CONESTOGA RIVER BASIN

01576521 BIG SPRING RUN NEAR WILLOW STREET, PA

LOCATION.--Lat 39°59'53", Long 76°15'55", Lancaster County, Hydrologic Unit 02050306, on left bank 300 ft upstream of Long Rifle Road bridge near the intersection with Gypsy Hill Road, and 1.5 mi northeast of Willow Street.

DRAINAGE AREA.--1.77 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1993 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 292.16 ft above sea level.

REMARKS.--Records good except those for daily discharges above 20 ft^3/s, which are fair.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 200 ft^3/s and maximum (*):

Date	Time	Discharge ft^3/s	Gage Height (ft)
Sept. 14	2400	*241	*6.86

No other peak greater than base discharge.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	1.4	1.5	1.7	1.5	3.0	3.1	2.4	2.1	2.1	1.4	11
2	1.7	2.9	1.5	1.7	e1.5	2.8	3.1	2.6	2.0	2.0	1.3	1.5
3	1.6	1.8	1.5	1.7	1.5	2.6	3.0	2.4	2.0	3.1	1.3	2.4
4	3.4	1.5	1.5	2.2	1.5	2.5	3.3	2.3	2.0	2.2	1.3	1.5
5	5.0	1.5	1.5	2.0	1.5	2.4	2.9	2.3	2.0	1.9	1.3	2.1
6	2.1	1.5	4.1	1.7	1.5	2.3	2.8	2.3	3.6	1.8	1.3	1.2
7	1.8	1.4	1.9	1.7	1.5	2.2	2.8	2.3	2.4	1.8	1.3	1.1
8	1.7	1.4	1.7	1.7	1.5	2.2	4.1	2.2	2.1	1.7	1.2	1.1
9	1.7	1.4	1.6	1.7	1.5	2.2	5.4	2.2	2.0	1.7	1.3	1.1
10	8.1	1.4	2.9	3.7	1.7	2.2	3.2	6.9	1.9	1.7	1.2	1.1
11	2.6	1.4	1.9	2.2	2.5	3.6	2.9	2.7	1.9	1.7	1.1	1.1
12	2.2	1.3	1.7	1.9	2.1	3.5	2.9	2.4	2.0	1.6	1.1	1.1
13	2.0	1.3	2.2	1.9	1.7	2.5	2.8	4.0	2.0	1.5	1.1	8.8
14	2.0	1.3	13	1.7	3.9	2.4	2.8	2.6	2.0	2.2	1.3	6.6
15	1.8	1.3	3.7	e1.7	2.8	2.3	2.8	2.3	2.0	5.4	1.2	18
16	1.7	1.3	2.6	1.8	3.5	2.4	4.9	2.2	2.2	1.9	1.2	1.9
17	1.7	1.2	2.3	1.6	3.0	3.8	6.3	2.2	2.8	1.8	1.1	1.6
18	1.8	1.2	2.2	1.6	2.7	2.4	4.7	2.1	3.4	1.6	1.1	1.5
19	1.6	1.2	2.0	1.6	9.1	2.3	3.5	6.0	2.8	1.8	1.1	3.1
20	2.3	1.3	3.0	1.7	4.5	2.3	3.3	4.8	2.0	1.7	1.0	2.1
21	1.8	1.3	2.5	1.6	3.5	41	3.9	3.1	3.0	1.5	1.0	1.6
22	1.7	1.3	2.1	1.6	3.7	26	3.3	5.1	3.7	1.5	.98	1.5
23	1.7	1.2	2.0	1.6	3.7	5.7	3.0	3.2	2.0	1.4	1.1	1.5
24	1.5	1.2	1.9	1.6	3.7	4.5	2.9	5.2	1.9	1.5	1.3	1.5
25	1.4	1.3	1.8	1.7	3.6	3.9	2.8	2.8	3.2	1.5	1.0	6.0
26	1.4	5.1	1.9	1.7	3.1	3.6	2.7	2.5	5.7	2.8	.97	10
27	1.5	5.7	1.8	1.6	3.3	4.4	2.7	2.4	2.1	1.7	2.7	2.7
28	1.4	2.0	1.8	1.5	9.2	6.1	2.6	2.4	2.5	1.6	1.8	2.1
29	1.5	1.7	1.7	1.5	3.4	3.6	2.6	2.4	4.7	1.5	1.1	1.9
30	1.4	1.6	1.7	1.5	---	3.4	2.5	2.2	2.7	1.4	1.2	1.8
31	1.4	---	1.7	1.6	---	3.2	---	2.2	---	1.4	1.5	---
TOTAL	65.5	51.4	75.2	55.0	88.2	157.3	99.6	92.7	76.7	59.0	38.85	100.5
MEAN	2.11	1.71	2.43	1.77	3.04	5.07	3.32	2.99	2.56	1.90	1.25	3.35
MAX	8.1	5.7	13	3.7	9.2	41	6.3	6.9	5.7	5.4	2.7	18
MIN	1.4	1.2	1.5	1.5	1.5	2.2	2.5	2.1	1.9	1.4	.97	1.1
CFSM	1.19	.97	1.37	1.00	1.72	2.87	1.88	1.69	1.44	1.08	.71	1.89
IN.	1.38	1.08	1.58	1.16	1.85	3.31	2.09	1.95	1.61	1.24	.82	2.11

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 2000, BY WATER YEAR (WY)

MEAN	2.35	2.64	3.01	3.85	3.16	4.99	3.25	2.92	2.41	2.21	1.80	2.38
MAX	5.66	4.92	7.08	7.96	5.00	12.1	4.98	4.08	4.02	4.79	4.75	5.20
(WY)	1997	1997	1997	1996	1994	1994	1996	1996	1996	1996	1996	1999
MIN	.63	.73	.62	1.77	1.71	2.20	2.03	1.49	1.00	.56	.75	.64
(WY)	1998	1999	1999	2000	1999	1999	1999	1999	1999	1999	1997	1997

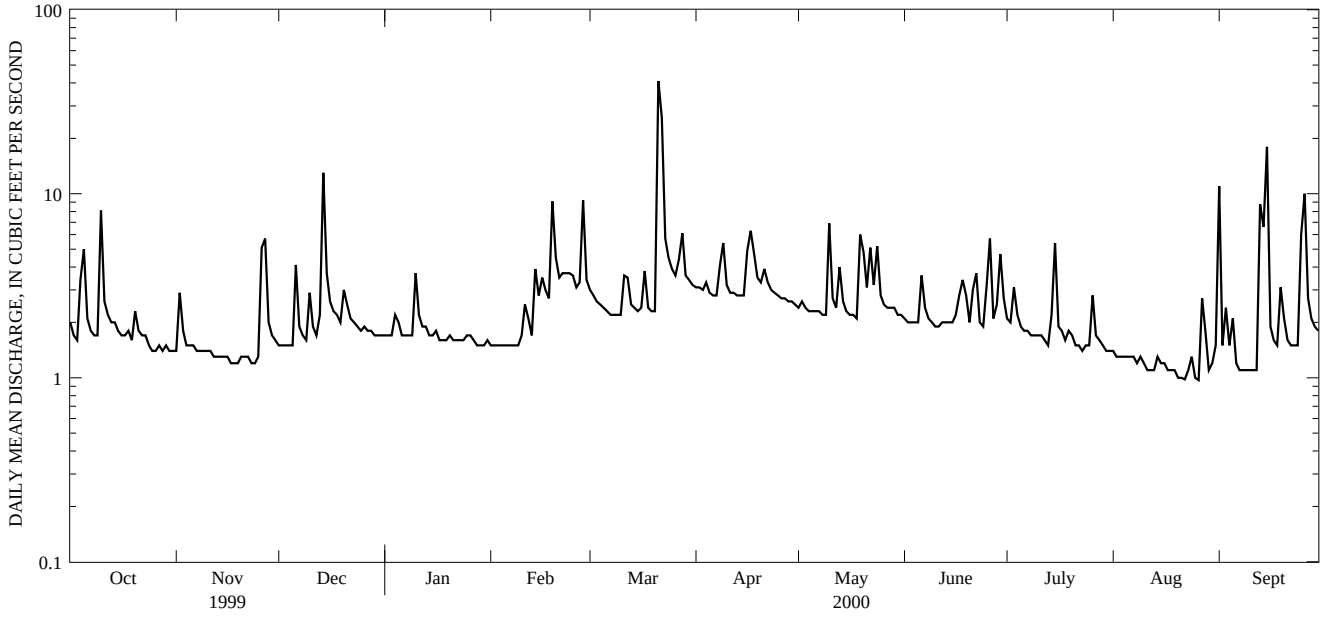
e Estimated.

CONESTOGA RIVER BASIN

01576521 BIG SPRING RUN NEAR WILLOW STREET, PA--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1994 - 2000	
ANNUAL TOTAL	764.32		959.95			
ANNUAL MEAN	2.09		2.62		2.92	
HIGHEST ANNUAL MEAN					4.21	1996
LOWEST ANNUAL MEAN					1.80	1999
HIGHEST DAILY MEAN	97	Sep 16	41	Mar 21	97	Sep 16 1999
LOWEST DAILY MEAN	.35	Aug 6	.97	Aug 26	.35	Aug 6 1999
ANNUAL SEVEN-DAY MINIMUM	.40	Jul 31	1.0	Aug 20	.40	Jul 31 1999
INSTANTANEOUS PEAK FLOW			**a**241	Sep 14	**a**392	Sep 16 1999
INSTANTANEOUS PEAK STAGE			6.86	Sep 14	7.67	Sep 16 1999
INSTANTANEOUS LOW FLOW			.97	Aug 20**b**	.15	Aug 8 1999**c**
ANNUAL RUNOFF (CFSM)	1.18		1.48		1.65	
ANNUAL RUNOFF (INCHES)	16.06		20.18		22.38	
10 PERCENT EXCEEDS	2.7		3.9		4.5	
50 PERCENT EXCEEDS	1.4		2.0		2.0	
90 PERCENT EXCEEDS	.54		1.3		.70	

a From rating curve extended above 100 ft^3/s on basis of step-backwater computation, at gage height 7.30 ft and at peak flow.
b Also Aug. 21-23, 25-27.
c Also Aug. 11-13, 1999.



1-YEAR HYDROGRAPH
OCTOBER 1, 1999 TO SEPTEMBER 30, 2000

CONESTOGA RIVER BASIN

01576521 BIG SPRING RUN NEAR WILLOW STREET, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--June 1993 to current year.

INSTRUMENTATION.--Automatic pumping sampler for stormflow, nutrient, and sediment samples since December 1993.

REMARKS.--Fixed-time, base flow, and stormflow samples collected at streamflow control. Constituent values for stormflow water quality are for discharge-weighted composited samples. Samples with two dates are composited samples; sample time is the composite start time, discharge is the mean for the composited period. Some values for "*dissolved*" parameters exceed values for the corresponding "*total*" parameter. These results are within the limits of analytical precision and methods.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	TIME	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	DISCHARGE, IN CUBIC FEET PER SECOND (00060)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	OXYGEN, DISSOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	SPECIFIC CONDUCTANCE (µS/CM) (00095)	TEMPERATURE WATER (DEG C) (00010)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)
OCT 1999												
04-04	0752	80020	1028	9.6	--	--	--	--	--	.47	1.2	.101
OCT												
04-05	2337	80020	1028	18	--	--	--	--	--	.87	2.5	.164
06...	0945	80020	1028	--	2.1	11.3	7.8	713	11.8	.37	.28	<.020
OCT												
10-10	0537	80020	1028	16	--	--	--	--	--	.73	1.8	.125
14...	0920	80020	1028	--	2.0	10.2	7.7	736	11.9	.17	.21	<.020
25...	0945	80020	1028	--	1.5	10.6	7.6	717	10.2	.24	.36	.026
NOV												
02...	1000	80020	1028	--	1.4	9.2	7.6	730	13.5	.17	.13	.022
NOV												
02-02	1752	80020	1028	12	--	--	--	--	--	.57	2.2	.058
12...	1015	80020	1028	--	1.4	11.3	7.7	729	10.1	.15	.20	.023
22...	0915	80020	1028	--	1.3	10.0	7.8	709	12.3	.16	.16	.028
NOV												
26-27	1822	80020	1028	17	--	--	--	--	--	1.2	2.5	.313
DEC												
06-06	0607	80020	1028	9.8	--	--	--	--	--	.47	.66	.095
07...	0915	80020	1028	--	1.9	10.5	7.8	715	8.9	1.3	2.9	.322
DEC												
10-10	1322	80020	1028	9.4	--	--	--	--	--	1.6	2.8	.594
DEC												
14-14	0837	80020	1028	24	--	--	--	--	--	2.3	5.2	.905
JAN 2000												
05...	0905	80020	1028	--	1.9	11.3	7.8	702	7.0	.17	.26	.025
FEB												
09...	0950	80020	1028	--	1.5	11.8	7.8	864	5.4	.31	1.1	.082
FEB												
14-14	1452	80020	1028	6.1	--	--	--	--	--	2.2	4.3	1.00
FEB												
27-28	2337	80020	1028	17	--	--	--	--	--	1.2	1.4	.419
MAR												
06...	0835	80020	1028	--	2.3	12.4	7.9	811	7.5	.19	.25	.022
MAR												
11-11	1337	80020	1028	11	--	--	--	--	--	1.3	2.2	.459
MAR												
11-11	1338	80020	1028	11	--	--	--	--	--	1.3	3.0	.509
MAR												
16-17	2352	80020	1028	8.1	--	--	--	--	--	.93	2.2	.256
MAR												
17-17	0637	80020	1028	6.6	--	--	--	--	--	.63	1.4	.165
MAR												
21-21	1152	80020	1028	74	--	--	--	--	--	.82	9.8	.230
24...	0900	80020	1028	--	4.5	12.5	7.9	780	10.0	.55	.31	<.020
APR												
05...	0915	80020	1028	--	2.9	14.1	8.0	742	8.5	.36	.38	<.020
APR												
16-16	1807	80020	1028	15	--	--	--	--	--	1.0	3.5	.435
APR												
17-17	0937	80020	1028	7.8	--	--	--	--	--	.97	1.9	.247
19...	0905	80020	1028	--	3.6	11.6	7.9	731	10.0	.24	.43	.037
25...	0825	80020	1028	--	2.8	10.3	7.8	714	10.9	.19	.25	<.020
MAY												
08...	0720	80020	1028	--	2.2	8.9	7.6	709	13.7	.27	.34	.033
08...	0721	80020	1028	--	2.2	8.9	7.6	709	13.7	.22	.32	.028
08...	0932	80020	1028	--	2.3	--	--	--	--	--	--	--
MAY												
10-10	1652	80020	1028	26	--	--	--	--	--	3.5	14	1.32
MAY												
13-13	2007	80020	1028	15	--	--	--	--	--	1.6	3.4	.617
MAY												
13-13	2008	80020	1028	15	--	--	--	--	--	1.5	4.0	.575
17...	0755	80020	1028	--	2.2	10.1	7.7	702	13.0	.20	.26	<.020
MAY												
19-19	0852	80020	1028	17	--	--	--	--	--	1.1	4.3	.297
26...	0910	80020	1028	--	2.6	10.7	7.8	672	13.9	.22	.20	<.020

CONESTOGA RIVER BASIN

01576521 BIG SPRING RUN NEAR WILLOW STREET, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	TUR-BID-ITY (NTU) (00076)	PERI-PHYTON BIOMASS ASH WEIGHT G/SQ M (00572)	PERI-PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M (00573)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	CHLOR-A PERI-PHYTON CHROMO-GRAPHIC FLUOROM (MG/M^2) (70957)	CHLOR-B PERI-PHYTON CHROMO-GRAPHIC FLUOROM (MG/M^2) (70958)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
OCT 1999												
04-04	3.60	.027	.090	.071	.264	25	--	--	--	--	--	83
OCT												
04-05	2.52	.044	.275	.262	.874	87	--	--	--	--	--	235
06...	7.95	.019	.055	--	.065	1.9	--	--	--	--	--	2
OCT												
10-10	2.19	.049	.267	.253	.679	43	--	--	--	--	--	126
14...	8.02	.011	.008	--	.033	1.2	--	--	17000	--	--	4
25...	8.48	.018	.033	--	.082	9.1	--	--	--	--	--	12
NOV												
02...	8.26	.024	.025	--	.029	1.4	--	--	K380	--	--	5
NOV												
02-02	3.18	.064	.104	.087	.558	68	--	--	--	--	--	229
12...	8.51	.016	.025	--	.032	1.4	--	--	--	--	--	10
22...	8.91	.027	.024	--	.024	1.4	--	--	--	--	--	8
NOV												
26-27	2.49	.092	.394	.317	.974	100	--	--	--	--	--	279
DEC												
06-06	7.70	.053	.082	.056	.090	E75	--	--	--	--	--	180
07...	3.20	.076	.224	--	.674	1.7	--	--	11000	--	--	4
DEC												
10-10	3.39	.048	.483	.438	.798	45	--	--	--	--	--	88
DEC												
14-14	2.57	.060	.984	.865	2.15	--	--	--	--	--	--	679
JAN 2000												
05...	8.06	.017	.036	--	.043	1.2	--	--	500	--	--	5
FEB												
09...	8.35	.011	.021	--	.319	220	--	--	1500	--	--	208
FEB												
14-14	4.61	.055	.510	.394	1.05	140	--	--	--	--	--	202
FEB												
27-28	3.57	.065	.389	.371	2.33	--	--	--	--	--	--	1420
MAR												
06...	9.02	.020	.031	--	.039	16	--	--	--	--	--	22
MAR												
11-11	3.67	.044	.104	.074	.450	--	--	--	--	--	--	375
MAR												
11-11	3.93	.047	.112	.082	.665	--	--	--	--	--	--	388
MAR												
16-17	4.18	.040	.126	.100	.436	--	--	--	--	--	--	162
MAR												
17-17	4.85	.046	.122	.095	.270	--	--	--	--	--	--	63
MAR												
21-21	2.34	.031	.477	.402	9.24	--	--	--	--	--	--	2680
24...	7.94	.023	.036	--	.089	20	--	--	490	--	--	26
APR												
05...	8.93	.013	.020	--	.030	4.3	--	--	--	--	--	9
APR												
16-16	4.01	.058	.091	.060	.961	--	--	--	--	--	--	525
APR												
17-17	4.88	.039	.175	.172	.414	--	--	--	--	--	--	62
19...	8.71	.023	.055	--	.073	7.3	--	--	760	--	--	5
25...	9.00	.025	.031	--	.040	6.1	--	--	--	--	--	6
MAY												
08...	8.60	.054	.027	--	.036	6.2	--	--	--	--	--	7
08...	8.87	.055	.026	--	.037	6.2	--	--	--	--	--	6
08...	--	--	--	--	--	--	1040	976.4	--	84.3	12.5	--
MAY												
10-10	2.89	.071	.311	.240	5.49	--	--	--	--	--	--	2680
MAY												
13-13	4.18	.140	.147	.138	1.45	--	--	--	--	--	--	827
MAY												
13-13	3.90	.131	.091	.038	1.63	--	--	--	--	--	--	820
17...	9.23	.055	.032	--	.043	5.8	--	--	710	--	--	8
MAY												
19-19	2.75	.085	.188	.187	1.85	--	--	--	--	--	--	733
26...	7.74	.049	.049	--	.054	5.0	--	--	--	--	--	20

CONESTOGA RIVER BASIN

01576521 BIG SPRING RUN NEAR WILLOW STREET, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	TIME	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	DISCHARGE, IN CUBIC FEET PER SECOND (00060)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	OXYGEN, DISSOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	SPECIFIC CONDUCTANCE (µS/CM) (00095)	TEMPERATURE WATER (DEG C) (00010)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)
JUN 2000												
06-06	0452	80020	1028	6.5	--	--	--	--	--	.67	1.4	.029
07...	0840	80020	1028	--	2.4	11.7	7.8	691	13.5	.29	.30	.031
16...	0805	80020	1028	--	2.2	10.4	7.6	658	15.7	.32	.38	<.020
JUN												
17-17	1722	80020	1028	9.7	--	--	--	--	--	.59	1.7	.083
23...	0830	80020	1028	--	2.1	11.0	7.7	728	15.5	.26	.25	<.020
JUL												
05...	1050	80020	1028	--	2.0	13.0	8.0	718	18.7	.23	.24	.027
14...	0850	80020	1028	--	1.6	12.2	7.6	691	14.5	.20	.29	<.020
25...	0845	80020	1028	--	1.5	11.4	7.7	711	14.2	.14	.14	<.020
JUL												
26-26	1322	80020	1028	7.2	--	--	--	--	--	.61	1.3	.079
AUG												
02...	0805	80020	1028	--	1.4	12.7	7.6	592	15.0	.13	.17	<.020
14...	0935	80020	1028	--	1.2	7.0	7.6	634	14.0	.15	.16	.024
22...	1155	80020	1028	--	1.0	10.6	7.8	714	16.1	.49	.50	.037
AUG												
27-28	2207	80020	1028	11	--	--	--	--	--	1.9	2.5	.478
SEP												
01-01	0722	80020	1028	43	--	--	--	--	--	1.0	3.9	.150
05...	0810	80020	1028	--	1.2	8.7	7.8	714	13.8	.17	.21	<.020
05...	0932	80020	1028	--	3.8	--	--	--	--	--	--	--
SEP												
13-13	0407	80020	1028	28	--	--	--	--	--	.98	2.6	.235
14...	1000	80020	1028	--	1.4	10.6	8.0	575	14.7	.19	.18	<.020
SEP												
14-15	2252	80020	1028	56	--	--	--	--	--	1.1	6.5	.198
28...	0930	80020	1028	--	2.2	13.1	7.9	667	12.9	.21	.23	<.020

DATE	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	PHOSPHORUS DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)	PHOSPHORUS TOTAL (MG/L AS P) (00665)	TURBIDITY (NTU) (00076)	PERIPHYTON BIOMASS ASH WEIGHT G/SQ M (00572)	PERIPHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M (00573)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	CHLOR-A PERIPHYTON CHROMOGRAPHIC FLUOROM (MG/M^2) (70957)	SEDIMENT, SUSPENDED (MG/L) (80154)
JUN 2000											
06-06	4.59	.056	.068	.014	.182	--	--	--	--	--	34
07...	8.17	.038	.039	.025	.048	1.9	--	--	--	--	2
16...	7.82	.044	.043	--	.059	3.4	--	--	--	--	3
JUN											
17-17	3.60	.082	.043	.040	.445	--	--	--	--	--	202
23...	7.67	.028	.051	--	.058	3.1	--	--	700	--	3
JUL											
05...	8.55	.017	.029	--	.035	3.3	--	--	--	--	10
14...	9.36	.029	.012	--	.024	4.0	--	--	1600	--	13
25...	8.78	.021	.017	--	.020	1.6	--	--	--	--	8
JUL											
26-26	2.85	.031	.092	.059	.259	--	--	--	--	--	66
AUG											
02...	10.1	.030	.025	--	.028	2.6	--	--	--	--	23
14...	9.77	.036	.025	--	.029	1.5	--	--	K950	--	24
22...	9.60	.043	.024	--	.030	--	--	--	--	--	5
AUG											
27-28	2.13	.054	.360	.308	.529	--	--	--	--	--	65
SEP											
01-01	1.45	.039	.473	.439	1.95	--	--	--	--	--	836
05...	8.27	.013	.033	--	.036	2.5	--	--	--	--	6
05...	--	--	--	--	--	--	271.1	281.1	--	62.7	--
SEP											
13-13	2.22	.080	.520	.475	1.86	--	--	--	--	--	757
14...	8.92	.011	.037	--	.043	3.6	--	--	--	--	12
SEP											
14-15	2.63	.063	.566	.524	3.30	--	--	--	--	--	1660
28...	7.98	.013	.053	--	.069	4.1	--	--	600	--	4