG011	0.094	0.100SG012	0.084	0.100		
SG013	0.070	0.100SG014	0.060	0.100SG015	0.052	0.100		
SG016	0.037	0.100SG017	0.010	0.100SG018	0.010	0.100		

Data Group J (Continued) - Initial Conditions: September 1985

SG019	0.017	0.100SG020	0.021	0.100SG021	0.030	0.100
SG022	0.030	0.100SG023	0.030	0.100SG024	0.030	0.100
SG025	0.030	0.100SG026	0.030	0.100SG027	0.028	0.100
SG028	0.027	0.100SG029	0.026	0.100SG030	0.024	0.100
SG031	0.023	0.100SG032	0.021	0.100SG033	0.020	0.100
SG034	0.021	0.100SG035	0.022	0.100SG036	0.023	0.100
SG037	0.024	0.100SG038	0.025	0.100SG039	0.025	0.100
SG040	0.044	0.100SG041	0.050	0.100SG042	0.047	0.100
SG043	0.045	0.100SG044	0.043	0.100SG045	0.042	0.100
SG046	0.040	0.100SG047	0.040	0.100SG048	0.000	0.100

Appendix O- Verification PRM Input Data: July 1987
Wasp4 Input File: PRM87068.INP

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Data Group A- Simulation Control data: July 1987

SegNo	APP O 01.TBL GEOM87.WQ1	Upstr Riv Mi miles	Dwnstr Riv Mi miles	Seg Cntr Riv Mi miles	Segment Depth meters	Segment Sfc A (xy) sq meters	Segment Volume cu meters
SG001	Westvaco	340.0	338.7	339.35	0.528	69570.1	36733.0
SG002	Georges Ck	338.7	338.2	338.45	0.652	32667.2	21299.0
SG003	UPRC STP	338.2	336.3	337.25	0.605	111666.1	67558.0
SG004	Stony Run	336.3	332.7	334.50	0.676	200983.7	135865.0
SG005	Keyser	332.7	331.4	332.05	0.739	70733.4	52272.0
SG006	21st Br	331.4	328.5	329.95	1.030	172485.4	177660.0
SG007	Dawson	328.5	326.0	327.25	1.030	148694.2	153155.0
SG008	Black Oak	326.0	322.0	324.00	1.030	237910.7	245048.0
SG009	Rawlings	322.0	318.3	320.15	1.030	220067.0	226669.0
SG010	Pinto	318.3	314.1	316.20	1.050	249058.1	261511.0
SG011	Cresaptown	314.1	313.4	313.75	1.990	50846.2	101184.0
SG012	Celanese	313.4	309.6	311.50	0.980	209259.2	205074.0
SG013	Md.Jnctn.	309.6	307.3	308.45	2.260	174155.8	393592.0
SG014	Wills Ck	307.3	305.2	306.25	0.805	160406.2	129127.0
SG015	Wiley Ford	305.2	304.0	304.60	1.340	67080.6	89888.0
SG016	Cumbrlnd STP	304.0	298.5	301.25	1.470	401471.4	590163.0
SG017	Mexico Field	298.5	294.1	296.30	1.160	270655.2	313960.0
SG018	Pattersn Ck	294.1	285.1	289.60	1.190	560090.8	666508.0
SG019	So. Branch	285.1	282.6	283.85	1.320	228109.1	301104.0
SG020	Town Ck	282.6	279.8	281.20	1.320	255482.6	337237.0
SG021	L Cacapon R	279.8	276.5	278.15	1.320	301103.8	397457.0
SG022	Paw Paw	276.5	255.2	265.85	1.030	2088177.7	2150823.0
SG023	15 Mile Ck	255.2	251.3	253.25	0.801	555812.7	445206.0
SG024	SidelingH.Ck	251.3	247.7	249.50	0.801	513058.7	410960.0
SG025	Cacapon R	247.7	238.6	243.15	0.921	1359071.7	1251705.0
SG026	Hancock	238.6	231.2	234.90	0.927	1115003.2	1033608.0
SG027	Licking Ck	231.2	227.1	229.15	0.927	617772.4	572675.0
SG028	Ft Frederick	227.1	217.4	222.25	1.940	3723800.0	7224172.0
SG029	Dam #5	217.4	210.8	214.10	1.230	1645524.4	2023995.0
SG030	Conocochg Ck	210.8	201.9	206.35	1.280	2267335.2	2902189.0
SG031	Opequon Ck	201.9	195.3	198.60	1.970	2767481.7	5451939.0
SG032	Dam #4	195.3	183.6	189.45	1.050	3080077.1	3234081.0
SG033	Sheperdstown	183.6	179.3	181.45	1.050	1131994.3	1188594.0
SG034	Antietam Ck	179.3	173.1	176.20	2.200	2888575.0	6354865.0
SG035	Pleasantv.Dam	173.1	171.5	172.30	0.659	798912.0	526483.0
SG036	Shenandoah R	171.5	165.8	168.65	0.797	2985061.5	2379094.0
SG037	Brunswick	165.8	163.4	164.60	1.060	1199536.8	1271509.0
SG038	CatoctinCkMD	163.4	159.5	161.45	1.110	1958652.3	2174104.0
SG039	Pt of Rocks	159.5	153.1	156.30	0.982	3231255.6	3173093.0
SG040	Monacacy R	153.1	147.1	150.10	1.020	3068393.1	3129761.0
SG041	Whites Ferry	147.1	142.2	144.65	1.180	3035671.2	3582092.0
SG042	Goose Ck	142.2	133.9	138.05	1.200	5158248.3	6189898.0
SG043	Seneca Ck	133.9	129.1	131.50	1.200	2974716.7	3569660.0
SG044	Watts Branch	129.1	126.3	127.70	3.350	1719047.2	5758808.0
SG045	Gr Falls Dam	126.3	118.4	122.35	1.860	3480003.2	6472806.0
SG046	Ruppert Isl.	118.4	117.4	117.90	3.370	555425.5	1871784.0
SG047	L. Falls Dam	117.4	115.9	116.65	1.640	623575.6	1022664.0
SG048	Dummy Sed.Layer	340.0	115.9	227.95	0.010	58734679.7	587346.8
-99	<<END-OF-FILE>> GEOM87.WQ1				-9.00	-9.0	

Data Group B- Exchange Coefficients: July 1987

APP O 02.TBL GEOM87.WQ1	From Seg#	To Seg#	X-Area sq meters	Char L meters	Kx sq m/sec
SG000 Upstream BC	0	1	17.56	1046.07	45.0
SG001 Westvaco	1	2	17.56	1448.41	45.0
SG002 Georges Ck	2	3	22.09	1931.21	45.0
SG003 UPRC STP	3	4	22.09	4425.70	45.0
SG004 Stony Run	4	5	23.45	3942.89	45.0
SG005 Keyser	5	6	24.98	3379.62	45.0
SG006 21st Br	6	7	38.07	4345.23	30.0
SG007 Dawson	7	8	38.07	5230.37	30.0
SG008 Black Oak	8	9	38.07	6195.97	30.0
SG009 Rawlings	9	10	38.07	6356.91	30.0
SG010 Pinto	10	11	38.69	3942.89	45.0
SG011 Cresaptown	11	12	33.53	3621.02	30.0
SG012 Celanese	12	13	33.53	4908.50	30.0
SG013 Md.Jnctn.	13	14	38.21	3540.56	45.0
SG014 Wills Ck	14	15	38.21	2655.42	45.0
SG015 Wiley Ford	15	16	46.55	5391.30	80.0
SG016 Cumbrlnd STP	16	17	44.34	7966.25	80.0
SG017 Mexico Field	17	18	44.34	10782.60	80.0
SG018 Pattersn Ck	18	19	46.62	9253.73	30.0
SG019 So. Branch	19	20	74.84	4264.76	30.0
SG020 Town Ck	20	21	74.84	4908.50	30.0
SG021 L Cacapon R	21	22	62.74	19794.93	80.0
SG022 Paw Paw	22	23	62.74	20277.73	80.0
SG023 15 Mile Ck	23	24	70.93	6035.04	60.0
SG024 SidelingH.Ck	24	25	70.93	10219.33	60.0
SG025 Cacapon R	25	26	85.47	13277.09	60.0
SG026 Hancock	26	27	86.79	9253.73	60.0
SG027 Licking Ck	27	28	86.79	11104.47	30.0
SG028 Ft Frederick	28	29	190.55	13116.15	100.0
SG029 Dam #5	29	30	190.55	12472.42	45.0
SG030 Conocochg Ck	30	31	202.62	12472.42	45.0
SG031 Opequon Ck	31	32	171.76	14725.50	45.0
SG032 Dam #4	32	33	171.76	12874.75	80.0
SG033 Sheperdstown	33	34	171.76	8449.06	60.0
SG034 Antietam Ck	34	35	204.46	6276.44	60.0
SG035 Pleasntv.Dam	35	36	204.46	5874.11	45.0
SG036 Shenandoah R	36	37	259.35	6517.84	45.0
SG037 Brunswick	37	38	329.20	5069.43	45.0
SG038 CatoctinCkMD	38	39	308.07	8288.12	45.0
SG039 Pt of Rocks	39	40	308.07	9977.93	30.0
SG040 Monacacy R	40	41	324.12	8770.93	30.0
SG041 Whites Ferry	41	42	454.25	10621.67	80.0
SG042 Goose Ck	42	43	462.10	10541.20	30.0
SG043 Seneca Ck	43	44	462.10	6115.51	30.0
SG044 Watts Branch	44	45	509.12	8609.99	80.0
SG045 Gr Falls Dam	45	46	509.12	7161.58	30.0
SG046 Ruppert Isl.	46	47	423.64	2011.68	80.0
SG047 L. Falls Dam	47	0	423.64	1207.01	80.0
SG048 Dummy Sediment Layer					

Data Group C- Segment Volumes: July 1987

APP O 03.TBL GEOM87.WQ1	Volume cu meters	Coeff "a" AMULT	Expon "b" VEXP	Coeff "c" DMULT	Expon "d" DXP
SG001 Westvaco	36733.0	0.1430	0.5570	0.3020	0.2690
SG002 Georges Ck	21299.0	0.1010	0.5570	0.3590	0.2690
SG003 UPRC STP	67558.0	0.1210	0.5570	0.3330	0.2690
SG004 Stony Run	135865.0	0.1140	0.5570	0.3720	0.2690
SG005 Keyser	52272.0	0.1070	0.5570	0.4070	0.2690
SG006 21st Br	177660.0	0.1410	0.2430	0.2610	0.6200
SG007 Dawson	153155.0	0.1410	0.2430	0.2610	0.6200
SG008 Black Oak	245048.0	0.1410	0.2430	0.2610	0.6200
SG009 Rawlings	226669.0	0.1410	0.2430	0.2610	0.6200
SG010 Pinto	261511.0	0.0852	0.4780	0.4220	0.4000
SG011 Cresaptown	101184.0	0.0367	0.4780	0.7990	0.4000
SG012 Celanese	205074.0	0.0983	0.4780	0.3930	0.4000
SG013 Md.Junctn.	393592.0	0.0119	0.8970	2.0220	0.0480
SG014 Wills Ck	129127.0	0.1150	0.3840	0.2730	0.4500
SG015 Wiley Ford	89888.0	0.0944	0.3840	0.4550	0.4500
SG016 Cumbrlnd STP	590163.0	0.0659	0.3840	0.5000	0.4500
SG017 Mexico Field	313960.0	0.0991	0.3840	0.3940	0.4500
SG018 Pattersn Ck	666508.0	0.0991	0.3840	0.3940	0.4500
SG019 So. Branch	301104.0	0.0788	0.3840	0.3480	0.4620
SG020 Town Ck	337237.0	0.0788	0.3840	0.3480	0.4620
SG021 L Cacapon R	397457.0	0.0788	0.3840	0.3480	0.4620
SG022 Paw Paw	2150823.0	0.0719	0.4770	0.3330	0.3920
SG023 15 Mile Ck	445206.0	0.0636	0.4770	0.2590	0.3920
SG024 SidelingH.Ck	410960.0	0.0636	0.4770	0.2590	0.3920
SG025 Cacapon R	1251705.0	0.0636	0.4770	0.2590	0.3920
SG026 Hancock	1033608.0	0.0462	0.5710	0.3270	0.3220
SG027 Licking Ck	572675.0	0.0462	0.5710	0.3270	0.3220
SG028 Ft Frederick	7224172.0	0.0098	0.5710	0.6240	0.3220
SG029 Dam #5	2023995.0	0.0238	0.5710	0.3940	0.3220
SG030 Conococho Ck	2902189.0	0.0238	0.5710	0.3940	0.3220
SG031 Opequon Ck	5451939.0	0.0098	0.5710	0.5860	0.3220
SG032 Dam #4	3234081.0	0.0326	0.5710	0.2880	0.3220
SG033 Sheperdstown	1188594.0	0.0326	0.5710	0.2880	0.3220
SG034 Antietam Ck	6354865.0	0.0174	0.4180	0.3210	0.4660
SG035 Pleasntv.Dam	526483.0	0.0542	0.4180	0.0960	0.4660
SG036 Shenandoah R	2379094.0	0.0542	0.4180	0.0960	0.4660
SG037 Brunswick	1271509.0	0.0427	0.4180	0.1280	0.4660
SG038 CatoctinCkMD	2174104.0	0.0427	0.4180	0.1280	0.4660
SG039 Pt of Rocks	3173093.0	0.0192	0.6160	0.2370	0.3070
SG040 Monacacy R	3129761.0	0.0192	0.6160	0.2370	0.3070
SG041 Whites Ferry	3582092.0	0.0137	0.6160	0.2730	0.3070
SG042 Goose Ck	6189898.0	0.0137	0.6160	0.2730	0.3070
SG043 Seneca Ck	3569660.0	0.0137	0.6160	0.2730	0.3070
SG044 Watts Branch	5758808.0	0.0049	0.6160	0.7650	0.3070
SG045 Gr Falls Dam	6472806.0	0.0123	0.6160	0.4280	0.3070
SG046 Ruppert Isl.	1871784.0	0.0055	0.6160	0.7650	0.3070
SG047 L. Falls Dam	1022664.0	0.0151	0.6160	0.3730	0.3070
SG048 Dummy Sediment	587346.8	0.0151	0.6160	0.3730	0.3070

Data Group D- Flows and Transport: July 1987

Note: All Flow and Transport Data for July 1987 verification
presented in Appendix L

Data Group E- Boundary Conditions: July 1987

- A - Individual Boundary Condition Flows and Concentrations
- B - Individual Boundary Condition Flows and Mass Load
- C - Sum of Boundary Condition Flows and Mass Load by Segment
- D - Weighted Sum Boundary Condition Concentrations by Segment

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07/01/1987	JWK	NSEG	0000 Seg#	JD= BC Input	182.00										
-----Flow															
(mgd)															
NH ₃ N NO ₃ +NO ₂ -N O P _{O4} PHYT#1 CBOD-5 DISS O ₂ ORG-N ORG-P Total N Total P															
mg N/L mg N/L mg P/L ug Chl/L mg BOD/L mg O ₂ /L mg N/L mg P/L mg N/L mg P/L															
1	128	1	B TRBG:	N Br.Potomac BC	186.814	0.0800	0.7400	0.0040	2.0000	2.0000	8.0900	0.2700	0.0260	1.0900	0.0300
2	128	2	B TRBG:	Savage River nr B	0.000	0.0300	0.7200	0.0040	2.0000	2.0000	8.9000	0.3200	0.0260	1.0700	0.0300
3	128	2	B TRBG:	Georges Ck @ Fran	8.402	0.4000	1.0900	0.0060	2.0000	2.0000	7.9000	0.6000	0.1540	2.0900	0.1600
4	128	14	B TRBG:	Willis Ck nr Cumbe	26.500	0.0200	0.2700	0.0040	2.0000	2.0000	8.4000	0.2600	0.0360	0.5500	0.0400
5	128	19	B TRBG:	S.Br.Potomack nr S	138.961	0.0200	0.2100	0.0040	2.0000	2.0000	7.0000	0.2600	0.0130	0.4900	0.0170
6	128	20	B TRBG:	Town Ck nr Oldtow	7.162	0.0200	0.0600	0.0040	2.0000	2.0000	7.4000	0.2800	0.0360	0.3600	0.0400
7	128	30	B TRBG:	Conococheague Ck	109.230	0.0800	3.5800	0.1700	0.6700	2.0000	8.0000	0.9200	0.0200	4.5800	0.1900
8	128	31	B TRBG:	Opequon Ck @Martil	78.206	0.0700	0.2700	0.1880	2.0000	1.2000	9.4000	0.2700	0.0310	0.6100	0.2190
9	128	34	B TRBG:	Antietam Ck nr Sh	108.583	0.0400	4.8800	0.2000	0.7500	2.0000	7.2000	0.7600	0.0260	5.6800	0.4060
10	128	36	B TRBG:	Shenandoah R #Mil	685.109	0.0300	0.9200	0.0400	3.7400	2.0000	6.5000	0.8700	0.0440	1.8200	0.0840
11	128	38	B TRBG:	Catoctin Ck MD	8.402	0.0500	1.3700	0.1040	3.7400	2.0000	6.5000	0.7000	0.0460	2.1200	0.1500
12	128	39	B TRBG:	Catoctin Ck VA	0.000	0.1000	1.4900	0.0400	5.0900	1.0000	7.7000	0.4000	0.0600	1.9900	0.1000
13	128	40	B TRBG:	Monoacy R @Jug B	232.032	0.0700	3.2200	0.1180	5.0900	4.0000	6.8000	0.8300	0.1620	4.1200	0.2800
14	128	42	B TRBG:	Goose Ck nr Leesb	23.268	0.1500	0.7200	0.0350	1.2000	3.0000	6.0500	0.6000	0.1150	1.4700	0.1500
15	128	43	B TRBG:	Seneca Ck @Dawnson	35.548	0.0400	2.6800	0.1160	1.2000	2.3000	8.4000	0.5100	0.0940	3.2300	0.2100
16	128	47	B TRBG:	Potomack River BC	2294.467	0.0400	1.1600	0.0600	8.2500	1.0000	7.3000	0.5500	0.0500	1.7500	0.1100
17	128	48	DIVR:	Westvaco Corporat	-24.920	0.0800	0.7400	0.0040	6.5900	4.0000	8.1000	0.2700	0.0260	1.0900	0.0300
18	128	22	DIVR:	City of Paw Paw	-0.060	0.0400	0.4100	0.0100	6.5900	4.0000	7.1000	0.4100	0.0500	0.8600	0.0600
19	128	30	DIVR:	City of Hagerstow	-6.200	0.0400	1.1050	0.0400	2.8400	4.0000	8.0000	0.7850	0.0400	1.9300	0.0800
20	128	32	DIVR:	City of Sharpsbur	-0.100	0.0400	1.1050	0.0400	2.8400	4.0000	8.0000	0.7850	0.0400	1.9300	0.0800
21	128	33	DIVR:	City of Shephards	-0.350	0.0400	1.1050	0.0400	2.8400	4.0000	8.0000	0.7850	0.0400	1.9300	0.0800
22	128	33	DIVR:	City of Harpers F	-0.350	0.0400	1.1050	0.0400	2.8400	4.0000	8.0000	0.7850	0.0400	1.9300	0.0800
23	128	36	DIVR:	City of Lovettsvil	0.000	0.0400	1.1050	0.0400	2.8400	4.0000	8.0000	0.7850	0.0400	1.9300	0.0800
24	128	37	DIVR:	City of Brunswick	0.000	0.0400	1.1050	0.0400	2.						

Data Group E, Part A (Continued): Individual BC Flows & Conc.by Wasp4 BC Input No. Avg. over time:

07/01/1987 0000 JD= 182.00				-----Flow	NH3 N	NO3+NO2 N	O PO4	PHYT#1	CBOD 5	DISS O2	ORG N	ORG P Total N	Total P	
JWK	NSEG	Seg#	BC Input	----- (mgd)	mg N/L	mg N/L	mg P/L	ug Chl/L	mg BOD/L	mg O2/L	mg N/L	mg P/L	mg N/L	mg P/L
94	128	26	F TRBU: Warm Spring Run	38.765	0.0200	0.0600	0.0040	2.0000	2.0000	7.4000	0.2800	0.0360	0.3600	0.0400
95	128	27	F TRBU: Big Run	38.765	0.0200	0.2100	0.0040	2.0000	2.0000	7.0000	0.2600	0.0130	0.4900	0.0170
96	128	27	F TRBU: Cherry Run	38.765	0.0200	0.2100	0.0040	2.0000	2.0000	7.0000	0.2600	0.0130	0.4900	0.0170
97	128	28	F TRBU: Back Creek	38.765	0.0200	0.2100	0.0040	2.0000	2.0000	7.0000	0.2600	0.0130	0.4900	0.0170
98	128	28	F TRBU: Green Spring Run	38.765	0.0200	0.2100	0.0040	2.0000	2.0000	7.0000	0.2600	0.0130	0.4900	0.0170
99	128	28	F TRBU: Harlan Run	38.765	0.0200	0.2100	0.0040	2.0000	2.0000	7.0000	0.2600	0.0130	0.4900	0.0170
100	128	28	F TRBU: Jordan Run	38.765	0.0200	0.2100	0.0040	2.0000	2.0000	7.0000	0.2600	0.0130	0.4900	0.0170
101	128	29	F TRBU: Little Conocochea	38.765	0.0800	3.5800	0.1700	0.6700	2.0000	8.0000	0.9200	0.0200	4.5800	0.1900
102	128	31	F TRBU: Downey Branch	38.765	0.0700	0.2700	0.1880	2.0000	1.2000	9.4000	0.2700	0.0310	0.6100	0.2190
103	128	32	F TRBU: Marsh Run	-7.879	0.0700	0.2700	0.1880	2.0000	1.2000	9.4000	0.2700	0.0310	0.6100	0.2190
104	128	32	F TRBU: Rockymarsh Run	-7.879	0.0700	0.2700	0.1880	2.0000	1.2000	9.4000	0.2700	0.0310	0.6100	0.2190
105	128	33	F TRBU: Rattlesnake Run	-7.879	0.0700	0.2700	0.1880	2.0000	1.2000	9.4000	0.2700	0.0310	0.6100	0.2190
106	128	33	F TRBU: Town Run	-7.879	0.0700	0.2700	0.1880	2.0000	1.2000	9.4000	0.2700	0.0310	0.6100	0.2190
107	128	34	F TRBU: Elk Branch	-7.879	0.0400	4.8800	0.2000	0.7500	2.0000	7.2000	0.7600	0.2060	5.6800	0.4060
108	128	36	F TRBU: Dutchman Creek	-7.879	0.0400	4.8800	0.2000	0.7500	2.0000	7.2000	0.7600	0.2060	5.6800	0.4060
109	128	36	F TRBU: Isreal Creek	-7.879	0.0400	4.8800	0.2000	0.7500	2.0000	7.2000	0.7600	0.2060	5.6800	0.4060
110	128	36	F TRBU: Piney Run	-7.879	0.0400	4.8800	0.2000	0.7500	2.0000	7.2000	0.7600	0.2060	5.6800	0.4060
111	128	37	F TRBU: Little Catoctin C	-7.879	0.0400	4.8800	0.2000	0.7500	2.0000	7.2000	0.7600	0.2060	5.6800	0.4060
112	128	37	F TRBU: Quarter Branch	-7.879	0.0400	4.8800	0.2000	0.7500	2.0000	7.2000	0.7600	0.2060	5.6800	0.4060
113	128	39	F TRBU: Tuscarora Creek	27.017	0.0700	3.2200	0.1180	5.0900	4.0000	6.8000	0.8300	0.1620	4.1200	0.2800
114	128	40	F TRBU: Limestone Branch	27.017	0.0700	3.2200	0.1180	5.0900	4.0000	6.8000	0.8300	0.1620	4.1200	0.2800
115	128	40	F TRBU: Little Monocacy	27.017	0.0700	3.2200	0.1180	5.0900	4.0000	6.8000	0.8300	0.1620	4.1200	0.2800
116	128	42	F TRBU: Broad Run	27.017	0.1500	0.7200	0.0350	1.2000	3.0000	6.0500	0.6000	0.1150	1.4700	0.1500
117	128	42	F TRBU: Cabin Branch	27.017	0.1500	0.7200	0.0350	1.2000	3.0000	6.0500	0.6000	0.1150	1.4700	0.1500
118	128	42	F TRBU: Chriel Branch	27.017	0.1500	0.7200	0.0350	1.2000	3.0000	6.0500	0.6000	0.1150	1.4700	0.1500
119	128	42	F TRBU: Horsepen Branch	27.017	0.1500	0.7200	0.0350	1.2000	3.0000	6.0500	0.6000	0.1150	1.4700	0.1500
120	128	42	F TRBU: Sugarland Run	27.017	0.1500	0.7200	0.0350	1.2000	3.0000	6.0500	0.6000	0.1150	1.4700	0.1500
121	128	43	F TRBU: Muddy Branch	27.017	0.0400	2.6800	0.1160	1.2000	2.3000	8.4000	0.5100	0.0940	3.2300	0.2100
122	128	43	F TRBU: Nichols Run	27.017	0.0400	2.6800	0.1160	1.2000	2.3000	8.4000	0.5100	0.0940	3.2300	0.2100
123	128	45	F TRBU: Bullneck Run	27.017	0.0200	0.8100	0.0080	2.7000	2.4000	8.7000	0.4300	0.0720	1.2600	0.0800
124	128	45	F TRBU: Dean Run	27.017	0.0200	0.8100	0.0080	2.7000	2.4000	8.7000	0.4300	0.0720	1.2600	0.0800
125	128	45	F TRBU: Difficult Run	27.017	0.0200	0.8100	0.0080	2.7000	2.4000	8.7000	0.4300	0.0720	1.2600	0.0800
126	128	45	F TRBU: Rock Run	27.017	0.0200	0.8100	0.0080	2.7000	2.4000	8.7000	0.4300	0.0720	1.2600	0.0800
127	128	45	F TRBU: Scott Run	27.017	0.0200	0.8100	0.0080	2.7000	2.4000	8.7000	0.4300	0.0720	1.2600	0.0800
128	128	45	F TRBU: Turkey Run	27.017	0.0200	0.8100	0.0080	2.7000	2.4000	8.7000	0.4300	0.0720	1.2600	0.0800

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JWK	MSEG	0000 Seg#	JW BC Input	Flow ----- (mgd)	NH3 N kg N/d	NO3+NO2 N kg N/d	O P04 kg P/d	PHTY#1 kg Chl/d	C800_5 kg BOD/d	DISS O2 kg OZ/d	ORG_N kg N/d	ORG_P kg P/d	Total N kg N/d	Total P kg P/d
1	128	1	B TRBG: N Br.Potomac BC	186.814	56.57	523.30	2.83	1.41	1414.34	5720.99	190.44	18.39	770.81	21.22
2	128	2	B TRBG: Savage River nr B	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	128	3	B TRBG: Georges Ck n Fran	8.402	12.72	34.67	0.19	0.06	63.61	251.27	19.08	4.90	66.47	5.09
4	128	4	B TRBG: Willis Ck nr Cumbe	26.500	2.01	27.08	0.40	0.06	200.62	842.15	26.08	3.61	55.17	4.01
5	128	5	S.Br Potomac mrt Sh S	158.961	10.32	110.46	2.10	1.05	1052.04	3682.15	136.77	6.84	257.75	8.94
6	128	6	Town Ck nr Oldtow	7.182	0.54	6.63	0.11	0.05	206.82	206.82	59.98	0.98	9.76	1.08
7	128	7	Coconochague Ck	109.230	33.08	1480.95	70.29	0.28	826.96	3307.82	380.40	8.27	1893.73	78.56
8	128	8	Opequon Ck @Mart I	78.236	20.72	79.93	55.66	0.59	355.25	2782.78	79.93	9.18	180.58	64.83
9	128	9	Annetam Ck nr Sh	108.583	16.44	2005.83	82.21	0.31	822.06	2959.42	312.38	84.67	2334.66	166.88
10	128	10	Shenandoah R @Mil	685.109	77.80	2385.94	103.74	9.70	5186.82	16857.16	2256.27	114.11	4720.01	217.85
11	128	11	Catoctin Ck MD	8.402	1.59	43.57	3.31	0.12	63.61	206.74	22.26	1.46	67.43	4.77
12	128	12	Catoctin Ck VA	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	128	13	Monocacy R @Jug B	232.032	61.48	2828.24	103.64	4.47	3513.34	5972.67	729.02	142.29	3618.74	245.93
14	128	14	Goose Ck nr Leesb	13.21	13.21	63.42	3.08	0.11	264.23	532.87	52.85	10.13	129.47	13.21
15	128	15	Seneca Ck @Dawson	55.548	3.38	360.63	15.61	0.16	309.50	1130.34	68.63	12.65	434.64	28.26
16	128	16	Potomac River SC	2294.467	347.42	10075.15	521.13	71.66	8685.48	63403.97	4777.01	434.27	15199.58	955.40
17	128	17	Westvaco Corporat	-24.920	-7.55	-69.81	-0.38	-0.62	-377.33	-764.09	-25.47	-2.45	-102.82	-2.83
18	128	18	City of Paw Paw	-0.060	-0.01	-0.09	0.00	0.00	-0.91	-1.61	-0.09	-0.01	-0.20	-0.01
19	128	19	City of Hagerstow	-6.200	-0.94	-25.93	-0.94	-0.07	-93.88	-187.76	-18.42	-0.94	-45.30	-1.88
20	128	20	City of Sharpsbur	-0.100	-0.02	-0.42	-0.02	0.00	-1.51	-3.03	-0.30	-0.02	-0.73	-0.03
21	128	21	City of Shephards	-0.350	-0.05	-1.46	-0.05	0.00	-5.30	-10.60	-1.04	-0.05	-2.56	-0.11
22	128	22	City of Harpers F	-0.350	-0.05	-1.46	-0.05	0.00	-5.30	-10.60	-1.04	-0.05	-2.56	-0.11
23	128	23	City of Lovettsvl	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	128	24	City of Brunswick	-0.300	-0.05	-1.25	-0.05	0.00	-4.54	-9.08	-0.89	-0.05	-2.19	-0.09
25	128	25	Point of Rocks	-1.500	-0.34	-8.66	-0.34	-0.02	-29.81	-41.45	-7.47	-2.03	-16.47	-2.36
26	128	26	City of Leesburg	-1.300	-0.37	-9.92	-0.40	-0.01	-29.81	-41.45	-7.47	-2.03	-16.47	-2.36
27	128	27	Fairfax Co FCWA	-54.700	-15.53	-417.23	-50.77	-1.88	-					

Data Group E, Part B (Continued): Individual BC Flows & Mass Load by Wasp4 BC Input No. Avg.
over time

JWK	NSEG	Seg#	BC	Inn Unit	-----Flow ----- (mgd)	NH3 N kg N/d	NO3+NO2 N kg N/d	O PO4 kg P/d	PHYT#1 kg Chl/d	CBOO 5 kg CBO07d	DISS O2 kg O2/d	ORG N kg N/d	ORG P Total N kg P/d Total N kg N/d	Total P kg P/d	
94	128	26	F	TRBU: Warm Spring Run	38.765	2.93	8.80	0.59	0.29	293.48	1085.89	41.09	5.28	52.83	5.87
95	128	27	F	TRBU: Big Run	38.765	2.93	30.82	0.59	0.29	293.48	1027.19	38.15	1.91	71.90	2.49
96	128	27	F	TRBU: Cherry Run	38.765	2.93	30.82	0.59	0.29	293.48	1027.19	38.15	1.91	71.90	2.49
97	128	28	F	TRBU: Back Creek	38.765	2.93	30.82	0.59	0.29	293.48	1027.19	38.15	1.91	71.90	2.49
98	128	28	F	TRBU: Green Spring Run	38.765	2.93	30.82	0.59	0.29	293.48	1027.19	38.15	1.91	71.90	2.49
99	128	28	F	TRBU: Harlan Run	38.765	2.93	30.82	0.59	0.29	293.48	1027.19	38.15	1.91	71.90	2.49
100	128	28	F	TRBU: Jordan Run	38.765	2.93	30.82	0.59	0.29	293.48	1027.19	38.15	1.91	71.90	2.49
101	128	29	F	TRBU: Little Conocochea	38.765	11.74	525.34	24.95	0.10	293.48	1173.93	135.00	2.93	672.08	27.88
102	128	31	F	TRBU: Downey Branch	38.765	10.27	39.62	27.59	0.29	176.09	1379.37	39.62	4.55	89.51	32.14
103	128	32	F	TRBU: Marsh Run	-7.879	-2.09	-8.05	-5.61	-0.06	-35.79	-280.35	-8.05	-0.92	-18.19	-6.53
104	128	33	F	TRBU: Rockymarsh Run	-7.879	-2.09	-8.05	-5.61	-0.06	-35.79	-280.35	-8.05	-0.92	-18.19	-6.53
105	128	33	F	TRBU: Rattlesnake Run	-7.879	-2.09	-8.05	-5.61	-0.06	-35.79	-280.35	-8.05	-0.92	-18.19	-6.53
106	128	33	F	TRBU: Town Run	-7.879	-2.09	-8.05	-5.61	-0.06	-35.79	-280.35	-8.05	-0.92	-18.19	-6.53
107	128	34	F	TRBU: Elk Branch	-7.879	-1.19	-145.54	-5.96	-0.02	-59.65	-214.74	-22.67	-6.14	-169.40	-12.11
108	128	36	F	TRBU: Dutchman Creek	-7.879	-1.19	-145.54	-5.96	-0.02	-59.65	-214.74	-22.67	-6.14	-169.40	-12.11
109	128	36	F	TRBU: Isreal Creek	-7.879	-1.19	-145.54	-5.96	-0.02	-59.65	-214.74	-22.67	-6.14	-169.40	-12.11
110	128	36	F	TRBU: Piney Run	-7.879	-1.19	-145.54	-5.96	-0.02	-59.65	-214.74	-22.67	-6.14	-169.40	-12.11
111	128	37	F	TRBU: Little Catoctin C	-7.879	-1.19	-145.54	-5.96	-0.02	-59.65	-214.74	-22.67	-6.14	-169.40	-12.11
112	128	37	F	TRBU: Quarter Branch	-7.879	-1.19	-145.54	-5.96	-0.02	-59.65	-214.74	-22.67	-6.14	-169.40	-12.11
113	128	39	F	TRBU: Tuscarora Creek	27.017	7.16	329.31	12.07	0.52	409.08	695.44	84.88	16.57	421.36	28.64
114	128	40	F	TRBU: Limestone Branch	27.017	7.16	329.31	12.07	0.52	409.08	695.44	84.88	16.57	421.36	28.64
115	128	40	F	TRBU: Little Monocacy	27.017	7.16	329.31	12.07	0.52	409.08	695.44	84.88	16.57	421.36	28.64
116	128	42	F	TRBU: Broad Run	27.017	15.34	73.64	3.58	0.12	306.81	618.74	61.36	11.76	150.34	15.34
117	128	42	F	TRBU: Cabin Branch	27.017	15.34	73.64	3.58	0.12	306.81	618.74	61.36	11.76	150.34	15.34
118	128	42	F	TRBU: Chriel Branch	27.017	15.34	73.64	3.58	0.12	306.81	618.74	61.36	11.76	150.34	15.34
119	128	42	F	TRBU: Horsepen Branch	27.017	15.34	73.64	3.58	0.12	306.81	618.74	61.36	11.76	150.34	15.34
120	128	42	F	TRBU: Sugarland Run	27.017	15.34	73.64	3.58	0.12	306.81	618.74	61.36	11.76	150.34	15.34
121	128	43	F	TRBU: Muddy Branch	27.017	4.09	274.09	11.86	0.12	235.22	859.08	52.16	9.61	330.34	21.48
122	128	43	F	TRBU: Nichols Run	27.017	4.09	274.09	11.86	0.12	235.22	859.08	52.16	9.61	330.34	21.48
123	128	45	F	TRBU: Bullneck Run	27.017	2.05	82.84	0.82	0.28	245.45	889.76	43.98	7.36	128.86	8.18
124	128	45	F	TRBU: Dean Run	27.017	2.05	82.84	0.82	0.28	245.45	889.76	43.98	7.36	128.86	8.18
125	128	45	F	TRBU: Difficult Run	27.017	2.05	82.84	0.82	0.28	245.45	889.76	43.98	7.36	128.86	8.18
126	128	45	F	TRBU: Rock Run	27.017	2.05	82.84	0.82	0.28	245.45	889.76	43.98	7.36	128.86	8.18
127	128	45	F	TRBU: Scott Run	27.017	2.05	82.84	0.82	0.28	245.45	889.76	43.98	7.36	128.86	8.18
128	128	45	F	TRBU: Turkey Run	27.017	2.05	82.84	0.82	0.28	245.45	889.76	43.98	7.36	128.86	8.18

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JSM	NBPS	#BC	Wasp Seg#	Segment Description	JD=182.00	-----Flow -----(mgpd)	NH3 N kg N/d	NO3+NO2 N kg N/d	O PO4 kg P/d	PHYT#1 kg Chl7d	CBOD 5 kg BOD7d	DISS O2 kg O2/d	ORG N kg N/d	ORG P kg P/d	Total N kg N/d	Total P kg P/d
1	5	1	2	Westvaco		166.106	62.15	455.22	6.24	0.79	1069.06	5056.54	169.40	16.52	686.77	22.76
2	2	2	3	Georges Ck		8.402	12.72	34.67	0.19	0.06	63.61	251.27	19.08	4.90	66.47	5.09
3	3	3	4	UPRC STP		21.360	7.92	19.00	39.23	0.00	2671.58	468.62	110.58	7.91	137.50	47.13
4	4	4	5	Stony Run		0.330	0.38	1.11	0.10	0.00	3.56	11.01	0.49	0.05	1.98	0.15
5	5	5	6	Keyser		1.740	37.55	27.98	24.99	0.00	119.35	47.57	12.02	4.23	77.54	29.22
6	6	6	7	Black Oak		0.345	0.89	1.47	0.25	0.00	5.26	11.37	0.64	0.07	3.00	0.32
7	7	7	8	Rawlins		0.400	2.76	2.78	0.79	0.00	11.51	12.29	1.21	0.15	6.75	0.94
8	8	8	9	Celanese		0.714	13.46	10.27	3.88	0.00	81.85	18.36	4.41	0.63	28.14	4.51
9	9	9	10	Willis Ck		27.466	34.92	50.12	9.91	0.20	359.15	861.40	35.95	5.07	120.99	14.98
10	10	10	11	Cumbrldg STP		13.577	238.91	172.12	68.97	0.05	171.66	333.27	78.00	10.92	489.03	79.89
11	11	11	12	Mexico Field		6.660	3.26	7.16	0.60	0.05	59.00	175.86	7.30	0.45	17.72	1.34
12	12	12	13	Patterson Ck		39.473	2.99	31.38	0.90	0.30	298.84	1045.94	38.85	1.94	73.22	2.54
13	13	13	14	So. Branch		152.118	11.52	120.92	2.30	1.15	1151.66	4030.80	149.72	7.49	282.16	9.79
14	14	14	15	Town Ck		7.162	0.54	1.63	0.11	0.05	54.22	200.62	7.59	0.98	9.76	1.08
15	15	15	16	Cacapon R		46.579	0.50	1.49	0.10	0.05	49.81	184.29	6.97	0.90	8.97	1.00
16	16	16	17	Paw Paw		66.572	7.08	16.46	1.60	0.50	509.91	1864.34	71.08	9.15	94.61	10.75
17	17	17	18	SidingH.Ck		33.286	2.52	7.56	0.50	0.25	252.00	932.41	35.28	4.54	45.36	5.04
18	18	18	19	Cacapon R		33.286	2.52	7.56	0.50	0.25	252.00	932.41	35.28	4.54	45.36	5.04
19	19	19	20	Hancock R		232.591	17.61	52.83	3.32	1.76	1760.90	6515.43	246.53	31.70	316.96	35.22
20	20	20	21	Ficking Ck		105.580	11.77	62.82	3.67	0.59	588.69	2055.33	147.82	7.89	147.21	17.82
21	21	21	22	Ft Frederick		155.061	11.74	123.26	2.35	1.17	1173.93	4103.77	159.61	7.63	287.61	9.98
22	22	22	23	Dam #5		38.765	11.74	525.94	24.95	0.21	293.48	1173.93	135.00	2.93	672.08	27.88
23	23	23	24	Conocochoy Ck		105.506	77.02	1487.65	82.32	0.10	855.27	3184.49	375.44	9.93	1940.11	91.64
24	24	24	25	Opequon Ck		116.971	30.99	119.55	83.24	0.89	531.34	4162.15	119.55	13.73	270.10	96.97
25	25	25	26	Dam #4		15.818	-2.83	-15.57	-10.84	-0.12	-68.55	-562.97	-15.99	-1.80	-34.39	-12.64
26	26	26	27	Sheperdstown												

FINAL REPORT

[illegible]

Data Group F- Point Sources : July 1987

DUMMY DATA OF ZERO LOADS USED FOR SEGMENT #1

All Point Source Loads Accounted for as Boundary Conditions

Data Group G- Spatial Forcing Functions: July 1987

<u>Label</u>	<u>Units</u>	<u>Description</u>
Seg#		PRM Segment No.
Temp(C) Deg C		Water temperature
FNH4 mgN/sq m-d		Sed NH4 flux
FPO4 mgP/sq m-d		Sed PO4 flux
SOD1D gO2/sq m-d		Sed Oxy Demand
FNO3 mgN/sq m-d		Sed NO3 flux
SOD(U,T) gO2/sq m-d		SOD(vel,temp)
SODMax gO2/sq m-d		SOD Max
BNit(U,T) mgN/sq m-d		Benth nitrific (U,T)
BNit(20) mgN/sq m-d		Benth nitrific (T=20)
BNO3 (T) mgN/sq m-d		Benth NO3 loss (T)
BNO3 (20) mgN/sq m-d		Benth NO3 loss (T=20)
BProdMax gC/sq m-d		Benth Algae Production Max
BProd(U,T) gC/sq m-d		Benth Algae Production (U,T)
B_NH4_U mgN/sq m-d		Benth Algae NH4 uptake
B_NO3_U mgN/sq m-d		Benth Algae NO3 uptake
B_PO4_U mgP/sq m-d		Benth Algae PO4 uptake
B_OXY_U gO2/sq m-d		Benth Algae Net Oxygen Prod
P/R ratio		Benth Algae Production/Resp
NPS_NO3 mgN/sq m-d		Non Point Input: NO3
NPS_PO4 mgP/sq m-d		Non Point Input: PO4

Data Group G (Continued): Spatial Forcing Functions

Case#	Temp(C)	Wasp4 Data	G Input	>< S00 Functions <Ben Nitrification<Ben Nitrate Loss><										Benthic Periphyton Gross Production/N,P,O2 Uptake								P/R	<NPS_N03 and P04>
Seg#	Temp(C)	FNH4	FP04	S0010	FNO3	S00(U,T)	S00Max	BNit(U,T)	BNit(20)	BN03 (T)	BN03 (20)	BProdMax	BProd(U,T)	B_NH4_U	B_N03_U	B_P04_U	B_OXY_U	P/R	NPS_N03	NPS_P04			
1	19.0	-143.87	-2.77	10.01	-44.74	2.33	5.00	-22.52	-25.00	-28.85	-30.00	1.50	1.36	-251.85	-88.41	-34.03	-7.72	0.40	50.00	12.50			
2	20.5	-59.80	6.94	5.93	-13.51	1.42	5.00	-13.00	-25.00	-30.59	-30.00	1.50	0.78	-148.43	-45.92	-19.43	-4.41	0.40	50.00	12.50			
3	22.0	-125.07	0.12	10.61	-35.72	2.00	5.00	-24.53	-25.00	-32.45	-30.00	1.50	1.45	-284.68	-77.80	-36.25	-8.23	0.40	50.00	12.50			
4	22.0	-86.57	3.80	9.16	-33.14	1.95	5.00	-20.77	-25.00	-32.45	-30.00	1.50	1.23	-235.55	-71.46	-30.70	-6.97	0.40	50.00	12.50			
5	23.0	-56.43	5.88	8.87	-39.95	1.90	5.00	-20.22	-25.00	-33.75	-30.00	1.50	1.19	-220.24	-76.43	-29.67	-6.73	0.40	50.00	12.50			
6	23.0	30.39	17.45	0.71	9.43	0.95	5.00	-8.11	-25.00	-33.75	-30.00	1.00	0.32	-64.40	-14.94	-7.93	-0.47	1.30	50.00	12.50			
7	24.0	44.11	18.69	0.76	7.18	0.95	5.00	-8.76	-25.00	-35.10	-30.00	1.00	0.34	-68.56	-16.49	-8.50	-0.50	1.50	50.00	12.50			
8	25.0	60.70	20.13	0.80	4.92	0.95	5.00	-9.46	-25.00	-36.50	-30.00	1.00	0.36	-73.12	-18.05	-9.12	-0.54	1.50	50.00	12.50			
9	25.0	61.02	20.13	0.80	4.59	0.95	5.00	-9.46	-25.00	-36.50	-30.00	1.00	0.36	-72.80	-18.37	-9.12	-0.54	1.50	50.00	12.50			
10	26.0	99.64	23.94	0.93	2.56	1.05	5.00	-10.22	-25.00	-37.96	-30.00	1.00	0.39	-78.03	-19.70	-9.77	-0.66	1.80	50.00	12.50			
11	25.0	96.20	19.66	0.59	11.34	0.53	5.00	-2.31	-25.00	-36.50	-30.00	1.00	0.09	-17.75	-4.47	-2.22	-0.15	1.80	50.00	12.50			
12	24.0	39.94	18.39	0.74	2.52	1.17	5.00	-12.56	-25.00	-35.10	-30.00	1.00	0.49	-96.94	-24.94	-12.19	-0.82	1.80	50.00	12.50			
13	23.0	37.51	17.41	0.47	14.99	0.47	5.00	-1.49	-25.00	-33.75	-30.00	1.00	0.06	-11.80	-2.76	-1.46	-0.10	1.80	50.00	12.50			
14	22.5	17.82	16.37	0.68	5.87	1.17	5.00	-11.19	-25.00	-33.09	-30.00	1.00	0.44	-87.58	-22.23	-10.98	-0.74	1.80	50.00	12.50			
15	20.0	3.24	14.76	0.54	14.99	0.95	5.00	-6.44	-25.00	-30.00	-30.00	1.00	0.26	-52.95	-11.45	-6.44	-0.43	1.80	50.00	12.50			
16	18.0	-19.06	11.39	0.14	14.54	0.68	5.00	-2.90	-25.00	-27.74	-30.00	2.00	0.24	-48.26	-10.63	-5.89	-0.47	1.80	50.00	12.50			
17	25.0	-52.98	9.13	-0.27	5.91	1.05	5.00	-11.41	-25.00	-36.50	-30.00	2.00	0.88	-200.80	-18.99	-21.98	-1.77	1.80	50.00	12.50			
18	26.5	-73.06	6.15	-0.68	-1.58	1.05	5.00	-15.22	-25.00	-38.71	-30.00	2.00	1.16	-261.94	-28.09	-29.00	-2.33	1.80	50.00	12.50			
19	27.1	93.15	21.84	0.80	-46.76	0.95	5.00	0.00	0.00	-79.27	-60.00	1.00	0.51	-109.68	-17.49	-12.72	-0.68	1.68	50.00	12.50			
20	27.0	97.32	21.54	0.79	-53.07	0.95	5.00	0.00	0.00	-78.96	-60.00	1.00	0.51	-102.18	-24.11	-12.63	-0.68	1.68	50.00	12.50			
21	25.5	64.25	19.00	0.73	-46.84	0.95	5.00	0.00	0.00	-74.44	-60.00	1.00	0.46	-91.39	-22.40	-11.38	-0.61	1.68	50.00	12.50			
22	24.0	-0.46	11.73	0.49	-58.78	1.17	5.00	0.00	0.00	-70.19	-60.00	1.00	0.75	-149.90	-38.59	-18.85	-1.01	1.68	50.00	12.50			
23	24.0	33.58	14.54	0.59	-61.74	1.05	5.00	0.00	0.00	-70.19	-60.00	1.00	0.57	-101.35	-41.55	-14.29	-0.77	1.68	50.00	12.50			
24	25.5	60.98	16.51	0.64	-71.08	1.05	5.00	0.00	0.00	-74.44	-60.00	1.00	0.63	-111.98	-46.63	-15.86	-0.85	1.68	50.00	12.50			
25	25.0	34.96	13.40	0.49	-75.89	1.05	5.00	0.00	0.00	-73.00	-60.00	1.00	0.71	-124.27	-52.89	-17.72	-0.95	1.68	50.00	12.50			
26	25.0	4.73	8.38	0.22	-95.78	1.05	5.00	0.00	0.00	-73.00	-60.00	1.00	0.91	-154.49	-72.79	-22.73	-1.22	1.68	50.00	12.50			
27	25.0	-1.20	5.90	-0.41	-114.71	1.05	5.00	0.00	0.00	-73.00	-60.00	1.00	1.01	-160.43	-91.71	-25.21	-1.85	1.60	50.00	12.50			
28	25.0	51.99	18.09	0.44	-29.59	0.41	5.00	0.00	0.00	-73.00	-60.00	1.00	0.07	-10.14	-6.59	-1.57	-0.12	1.60	50.00	12.50			
29	25.0	48.44	15.65	0.28	-55.29	0.60	5.00	0.00	0.00	-73.00	-60.00	1.00	0.30	-42.30	-32.29	-7.46	-0.55	1.60	50.00	12.50			
30	25.5	56.45	53.32	0.26	85.78	0.68	5.00	0.00	0.00	-74.44	-60.00	1.00	0.38	-54.62	-39.77	-9.44	-0.69	1.60	200.00	50.00			
31	26.0	57.47	55.90	0.43	154.06	0.41	5.00	0.00	0.00	-37.96	-30.00	1.00	0.10	-15.83	-7.98	-2.38	-0.17	1.60	200.00	50.00			
32	27.0	31.74	46.30	-0.38	75.49	0.85	5.00	0.00	0.00	-39.48	-30.00	1.00	0.93	-147.16	-85.03	-23.22	-1.70	1.60	200.00	50.00			
33	27.0	35.06	46.30	0.61	72.16	0.85	5.00	0.00	0.00	-39.48	-30.00	1.00	0.93	-143.84	-88.36	-23.22	-0.71	1.40	200.00	50.00			
34	21.0	24.02	153.03	0.40	491.36	0.41	5.00	0.00	0.00	-104.00	-100.00	1.00	0.05	-8.03	-4.64	-1.27	-0.04	1.40	600.00	150.00			
35	24.0	9.62	146.65	0.59	417.02	0.85	5.00	0.00	0.00	-116.99	-100.00	1.00	0.66	-99.26	-66.00	-16.53	-0.50	1.40	600.00	150.00			
36	27.0	65.64	148.07	0.84	363.29	1.05	5.00	0.00	0.00	-131.59	-100.00	1.00	1.04	-156.07	-105.12	-26.12	-0.80	1.40	600.00	150.00			
37	27.0	67.85	151.91	0.78	403.41	0.85	5.00	0.00	0.00	-131.59	-100.00	1.00	0.70	-111.05	-65.00	-17.61	-0.54	1.40	600.00	150.00			
38	26.5	53.83	151.28	0.76	411.79	0.85	5.00	0.00	0.00	-129.04	-100.00	1.00	0.68	-110.86	-59.17	-17.00	-0.52	1.40	600.00	150.00			
39	28.0	45.23	148.06	0.59	388.31	0.76	5.00	0.00	0.00	-136.86	-100.00	1.00	0.87	-143.42	-74.83	-21.82	-0.67	1.40	600.00	150.00			
40	26.0	88.78	201.75	2.48	309.94	1.70	10.00	0.00	0.00	-379.60	-300.00	1.50	1.30	-214.44	-110.46	-32.49	-0.00	0.50	800.00	200.00			
41	27.5	137.43	209.82	1.93	338.34	1.20	10.00	0.00	0.00	-402.60	-300.00	1.50	0.78	-137.07	-59.06	-19.61	-0.00	0.50	800.00	200.00			
42	27.8	141.49	210.59	1.96	339.36	1.20	10.00	0.00	0.00	-407.36	-300.00	1.50	0.80	-147.00	-53.28	-20.03	-0.00	0.50	800.00	200.00			
43	22.8	16.40	51.76	1.43	-613.02	1.20	10.00	0.00	0.00	-781.25	-700.00	1.50	0.57	-109.70	-31.77	-14.15	-0.00	0.50	200.00	50.00			
44	23.0	61.54	11.35	0.87	-777.68	0.72	10.00	0.00	0.00	-787.40	-700.00	1.50	0.16	-09.56	-5.27	-1.18	-0.00	0.50	15.00	3.75			
45	23.2	-1.20	2.77	3.94	-804.63	0.64	8.00	0.00	0.00	-793.61	-700.00	1.50	0.39	-72.70	-26.03	-9.87	-3.16	0.25	15.00	3.75			
46	26.0	63.64	10.11	1.86	-882.12	0.49	6.00	0.00	0.00	-885.72	-700.00	1.50	0.14	-24.33	-11.40	-3.57	-1.14	0.25	15.00	3.75			
47	28.5	26.69	-1.11	9.24	-1044.28	0.72	6.00	0.00	0.00	-976.97	-700.00	1.50	1.00	-167.67	-82.31	-25.00	-8.01	0.25	15.00	3.75			
48	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.00			
-99	-99.0	-99.00	-99.00	-99.00	-99.00	-99.00	0.00	-99.00	-99.00	-0.93	-99.00	-99.00	-99.00	-99.00	-99.00	-99.00	-99.00	-99.00	-99.00	-99.00			

Data Group H- Chemical and Kinetic Constants: July 1987

Note: All Chemical Constants Data for July 1987 calibration
presented in Appendix L

Data Group I- Time Varying Forcing Functions: July 1987'

Note: All Time Varying Forcing Function Data for July 1987 calibration
presented in Appendix L

Data Group J- Initial Conditions: July 1987

NH3-N	mg/l	Sys#01	CX87_NH3.IC	3	1.	999.	IC(xyz): J 06/04/91
SG001	0.080	1.000SG002	0.067	1.000SG003	0.062	1.000	
SG004	0.049	1.000SG005	0.040	1.000SG006	0.044	1.000	
SG007	0.047	1.000SG008	0.051	1.000SG009	0.056	1.000	
SG010	0.060	1.000SG011	0.066	1.000SG012	0.071	1.000	
SG013	0.076	1.000SG014	0.080	1.000SG015	0.083	1.000	
SG016	0.089	1.000SG017	0.100	1.000SG018	0.070	1.000	
SG019	0.060	1.000SG020	0.053	1.000SG021	0.040	1.000	
SG022	0.040	1.000SG023	0.040	1.000SG024	0.040	1.000	
SG025	0.040	1.000SG026	0.040	1.000SG027	0.040	1.000	
SG028	0.040	1.000SG029	0.040	1.000SG030	0.040	1.000	
SG031	0.040	1.000SG032	0.040	1.000SG033	0.040	1.000	
SG034	0.046	1.000SG035	0.049	1.000SG036	0.052	1.000	
SG037	0.055	1.000SG038	0.058	1.000SG039	0.060	1.000	
SG040	0.071	1.000SG041	0.075	1.000SG042	0.070	1.000	
SG043	0.067	1.000SG044	0.065	1.000SG045	0.063	1.000	
SG046	0.060	1.000SG047	0.060	1.000SG048	0.000	1.000	
N03+N02-N	mg/l	Sys#02	CX87_N03.IC	5	1.	999.	IC(xyz): J 06/04/91
SG001	0.740	1.000SG002	0.696	1.000SG003	0.676	1.000	
SG004	0.630	1.000SG005	0.600	1.000SG006	0.607	1.000	
SG007	0.614	1.000SG008	0.623	1.000SG009	0.633	1.000	
SG010	0.640	1.000SG011	0.677	1.000SG012	0.701	1.000	
SG013	0.733	1.000SG014	0.756	1.000SG015	0.773	1.000	
SG016	0.809	1.000SG017	0.870	1.000SG018	0.780	1.000	
SG019	0.658	1.000SG020	0.568	1.000SG021	0.410	1.000	
SG022	0.311	1.000SG023	0.195	1.000SG024	0.160	1.000	
SG025	0.102	1.000SG026	0.060	1.000SG027	0.269	1.000	
SG028	0.422	1.000SG029	0.602	1.000SG030	0.773	1.000	
SG031	0.945	1.000SG032	1.147	1.000SG033	1.290	1.000	
SG034	1.357	1.000SG035	1.395	1.000SG036	1.431	1.000	
SG037	1.471	1.000SG038	1.502	1.000SG039	1.525	1.000	
SG040	1.893	1.000SG041	2.015	1.000SG042	1.910	1.000	
SG043	1.834	1.000SG044	1.790	1.000SG045	1.728	1.000	
SG046	1.676	1.000SG047	1.670	1.000SG048	0.000	1.000	
O-P04	mg/l	Sys#03	CX87_P04.IC	5	1.	999.	IC(xyz): J 06/04/91
SG001	0.004	0.700SG002	0.007	0.700SG003	0.009	0.700	
SG004	0.012	0.700SG005	0.014	0.700SG006	0.013	0.700	
SG007	0.013	0.700SG008	0.012	0.700SG009	0.011	0.700	
SG010	0.010	0.700SG011	0.016	0.700SG012	0.020	0.700	
SG013	0.025	0.700SG014	0.029	0.700SG015	0.032	0.700	
SG016	0.038	0.700SG017	0.048	0.700SG018	0.026	0.700	
SG019	0.021	0.700SG020	0.017	0.700SG021	0.010	0.700	
SG022	0.009	0.700SG023	0.008	0.700SG024	0.007	0.700	
SG025	0.006	0.700SG026	0.006	0.700SG027	0.012	0.700	
SG028	0.016	0.700SG029	0.021	0.700SG030	0.026	0.700	
SG031	0.030	0.700SG032	0.036	0.700SG033	0.040	0.700	
SG034	0.045	0.700SG035	0.048	0.700SG036	0.050	0.700	
SG037	0.053	0.700SG038	0.055	0.700SG039	0.057	0.700	
SG040	0.075	0.700SG041	0.081	0.700SG042	0.082	0.700	
SG043	0.083	0.700SG044	0.083	0.700SG045	0.084	0.700	
SG046	0.084	0.700SG047	0.084	0.700SG048	0.000	0.700	
Phyt#1	ug chl/l	Sys#04	CX87_CHL.IC	4	1.	999.	IC(xyz): J 06/04/91
SG001	2.000	0.000SG002	2.000	0.000SG003	2.000	0.000	
SG004	2.000	0.000SG005	2.000	0.000SG006	2.000	0.000	
SG007	2.000	0.000SG008	2.000	0.000SG009	2.000	0.000	
SG010	2.000	0.000SG011	2.000	0.000SG012	2.000	0.000	
SG013	2.000	0.000SG014	2.000	0.000SG015	2.000	0.000	
SG016	2.000	0.000SG017	2.000	0.000SG018	2.000	0.000	
SG019	2.000	0.000SG020	2.000	0.000SG021	2.000	0.000	
SG022	2.000	0.000SG023	2.000	0.000SG024	2.000	0.000	
SG025	2.000	0.000SG026	2.000	0.000SG027	2.000	0.000	

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SG028	2.000	0.000SG029	2.000	0.000SG030	2.000	0.000		
SG031	2.000	0.000SG032	2.000	0.000SG033	2.000	0.000		
SG034	2.000	0.000SG035	2.000	0.000SG036	2.000	0.000		
SG037	2.000	0.000SG038	2.000	0.000SG039	2.000	0.000		
SG040	2.000	0.000SG041	2.000	0.000SG042	2.000	0.000		
SG043	6.590	0.000SG044	2.840	0.000SG045	3.650	0.000		
SG046	2.995	0.000SG047	3.560	0.000SG048	0.000	0.000	0.000CBOD-U	mg/l
CX87 BOD.IC	3	1.	999.	IC(xyz): J	06/04/91			Sys#05
SG001	11.340	0.800SG002	11.340	0.800SG003	11.340	0.800		
SG004	11.340	0.800SG005	11.340	0.800SG006	11.340	0.800		
SG007	11.340	0.800SG008	11.340	0.800SG009	11.340	0.800		
SG010	11.340	0.800SG011	11.340	0.800SG012	11.340	0.800		
SG013	11.340	0.800SG014	11.340	0.800SG015	11.340	0.800		
SG016	11.340	0.800SG017	11.340	0.800SG018	11.340	0.800		
SG019	11.340	0.800SG020	11.340	0.800SG021	11.340	0.800		
SG022	11.340	0.800SG023	11.340	0.800SG024	11.340	0.800		
SG025	11.340	0.800SG026	11.340	0.800SG027	11.340	0.800		
SG028	11.340	0.800SG029	11.340	0.800SG030	11.340	0.800		
SG031	11.340	0.800SG032	11.340	0.800SG033	11.340	0.800		
SG034	11.340	0.800SG035	11.340	0.800SG036	11.340	0.800		
SG037	11.340	0.800SG038	11.340	0.800SG039	11.340	0.800		
SG040	11.340	0.800SG041	11.340	0.800SG042	11.340	0.800		
SG043	11.340	0.800SG044	11.340	0.800SG045	14.884	0.800		
SG046	5.670	0.800SG047	5.103	0.800SG048	0.000	0.800		
Diss 02	mg/l	Sys#06	CX87_OXY.IC	5	1.	999.	IC(xyz): J	06/04/91
SG001	8.100	1.000SG002	7.753	1.000SG003	7.596	1.000		
SG004	7.236	1.000SG005	7.000	1.000SG006	6.875	1.000		
SG007	6.752	1.000SG008	6.605	1.000SG009	6.430	1.000		
SG010	6.300	1.000SG011	6.640	1.000SG012	6.856	1.000		
SG013	7.149	1.000SG014	7.360	1.000SG015	7.518	1.000		
SG016	7.839	1.000SG017	8.400	1.000SG018	7.100	1.000		
SG019	7.100	1.000SG020	7.100	1.000SG021	7.100	1.000		
SG022	7.355	1.000SG023	7.653	1.000SG024	7.742	1.000		
SG025	7.892	1.000SG026	8.000	1.000SG027	8.000	1.000		
SG028	8.000	1.000SG029	8.000	1.000SG030	8.000	1.000		
SG031	8.000	1.000SG032	8.000	1.000SG033	8.000	1.000		
SG034	7.801	1.000SG035	7.687	1.000SG036	7.580	1.000		
SG037	7.461	1.000SG038	7.369	1.000SG039	7.300	1.000		
SG040	6.887	1.000SG041	6.750	1.000SG042	6.430	1.000		
SG043	6.198	1.000SG044	6.064	1.000SG045	5.875	1.000		
SG046	5.718	1.000SG047	5.700	1.000SG048	0.000	1.000		
Org-N	mg/l	Sys#07	CX87_TON.IC	3	1.	999.	IC(xyz): J	06/04/91
SG001	0.270	0.800SG002	0.409	0.800SG003	0.472	0.800		
SG004	0.616	0.800SG005	0.710	0.800SG006	0.706	0.800		
SG007	0.703	0.800SG008	0.699	0.800SG009	0.694	0.800		
SG010	0.690	0.800SG011	0.659	0.800SG012	0.640	0.800		
SG013	0.613	0.800SG014	0.594	0.800SG015	0.580	0.800		
SG016	0.551	0.800SG017	0.500	0.800SG018	0.480	0.800		
SG019	0.457	0.800SG020	0.440	0.800SG021	0.410	0.800		
SG022	0.523	0.800SG023	0.656	0.800SG024	0.695	0.800		
SG025	0.762	0.800SG026	0.810	0.800SG027	0.806	0.800		
SG028	0.803	0.800SG029	0.799	0.800SG030	0.795	0.800		
SG031	0.792	0.800SG032	0.788	0.800SG033	0.785	0.800		
SG034	0.936	0.800SG035	1.022	0.800SG036	1.103	0.800		
SG037	1.193	0.800SG038	1.263	0.800SG039	1.315	0.800		
SG040	0.873	0.800SG041	0.725	0.800SG042	0.714	0.800		
SG043	0.707	0.800SG044	0.702	0.800SG045	0.696	0.800		
SG046	0.691	0.800SG047	0.690	0.800SG048	0.000	0.800		
Org-P	mg/l	Sys#08	CX87_TOP.IC	3	1.	999.	IC(xyz): J	06/04/91
SG001	0.026	0.100SG002	0.048	0.100SG003	0.058	0.100		
SG004	0.081	0.100SG005	0.096	0.100SG006	0.093	0.100		
SG007	0.090	0.100SG008	0.087	0.100SG009	0.083	0.100		

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SG010	0.080	0.100SG011	0.075	0.100SG012	0.073	0.100
SG013	0.069	0.100SG014	0.066	0.100SG015	0.064	0.100
SG016	0.059	0.100SG017	0.052	0.100SG018	0.054	0.100
SG019	0.053	0.100SG020	0.052	0.100SG021	0.050	0.100
SG022	0.048	0.100SG023	0.046	0.100SG024	0.046	0.100
SG025	0.045	0.100SG026	0.044	0.100SG027	0.043	0.100
SG028	0.043	0.100SG029	0.042	0.100SG030	0.042	0.100
SG031	0.041	0.100SG032	0.040	0.100SG033	0.040	0.100
SG034	0.130	0.100SG035	0.182	0.100SG036	0.231	0.100
SG037	0.285	0.100SG038	0.327	0.100SG039	0.358	0.100
SG040	0.183	0.100SG041	0.124	0.100SG042	0.122	0.100
SG043	0.120	0.100SG044	0.119	0.100SG045	0.117	0.100
SG046	0.116	0.100SG047	0.116	0.100SG048	0.000	0.100