

PHYSICAL, CHEMICAL, AND BIOLOGICAL DATA FOR SELECTED STREAMS IN
CHESTER COUNTY, PENNSYLVANIA, 1969-80

By Craig R. Moore

U.S. Geological Survey

Open-File Report 85-686

Prepared in cooperation with the

CHESTER COUNTY WATER RESOURCES AUTHORITY

AND CHESTER COUNTY BOARD OF COMMISSIONERS

Harrisburg, Pennsylvania

1989

DEPARTMENT OF THE INTERIOR

MANUEL LUJAN, JR., Secretary

U.S. GEOLOGICAL SURVEY

Dallas L. Peck, Director

For additional information write
to:
District Chief
U.S. Geological Survey
4th Floor, Federal Building
P.O. Box 1107
Harrisburg, Pennsylvania 17108-1107

Copies can be purchased from:
U.S. Geological Survey
Books and Open-File Reports Section
Federal Center
Box 25425
Denver, Colorado 80225

CONTENTS

	Page
Abstract	1
Introduction	1
Purpose and scope	2
Acknowledgments	2
Data base	2
References cited	3

ILLUSTRATIONS

Figure 1.--Map of Chester County, Pennsylvania showing sampling sites and related streams	4
---	---

TABLES

Table 1.--Sampling sites, station numbers, station names, and drainage areas	5
2.--Water-quality data for surface-water sites	6
3.--Benthic-invertebrate data	168
4.--Brillouin's diversity index, maximum diversity, minimum diversity, and relative evenness	262
5.--Median, mean, standard deviation, and standard error values of Brillouin's diversity index	277
6.--Alphabetic checklist of taxa reported in the benthic-invertebrate sampling project, Chester County, Pennsylvania	278
7.--Systematic checklist of taxa reported in the benthic-invertebrate sampling project, Chester County, Pennsylvania	284

FACTORS FOR CONVERTING INCH POUND TO METRIC UNITS

<u>Multiply Inch-Pound Unit</u>	<u>By</u>	<u>To obtain (SI) Unit</u>
Square mile (mi ²)	2.590	Square kilometer (km ²)
Micromhos per centimeter at 25° Celsius (μmho/cm)	1.000	Microsiemens per centimeter at 25° Celsius (μS/cm)

PHYSICAL, CHEMICAL, AND BIOLOGICAL DATA FOR SELECTED STREAMS

IN CHESTER COUNTY, PENNSYLVANIA, 1969-80

By Craig R. Moore

ABSTRACT

This report presents physical, chemical, and biological data collected at 50 sampling sites on selected streams in Chester County, Pennsylvania from 1969 to 1980. The physical data consist of air and water temperature, stream discharge, suspended sediment, pH, specific conductance, and dissolved oxygen. The chemical data consist of laboratory determinations of total nutrients, major ions, and trace metals. The biological data consist of total coliform, fecal coliform, and fecal streptococcus bacteriological analyses, and benthic-macroinvertebrate population analyses. Brillouin's diversity index, maximum diversity, minimum diversity, and evenness for each sample, and median and mean Brillouin's diversity index, standard deviation, and standard error of the mean were calculated for the benthic-macroinvertebrate data for each site.

INTRODUCTION

Chester County, in southeastern Pennsylvania (fig. 1), adjacent to the Philadelphia and Wilmington metropolitan areas, is undergoing a transition from rural to suburban land use due to moderate population growth. Physical, chemical, and biological data for major streams in Chester County, Pennsylvania have been tabulated to provide base-line of the existing stream conditions. As land-use patterns change and further urbanization takes place, it is anticipated that these data will serve as a basis for comparison of conditions in the future. The information contained in this report was the basis for the interpretive report by Moore (1987), and supersedes an earlier data report by Lium (1976). This report was prepared by the U.S. Geological Survey in cooperation with the Chester County Water Resources Authority and the Chester County Board of Commissioners.

The 14 basins studied drain 720 mi² (square miles) of the 760 mi² within Chester County. Five of the streams are tributaries to the Schuylkill River and include Valley Creek, Pickering Creek, Stony Run, Pigeon Creek, and French Creek. Tributaries to the Delaware River include Darby Creek, Crum Creek, Ridley Creek, Chester Creek, Red Clay Creek, and White Clay Creek. Big Elk Creek flows into the Chesapeake Bay. The Brandywine is a tributary to the Christiana River, itself a tributary to the Delaware. The Octoraro Creek is a tributary to the Susquehanna River.

Purpose and Scope

The purpose of this report is to present the physical, chemical, and biological data collected from 50 sampling sites on 14 streams and rivers in Chester County over a 12-year period (1969-80) and to supplement an interpretive report by Moore (1987). The data in this report will be useful to those concerned with water-resources management as urbanization continues. The data can be used to compare present conditions with those of the next several decades to give a better understanding of changes in stream quality in response to increased urbanization. This will aid the development of sound planning procedures that will help to minimize the effects of urbanization on the hydrologic regimen.

Acknowledgments

The cooperation of the Chester County Board of Commissioners, the Chester County Water Resources Authority, and the Chester County Health Department is gratefully acknowledged. The author extends appreciation to the members and staff of the Chester County Water Resources Authority, especially David C. Yaeck, Executive Director, who has shown sincere interest throughout the investigation. In addition, many persons, particularly Philip Terry and Stuart Pollock, Chester County Health Department, and Richard Casson and Sue Ann Wetzell, formerly with the Chester County Health Department have been of the utmost assistance.

DATA BASE

The network of 50 stations is shown in figure 1. Table 1 lists station numbers and a brief description of station locations. Table 2 shows the physical, chemical, and bacteriological data collected by station and date. Table 3 shows the benthic-invertebrate data collected by station and date. Table 4 gives the Brillouin's diversity index, maximum diversity, minimum diversity, and evenness for each sample. Table 5 gives the median and mean Brillouin's diversity index, standard deviation, and standard error of the mean for each site. Tables 6 and 7, respectively, are alphabetic and systematic checklists of taxa of benthic-invertebrate organisms reported in the data base. A detailed explanation of methods of data collection and analyses are given by Moore (1987).

REFERENCES CITED

Lium, B. W., 1976, Limnological data for the major streams in Chester County, Pennsylvania: U.S. Geological Survey Open-File Report, 219 p.

Moore, C. R., 1987, Determination of benthic-invertebrate indices and water-quality trends of selected streams in Chester County, Pennsylvania, 1969-80: U.S. Geological Survey Water-Resources Investigations Report 85-4177, 62 p.

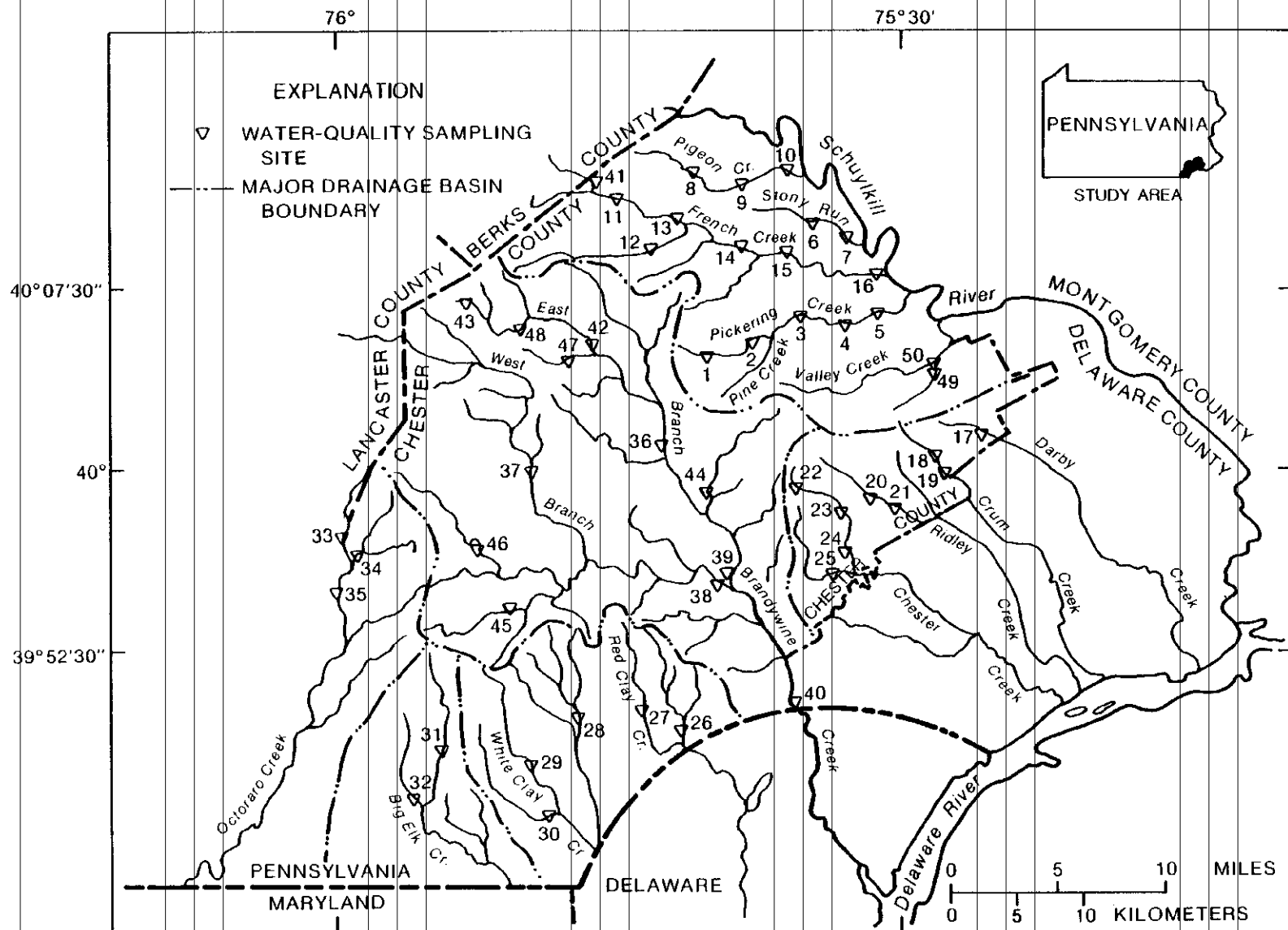


Figure 1.--Chester County, Pennsylvania, showing sampling sites and related streams.
Site numbers refer to sites listed in table 1.

Table 1. --Sampling sites, station numbers, names, and drainage areas

Site number	Station number	Name	Drainage area (mi ²)
1	01472170	Pickering Creek near Eagle	3.09
2	01472174	Pickering Creek near Chester Springs	5.98
3	014721854	Pickering Creek at Merlin	21.2
4	014721884	Pickering Creek at Charlestown Road at Charlestown	27.5
5	01472190	Pickering Creek near Phoenixville	31.4
6	01472109	Stony Run near Spring City	2.00
7	01472110	Stony Run at Spring City	4.07
8	01472054	Pigeon Creek near Bucktown	4.20
9	01472065	Pigeon Creek at Porters Mill	6.97
10	01472080	Pigeon Creek near Parker Ford	12.0
11	01472129	French Creek near Knauertown	11.7
12	01472140	South Branch French Creek at Coventryville	12.4
13	01472138	French Creek near Coventryville	19.9
14	01472154	French Creek near Pughtown	46.1
15	01472157	French Creek near Phoenixville	59.1
16	014721612	French Creek at railroad bridge at Phoenixville	70.7
17	01475300	Darby Creek at Waterloo Mills near Devon	5.15
18	01475830	Crum Creek near Paoli	6.16
19	01475840	Crum Creek at Whitehorse	10.1
20	01476430	Ridley Creek at Goshenville	4.22
21	01476435	Ridley Creek at Dutton Mill near West Chester	9.71
22	01476790	East Branch Chester Creek at Green Hill	0.63
23	01476830	East Branch Chester Creek at Milltown	5.77
24	01476835	East Branch Chester Creek at Westtown School	10.4
25	01476840	Tributary (Goose Creek) to East Branch Chester Creek near West Chester	4.28
26	01479800	East Branch Red Clay Creek near Five Point	10.2
27	01479680	West Branch Red Clay Creek at Kennett Square	9.79
28	01478120	East Branch White Clay Creek near Avondale	11.3
29	01478190	Middle Branch White Clay Creek near Wickertown	9.94
30	01478220	West Branch White Clay Creek near Chesterville	9.92
31	01494900	East Branch Elk Creek at Elkview	11.1
32	01494950	West Branch Elk Creek near Oxford	10.0
33	01578340	East Branch Octoraro Creek at Christiana	11.8
34	01578343	Valley Creek at Atglen	10.5
35	41578345	East Branch Octoraro Creek at Steelville	32.9
36	01480700	East Branch Brandywine Creek near Downingtown	60.6
37	01480434	West Branch Brandywine Creek at Rock Run	37.3
38	01480640	West Branch Brandywine Creek at Wawaset	134.
39	01480950	East Branch Brandywine Creek at Wawaset	123.
40	01481030	Brandywine Creek near Chadds Ford	291.
41	01472126	French Creek at Trythall	5.06
42	01480653	East Branch Brandywine Creek at Glenmoore	16.5
43	01480647	East Branch Brandywine Creek near Struble Dam	4.36
44	01480903	Valley Creek at Mullsteins Meadows near Downingtown	16.1
45	01480632	Doe Run at Springdell	11.8
46	01480629	Buck Run at Doe Run	22.6
47	01480656	Indian Run near Springton	4.26
48	01480648	East Branch Brandywine Creek near Cupola	5.98
49	01473167	Little Valley Creek at Howellville	6.45
50	01473168	Valley Creek near Valley Forge	12.7

TABLE 2. -- Water-quality data for surface-water sites
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01472054 - PIGEON CREEK NEAR BUCKTOWN, PA

DATE	TIME	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) _d	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCOCCI FECAL, (COLS. PER 100 ML)	
NOV , 1969											
FEB 14 , 1970	--	84215 _a	1.3	140	7.0	5.0	--	1000	--	800	
FEB 19 , 1970	--	84215	4.2	80	7.2	5.0	--	620	--	120	
MAY 06 , 1970	--	84215	4.3	105	7.4	13.0	--	580	--	32	
SEP 28 , 1970	--	84215	1.5	100	8.4	12.0	--	8000	--	780	
MAY 04 , 1971	--	84215	4.5	110	7.6	9.5	--	700	90	30	
SEP 28 , 1971	--	84215	6.2	100	8.9	16.0	--	13000	260	580	
OCT 09 , 1972	--	84215	3.6	102	8.0	13.0	--	12700	190	1000	
OCT 03 , 1973	0825	1028 _b	--	120	8.4	16.0	11.0	14300	240	300	
OCT 24 , 1974	1230	1028	--	80	7.2	7.5	10.2	--	--	--	
NOV 05 , 1975	0800	1028	--	120	6.7	12.5	9.6	--	--	--	
OCT 26 , 1976	1230	1028	--	120	7.0	11.0	10.0	--	--	--	
OCT 20 , 1977	1600	80010 _e	--	125	6.8	13.0	10.2	--	--	--	
OCT 31 , 1978	1530	80010	--	138	6.8	12.5	10.0	--	--	--	
NOV 08 , 1979	1515	80010	--	89	6.1	8.5	11.5	--	--	--	
NOV 05 , 1980	1345	80010	--	130	6.8	9.5	10.5	--	--	--	
DATE		HARD- NESS (MG/L AS CACO ₃)	HARD- NESS NONCAR- BONATE (MG/L CACO ₃)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
NOV , 1969											
FEB 14 , 1970	--	--	--	--	--	--	--	--	--	--	--
FEB 19 , 1970	--	--	--	--	--	--	--	--	--	--	--
MAY 06 , 1970	--	--	--	6.6	--	2.7	--	4.7	--	.9	--
SEP 28 , 1970	--	--	--	8.8	--	1.5	--	3.3	--	.9	--
MAY 04 , 1971	--	--	--	8.3	--	2.8	--	5.0	--	2.8	--
SEP 28 , 1971	--	--	--	8.7	--	2.8	--	5.7	--	1.5	--
OCT 09 , 1972	--	--	--	9.0	--	2.7	--	4.8	--	1.1	--
OCT 03 , 1973	37	11	--	9.5	--	3.3	--	6.0	--	1.4	--
OCT 24 , 1974	44	18	--	12	--	3.5	--	5.4	--	1.1	--
NOV 05 , 1975	35	14	--	10	--	2.5	--	4.7	--	1.2	--
OCT 26 , 1976	38	13	--	9.5	--	3.4	--	5.1	--	2.0	--
OCT 20 , 1977	45	22	--	12	--	3.7	--	5.6	--	1.6	--
OCT 31 , 1978	36	13	--	9.3	--	3.1	--	5.5	--	1.2	--
NOV 08 , 1979	--	--	--	--	--	--	--	--	--	--	--
NOV 05 , 1980	38	--	--	10	--	3.2	--	5.5	--	2.3	--

_a/ Chester County Health Department Laboratory, Pennsylvania.

_b/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

_c/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.

_d/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

01472054 - PIGEON CREEK NEAR BUCKTOWN, PA--Continued

DATE	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SOLIDS, SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)
NOV , 1969	--	--	--	18	5.0	--	--	--	--
FEB , 1970	--	--	--	16	14	--	--	--	--
MAY , 1970	--	--	--	22	--	--	--	--	74
SEP , 1970	--	--	--	14	4.1	--	--	--	83
MAY , 1971	--	--	--	18	5.5	--	--	--	42
SEP , 1971	--	--	--	11	2.6	--	--	--	90
OCT , 1972	--	--	--	14	4.1	--	--	--	62
OCT , 1973	32	0	26	14	4.2	.70	14	--	67
OCT , 1974	32	0	26	18	3.9	.20	14	79	--
NOV , 1975	26	0	21	15	4.4	.10	13	81	--
OCT , 1976	30	0	25	20	6.4	.10	12	82	--
OCT , 1977	28	0	23	19	5.2	<.10	14	89	--
OCT , 1978	28	0	23	17	4.8	<.10	14	80	--
NOV , 1979	--	--	15	14	4.4	.00	13	--	--
NOV , 1980	--	--	--	20	6.0	.10	15	88	--

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)
NOV , 1969	--	.60	--	--	--	--	--	--	--	--
FEB , 1970	--	1.1	--	--	--	--	--	--	--	.030
MAY , 1970	--	.57	--	--	--	--	--	--	--	.020
SEP , 1970	--	.81	.010	--	.010	--	--	--	.030	.020
MAY , 1971	--	.93	<.010	--	.160	.34	--	--	.160	.002
SEP , 1971	--	1.1	.010	--	.010	.26	--	--	.130	.010
OCT , 1972	--	.87	<.010	--	.010	.01	--	--	.040	.030
OCT , 1973	67	.88	.001	.88	.070	.41	.48	1.4	.030	.030
OCT , 1974	74	.79	--	--	.020	.27	.29	--	.030	.020
NOV , 1975	64	.97	--	--	<.010	.56	.56	--	.050	.020
OCT , 1976	74	.63	.010	.64	.040	.21	.25	.89	.060	.030
OCT , 1977	75	.80	<.010	.80	.030	.39	.42	1.2	.020	<.010
OCT , 1978	69	1.6	.010	1.6	.070	.22	.29	1.9	.020	.010
NOV , 1979	--	--	--	.89	.000	.25	.25	1.1	.030	--
NOV , 1980	--	.51	.010	.52	.060	.13	.19	.71	.050	.030

01472054 - PIGEON CREEK NEAR BUCKTOWN, PA--Continued

DATE	CADMIUM TOTAL DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, TOTAL DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, TOTAL DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, TOTAL DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, TOTAL DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL DIS- SOLVED (UG/L AS PB)
NOV , 1969	--	--	--	--	--	--	--	--	--	--
FEB , 1970	--	--	--	--	--	--	--	--	--	--
MAY , 1970	--	--	--	--	--	--	--	--	--	--
SEP , 1970	--	<100	--	<200	--	<250	--	<150	--	--
MAY , 1971	--	<100	--	<900	--	<250	--	<100	--	--
SEP , 1971	--	<150	--	<200	--	<250	--	290	--	--
OCT , 1972	--	<100	--	<200	--	<250	--	<150	--	--
OCT , 1973	--	<100	--	<200	--	<250	--	440	--	--
OCT , 1974	ND	--	ND	--	<2	--	<20	290	--	ND
NOV , 1975	ND	--	ND	--	ND	--	ND	--	110	<2
OCT , 1976	<2	--	ND	--	ND	--	ND	--	20	5
OCT , 1977	16	--	<20	--	ND	--	<20	--	150	2
OCT , 1978	ND	--	<2	--	ND	--	2	--	150	8
NOV , 1979	ND	--	ND	--	ND	--	<2	--	140	3
NOV , 1980	--	10	--	--	--	0	--	--	--	--
NOV , 1980	1	--	.00	--	1	--	1	--	160	0
DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, TOTAL DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, TOTAL DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, TOTAL DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
NOV , 1969	--	--	--	--	--	--	--	--	--	--
FEB , 1970	--	--	--	--	--	--	--	--	--	--
MAY , 1970	--	--	--	--	--	--	--	--	--	--
SEP , 1970	<100	<250	--	<250	--	<50	--	--	7	.08
MAY , 1971	<50	<250	--	<250	--	<20	--	--	3	.01
SEP , 1971	<50	<250	--	<250	--	<20	--	--	6	.07
OCT , 1972	<50	<250	--	<250	--	<50	--	--	5	.08
OCT , 1973	<50	<250	--	<250	--	<20	--	--	--	--
OCT , 1974	--	70	--	--	2	--	20	--	--	--
NOV , 1975	--	--	60	--	3	--	ND	--	--	--
OCT , 1976	--	--	50	--	3	--	<20	--	--	--
OCT , 1977	--	--	60	--	6	--	20	--	--	--
OCT , 1978	--	--	80	--	2	--	<20	.00	--	--
NOV , 1979	--	--	40	--	3	--	<20	.00	--	--
NOV , 1980	--	--	--	--	--	160	--	--	--	--
NOV , 1980	--	--	60	--	2	--	3	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued
 (Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius;
 Deg C, degrees Celsius; mg/L, milligrams
 per liter; COLS per 100 ML, colonies per
 100 milliliters; UG/L, micrograms per liter;
 T/DAY, tons per day; dashes indicate no data.)

01472065 - PIGEON CREEK AT PORTERS MILL, PA

DATE	TIME	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCTANCE (US/CM)d/	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
NOV 14, 1969	--	84215a /	2.4	140	7.0	6.0	--	940	--	670
FEB 19, 1970	--	84215	8.8	95	7.3	6.0	--	650	--	490
MAY 05, 1970	--	84215	8.3	106	7.7	14.0	--	80	--	8
SEP 29, 1970	--	84215	2.7	90	8.2	12.0	--	6300	--	1200
MAY 04, 1971	--	84215	8.8	120	7.6	10.5	--	1300	230	67
SEP 28, 1971	--	84215	12	110	7.3	16.0	--	19300	380	1100
OCT 09, 1972	1215	84215	7.1	115	6.8	12.5	--	17700	190	1600
OCT 03, 1973	0905	1028b /	--	130	6.4	16.0	11.2	35600	4800	5700
OCT 24, 1974	1110	1028	--	75	7.5	9.5	11.2	--	--	--
NOV 05, 1975	0930	1028	--	130	7.1	13.0	10.2	--	--	--
OCT 26, 1976	1430	1028	--	140	7.1	12.0	10.4	--	--	--
OCT 20, 1977	1500	80010c /	--	145	7.1	14.5	10.0	--	--	--
OCT 31, 1978	1445	80010	--	160	6.9	13.0	10.9	--	--	--
NOV 08, 1979	1615	80010	--	108	7.0	8.0	11.7	--	--	--
NOV 05, 1980	1500	80010	--	140	7.0	--	11.2	--	--	--

DATE	HARD- NESS (MG/ AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
NOV 14, 1969	--	--	--	--	--	--	--	--	--	--
FEB 19, 1970	--	--	--	--	--	--	--	--	--	--
MAY 05, 1970	--	--	8.2	--	2.8	--	6.8	--	1.4	--
SEP 29, 1970	--	--	9.7	--	1.5	--	3.9	--	.8	--
MAY 04, 1971	--	--	9.3	--	3.1	--	6.8	--	3.1	--
SEP 28, 1971	--	--	8.2	--	5.2	--	6.1	--	1.4	--
OCT 09, 1972	--	--	9.0	--	2.7	--	5.5	--	1.1	--
OCT 03, 1973	42	14	--	11	--	3.6	--	6.5	--	2.2
OCT 24, 1974	46	15	--	12	--	3.9	--	6.0	--	.90
NOV 05, 1975	37	12	--	10	--	2.8	--	5.4	--	1.3
OCT 26, 1976	40	10	--	10	--	3.6	--	5.3	--	2.3
OCT 20, 1977	52	22	--	14	--	4.2	--	6.1	--	1.8
OCT 31, 1978	44	16	--	12	--	3.5	--	6.5	--	1.6
NOV 08, 1979	--	--	--	--	--	--	--	--	--	--
NOV 05, 1980	46	--	--	12	--	3.6	--	6.4	--	2.0

a/ Chester County Health Department Laboratory, Pennsylvania.

b/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

c/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.

d/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

TABLE 2.-- Water-quality data for surface-water sites--Continued
 (Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.)

01472065 - PIGEON CREEK AT PORTERS MILL, PA--Continued

DATE	BICARBONATE FET-FLD (MG/L AS HCO3)	CARBONATE FET-FLD (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLORIDE, DIS- SOLVED (MG/L AS CL)	FLUORIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
NOV 14, 1969	--	--	--	15	11	--	--	--	--	--
FEB 19, 1970	--	--	--	16	15	--	--	--	--	--
MAY 05, 1970	--	--	--	18	18	--	--	--	102	--
SEP 29, 1970	--	--	--	8.8	7.8	--	--	--	81	--
MAY 04, 1971	--	--	--	17	6.4	--	--	--	83	--
SEP 28, 1971	--	--	--	12	6.2	--	--	--	94	--
OCT 09, 1972	--	--	--	12	7.2	--	--	--	71	--
OCT 03, 1973	34	0	28	15	6.2	.70	15	--	--	77
OCT 24, 1974	38	0	31	17	5.0	.20	15	90	--	79
NOV 05, 1975	30	0	25	14	6.3	.10	14	86	--	69
OCT 26, 1976	37	0	30	20	7.0	.10	14	85	--	81
OCT 20, 1977	37	0	30	19	6.2	<.10	17	97	--	87
OCT 31, 1978	34	0	28	16	6.0	<.10	13	86	--	75
NOV 08, 1979	--	--	18	14	5.9	.00	15	--	--	--
NOV 05, 1980	--	--	--	18	5.6	.10	18	93	--	--

DATE	NITROGEN NITRATE TOTAL (MG/L AS N)	NITROGEN NITRITE TOTAL (MG/L AS N)	NITROGEN NO2+NO3 TOTAL (MG/L AS N)	NITROGEN AMMONIA TOTAL (MG/L AS N)	NITROGEN ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)
NOV 14, 1969	.38	--	--	--	--	--	--	--	.050
FEB 19, 1970	1.5	--	--	--	--	--	--	--	.080
MAY 05, 1970	.30	--	--	--	--	--	--	--	.020
SEP 29, 1970	1.2	.010	--	--	--	--	--	<.00	.030
MAY 04, 1971	1.0	<.010	--	--	--	--	--	.070	.020
SEP 28, 1971	2.8	.010	--	.010	.15	--	--	.080	.010
OCT 09, 1972	1.4	<.010	--	.010	.23	--	--	.050	.030
OCT 03, 1973	1.0	--	--	.070	.53	.60	--	.050	.050
OCT 24, 1974	1.1	--	--	.010	.35	.36	--	.030	.020
NOV 05, 1975	1.4	--	--	<.010	.59	.59	--	.050	.020
OCT 26, 1976	.86	.010	.87	.050	.40	.45	1.3	.060	.030
OCT 20, 1977	1.2	<.010	1.2	.020	.38	.40	1.6	.040	.020
OCT 31, 1978	1.1	.010	1.1	.070	.31	.38	1.5	.020	.010
NOV 08, 1979	--	--	1.4	.000	.20	.20	1.6	.030	--
NOV 05, 1980	.90	.000	.90	.010	.21	.22	1.1	.040	.020

01472065 - PIGEON CREEK AT PORTERS MILL, PA--Continued

DATE	CADMIUM TOTAL DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
NOV , 1969	--	--	--	--	--	--	--	--	--	--
FEB , 1970	--	--	--	--	--	--	--	--	--	--
MAY , 1970	--	--	--	--	--	--	--	--	--	--
SEP , 1970	--	--	--	--	--	--	--	--	--	--
MAY , 1971	--	<100	--	<900	--	<250	--	<100	--	--
SEP , 1971	--	<150	--	<200	--	<250	--	<200	--	--
OCT , 1972	--	<100	--	<200	--	<250	--	<150	--	--
OCT , 1973	--	<100	--	<200	--	<250	--	<500	--	--
OCT , 1974	ND	--	ND	--	ND	--	ND	340	--	ND
NOV , 1975	ND	--	ND	--	ND	--	ND	--	90	<2
OCT , 1976	<2	--	ND	--	ND	--	ND	--	80	4
OCT , 1977	<2	--	<20	--	ND	--	<20	--	140	2
OCT , 1978	ND	--	<2	--	ND	--	2	--	130	9
NOV , 1979	4	--	ND	--	4	--	ND	--	110	9
NOV , 1980	--	10	--	--	--	0	--	--	--	--
05...	1	--	1	--	2	--	2	--	130	0
DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
NOV , 1969	--	--	--	--	--	--	--	--	--	--
FEB , 1970	--	--	--	--	--	--	--	--	--	--
MAY , 1970	--	--	--	--	--	--	--	--	--	--
SEP , 1970	--	500	--	--	--	--	--	--	9	.20
MAY , 1971	<500	500	--	<250	--	<20	--	--	1	.00
SEP , 1971	<50	<250	--	<250	--	<20	--	--	5	.12
OCT , 1972	<50	<250	--	<250	--	<50	--	--	6	.20
OCT , 1973	<500	<250	--	<250	--	<20	--	--	--	--
OCT , 1974	--	50	--	--	2	--	<20	--	--	--
NOV , 1975	--	--	50	--	4	--	ND	--	--	--
OCT , 1976	--	--	30	--	3	--	<20	--	--	--
OCT , 1977	--	--	80	--	2	--	20	--	--	--
OCT , 1978	--	--	60	--	2	--	<20	.00	--	--
NOV , 1979	--	--	40	--	<2	--	<20	.00	--	--
NOV , 1980	--	--	--	--	--	10	--	--	--	--
05...	--	--	50	--	1	--	2	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued
 (Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius;
 Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter;
 T/DAY, tons per day; dashes indicate no data.)

01472080 - PIGEON CREEK NEAR PARKER FORD, PA

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW- INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) _d	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN DIS- SOLVE (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)	
NOV 14, 1969	--	84215 _a /	4.2	145	7.0	8.0	-	1200	--	100	
FEB 19, 1970	--	84215	12	105	7.7	6.0	-	920	--	690	
MAY 06, 1970	--	84215	12	106	8.0	13.0	-	44	--	2	
SEP 29, 1970	--	84215	3.0	90	8.1	12.0	-	990	--	1500	
MAY 04, 1971	--	84215	14	130	7.9	12.0	-	650	100	45	
SEP 28, 1971	--	84215	19	120	7.4	16.0	-	26000	480	680	
OCT 09, 1972	1030	84215	11	120	6.1	12.5	-	28000	1500	2500	
OCT 03, 1973	0935	1028 _b /	8.8	160	6.5	16.5	11.2	26300	2500	2400	
OCT 24, 1974	1030	1028	4.6	85	7.3	5.5	10.	--	--	--	
NOV 05, 1975	1345	1028	7.3	--	7.5	15.5	--	--	--	--	
OCT 26, 1976	0915	1028	17.1	175	6.8	11.0	9.	--	--	--	
OCT 20, 1977	1400	80010 _c /	7.7	160	7.3	14.0	10.	--	--	--	
OCT 31, 1978	1400	80010	6.2	255	6.9	13.0	11.	--	--	--	
NOV 14, 1979	0930	80010	41.0	138	6.2	6.0	12.	--	--	--	
NOV 05, 1980	1630	80010	7.6	280	7.2	8.5	10.	--	--	--	
DATE		HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
NOV 14, 1969	--	--	--	3.6	--	--	--	--	--	--	--
FEB 19, 1970	--	--	--	--	--	--	--	--	--	--	--
MAY 06, 1970	--	--	--	7.8	--	3.4	--	6.6	--	1.5	--
SEP 29, 1970	--	--	--	14	--	4.0	--	8.3	--	2.5	--
MAY 04, 1971	--	--	--	12	--	3.5	--	7.1	--	3.5	--
SEP 28, 1971	--	--	--	9.7	--	5.7	--	9.5	--	1.8	--
OCT 09, 1972	--	--	--	10	--	3.3	--	5.8	--	1.6	--
OCT 03, 1973	48	18	--	12	--	4.3	--	7.5	--	2.7	--
OCT 24, 1974	53	20	--	14	--	4.5	--	6.9	--	1.5	--
NOV 05, 1975	52	26	--	13	--	4.8	--	6.4	--	1.7	--
OCT 26, 1976	52	19	--	13	--	4.8	--	6.3	--	4.4	--
OCT 20, 1977	57	25	--	15	--	4.8	--	6.8	--	2.4	--
OCT 31, 1978	55	22	--	14	--	4.8	--	7.6	--	2.1	--
NOV 14, 1979	--	--	--	--	--	--	--	--	--	--	--
NOV 05, 1980	54	--	--	14	--	4.6	--	6.9	--	2.1	--

a/ Chester County Health Department Laboratory, Pennsylvania.

b/ U. S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

c/ U. S. Geological Survey Central Laboratory Atlanta, Georgia.

d/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

01472080 - PIGEON CREEK NEAR PARKER FORD, PA--Continued

DATE	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALK LINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
NOV 14, 1969	--	--	--	--	15	--	--	--	--	--
FEB 19, 1970	--	--	--	21	16	--	--	--	--	--
MAY 06, 1970	--	--	--	44	10	--	--	--	--	--
SEP 29, 1970	--	--	--	8.5	8.8	--	--	--	101	--
MAY 04, 1971	--	--	--	13	5.5	--	--	--	101	--
SEP 28, 1971	--	--	--	14	6.2	--	--	--	84	--
OCT 09, 1972	--	--	--	15	7.0	--	--	--	71	--
OCT 03, 1973	37	0	30	17	7.7	.70	15	--	--	85
OCT 24, 1974	41	0	34	20	6.2	.20	16	95	--	90
NOV 05, 1975	32	0	26	17	7.4	.10	14	98	--	80
OCT 26, 1976	40	0	33	23	11	.10	13	111	--	96
OCT 20, 1977	39	0	32	22	7.3	<.10	17	102	--	95
OCT 31, 1978	40	0	33	20	7.7	<.10	15	106	--	91
NOV 14, 1979	--	--	23	17	8.4	.10	15	--	--	--
NOV 05, 1980	--	--	--	21	7.2	.10	18	100	--	--

DATE	NITRO- GEN NITRATE TOTAL (MG/L AS N)	NITRO- GEN NITRITE TOTAL (MG/L AS N)	NITRO- GEN NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN AMMONIA TOTAL (MG/L AS N)	NITRO- GEN ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)
NOV 14, 1969	.85	--	--	--	--	--	--	--	--
FEB 19, 1970	1.7	--	--	--	--	--	--	--	--
MAY 06, 1970	1.4	--	--	--	--	--	--	--	--
SEP 29, 1970	1.4	.020	--	.150	--	--	.002	.050	--
MAY 04, 1971	1.2	.010	--	.060	.03	--	.200	.030	--
SEP 28, 1971	2.8	.010	--	.010	.46	--	.130	.010	--
OCT 09, 1972	2.0	.010	--	.010	.10	--	.080	.050	--
OCT 03, 1973	1.4	--	--	.090	.91	1.0	.130	.070	--
OCT 24, 1974	1.6	--	--	.020	.40	.42	.050	<.010	--
NOV 05, 1975	2.2	--	--	.010	.65	.66	.050	.030	--
OCT 26, 1976	1.2	.030	1.2	.170	.68	.85	.170	.070	--
OCT 20, 1977	1.5	.010	1.5	.010	.52	.53	.050	.050	--
OCT 31, 1978	1.8	.010	1.8	.170	.27	.44	.030	.030	--
NOV 14, 1979	--	--	2.2	.000	.11	.11	.040	--	--
NOV 05, 1980	1.3	.010	1.3	.050	.15	.20	.040	.020	--

01472080 - PIGEON CREEK NEAR PARKER FORD, PA--Continued

DATE	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
NOV , 1969										
FEB , 1970	--	--	--	--	--	--	--	--	--	--
MAY , 1970	--	--	--	--	--	--	--	--	--	--
SEP , 1970	--	<100	--	<200	--	<250	--	<150	--	--
MAY , 1971	--	<100	--	<900	--	<250	--	<100	--	--
SEP , 1971	--	<150	--	<200	--	250	--	<200	--	--
OCT , 1972	--	<100	--	<200	--	<250	--	<150	--	--
OCT , 1973	--	<100	--	<200	--	<250	--	<500	--	--
OCT , 1974	ND	--	ND	--	ND	--	ND	440	--	ND
NOV , 1975	ND	--	ND	--	ND	--	ND	--	110	2
OCT , 1976	ND	--	ND	--	ND	--	ND	--	40	<2
OCT , 1977	<2	--	<20	--	ND	--	<20	--	210	2
OCT , 1978	ND	--	<2	--	ND	--	2	--	140	10
NOV , 1979	ND	--	ND	--	ND	--	ND	--	110	3
NOV , 1980	--	20	--	--	--	0	--	--	--	--
05...	1	--	.00	--	1	--	1	--	110	0
DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
NOV , 1969										
FEB , 1970	--	--	--	--	--	--	--	--	--	--
MAY , 1970	--	--	--	--	--	--	--	--	19	.62
SEP , 1970	<100	--	--	<250	--	<50	--	--	9	.29
MAY , 1971	<50	--	--	<250	--	<20	--	--	1	.00
SEP , 1971	<50	<250	--	<250	--	<20	--	--	5	.19
OCT , 1972	<50	<250	--	<250	--	<50	--	--	7	.36
OCT , 1973	<50	<250	--	<250	--	<20	--	--	--	--
OCT , 1974	--	60	--	--	ND	--	<20	--	--	--
NOV , 1975	--	--	60	--	3	--	<20	--	--	--
OCT , 1976	--	--	30	--	4	--	<20	--	--	--
OCT , 1977	--	--	90	--	8	--	30	--	--	--
OCT , 1978	--	--	60	--	ND	--	ND	.00	--	--
NOV , 1979	--	--	50	--	ND	--	ND	.00	--	--
NOV , 1980	--	--	--	--	--	150	--	--	--	--
05...	--	--	40	--	0	--	2	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued
 (Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius;
 Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter;
 T/DAY, tons per day; dashes indicate no data.)

01472109 - STONY RUN NEAR SPRING CITY, PA

DATE	TIME	ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	CIFIC CON- DUC- TANCE (US/CM) _d	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCOCCI FECAL, (COLS. PER 100 ML)	
NOV , 1969											
FEB , 1970		84215 _a /	.50	262	6.9	7.0	--	4000	--	400	
MAY , 1970		84215	5.2	160	7.2	7.0	--	50	--	<1	
SEP , 1970		84215	6.9	110	8.1	13.0	--	630	--	12	
MAY , 1971		84215	.70	285	8.4	15.0	--	21000	--	1300	
SEP , 1971		84215	1.0	270	8.9	5.5	--	930	80	55	
OCT , 1972		84215	1.9	210	7.3	16.0	--	50000	750	1500	
OCT , 1973	0930	84215	2.2	221	6.4	11.5	--	38000	1500	2600	
OCT , 1974	1120	1028 _b /	--	270	7.0	17.0	--	40300	330	440	
NOV , 1975	0945	1028	--	430	7.6	5.0	9.0	--	--	--	
OCT , 1976	1430	1028	--	230	7.6	17.0	10.9	--	--	--	
OCT , 1977	1000	1028	--	260	6.5	10.0	9.6	--	--	--	
OCT , 1978	1130	80010 _c /	--	255	7.4	14.0	10.1	--	--	--	
NOV , 1979	1115	80010	--	400	7.0	12.5	12.8	--	--	--	
NOV , 1980	1115	80010	--	229	6.4	10.0	11.8	--	--	--	
	1130	80010	--	370	7.2	9.0	10.3	--	--	--	
DATE		HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL, RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL, RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL, RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
NOV , 1969		--	--	--	--	--	--	--	--	--	--
FEB , 1970		--	--	--	--	--	--	--	--	--	--
MAY , 1970		--	--	14	--	6.2	--	11	--	3.5	--
SEP , 1970		--	--	21	--	6.6	--	36	--	5.8	--
MAY , 1971		--	--	18	--	6.9	--	16	--	--	--
SEP , 1971		--	--	17	--	6.8	--	12	--	3.6	--
OCT , 1972		--	--	17	--	5.6	--	13	--	4.6	--
OCT , 1973		74	18	--	18	--	7.0	--	22	--	3.4
OCT , 1974		120	55	--	33	--	9.0	--	36	--	7.0
NOV , 1975		72	38	--	18	--	6.5	--	13	--	2.8
OCT , 1976		74	30	--	17	--	7.6	--	11	--	11
OCT , 1977		87	42	--	22	--	7.9	--	13	--	4.6
OCT , 1978		81	28	--	21	--	6.9	--	21	--	3.1
NOV , 1979		--	--	--	--	--	--	--	--	--	--
NOV , 1980		86	--	--	23	--	7.0	--	32	--	5.5

a/ Chester County Health Department Laboratory, Pennsylvania.

b/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

c/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.

d/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

TABLE 2.-- Water-quality data for surface-water sites--Continued
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25 Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01472109 - STONY RUN NEAR SPRING CITY, PA--Continued

DATE	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
NOV , 1969	--	--	--	16	10	--	--	--	--	--
FEB , 1970	--	--	--	24	17	--	--	--	--	--
MAY , 1970	--	--	--	11	12	--	--	--	282	--
SEP , 1970	--	--	--	22	46	--	--	--	248	--
MAY , 1971	--	--	--	33	15	--	--	--	137	--
SEP , 1971	--	--	--	18	17	--	--	--	171	--
OCT , 1972	--	--	--	27	19	--	--	--	136	--
OCT , 1973	68	0	56	23	18	.20	20	--	--	145
OCT , 1974	79	0	65	25	64	.20	18	249	--	230
NOV , 1975	42	0	34	25	16	.10	17	148	--	120
OCT , 1976	54	0	44	33	19	.10	14	167	--	140
OCT , 1977	56	0	46	30	18	.10	18	168	--	140
OCT , 1978	65	0	53	26	28	<.10	17	184	--	160
NOV , 1979	--	--	26	25	19	.10	17	--	--	--
NOV , 1980	--	--	--	38	32	.10	20	219	--	--

DATE	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)
NOV , 1969	.99	--	--	--	--	--	--	--	.580
FEB , 1970	1.4	--	--	--	--	--	--	--	.140
MAY , 1970	1.7	--	--	--	--	--	--	--	--
SEP , 1970	3.2	.050	--	--	--	--	--	.790	.670
MAY , 1971	5.3	.050	--	.300	.18	--	--	.350	.290
SEP , 1971	7.1	.040	--	.010	.82	--	--	.160	.070
OCT , 1972	5.3	.060	--	.020	.61	--	--	.470	.360
OCT , 1973	5.4	--	--	.140	1.0	1.1	--	.740	.740
OCT , 1974	3.8	--	--	.200	.76	.96	--	4.70	1.20
NOV , 1975	6.6	--	--	.020	.78	.80	--	.330	.280
OCT , 1976	1.9	.030	1.9	.470	1.6	2.1	4.0	.520	.370
OCT , 1977	4.3	.050	4.3	.090	.57	.66	5.0	.420	.380
OCT , 1978	4.5	.020	4.5	.040	.31	.35	4.9	.490	.490
NOV , 1979	--	--	--	.000	.16	.16	--	.290	--
NOV , 1980	2.7	.070	2.8	.070	.54	.61	3.4	1.20	1.00

01472109 - STONY RUN NEAR SPRING CITY, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
NOV , 1969	--	--	--	--	--	--	--	--	--	--
FEB , 1970	--	--	--	--	--	--	--	--	--	--
MAY , 1970	--	--	--	--	--	--	--	--	--	--
SEP , 1970	--	<100	--	<200	--	<250	--	<150	--	--
MAY , 1971	--	<100	--	<900	--	<250	--	<100	--	--
SEP , 1971	--	<150	--	<200	--	<250	--	320	--	--
OCT , 1972	--	<100	--	<200	--	<250	--	480	--	--
OCT , 1973	--	<100	--	<200	--	<250	--	770	--	--
OCT , 1974	<2	--	ND	--	ND	--	ND	280	--	2
NOV , 1975	ND	--	ND	--	ND	--	ND	--	120	<2
OCT , 1976	<2	--	ND	--	ND	--	ND	--	<10	6
OCT , 1977	<2	--	<20	--	ND	--	<20	--	290	270
OCT , 1978	ND	--	<2	--	ND	--	2	--	60	9
NOV , 1979	ND	--	ND	--	ND	--	<2	--	110	ND
NOV , 1980	--	20	--	--	--	0	--	--	--	--
05...	3	--	.00	--	1	--	2	--	130	0
DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
NOV , 1969	--	--	--	--	--	--	--	--	--	--
FEB , 1970	--	--	--	--	--	--	--	--	--	--
MAY , 1970	--	--	--	--	--	--	--	--	--	--
SEP , 1970	<100	--	--	<250	--	<50	--	--	43	.80
MAY , 1971	<50	<250	--	<250	--	<20	--	--	14	.03
SEP , 1971	<50	<250	--	<250	--	<20	--	--	15	.04
OCT , 1972	<50	<250	--	<250	--	<50	--	--	9	.05
OCT , 1973	<50	<250	--	<250	--	<60	--	--	--	--
OCT , 1974	--	50	--	--	<2	--	20	--	--	--
NOV , 1975	--	--	90	--	5	--	20	--	--	--
OCT , 1976	--	--	50	--	2	--	<20	--	--	--
OCT , 1977	--	--	160	--	7	--	20	--	--	--
OCT , 1978	--	--	110	--	2	--	<20	.00	--	--
NOV , 1979	--	--	30	--	<2	--	ND	.00	--	--
NOV , 1980	--	--	--	--	--	20	--	--	--	--
05...	--	--	160	--	2	--	20	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued
 (Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius;
 Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter;
 T/DAY, tons per day; dashes indicate no data.)

01472110 - STONY RUN AT SPRING CITY, PA

DATE	TIME	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) _d	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCOCCI FECAL, (COLS. PER 100 ML)	
NOV 13, 1969											
FEB 19, 1970	--	84215 _a /	.70	190	6.9	15.0	--	40	--	<1	
MAY 06, 1970	--	84215	7.1	150	7.6	5.0	--	2000	--	900	
SEP 29, 1970	--	84215	9.4	109	8.1	13.0	--	8	--	<1	
MAY 04, 1971	--	84215	9.1	195	7.9	15.0	--	6400	--	550	
SEP 28, 1971	--	84215	2.3	220	8.7	16.0	--	4200	1000	130	
OCT 09, 1972	0900	84215	3.6	205	7.5	17.0	--	72000	840	4100	
OCT 02, 1973	1035	1028 _b /	3.7	240	6.5	12.0	--	5600	4100	4500	
OCT 24, 1974	1035	1028 _b /	1.6	260	6.8	17.0	9.8	28300	620	280	
NOV 05, 1975	0900	1028	3.3	165	7.7	4.0	9.2	--	--	--	
OCT 26, 1976	1500	1028	--	--	7.3	16.5	11.0	--	--	--	
OCT 20, 1977	1045	1028	--	275	7.0	11.0	9.2	--	--	--	
OCT 31, 1978	1030	80010 _c /	0.75	295	7.2	13.0	9.8	--	--	--	
NOV 09, 1979	1215	80010	--	310	7.3	12.0	12.6	--	--	--	
NOV 05, 1980	1315	80010	--	227	6.7	11.0	13.0	--	--	--	
	1000	80010	--	280	7.1	8.0	9.7	--	--	--	
DATE		HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
NOV 13, 1969	--	--	--	--	--	--	--	--	--	--	--
FEB 19, 1970	--	--	--	--	--	--	--	--	--	--	--
MAY 06, 1970	--	--	--	18	--	6.6	--	12	--	2.1	--
SEP 29, 1970	--	--	--	19	--	6.0	--	18	--	6.4	--
MAY 04, 1971	--	--	--	18	--	6.9	--	16	--	1.9	--
SEP 28, 1971	--	--	--	17	--	6.8	--	12	--	3.2	--
OCT 09, 1972	--	--	--	20	--	6.6	--	15	--	7.9	--
OCT 02, 1973	71	20	--	17	--	6.9	--	19	--	4.0	--
OCT 24, 1974	82	28	--	22	--	6.5	--	15	--	4.9	--
NOV 05, 1975	78	41	--	20	--	6.7	--	13	--	2.8	--
OCT 26, 1976	78	39	--	19	--	7.5	--	13	--	7.4	--
OCT 20, 1977	92	44	--	23	--	8.5	--	16	--	10	--
OCT 31, 1978	79	36	--	20	--	7.1	--	14	--	3.2	--
NOV 09, 1979	--	--	--	--	--	--	--	--	--	--	--
NOV 05, 1980	85	--	--	22	--	7.3	--	26	--	4.4	--

a/ Chester County Health Department Laboratory, Pennsylvania.
 b/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany,
 c/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.
 d/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

01472110 - STONY RUN AT SPRING CITY, PA--Continued

	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
DATE										
NOV 13, 1969	--	--	--	--	--	--	--	--	--	--
FEB 19, 1970	--	--	--	38	18	--	--	--	--	--
MAY 06, 1970	--	--	--	42	13	--	--	--	141	--
SEP 29, 1970	--	--	--	17	23	--	--	--	192	--
MAY 04, 1971	--	--	--	33	15	--	--	--	137	--
SEP 28, 1971	--	--	--	30	14	--	--	--	164	--
OCT 09, 1972	--	--	--	34	23	--	--	--	163	--
OCT 02, 1973	62	0	51	23	16	.30	17	--	--	134
OCT 24, 1974	66	0	54	29	21	.10	15	175	--	150
NOV 05, 1975	45	0	37	27	16	<.10	15	153	--	120
OCT 26, 1976	48	0	39	35	21	.10	14	165	--	140
OCT 20, 1977	60	0	49	34	22	.10	16	180	--	160
OCT 31, 1978	53	0	43	25	19	.10	16	138	--	130
NOV 09, 1979	--	--	27	27	16	.10	16	--	--	--
NOV 05, 1980	--	--	--	35	43	.10	18	225	--	--
	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	
DATE										
NOV 13, 1969	.32	--	--	--	--	--	--	--	--	
FEB 19, 1970	1.3	--	--	--	--	--	--	--	--	
MAY 06, 1970	2.7	--	--	--	--	--	--	--	--	
SEP 29, 1970	1.9	.300	--	.130	--	--	--	.590	.500	
MAY 04, 1971	5.5	.050	--	.300	.20	--	--	.250	.190	
SEP 28, 1971	6.5	.030	--	.010	.96	--	--	.220	.080	
OCT 09, 1972	3.6	.040	--	.080	.86	--	--	.480	.360	
OCT 02, 1973	5.0	--	--	.100	.81	.91	--	.520	.520	
OCT 24, 1974	4.1	--	--	.170	.58	.75	--	.440	.400	
NOV 05, 1975	6.1	--	--	.130	.77	.90	--	.250	.220	
OCT 26, 1976	2.6	.070	2.7	.300	1.2	1.5	4.2	.420	.230	
OCT 20, 1977	1.1	.010	1.1	.080	.57	.65	1.8	.190	.090	
OCT 31, 1978	4.0	.010	4.0	.020	.23	.25	4.3	.210	.180	
NOV 09, 1979	--	--	--	--	--	--	--	.21	--	
NOV 05, 1980	2.9	.020	2.9	.060	.42	.48	3.4	.210	.170	

01472110 - STONY RUN AT SPRING CITY, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
NOV , 1969	--	--	--	--	--	--	--	--	--	--
FEB , 1970	--	--	--	--	--	--	--	--	--	--
MAY , 1971	--	--	--	--	--	--	--	--	--	--
SEP , 1971	--	<200	--	<500	--	<250	--	<250	--	--
MAY , 1971	--	<100	--	<900	--	<250	--	<100	--	--
SEP , 1971	--	<150	--	<200	--	<250	--	320	--	--
OCT , 1972	--	<100	--	<200	--	<250	--	<150	--	--
OCT , 1973	--	<100	--	<200	--	<250	--	1300	--	--
OCT , 1974	ND	--	<.00	--	ND	--	ND	250	--	2
NOV , 1975	<2	--	ND	--	ND	--	ND	--	60	<2
OCT , 1976	<2	--	ND	--	ND	--	ND	--	40	3
OCT , 1977	<2	--	<20	--	ND	--	<20	--	180	4
OCT , 1978	ND	--	<2	--	ND	--	6	--	130	8
NOV , 1979	ND	--	ND	--	ND	--	2	--	190	<2
NOV , 1980	--	20	--	--	--	0	--	--	--	--
NOV , 1980	1	--	.00	--	0	--	2	--	80	0
DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE SUS- PENDED (T/DAY)
NOV , 1969	--	--	--	--	--	--	--	--	--	--
FEB , 1970	--	--	--	--	--	--	--	--	25	.48
MAY , 1971	<100	--	--	<250	--	<250	--	--	9	.23
SEP , 1971	<50	--	--	<250	--	<20	--	--	8	.20
MAY , 1971	<50	<250	--	<250	--	<20	--	--	15	.09
SEP , 1971	<50	<250	--	<250	--	<50	--	--	13	.13
OCT , 1972	<50	<250	--	<250	--	<20	--	--	--	--
OCT , 1973	--	40	--	--	<2	--	20	--	--	--
OCT , 1974	--	--	50	--	4	--	<20	--	--	--
NOV , 1975	--	--	30	--	3	--	20	--	--	--
OCT , 1976	--	--	130	--	2	--	<20	--	--	--
OCT , 1977	--	--	110	--	2	--	20	.10	--	--
OCT , 1978	--	--	40	--	2	--	ND	.00	--	--
NOV , 1979	--	--	--	--	--	190	--	--	--	--
NOV , 1980	--	--	90	--	2	--	8	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; ug/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01472126 - FRENCH CREEK AT TRYTHALL, PA

DATE	TIME	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAM- FLOW- INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM)d/	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
MAY, 1971										
10...	--	84215a/	--	75	7.5	50.0	12.8	3200	280	300
OCT 25...	--	84215	--	70	7.5	16.0	--	15800	650	2300
OCT 24, 1972	1315	84215	--	55	6.9	14.0	--	2400	280	720
OCT 03, 1973	1035	1028b/	--	80	6.3	17.5	10.6	8300	310	100
OCT 24, 1974	1400	1028	--	45	8.4	11.0	--	--	--	--
OCT 30, 1975	1400	1028	--	60	7.1	13.0	9.2	--	--	--
OCT 27, 1976	1045	1028	--	100	7.0	7.0	11.4	--	--	--
OCT 21, 1977	1300	80010c/	--	70	6.9	13.5	10.1	--	--	--
NOV 01, 1978	1500	80010	--	85	6.9	--	11.6	--	--	--
NOV 08, 1979	1315	80010	--	55	6.9	8.0	11.8	--	--	--
NOV 07, 1980	0830	80010	--	85	7.1	7.0	10.5	--	--	--

DATE	HARD- NESS (MG/L AS CaCO3)	HARD- NESS NONCAR- BONATE (MG/L AS CaCO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS Ca)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS Mg)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS Na)	SODIUM, DIS- SOLVED (MG/L AS Na)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
MAY, 1971										
10...	--	--	5.8	--	2.5	--	3.3	--	1.1	--
OCT 25...	--	--	5.3	--	1.9	--	2.9	--	1.2	--
OCT 24, 1972	--	--	3.9	--	1.4	--	2.4	--	1.0	--
OCT 03, 1973	24	4	--	6.0	--	2.2	--	3.5	--	1.0
OCT 24, 1974	25	4	--	6.5	--	2.2	--	2.8	--	.70
OCT 30, 1975	18	2	--	5.5	--	1.0	--	2.5	--	.90
OCT 27, 1976	26	9	--	6.3	--	2.5	--	3.2	--	1.6
OCT 21, 1977	25	6	--	6.8	--	2.0	--	3.4	--	1.1
NOV 01, 1978	24	3	--	6.4	--	2.0	--	4.3	--	1.5
NOV 08, 1979	--	--	--	--	--	--	--	--	--	--
NOV 07, 1980	24	--	--	6.4	--	2.0	--	3.5	--	.90

a/ Chester County Health Department Laboratory, Pennsylvania.
 b/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.
 c/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.
 d/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

TABLE 2.-- Water-quality data for surface-water sites--Continued
 (Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25 Celsius;
 Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.)

01472126 - FRENCH CREEK AT TRYTHALL, PA--Continued

DATE	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
MAY , 1971										
10...	--	--	--	14	4.6	--	--	--	--	--
OCT 25...	--	--	--	18	3.2	--	--	--	--	--
OCT 24... 1972	--	--	--	6.0	1.5	--	--	--	46	--
OCT 03... 1973	24	0	20	6.4	2.7	.20	8.7	--	--	43
OCT 24... 1974	25	0	21	6.7	2.3	.10	9.9	56	--	44
OCT 30... 1975	19	0	16	7.1	2.7	<.10	8.6	52	--	38
OCT 27... 1976	21	0	17	15	4.8	.10	11	55	--	55
OCT 21... 1977	23	0	19	7.6	1.8	<.10	9.1	51	--	43
NOV 01... 1978	25	0	21	6.5	4.2	.10	9.1	56	--	47
NOV 08... 1979	--	--	13	6.8	2.6	.10	8.6	--	--	--
NOV 07... 1980	--	--	--	6.4	2.3	.10	7.9	47	--	--

DATE	NITRO- GEN NITRATE TOTAL (MG/L AS N)	NITRO- GEN NITRITE TOTAL (MG/L AS N)	NITRO- GEN NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN AMMONIA TOTAL (MG/L AS N)	NITRO- GEN ORGANIC TOTAL (MG/L AS N)	NITRO- GEN AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)
MAY , 1971									
10...	.11	<.010	--	<.010	.34	--	--	.490	.010
OCT 25...	.09	<.010	--	<.010	.71	--	--	.070	.010
OCT 24... 1972	.08	.010	--	.020	.27	--	--	.150	.010
OCT 03... 1973	.24	.005	.24	.050	.26	.31	.55	.030	.010
OCT 24... 1974	.11	--	--	.020	.20	.22	--	.020	.010
OCT 30... 1975	.11	--	--	.010	.21	.22	--	.030	<.010
OCT 27... 1976	.28	.010	.29	.100	.30	.40	.69	.030	.010
OCT 21... 1977	.19	<.010	.19	.040	.53	.57	.76	.020	<.010
NOV 01... 1978	.09	<.010	.09	.030	.19	.22	.31	.010	<.010
NOV 08... 1979	--	--	--	--	--	--	--	.030	--
NOV 07... 1980	.09	.000	.09	.050	.03	.08	.17	.020	.020

01472126 - FRENCH CREEK AT TRYTHALL, PA--Continued

DATE	CADMIUM, DIS- SOLVED (UG/L AS CD)	CHROMIUM, TOTAL, RECOV- ERABLE (UG/L AS CR)	CHROMIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL, RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL, RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL, RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
MAY , 1971	--	<150	--	<200	--	<250	--	500	--	--
OCT 10...	--	<100	--	<200	--	<250	--	<150	--	--
OCT 25...	--	<100	--	<200	--	<250	--	860	--	--
OCT 24... 1972	--	<100	--	<200	--	<250	--	860	--	--
OCT 03... 1973	ND	--	ND	--	ND	--	ND	--	180	3
OCT 24... 1974	ND	--	ND	--	ND	--	ND	--	180	2
OCT 30... 1975	<2	--	ND	--	ND	--	ND	--	190	10
OCT 27... 1976	2	--	<20	--	ND	--	<20	--	220	5
OCT 21... 1977	ND	--	ND	--	ND	--	2	--	240	ND
NOV 01... 1978	<2	--	ND	--	ND	--	4	--	290	8
NOV 08... 1979	--	20	--	--	--	0	--	--	--	--
NOV 07... 1980	1	--	1	--	0	--	2	--	90	0

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGANESE, TOTAL, RECOV- ERABLE (UG/L AS MN)	MANGANESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL, RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL, RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
MAY , 1971	<50	<250	--	<250	--	<20	--	--	--	--
OCT 10...	<50	<250	--	<250	--	<50	--	--	--	--
OCT 25...	<50	<250	--	<250	--	<50	--	--	--	--
OCT 24... 1972	<50	370	--	<250	--	<20	--	--	--	--
OCT 03... 1973	--	--	70	--	3	--	<20	--	--	--
OCT 24... 1974	--	--	80	--	ND	--	<20	--	--	--
OCT 30... 1975	--	--	60	--	<2	--	<20	--	--	--
OCT 27... 1976	--	--	40	--	5	--	<20	--	--	--
OCT 21... 1977	--	--	70	--	<2	--	<20	.00	--	--
NOV 01... 1978	--	--	80	--	<2	--	30	.00	--	--
NOV 08... 1979	--	--	--	--	--	140	--	--	--	--
NOV 07... 1980	--	--	70	--	0	--	9	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued
 (Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS, per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.)

01472129 - FRENCH CREEK NEAR KNAUERTOWN, PA

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) _d	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCOCCI FECAL, (COLS. PER 100 ML)	
DEC 09, 1969	--	84215 _a /	9.7	95	6.9	5.0	--	2800	--	1300	
FEB 24, 1970	--	84215	16	35	7.6	3.0	--	1900	--	1200	
MAY 07, 1970	--	84215	17	103	8.1	12.0	--	96	--	12	
OCT 05, 1970	--	84215	5.6	50	7.8	9.0	--	1600	--	210	
MAY 10, 1971	--	84215	15	80	7.2	11.0	--	4500	380	590	
OCT 04, 1971	--	84215	11	85	7.6	17.0	--	13600	300	800	
OCT 30, 1972	0730	84215	12	75	6.0	9.5	--	1300	160	220	
OCT 03, 1973	1205	1028 _b /	--	95	6.6	17.5	10.4	9700	340	270	
OCT 24, 1974	1430	1028	--	55	8.2	9.0	10.1	--	--	--	
NOV 10, 1975	1500	1028	--	95	7.1	16.0	10.2	--	--	--	
OCT 27, 1976	1200	1028	--	70	7.1	8.0	10.4	--	--	--	
OCT 21, 1977	1200	80010 _c /	--	90	6.8	12.0	10.5	--	--	--	
NOV 01, 1978	1420	80010	--	95	7.0	10.5	13.2	--	--	--	
NOV 08, 1979	1230	80010	--	79	6.6	7.0	12.2	--	--	--	
NOV 06, 1980	1530	80010	--	95	7.2	6.0	11.8	--	--	--	
DATE		HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
DEC 09, 1969	--	--	--	--	--	--	--	--	--	--	--
FEB 24, 1970	--	--	--	--	--	--	--	--	--	--	--
MAY 07, 1970	--	--	--	4.8	--	2.2	--	3.0	--	1.3	--
OCT 05, 1970	--	--	--	9.0	--	2.5	--	3.5	--	1.5	--
MAY 10, 1971	--	--	--	5.7	--	1.7	--	3.1	--	1.0	--
OCT 04, 1971	--	--	--	13	--	6.2	--	6.8	--	4.5	--
OCT 30, 1972	--	--	--	5.5	--	1.9	--	2.7	--	1.3	--
OCT 03, 1973	32	7	--	8.0	--	2.8	--	3.5	--	1.6	--
OCT 24, 1974	38	11	--	10	--	3.1	--	3.0	--	1.0	--
NOV 10, 1975	31	6	--	8.9	--	2.1	--	3.1	--	1.7	--
OCT 27, 1976	22	6	--	5.4	--	2.0	--	3.0	--	1.0	--
OCT 21, 1977	35	12	--	9.4	--	2.7	--	3.7	--	1.4	--
NOV 01, 1978	--	--	--	--	--	--	--	--	--	--	--
NOV 08, 1979	--	--	--	--	--	--	--	--	--	--	--
NOV 06, 1980	34	--	--	8.9	--	2.9	--	3.7	--	1.2	--

a/ Chester County Health Department Laboratory, Pennsylvania.

b/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

c/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.

d/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

01472129 - FRENCH CREEK NEAR KNAUERTOWN, PA--Continued

	BICARBONATE FET-FLD (MG/L AS HCO3)	CARBONATE FET-FLD (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLORIDE, DIS- SOLVED (MG/L AS CL)	FLUORIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG-C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG-C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
DATE										
DEC , 1969										
09...	--	--	--	16	9.0	--	--	--	--	--
FEB , 1970										
24...	--	--	--	6.6	6.2	--	--	--	--	--
MAY , 1970										
07...	--	--	--	19	1.1	--	--	--	69	--
OCT , 1970										
05...	--	--	--	7.1	3.5	--	--	--	63	--
MAY , 1971										
10...	--	--	--	9.9	4.6	--	--	--	33	--
OCT , 1971										
04...	--	--	--	8.2	3.8	--	--	--	59	--
OCT , 1972										
30...	--	--	--	5.5	4.1	--	--	--	63	--
OCT , 1973										
03...	30	0	25	7.7	3.5	.60	13	--	--	55
OCT , 1974										
24...	33	0	27	9.1	3.7	.20	12	55	--	59
NOV , 1975										
10...	30	0	25	7.3	4.2	.10	11	62	--	54
OCT , 1976										
27...	20	0	16	13	3.2	.10	9.1	45	--	47
OCT , 1977										
21...	28	0	23	11	3.3	<.10	13	68	--	59
NOV , 1978										
01...	17	0	14	8.1	4.0	0.1	12	52	--	--
NOV , 1979										
08...	--	--	18	7.1	4.1	.10	13	--	--	--
NOV , 1980										
06...	--	--	--	12	4.3	.10	12	67	--	--
	NITRO- GEN NITRATE TOTAL (MG/L AS N)	NITRO- GEN NITRITE TOTAL (MG/L AS N)	NITRO- GEN NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN AMMONIA TOTAL (MG/L AS N)	NITRO- GEN ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	
DATE										
DEC , 1969										
09...	.27	--	--	--	--	--	--	--	--	
FEB , 1970										
24...	.10	--	--	--	--	--	--	--	--	
MAY , 1970										
07...	.39	--	--	--	--	--	--	--	--	
OCT , 1970										
05...	.49	<.010	--	--	.01	--	--	<.010	.010	
MAY , 1971										
10...	--	<.010	--	.110	.27	--	--	.030	.020	
OCT , 1971										
04...	.36	<.010	--	.060	.31	--	--	.040	.010	
OCT , 1972										
30...	.05	<.010	--	.050	.18	--	--	.030	.000	
OCT , 1973										
03...	.43	.001	.43	.100	.60	.70	1.1	.030	.010	
OCT , 1974										
24...	.25	--	--	.030	.26	.29	--	.030	.010	
NOV , 1975										
10...	.52	--	--	.010	.44	.45	--	.050	.010	
OCT , 1976										
27...	.11	.010	.12	.040	.21	.25	.37	.030	<.010	
OCT , 1977										
21...	.45	<.010	.45	.030	.36	.39	.84	.020	<.010	
NOV , 1978										
01...	.09	.00	.09	.01	.47	.48	.57	.01	.02	
NOV , 1979										
08...	--	--	--	--	--	--	--	.010	--	
NOV , 1980										
06...	.22	.000	.22	.040	.18	.22	.44	.020	.020	

01472129 - FRENCH CREEK NEAR KNAUERTOWN, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
DEC , 1969	--	--	--	--	--	--	--	--	--	--
FEB , 1970	--	--	--	--	--	--	--	--	--	--
MAY , 1971	--	--	--	--	--	--	--	--	--	--
OCT , 1971	--	--	--	--	--	--	--	--	--	--
MAY , 1971	--	<100	--	<900	--	<250	--	<100	--	--
OCT , 1971	--	<150	--	<200	--	<250	--	<330	--	--
OCT , 1972	--	<100	--	<200	--	<250	--	1000	--	--
OCT , 1973	--	<100	--	<200	--	<250	--	<410	--	--
OCT , 1974	ND	--	ND	--	ND	--	<20	360	--	ND
NOV , 1975	ND	--	ND	--	ND	--	ND	--	160	2
OCT , 1975	<2	--	ND	--	ND	--	ND	--	250	3
OCT , 1975	<2	--	<20	--	ND	--	ND	--	210	5
OCT , 1977	ND	--	ND	--	ND	--	2	--	200	<2
NOV , 1978	--	--	--	--	--	--	--	--	--	--
NOV , 1979	--	--	--	--	--	--	--	--	--	--
NOV , 1980	0	--	.00	--	1	--	1	--	150	0
DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
DEC , 1969	--	--	--	--	--	--	--	--	--	--
FEB , 1970	--	--	--	--	--	--	--	--	--	--
MAY , 1971	--	--	--	--	--	--	--	--	2	.09
OCT , 1971	<50	<250	--	<250	--	<20	--	--	3	.05
MAY , 1971	<50	<250	--	<250	--	<20	--	--	7	.28
OCT , 1972	<50	<250	--	<250	--	<50	--	--	4	.12
OCT , 1973	<50	<250	--	<250	--	<20	--	--	8	.26
OCT , 1974	--	70	--	--	ND	--	<20	--	--	--
NOV , 1975	--	--	60	--	<2	--	40	--	--	--
OCT , 1975	--	--	130	--	6	--	<20	--	--	--
OCT , 1977	--	--	70	--	4	--	<20	--	--	--
NOV , 1978	--	--	70	--	<2	--	<20	.00	--	--
NOV , 1979	--	--	--	--	--	--	--	.00	--	--
NOV , 1980	--	--	--	--	--	--	--	--	--	--
NOV , 1980	--	--	70	--	0	--	2	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01472138 - FRENCH CREEK NEAR COVENTRYVILLE, PA

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) _d	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCOCCI FECAL, (COLS. PER 100 ML)	
DEC , 1969											
FEB , 1970	--	84215 _a	24	120	7.0	5.0	--	1700	--	1500	
MAY , 1970	--	84215	28	60	7.4	6.0	--	1300	--	940	
OCT , 1970	--	84215	30	70	8.0	16.0	--	73000	--	84	
MAY , 1971	--	84215	11	60	7.2	9.0	--	1200	--	250	
OCT , 1971	--	84215	30	105	7.0	12.0	--	7200	580	250	
OCT , 1972	--	84215	23	115	7.6	18.0	--	26000	190	1800	
OCT , 1973	0830	84215	18	102	7.1	9.5	--	1600	180	300	
OCT , 1974	1050	1028 _b	--	140	6.2	16.5	11.6	11300	--	270	
NOV , 1975	1515	1028	--	100	7.8	10.0	11.0	--	--	--	
OCT , 1976	1100	1028	--	140	7.2	13.0	11.2	--	--	--	
OCT , 1977	0830	1028	--	120	7.2	8.0	11.4	--	--	--	
NOV , 1978	0930	80010 _c	--	130	6.9	10.5	10.5	--	--	--	
NOV , 1979	1115	80010	--	180	7.2	9.5	10.6	--	--	--	
NOV , 1980	0900	80010	--	110	6.5	8.0	11.2	--	--	--	
NOV , 1980	1300	80010	--	150	7.4	6.0	12.6	--	--	--	
DATE		HARD- NESS (MG/L AS CaCO3)	HARD- NESS, NONCAR- BONATE (MG/L CaCO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
DEC , 1969											
FEB , 1970	--	--	--	--	--	--	--	--	--	--	--
MAY , 1970	--	--	--	10	--	2.9	--	7.4	--	.9	--
OCT , 1970	--	--	--	7.6	--	3.5	--	9.7	--	.9	--
MAY , 1971	--	--	--	9.0	--	2.5	--	3.0	--	1.2	--
OCT , 1971	--	--	--	8.3	--	3.6	--	3.9	--	1.0	--
OCT , 1972	--	--	--	12	--	3.9	--	6.5	--	1.5	--
OCT , 1973	--	--	--	12	--	6.2	--	3.4	--	2.0	--
OCT , 1974	47	11	--	11	--	4.7	--	5.2	--	1.4	--
NOV , 1975	55	19	--	17	--	3.0	--	6.3	--	1.7	--
OCT , 1976	49	16	--	13	--	4.0	--	4.4	--	1.3	--
OCT , 1977	40	13	--	9.6	--	4.0	--	3.8	--	2.0	--
NOV , 1978	51	22	--	13	--	4.4	--	5.0	--	1.7	--
NOV , 1979	53	17	--	13	--	4.9	--	5.5	--	1.7	--
NOV , 1980	--	--	--	--	--	--	--	--	--	--	--
NOV , 1980	52	--	--	13	--	4.7	--	5.0	--	1.4	--

_a/ Chester County Health Department Laboratory, Pennsylvania.

_b/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

_c/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.

_d/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

TABLE 2.-- Water-quality data for surface-water sites--Continued

[Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01472138 - FRENCH CREEK NEAR COVENTRYVILLE, PA--Continued

DATE	BICARBONATE FET-FLD (MG/L AS HCO3)	CARBONATE FET-FLD (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLORIDE, DIS- SOLVED (MG/L AS CL)	FLUORIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
DEC , 1969	--	--	--	15	5.0	--	--	--	--	--
FEB , 1970	--	--	--	7.7	11	--	--	--	--	--
MAY , 1970	--	--	--	15	7.0	--	--	--	77	--
OCT , 1970	--	--	--	9.9	9.5	--	--	--	77	--
MAY , 1971	--	--	--	16	3.6	--	--	--	60	--
OCT , 1971	--	--	--	7.4	7.6	--	--	--	93	--
OCT , 1972	--	--	--	8.5	6.6	--	--	--	82	--
OCT , 1973	44	0	36	11	8.5	.30	16	--	--	80
OCT , 1974	44	0	36	14	10	.20	19	108	--	93
NOV , 1975	40	0	33	10	7.0	.10	14	81	--	74
OCT , 1976	33	0	27	17	6.7	.10	14	82	--	74
OCT , 1977	35	0	29	15	6.9	<.10	16	92	--	79
NOV , 1978	44	0	36	11	8.0	.10	15	87	--	81
NOV , 1979	--	--	24	10	6.6	.10	15	--	--	--
NOV , 1980	--	--	--	16	9.6	.10	17	92	--	--

DATE	NITROGEN NITRATE TOTAL (MG/L AS N)	NITROGEN NITRITE TOTAL (MG/L AS N)	NITROGEN NO2+NO3 TOTAL (MG/L AS N)	NITROGEN AMMONIA TOTAL (MG/L AS N)	NITROGEN ORGANIC TOTAL (MG/L AS N)	NITROGEN AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)
DEC , 1969	.14	--	--	--	--	--	--	--	--
FEB , 1970	.13	--	--	--	--	--	--	--	--
MAY , 1970	--	--	--	--	--	--	--	--	--
OCT , 1970	--	--	--	--	--	--	--	--	--
MAY , 1971	.68	--	--	--	--	--	.020	.030	--
OCT , 1971	.36	.010	--	--	.05	--	.030	.010	--
OCT , 1972	.72	<.010	--	.020	.24	--	.060	.020	--
OCT , 1973	.08	<.010	--	.020	.31	--	.040	.010	--
OCT , 1974	.57	.002	.57	.150	.17	.32	.89	.020	.010
NOV , 1975	.50	--	--	--	--	--	.030	.020	--
NOV , 1976	.68	--	--	.010	.32	.33	.020	<.010	--
OCT , 1977	.35	.010	.36	.040	.26	.30	.66	.040	.010
OCT , 1977	.54	.010	.55	<.010	.17	.17	.72	.010	<.010
NOV , 1978	.57	.010	.58	.010	.29	.30	.88	.010	.010
NOV , 1979	--	--	--	--	--	--	.220	--	--
NOV , 1980	.35	.000	.35	.040	.09	.13	.48	.030	.010

01472138 - FRENCH CREEK NEAR COVENTRYVILLE, PA--Continued

DATE	CADMIUM TOTAL DIS- SOLVED (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, TOTAL DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOVERABLE (UG/L AS CO)	COBALT, TOTAL DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, TOTAL DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, TOTAL DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL DIS- SOLVED (UG/L AS PB)
DEC , 1969	--	--	--	--	--	--	--	--	--	--
FEB , 1970	--	<100	--	<200	--	--	--	<250	--	--
MAY , 1970	--	--	--	--	--	--	--	--	--	--
OCT , 1970	--	--	--	--	--	--	--	--	--	--
MAY , 1971	--	<100	--	<900	--	<250	--	<100	--	--
OCT , 1971	--	<150	--	<200	--	<250	--	340	--	--
OCT , 1972	--	<100	--	<200	--	<250	--	<150	--	--
OCT , 1973	--	<100	--	<200	--	<250	--	430	--	--
OCT , 1974	ND	--	ND	--	ND	--	<20	180	--	2
NOV , 1975	ND	--	ND	--	ND	--	ND	--	130	2
OCT , 1976	<2	--	ND	--	ND	--	ND	--	190	6
OCT , 1977	<2	--	<20	--	ND	--	<20	--	240	4
NOV , 1978	ND	--	ND	--	ND	--	2	--	200	4
NOV , 1979	ND	--	ND	--	ND	--	ND	--	120	3
NOV , 1980	--	20	--	--	--	0	--	--	--	--
OCT , 1980	1	--	.00	--	1	--	1	--	120	0
DATE	LITHIUM TOTAL RECOVERABLE (UG/L AS LI)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, TOTAL DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, TOTAL DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, TOTAL DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
DEC , 1969	--	--	--	--	--	--	--	--	--	--
FEB , 1970	--	--	--	--	--	--	--	--	--	--
MAY , 1970	--	--	--	--	--	--	--	--	--	--
OCT , 1970	--	--	--	--	--	--	--	--	6	.49
MAY , 1971	<50	<250	--	<250	--	<20	--	--	1	.03
OCT , 1971	<50	<250	--	<250	--	<20	--	--	7	.57
OCT , 1972	<50	<250	--	<250	--	<50	--	--	2	.12
OCT , 1973	<50	<250	--	<250	--	<20	--	--	6	.30
OCT , 1974	--	20	--	--	ND	--	<20	--	--	--
NOV , 1975	--	--	40	--	<2	--	<20	--	--	--
OCT , 1976	--	--	30	--	2	--	<20	--	--	--
OCT , 1977	--	--	20	--	6	--	<20	--	--	--
NOV , 1978	--	--	40	--	<2	--	<20	.00	--	--
NOV , 1979	--	--	40	--	ND	--	<20	.00	--	--
NOV , 1980	--	--	--	--	--	160	--	--	--	--
OCT , 1980	--	--	40	--	0	--	3	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued

[Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01472140 - SOUTH BRIDGE FRENCH CREEK COVENTRYVILLE, PA

DATE	TIME	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM)d/	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
DEC , 1969										
09...	--	84215a/	13	175	6.9	4.0	--	1300	--	150
FEB , 1970										
24...	--	84215	16	90	7.8	6.0	--	1600	--	300
MAY , 1970										
07...	--	84215	16	106	8.8	13.0	--	<1	--	8
OCT , 1970										
05...	--	84215	5.8	45	7.4	11.0	--	1900	--	420
MAY , 1971										
10...	--	84215	16	145	7.4	12.0	--	3900	480	180
OCT , 1971										
04...	--	84215	12	140	7.8	17.0	--	7000	180	360
OCT , 1972										
30...	0915	84215	9.6	150	7.3	9.0	--	2700	440	820
OCT , 1973										
03...	1245	1028b/	--	175	7.5	18.0	13.0	9700	290	290
OCT , 1974										
25...	0900	1028	--	149	7.4	5.5	10.8	--	--	--
NOV , 1975										
04...	1015	1028	--	190	7.0	13.0	11.9	--	--	--
OCT , 1977										
21...	1030	80010c/	--	180	7.1	12.0	11.4	--	--	--
NOV , 1978										
01...	1215	80010	--	180	7.0	9.5	13.8	--	--	--
NOV , 1979										
09...	0830	80010	--	158	6.0	8.5	11.2	--	--	--
NOV , 1980										
06...	1400	80010	--	180	7.5	7.5	13.0	--	--	--

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
DEC , 1969										
09...	--	--	--	--	--	--	--	--	--	--
FEB , 1970										
24...	--	--	--	--	--	--	--	--	--	--
MAY , 1970										
07...	--	--	10	--	4.4	--	6.2	--	1.9	--
OCT , 1970										
05...	--	--	12	--	4.5	--	6.9	--	2.3	--
MAY , 1971										
10...	--	--	12	--	4.6	--	6.7	--	1.8	--
OCT , 1971										
04...	--	--	12	--	5.6	--	6.2	--	4.3	--
OCT , 1972										
30...	--	--	13	--	5.2	--	6.4	--	3.2	--
OCT , 1973										
03...	56	19	--	14	--	5.0	--	6.7	--	2.0
OCT , 1974										
25...	53	38	--	13	--	5.0	--	4.5	--	1.2
NOV , 1975										
04...	63	29	--	17	--	5.0	--	6.3	--	1.8
OCT , 1977										
21...	65	32	--	17	--	5.5	--	7.4	--	2.3
NOV , 1978										
01...	65	30	--	17	--	5.4	--	7.8	--	2.4
NOV , 1979										
09...	--	--	--	--	--	--	--	--	--	--
NOV , 1980										
06...	61	--	--	16	--	5.2	--	7.5	--	2.1

a/ Chester County Health Department Laboratory, Pennsylvania.

b/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

c/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.

d/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

01472140 - SOUTH BRIDGE FRENCH CREEK AT COVENTRYVILLE, PA--Continued

DATE	BICARBONATE FET-FLD (MG/L AS HCO3)	CARBONATE FET-FLD (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLORIDE, DIS- SOLVED (MG/L AS CL)	FLUORIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
DEC , 1969	--	--	--	13	10	--	--	--	--	--
FEB , 1970	--	--	--	7.7	11	--	--	--	--	--
MAY , 1970	--	--	--	27	6.4	--	--	--	115	--
OCT , 1970	--	--	--	7.7	1.0	--	--	--	112	--
MAY , 1971	--	--	--	18	8.2	--	--	--	72	--
OCT , 1971	--	--	--	10	11	--	--	--	111	--
OCT , 1972	--	--	--	13	12	--	--	--	121	--
OCT , 1973	45	0	37	13	9.4	.30	20	--	--	93
OCT , 1974	17	0	15	12	7.6	.10	15	92	--	67
NOV , 1975	42	0	34	14	11	.20	18	110	--	94
OCT , 1977	40	0	33	17	15	.10	20	127	--	100
NOV , 1978	43	0	35	14	11	.10	18	113	--	97
NOV , 1979	--	--	27	17	11	.10	18	--	--	--
NOV , 1980	--	--	--	19	12	.10	22	115	--	--

DATE	NITRO- GEN NITRATE TOTAL (MG/L AS N)	NITRO- GEN NITRITE TOTAL (MG/L AS N)	NITRO- GEN NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN AMMONIA TOTAL (MG/L AS N)	NITRO- GEN ORGANIC TOTAL (MG/L AS N)	NITRO- GEN AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)
DEC , 1969	.14	--	--	--	--	--	--	--	.030
FEB , 1970	.39	--	--	--	--	--	--	--	<.010
MAY , 1970	.65	--	--	--	--	--	--	--	.060
OCT , 1970	1.8	--	--	--	--	--	--	.030	.030
MAY , 1971	2.1	.020	--	.050	.28	--	--	.070	.030
OCT , 1971	2.2	<.010	--	.010	.49	--	--	.090	.040
OCT , 1972	2.1	<.010	--	.010	.28	--	--	.050	.030
OCT , 1973	2.2	<.010	2.2	.070	.51	.58	2.8	.030	.020
OCT , 1974	2.7	--	--	.020	.23	.25	--	.020	.010
NOV , 1975	2.9	--	--	<.010	.59	.59	--	.020	.010
OCT , 1977	2.7	.010	2.7	<.010	.24	.24	2.9	.030	.010
NOV , 1978	2.9	.010	2.9	.010	.32	.33	3.2	.010	.010
NOV , 1979	--	--	3.8	.030	.28	.29	4.1	.400	--
NOV , 1980	2.5	.000	2.5	.040	.10	.14	2.6	.020	.010

01472140 - SOUTH BRIDGE FRENCH CREEK AT COVENTRYVILLE, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
DEC , 1969	--	--	--	--	--	--	--	--	--	--
FEB , 1970	--	--	--	--	--	--	--	--	--	--
MAY , 1970	--	--	--	--	--	--	--	--	--	--
OCT , 1970	--	--	--	--	--	--	--	--	--	--
MAY , 1971	--	<100	--	<900	--	<250	--	<100	--	--
OCT , 1971	--	<150	--	<200	--	<250	--	630	--	--
OCT , 1972	--	<100	--	<200	--	<250	--	1700	--	--
OCT , 1973	--	<100	--	<200	--	<250	--	510	--	--
OCT , 1974	ND	--	ND	--	3	--	<20	280	--	<2
NOV , 1975	ND	--	ND	--	ND	--	ND	--	140	2
OCT , 1977	<2	--	ND	--	ND	--	ND	--	100	4
NOV , 1978	<2	--	ND	--	ND	--	2	--	160	6
NOV , 1979	<2	--	ND	--	ND	--	<2	--	70	<2
NOV , 1980	--	<10	--	--	--	10	--	--	--	--
OCT , 1980	2	--	1	--	1	--	0	--	90	0

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
DEC , 1969	--	--	--	--	--	--	--	--	--	--
FEB , 1970	--	--	--	--	--	--	--	--	--	--
MAY , 1970	--	--	--	--	--	--	--	--	4	.18
OCT , 1970	<50	<250	--	<250	--	<20	--	--	1	.02
MAY , 1971	<50	<250	--	<250	--	<20	--	--	6	.26
OCT , 1971	<50	<250	--	<250	--	<50	--	--	2	.06
OCT , 1972	<50	<250	--	<250	--	<20	--	--	4	.10
OCT , 1973	--	<10	--	--	ND	--	<20	--	--	--
OCT , 1974	--	--	50	--	4	--	<20	--	--	--
NOV , 1975	--	--	30	--	2	--	<20	--	--	--
OCT , 1977	--	--	30	--	<2	--	<20	.00	--	--
NOV , 1978	--	--	40	--	ND	--	ND	.00	--	--
NOV , 1979	--	--	--	--	--	10	--	--	--	--
NOV , 1980	--	--	20	--	0	--	0	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01472154 - FRENCH CREEK NEAR PUGHTOWN, PA

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) _d	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)	
DEC , 1969											
FEB , 1970	--	84215a/	37	125	7.0	5.0	--	3200	--	2600	
MAY , 1970	--	84215	42	70	7.6	5.0	--	2700	--	2400	
OCT , 1970	--	84215	42	55	7.7	16.0	--	10	--	<1	
MAY , 1971	--	84215	22	40	7.6	11.0	--	6600	--	180	
OCT , 1971	--	84215	61	120	7.3	13.0	--	6500	300	90	
OCT , 1972	--	84215	46	135	8.1	18.0	--	51000	580	920	
OCT , 1973	1200	84215	37	122	7.1	11.0	--	3100	700	1400	
OCT , 1974	1115	1028b/	--	153	6.4	17.5	11.8	9300	--	100	
NOV , 1975	0945	1028	--	150	7.3	6.0	10.1	--	--	--	
OCT , 1976	1230	1028	--	150	7.6	13.5	11.2	--	--	--	
OCT , 1977	1400	1028	--	140	7.3	8.0	11.9	--	--	--	
NOV , 1978	1500	80010g/	--	160	6.8	13.0	11.2	--	--	--	
NOV , 1979	1000	80010	--	200	7.2	9.5	9.0	--	--	--	
NOV , 1980	1000	80010	--	127	6.1	8.5	11.4	--	--	--	
NOV , 1980	1030	80010	--	155	7.1	5.0	11.8	--	--	--	
DATE		HARD- NESS (MG/L AS CaCO3)	HARD- NESS NONCAR- BONATE (MG/L AS CaCO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
DEC , 1969											
FEB , 1970	--	--	--	--	--	--	--	--	--	--	--
MAY , 1970	--	--	--	12	--	3.4	--	6.8	--	1.2	--
OCT , 1970	--	--	--	9.2	--	3.7	--	5.3	--	1.2	--
MAY , 1971	--	--	--	15	--	4.0	--	8.3	--	2.0	--
OCT , 1971	--	--	--	12	--	3.9	--	5.5	--	1.2	--
OCT , 1972	--	--	--	12	--	3.9	--	6.5	--	2.0	--
OCT , 1973	--	--	--	11	--	3.8	--	5.2	--	3.0	--
OCT , 1974	51	15	--	13	--	4.6	--	6.5	--	1.8	--
NOV , 1975	56	23	--	15	--	4.6	--	6.3	--	1.6	--
OCT , 1976	51	19	--	14	--	4.0	--	5.7	--	1.6	--
OCT , 1977	46	14	--	11	--	4.4	--	5.6	--	2.5	--
NOV , 1978	57	23	--	15	--	4.8	--	6.8	--	2.2	--
NOV , 1979	55	19	--	14	--	4.8	--	6.8	--	2.1	--
NOV , 1980	--	--	--	--	--	--	--	--	--	--	--
NOV , 1980	53	--	--	14	--	4.5	--	6.1	--	1.8	--

a/ Chester County Health Department Laboratory, Pennsylvania.

b/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

c/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.

d/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

TABLE 2.-- Water-quality data for surface-water sites--Continued
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25 Celsius;
 Deg C degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter;
 T/DAY, tons per day; dashes indicate no data.]

01472154 - FRENCH CREEK NEAR PUGHTOWN, PA--Continued

DATE	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
DEC , 1969	--	--	--	--	--	--	--	--	--	--
FEB , 1970	--	--	--	13	13	--	--	--	85	--
MAY , 1970	--	--	--	14	9.0	--	--	--	89	--
OCT , 1970	--	--	--	6.9	7.0	--	--	--	90	--
MAY , 1971	--	--	--	18	6.4	--	--	--	78	--
OCT , 1971	--	--	--	.6	6.6	--	--	--	98	--
OCT , 1972	--	--	--	14	9.7	--	--	--	111	--
OCT , 1973	44	0	36	12	8.3	.30	17	--	--	85
OCT , 1974	40	0	33	15	9.4	.10	16	99	--	88
NOV , 1975	40	0	33	13	8.6	.10	15	95	--	82
OCT , 1976	39	0	32	18	9.5	.10	16	94	--	87
OCT , 1977	42	0	34	17	9.1	<.10	17	109	--	93
NOV , 1978	44	0	36	15	9.6	.10	16	94	--	90
NOV , 1979	--	--	24	13	8.2	.10	45	--	--	--
NOV , 1980	--	--	--	16	9.2	.10	18	96	--	--
DATE	NITRO- GEN NITRATE TOTAL (MG/L AS N)	NITRO- GEN NITRITE TOTAL (MG/L AS N)	NITRO- GEN NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN AMMONIA TOTAL (MG/L AS N)	NITRO- GEN ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	
DEC , 1969	.20	--	--	--	--	--	--	--	<.010	
FEB , 1970	.32	--	--	--	--	--	--	--	--	
MAY , 1970	.27	--	--	--	--	--	--	--	.010	
OCT , 1970	.93	<.010	--	--	.02	--	--	.060	.030	
MAY , 1971	.50	.010	--	.570	.36	--	--	.050	.010	
OCT , 1971	1.3	<.010	--	.010	.58	--	--	.080	.010	
OCT , 1972	.33	<.010	--	.060	.25	--	--	.060	.010	
OCT , 1973	1.1	.001	1.1	.070	.36	.43	1.5	.020	.020	
OCT , 1974	1.2	--	--	.040	.36	.40	--	.020	.020	
NOV , 1975	1.6	--	--	.010	.53	.54	--	.020	.010	
OCT , 1976	.92	.010	.93	.090	.36	.45	1.4	.040	.010	
OCT , 1977	1.3	<.010	1.3	.030	.27	.30	1.6	.020	.010	
NOV , 1978	1.4	.010	1.4	.100	.45	.55	2.0	.010	.010	
NOV , 1979	--	--	1.5	.000	.12	.12	1.6	.110	--	
NOV , 1980	1.2	.000	1.2	.030	.23	.26	1.5	.020	.010	

01472154 - FRENCH CREEK NEAR PUGHTOWN, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
DEC , 1969	--	--	--	--	--	--	--	--	--	--
FEB , 1970	--	<100	--	<200	--	--	--	310	--	--
MAY , 1970	--	<100	--	<200	--	<250	--	<150	--	--
OCT , 1970	--	<100	--	<900	--	<250	--	<100	--	--
MAY , 1971	--	<150	--	<200	--	<250	--	310	--	--
OCT , 1971	--	<100	--	<200	--	<250	--	<150	--	--
OCT , 1972	--	<100	--	<200	--	<250	--	550	--	--
OCT , 1973	ND	--	ND	--	3	--	<20	160	--	<2
OCT , 1974	ND	--	ND	--	ND	--	<20	--	150	2
NOV , 1975	ND	--	ND	--	ND	--	ND	--	180	4
OCT , 1976	<2	--	<20	--	ND	--	<20	--	200	7
OCT , 1977	<2	--	ND	--	ND	--	2	--	200	ND
NOV , 1978	<2	--	ND	--	ND	--	<2	--	130	5
NOV , 1979	--	10	--	--	--	0	--	--	--	--
NOV , 1980	2	--	.00	--	0	--	1	--	110	0
06...										
DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
DEC , 1969	--	--	--	--	--	--	--	--	--	--
FEB , 1970	--	--	--	--	--	--	--	--	--	--
MAY , 1970	<100	<250	--	<250	--	--	--	--	5	.69
OCT , 1970	<50	--	--	<250	--	<20	--	--	1	.06
MAY , 1971	<50	<250	--	<250	--	<20	--	--	5	.82
OCT , 1971	<50	<250	--	<250	--	<50	--	--	4	.49
OCT , 1972	<50	<250	--	<250	--	<20	--	--	5	.50
OCT , 1973	--	<10	--	--	ND	--	<20	--	--	--
OCT , 1974	--	--	40	--	4	--	<20	--	--	--
NOV , 1975	--	--	20	--	<2	--	20	--	--	--
OCT , 1976	--	--	40	--	4	--	<20	--	--	--
OCT , 1977	--	--	40	--	<2	--	ND	.00	--	--
NOV , 1978	--	--	40	--	<2	--	<20	.60	--	--
NOV , 1979	--	--	--	--	--	10	--	--	--	--
NOV , 1980	--	--	30	--	1	--	0	.00	--	--
06...										

TABLE 2.-- Water-quality data for surface-water sites--Continued
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius;
 Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter;
 T/DAY, tons per day; dashes indicate no data.]

01472157 - FRENCH CREEK NEAR PHOENIXVILLE, PA ^{a/}

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	STREAM- FLOW, MEAN DAILY (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) ^{a/}	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCEI FECAL, (COLS. PER 100 ML)
SEP , 1969											
04...	1510	--	--	54	134	7.4	21.0	--	--	--	--
OCT...											
08...	0900	--	--	22	136	7.6	15.0	--	--	--	--
NOV...											
19...	1300	--	--	18	90	6.4	8.0	--	--	--	--
DEC...											
10...	--	84215 ^{b/}	50	106	130	7.0	5.0	--	15	--	<1
17...	1310	--	--	37	146	7.1	8.0	--	--	--	--
JAN , 1970											
21...	1205	--	--	25	126	7.7	.5	--	--	--	--
FEB...											
24...	--	84215	64	76	80	7.8	5.0	--	<1	--	<1
26...	1250	--	--	67	127	7.3	5.0	--	--	--	--
APR...											
03...	1240	--	--	436	134	7.4	8.0	--	--	--	--
MAY...											
06...	1525	--	--	93	109	7.1	22.0	--	--	--	--
21...	--	84215	50	60	80	7.4	20.0	--	>30000	--	<1
JUL...											
14...	1620	--	--	30	135	7.7	22.0	--	--	--	--
AUG...											
27...	1245	--	--	25	130	7.7	22.0	--	--	--	--
SEP...											
24...	0945	--	--	14	139	7.8	22.0	--	--	--	--
OCT...											
05...	--	84215	30	15	--	--	--	--	>30000	--	--
28...	1405	--	--	23	149	7.8	11.0	--	--	--	--
DEC...											
02...	0945	--	--	45	136	7.8	7.0	--	--	--	--
JAN , 1971											
07...	1600	--	--	117	126	7.4	.0	--	--	--	--
FEB...											
09...	1230	--	--	361	104	6.5	1.0	--	--	--	--
MAR...											
18...	1130	--	--	89	113	7.2	8.0	--	--	--	--
APR...											
15...	1300	--	--	72	119	7.5	14.0	--	--	--	--
MAY...											
10...	--	84215	76	91	175	7.2	16.0	--	8000	200	98
27...	1215	--	--	58	105	7.2	--	--	--	--	--
JUL...											
01...	1210	--	--	34	120	7.5	24.0	--	--	--	--
AUG...											
10...	1630	--	--	27	138	7.4	25.0	--	--	--	--

^{a/} Additional data are available from 1950 to 1969.
^{b/} Chester County Health Department Laboratory, Pennsylvania.
^{c/} U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.
^{d/} U.S. Geological Survey Central Laboratory Atlanta, Georgia.
^{e/} Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

01472157 - FRENCH CREEK NEAR PHOENIXVILLE, PA--Continued

DATE	TIME	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	STREAM- FLOW MEAN DAILY (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN DIS- SOLVE (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCOCCI FECAL, (COLS. PER 100 ML)
SEP ., 1971	0900	--	--	68	140	7.4	15.0	--	--	--	--
OCT 24...	--	84215	57	60	130	8.0	18.0	--	6600	330	330
OCT 04...	1340	--	--	84	132	7.6	12.0	--	--	--	--
MAR ., 1972	1035	--	--	545	90	6.7	8.0	--	--	--	--
OCT 02...	1310	--	--	261	125	7.5	11.0	--	--	--	--
MAY 09...	1330	84215	46	50	125	7.3	11.5	--	1900	740	1100
OCT 30...	1145	--	--	162	--	6.7	--	--	--	--	--
MAR ., 1973	1400	--	--	42	410	6.9	27.0	5.5	--	--	--
OCT 08...	1000	--	--	31	130	7.3	--	--	--	--	--
AUG 13...	0945	1028g/	--	33	150	7.1	16.5	12.4	7700	--	150
SEP 20...	1015	1028	--	24	70	7.3	6.5	11.5	--	--	--
OCT 04...	1015	--	45	44	110	--	15.0	--	--	--	--
NOV 15...	1330	1028	54	54	150	8.4	15.0	11.8	--	--	--
OCT 04...	0900	--	150	73	140	--	.0	--	--	--	--
JAN 22...	1300	--	120	128	110	--	7.0	--	--	--	--
FEB 18...	1000	--	80	80	110	--	10.0	--	--	--	--
MAR 29...	0830	--	56	56	130	--	18.0	--	--	--	--
MAY 17...	0920	--	61	50	150	--	22.0	--	--	--	--
JUN 17...	1015	--	25	32	150	--	--	--	--	--	--
JUL 29...	1100	--	24	27	170	--	19.0	--	--	--	--
AUG 19...	1445	1028	71	77	140	7.2	8.0	12.0	--	--	--
OCT 27...	1600	80010d/	32	34	160	7.4	13.5	11.0	--	--	--
OCT 21...	1030	80010	36	36	200	7.2	9.0	12.2	--	--	--
OCT 31...	1400	80010	--	83	140	7.0	.0	--	--	--	--
DEC 28...	1030	80010	75	75	129	6.6	9.0	11.4	--	--	--
NOV 09...	0900	80010	20	20	180	6.7	5.0	12.8	--	--	--
NOV 06...											

TABLE 2.-- Water-quality data for surface-water sites--Continued

[Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01472157 - FRENCH CREEK NEAR PHOENIXVILLE, PA--Continued

DATE	HARD- NESS (MG/L AS CaCO ₃)	HARD- NESS NONCAR- BONATE (MG/L CaCO ₃)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS Ca)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS Mg)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS Na)	SODIUM, DIS- SOLVED (MG/L AS Na)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
SEP , 1969										
OCT 04...	54	21	--	15	--	3.9	--	--	--	--
NOV 08...	48	8	--	13	--	3.8	--	5.4	--	2.6
DEC 19...	41	14	--	11	--	3.2	--	3.5	--	1.1
JAN 10...	--	--	--	--	--	--	--	--	--	--
JAN 17...	52	22	--	14	--	4.2	--	--	--	--
JAN 21...	44	19	--	12	--	3.5	--	--	--	--
FEB 24...	--	--	13	--	3.2	--	6.9	--	1.8	--
FEB 26...	43	20	--	11	--	3.8	--	4.8	--	1.3
APR 03...	39	28	--	9.0	--	4.0	--	3.4	--	1.8
MAY 06...	40	11	--	10	--	3.6	--	5.0	--	1.4
MAY 21...	--	--	11	--	3.4	--	6.4	--	1.6	--
JUL 14...	51	17	--	13	--	4.5	--	5.0	--	1.7
AUG 27...	43	7	--	12	--	3.2	--	6.0	--	2.0
SEP 24...	51	9	--	13	--	4.6	--	5.6	--	2.0
OCT 05...	--	--	11	--	2.5	--	3.6	--	1.3	--
OCT 28...	53	15	--	14	--	4.5	--	6.0	--	2.1
DEC 02...	49	20	--	13	--	4.1	--	5.4	--	1.4
JAN 07...	39	22	--	10	--	3.5	--	5.6	--	1.3
FEB 09...	29	18	--	7.5	--	2.5	--	5.2	--	3.8
MAR 18...	37	18	--	8.6	--	3.8	--	--	--	--
APR 15...	41	16	--	10	--	3.9	--	--	--	--
MAY 10...	--	--	10	--	3.9	--	6.1	--	1.3	--
MAY 27...	40	13	--	10	--	3.6	--	5.1	--	1.2
JUL 01...	39	6	--	10	--	3.5	--	--	--	--
AUG 10...	48	11	--	12	--	4.3	--	8.7	--	1.8
SEP 24...	48	17	--	12	--	4.3	--	5.6	--	1.7
OCT 04...	--	--	11	--	3.5	--	5.9	--	1.7	--

01472157 - FRENCH CREEK NEAR PHOENIXVILLE, PA--Continued

DATE	HARD- NESS (MG/L AS CaCO3)	HARD- NESS NONCAR- BONATE (MG/L CaCO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS Ca)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS Mg)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS Na)	SODIUM, DIS- SOLVED (MG/L AS Na)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT 13, 1971		42	16	--	10	--	4.1	--	5.0	-- 1.7
MAR 02, 1972		32	15	--	8.5	--	2.5	--	--	--
MAY 09, 1972		40	15	--	10	--	3.7	--	5.2	-- 1.1
OCT 30, 1972		--	--	11	--	3.8	--	5.0	--	3.1 --
MAR 08, 1973		--	--	--	--	--	--	--	--	--
AUG 13, 1973		130	0	--	4.8	--	28	--	--	--
SEP 20, 1973		37	0	--	14	--	20	--	--	--
OCT 04, 1974		48	13	--	12	--	4.5	--	6.0	-- 1.8
OCT 25, 1974		63	27	--	17	--	4.9	--	6.5	-- 1.7
OCT 15, 1975		65	23	--	12	--	8.5	--	--	--
NOV 04, 1976		51	21	--	14	--	4.0	--	5.6	-- 1.6
JAN 22, 1976		57	27	--	11	--	7.0	--	--	--
FEB 19, 1976		53	25	--	9.6	--	7.0	--	--	--
MAR 29, 1976		30	0	--	10	--	1.0	--	--	--
MAY 17, 1976		59	0	--	12	--	7.0	--	--	--
JUN 17, 1976		55	17	--	12	--	6.0	--	--	--
JUL 29, 1976		57	17	--	13	--	6.0	--	--	--
AUG 19, 1976		54	11	--	14	--	4.5	--	--	--
OCT 27, 1977		45	11	--	11	--	4.3	--	5.7	-- 2.5
OCT 21, 1978		54	24	--	14	--	4.6	--	6.6	-- 2.1
OCT 31, 1978		56	21	--	15	--	4.6	--	6.5	-- 2.1
DEC 28, 1978		--	--	--	--	--	--	--	--	--
NOV 09, 1979		--	--	--	--	--	--	--	--	--
NOV 06, 1980		53	--	--	14	--	4.4	--	6.1	-- 1.8

TABLE 2.-- Water-quality data for surface-water sites--Continued
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius;
 Deg C, degrees Celsius; mg/L, milligrams per liter; CCLS, colonies per 100 mL; colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

G1472157 - FRENCH CREEK NEAR PHOENIXVILLE, PA--Continued

DATE	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 103 DEG. C DIS- SOLVED (MG/L)
SEP , 1969									
04...	40	--	33	14	9.5	--	18	--	--
OCT									
08...	49	0	40	12	6.8	.20	15	89	--
NOV									
19...	33	0	27	11	5.6	.10	13	87	--
DEC									
10...	--	--	--	7.1	9.5	--	--	--	--
17...	36	0	30	22	14	--	--	--	--
JAN , 1970									
21...	31	--	25	18	7.8	--	--	--	--
FEB									
24...	--	--	--	13	11	--	--	--	118
26...	28	--	23	17	8.5	.00	15	96	--
APR									
03...	14	0	11	24	6.1	.10	9.8	84	--
MAY									
06...	35	0	29	13	6.5	.00	13	80	--
21...	--	--	--	16	3.2	--	--	--	120
JUL									
14...	42	0	34	11	7.4	.30	18	103	--
AUG									
27...	44	0	36	11	6.6	.10	16	104	--
SEP									
24...	51	0	42	11	7.3	.00	17	105	--
OCT									
05...	--	--	--	5.8	8.0	--	--	--	90
28...	47	--	39	16	7.9	.30	20	106	--
DEC									
02...	35	0	29	16	7.7	.40	15	85	--
JAN , 1971									
07...	21	--	17	20	8.1	.30	14	101	--
FEB									
09...	13	0	11	16	9.0	.20	6.5	76	--
MAR									
18...	23	0	19	18	8.4	--	--	--	--
APR									
15...	31	0	25	17	7.0	--	--	--	--
MAY									
10...	--	--	--	39	5.5	--	--	--	81
27...	33	0	27	13	7.4	.00	15	89	--
JUL									
01...	40	0	33	11	5.6	--	--	--	--
AUG									
10...	45	0	37	13	8.3	.00	17	89	--
SEP									
24...	38	0	31	14	8.0	.10	19	95	--
OCT									
04...	--	--	--	13	6.6	--	--	--	85

01472157 - FRENCH CREEK NEAR PHOENIXVILLE, PA--Continued

DATE	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LINEITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS RESIDUE AT 180 DEG C DIS- SOLVED (MG/L)	SOLIDS RESIDUE AT 105 DEG C, DIS- SOLVED (MG/L)
OCT , 1971									
13...	32	0	26	16	7.6	.30	15	93	--
MAR , 1972									
02...	21	0	17	16	9.0	--	--	--	--
MAY									
09...	31	0	25	14	6.4	.20	13	112	--
OCT , 1972									
30...	--	--	--	16	11	--	--	--	102
MAR , 1973									
08...	--	--	140	--	55	--	--	--	--
AUG									
13...	--	--	157	39	34	--	--	--	--
SEP									
20...	--	--	39	18	5.0	--	--	--	--
OCT									
04...	44	0	36	12	7.5	.30	16	--	--
OCT , 1974									
25...	44	0	36	13	9.5	.20	16	99	--
OCT , 1975									
15...	--	--	42	18	9.0	--	--	--	124
NOV									
04...	38	0	31	13	8.2	.10	15	80	--
JAN , 1976									
22...	--	--	30	22	20	--	--	--	90
FEB									
19...	--	--	28	14	14	--	--	--	92
MAR									
29...	--	--	32	16	9.0	--	--	--	90
MAY									
17...	--	--	170	12	8.0	--	--	--	180
JUN									
17...	--	--	38	140	8.0	--	--	--	106
JUL									
29...	--	--	40	10	12	--	--	--	96
AUG									
19...	--	--	44	12	12	--	--	--	124
OCT									
27...	41	0	34	19	9.2	.10	16	93	--
OCT , 1977									
21...	37	0	30	17	8.8	.10	17	108	--
OCT , 1978									
31...	43	0	35	14	8.8	.10	16	90	--
DEC									
28...	--	--	--	--	--	--	--	--	--
NOV , 1979									
09...	--	--	31	13	8.1	.10	16	--	--
NOV , 1980									
06...	--	--	--	15	11	.10	17	100	--

TABLE 2.-- Water-quality data for surface-water sites--Continued
 (Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.)

01472157 - FRENCH CREEK NEAR PHOENIXVILLE, PA--Continued

DATE	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)
SEP , 1969										
04...	--	--	--	--	--	--	--	--	--	--
OCT										
08...	83	--	--	--	--	--	--	--	--	--
NOV										
19...	65	--	--	--	--	--	--	--	--	--
DEC										
10...	--	.20	--	--	--	--	--	--	--	.030
17...	--	--	--	--	--	--	--	--	--	--
JAN , 1970										
21...	--	--	--	--	--	--	--	--	--	--
FEB										
24...	--	.40	--	--	--	--	--	--	--	--
26...	75	--	--	--	--	--	--	--	--	--
APR										
03...	65	--	--	--	--	--	--	--	--	--
MAY										
06...	70	--	--	--	--	--	--	--	--	--
21...	--	1.3	--	--	--	--	--	--	--	.050
JUL										
14...	82	--	--	--	--	--	--	--	--	--
AUG										
27...	79	--	--	--	--	--	--	--	--	--
SEP										
24...	86	--	--	--	--	--	--	--	--	--
OCT										
05...	--	1.0	<.010	--	<.010	<.01	--	--	<.010	.010
08...	94	--	--	--	--	--	--	--	--	--
DEC										
02...	82	--	--	--	--	--	--	--	--	--
JAN , 1971										
07...	73	--	--	--	--	--	--	--	--	--
FEB										
09...	57	--	--	--	--	--	--	--	--	--
MAR										
18...	--	--	--	--	--	--	--	--	--	--
APR										
15...	--	--	--	--	--	--	--	--	--	--
MAY										
10...	--	1.3	.010	--	.210	.26	--	--	.030	.020
27...	72	--	--	--	--	--	--	--	--	--
JUL										
01...	--	--	--	--	--	--	--	--	--	--
AUG										
10...	87	--	--	--	--	--	--	--	--	--
SEP										
24...	83	--	--	--	--	--	--	--	--	--
OCT										
04...	--	1.1	<.010	--	.020	.32	--	--	.050	.040

01472157 - FRENCH CREEK NEAR PHOENIXVILLE, PA--Continued

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)	NITRO- GEN NITRATE TOTAL (MG/L AS N)	NITRO- GEN NITRITE TOTAL (MG/L AS N)	NITRO- GEN NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN AMMONIA TOTAL (MG/L AS N)	NITRO- GEN ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)
OCT 13, 1971	79	--	--	--	--	--	--	--	--	.020
MAR 02, 1972	--	--	--	--	--	--	--	--	--	.032
MAY 09, 1972	71	--	--	--	--	--	--	--	--	.014
OCT 30, 1972	--	.34	<.010	--	.010	.40	--	--	.060	.010
MAR 08, 1973	--	2.6	.060	--	<.010	--	--	--	.900	--
AUG 19, 1973	--	2.9	.024	--	.070	--	--	--	.110	--
SEP 20, 1973	--	3.4	.018	--	.050	--	--	--	.060	--
OCT 04, 1974	82	1.1	.003	1.1	.070	.63	.70	1.8	.010	.010
OCT 25, 1975	91	1.3	--	--	.020	.38	.40	--	.020	.010
OCT 15, 1975	--	1.6	.024	--	.020	--	--	--	.050	--
NOV 04, 1976	80	1.5	--	--	.010	.59	.60	--	.020	.010
JAN 22, 1976	--	2.8	.112	--	.030	--	--	--	.060	--
FEB 19, 1976	--	2.0	.048	--	.150	--	--	--	.180	--
MAR 29, 1976	--	1.9	.034	--	.030	--	--	--	.090	--
MAY 17, 1976	--	1.8	.050	--	.110	--	--	--	.130	--
JUN 17, 1976	--	1.6	.040	--	.090	--	--	--	.120	--
JUL 29, 1976	--	1.4	.038	--	.040	--	--	--	.020	--
AUG 19, 1976	--	1.3	.028	--	.050	--	--	--	.050	--
OCT 27, 1977	88	.91	.010	.92	.090	.36	.45	1.4	.040	.010
OCT 21, 1977	89	1.3	<.010	1.3	.020	.28	.30	1.6	.020	.010
OCT 31, 1978	88	1.2	.010	1.2	.020	.17	.19	1.4	.010	.010
DEC 28, 1978	--	--	--	--	--	--	--	--	--	--
NOV 09, 1979	--	--	--	1.6	.000	.22	.22	1.8	.170	--
NOV 06, 1980	--	1.2	.000	1.2	.040	.15	.19	1.4	.020	.010

TABLE 2.-- Water-quality data for surface-water sites--Continued
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01472157 - FRENCH CREEK NEAR PHOENIXVILLE, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL, RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL, RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL, RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL, RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
SEP , 1969										
04...	--	--	--	--	--	--	--	--	--	--
OCT										
08...	--	--	--	--	--	--	--	--	--	--
NOV										
19...	--	--	--	--	--	--	--	--	--	--
DEC										
10...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
JAN , 1970										
21...	--	--	--	--	--	--	--	--	--	--
FEB										
24...	--	<100	--	<200	--	--	--	410	--	--
28...	--	--	--	--	--	--	--	--	--	--
APR										
03...	--	--	--	--	--	--	--	--	--	--
MAY										
06...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
JUL										
14...	--	--	--	--	--	--	--	--	--	--
AUG										
27...	--	--	--	--	--	--	--	--	--	--
SEP										
24...	--	--	--	--	--	--	--	--	--	--
OCT										
05...	--	<100	--	<900	--	<250	--	<100	--	--
28...	--	--	--	--	--	--	--	--	--	--
DEC										
02...	--	--	--	--	--	--	--	--	--	--
JAN , 1971										
07...	--	--	--	--	--	--	--	--	--	--
FEB										
09...	--	--	--	--	--	--	--	--	--	--
MAR										
18...	--	--	--	--	--	--	--	--	--	--
APR										
15...	--	--	--	--	--	--	--	--	--	--
MAY										
10...	--	<150	--	<200	--	<250	--	<330	--	--
27...	--	--	--	--	--	--	--	--	--	--
JUL										
01...	--	--	--	--	--	--	--	--	--	--
AUG										
10...	--	--	--	--	--	--	--	--	--	--
SEP										
24...	--	--	--	--	--	--	--	--	--	--
OCT										
04...	--	<100	--	<200	--	<250	--	<150	--	--

01472157 - FRENCH CREEK NEAR PHOENIXVILLE, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRC- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
OCT , 1971	--	--	--	--	--	--	--	--	--	--
MAR , 1972	--	--	--	--	--	--	--	--	--	--
MAY , 1972	--	--	--	--	--	--	--	--	--	--
OCT , 1972	--	--	--	--	--	--	--	--	--	--
MAR , 1973	--	<100	--	<200	--	<250	--	430	--	--
AUG , 1973	--	--	--	--	--	--	--	7700	--	--
SEP , 1973	--	--	--	--	--	--	--	120	--	--
OCT , 1973	--	--	--	--	--	--	--	260	--	--
OCT , 1974	ND	--	ND	--	ND	--	ND	110	--	<2
OCT , 1975	ND	--	ND	--	ND	--	ND	--	100	2
NOV , 1975	--	--	--	--	--	--	--	180	--	--
JAN , 1976	3	--	ND	--	ND	--	ND	--	120	13
FEB , 1976	--	--	--	--	--	--	--	350	--	--
MAR , 1976	--	--	--	--	--	--	--	1100	--	--
MAY , 1976	--	--	--	--	--	--	--	20	--	--
JUN , 1976	--	--	--	--	--	--	--	450	--	--
JUL , 1976	--	--	--	--	--	--	--	1300	--	--
AUG , 1976	--	--	--	--	--	--	--	150	--	--
OCT , 1976	--	--	--	--	--	--	--	170	--	--
OCT , 1977	<2	--	<20	--	ND	--	ND	--	220	7
OCT , 1978	11	--	ND	--	ND	--	2	--	170	160
DEC , 1978	ND	--	ND	--	ND	--	<2	--	110	2
NOV , 1979	--	--	--	--	--	--	--	--	--	--
NOV , 1980	--	20	--	--	--	0	--	--	--	--
OCT , 1980	2	--	1	--	1	--	1	--	100	0

TABLE 2.-- Water-quality data for surface-water sites--Continued
[Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01472157 - FRENCH CREEK NEAR PHOENIXVILLE, PA--Continued

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
SEP , 1969										
04...	--	--	--	--	--	--	--	--	--	--
OCT...	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--
NOV...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
DEC...	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
JAN , 1970										
21...	--	--	--	--	--	--	--	--	--	--
FEB...	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
APR...	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--
MAY...	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	12	1.6
JUL...	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--
AUG...	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--
SEP...	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--
OCT...	--	--	--	--	--	--	--	--	--	--
05...	<50	<250	--	<250	--	<20	--	--	1	.08
28...	--	--	--	--	--	--	--	--	--	--
DEC...	--	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--	--
JAN , 1971										
07...	--	--	--	--	--	--	--	--	--	--
FEB...	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
MAR...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
APR...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
MAY...	--	--	--	--	--	--	--	--	--	--
10...	<50	<250	--	<250	--	<20	--	--	18	3.7
27...	--	--	--	--	--	--	--	--	--	--
JUL...	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--
AUG...	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--
SEP...	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--
OCT...	--	--	--	--	--	--	--	--	--	--
04...	<50	<250	--	<250	--	<50	--	--	2	.31

01472157 - FRENCH CREEK NEAR PHOENIXVILLE, PA--Continued

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE- TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE- DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
OCT , 1971										
MAR 13 , 1972	--	--	--	--	--	--	--	--	--	--
MAY 02 , 1972	--	--	--	--	--	--	--	--	--	--
MAY 09 , 1972	--	--	--	--	--	--	--	--	--	--
OCT 30 , 1972	--	--	--	--	--	--	--	--	--	--
MAR 08 , 1973	<50	<250	--	<250	--	<20	--	--	5	.62
AUG 13 , 1973	--	--	--	--	--	--	--	.15	--	--
SEP 20 , 1973	--	--	--	--	--	--	--	--	--	--
OCT 04 , 1974	--	<10	--	--	ND	--	<20	--	--	--
OCT 25 , 1974	--	--	20	--	3	--	<20	--	--	--
OCT 15 , 1975	--	--	--	--	--	--	--	--	--	--
NOV 04 , 1975	--	--	<10	--	<2	--	<20	--	--	--
JAN 22 , 1976	--	--	--	--	--	--	--	--	--	--
FEB 19 , 1976	--	--	--	--	--	--	--	.00	--	--
MAR 29 , 1976	--	--	--	--	--	--	--	--	--	--
MAY 17 , 1976	--	--	--	--	--	--	--	--	--	--
JUN 17 , 1976	--	--	--	--	--	--	--	--	--	--
JUL 29 , 1976	--	30	--	--	--	--	--	.00	--	--
AUG 19 , 1976	--	--	--	--	--	--	--	.00	--	--
OCT 27 , 1977	--	--	20	--	8	--	<20	--	--	--
OCT 21 , 1978	--	--	20	--	<2	--	<20	.00	--	--
OCT 31 , 1978	--	--	<10	--	4	--	ND	.00	--	--
DEC 28 , 1978	--	--	--	--	--	--	--	--	--	--
NOV 09 , 1979	--	--	--	--	--	10	--	--	--	--
NOV 06 , 1980	--	--	20	--	0	--	2	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued
 (Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.)

014721612 - FRENCH CREEK AT RAILROAD BRIDGE AT PHOENIXVILLE, PA

DATE	TIME	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAM- FLOW- INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) _d	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
MAY , 1970	--	84215 ^a /	--	--	--	--	--	<1	--	<1
OCT 21...	--	84215	38	--	--	--	--	30000	--	110
MAY , 1971	--	84215	91	170	7.3	15.0	--	9500	900	80
OCT 11...	--	84215	68	195	8.0	19.0	--	54000	2900	480
OCT 04...	--	84215	55	215	7.8	14.0	--	1300	12	25
OCT 24... 1972	0945	84215	--	320	7.4	21.0	10.2	27000	--	87
OCT 04... 1973	0835	1028 ^b /	--	245	7.4	14.5	10.4	--	--	--
OCT 23... 1974	1100	1028	--	240	7.6	15.5	10.4	--	--	--
NOV 07... 1975	0915	1028	--	180	7.2	11.0	11.8	--	--	--
OCT 22... 1976	1130	1028	--	245	7.1	12.5	11.6	--	--	--
OCT 19... 1977	1330	1028	--	490	7.4	14.0	12.0	--	--	--
OCT 31... 1978	0945	80010 ^c /	--	167	6.8	7.5	10.4	--	--	--
NOV 14... 1979	1130	80010	--	405	7.7	9.0	11.6	--	--	--
NOV 10... 1980	1400	80010	--							

DATE	HARD- NESS (MG/L AS CaCO ₃)	HARD- NESS, NONCAR- BONATE (MG/L AS CaCO ₃)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS Ca)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, TOTAL/ RECOV- ERABLE (MG/L AS Mg)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS Na)	SODIUM, DIS- SOLVED (MG/L AS Na)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
MAY , 1970	--	--	--	--	--	--	--	--	--	--
OCT 21...	--	--	22	--	8.9	--	27	--	3.2	--
MAY , 1971	--	--	14	--	5.1	--	9.9	--	1.8	--
OCT 11...	--	--	18	--	5.6	--	12	--	2.5	--
OCT 04... 1972	--	--	22	--	6.5	--	17	--	2.4	--
OCT 24... 1973	97	45	--	24	--	9.0	--	14	--	2.9
OCT 04... 1974	130	65	--	35	--	11	--	28	--	3.4
NOV 07... 1975	88	38	--	23	--	7.4	--	9.7	--	2.0
OCT 22... 1976	57	27	--	14	--	5.3	--	6.7	--	3.8
OCT 19... 1977	94	58	--	25	--	7.7	--	9.6	--	2.8
OCT 31... 1978	130	69	--	34	--	10	--	18	--	3.3
NOV 14... 1979	--	--	--	--	--	--	--	--	--	--
NOV 10... 1980	110	--	--	30	--	8.7	--	16	--	2.9

^a/ Chester County Health Department Laboratory, Pennsylvania.

^b/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

^c/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.

^d/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

TABLE 2.-- Water-quality data for surface-water sites--Continued
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius;
 Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

014721612 -- FRENCH CREEK AT RAILROAD BRIDGE AT PHOENIXVILLE, PA--Continued

DATE	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG C, DIS- SOLVED (MG/L)
MAY , 1970									
21...	--	--	--	16	7.4	--	--	--	--
OCT 05...	--	--	--	52	30	--	--	--	122
MAY , 1971									
11...	--	--	--	26	8.2	--	--	--	105
OCT 04...	--	--	--	24	13	--	--	--	136
OCT , 1972	--	--	--	36	18	--	--	--	152
OCT , 1973	64	--	52	46	16	.30	11	--	--
OCT , 1974	83	--	68	70	37	.20	12	259	--
NOV , 1975	61	--	50	34	13	.20	11	149	--
OCT , 1976	37	--	30	27	12	.20	13	118	--
OCT , 1977	44	--	36	42	13	.40	9.6	155	--
OCT , 1978	70	--	57	54	24	.50	13	198	--
NOV , 1979	--	--	32	19	11	.10	16	--	--
NOV , 1980	--	--	--	42	22	.80	14	187	--
10...									

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	NITRO- GEN NITRATE TOTAL (MG/L AS N)	NITRO- GEN NITRITE TOTAL (MG/L AS N)	NITRO- GEN NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN AMMONIA TOTAL (MG/L AS N)	NITRO- GEN ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)
MAY , 1970										
21...	--	1.6	.050	--	--	--	--	--	--	.030
OCT 05...	--	1.7	.060	--	<.000	.04	--	--	1.50	.150
MAY , 1971										
11...	--	.97	.000	--	.490	<.00	--	--	.080	.020
OCT 04...	--	1.5	<.000	--	.620	.24	--	--	.080	.030
OCT , 1972	--	.98	.000	--	.360	.15	--	--	.070	.040
OCT , 1973	155	1.6	.000	1.6	.100	.45	.55	2.2	.100	.090
OCT , 1974	240	2.2	--	--	.210	.60	.81	--	.190	.130
NOV , 1975	130	2.1	--	--	<.000	.73	.73	--	.080	.040
OCT , 1976	100	.46	.000	.46	.090	.26	.35	.81	.080	.030
OCT , 1977	130	2.0	.020	2.0	.160	.47	.63	2.6	.080	.040
OCT , 1978	190	1.7	.060	1.8	.040	.28	.32	2.1	.080	.070
NOV , 1979	--	--	--	1.7	--	.53	.53	2.2	.030	--
NOV , 1980	--	1.5	.030	1.5	.080	.18	.26	1.8	.080	.070
10...										

014721612 - FRENCH CREEK AT RAILROAD BRIDGE AT PHOENIXVILLE, PA--Continued

DATE	CADMIUM, DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL, RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL, RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL, RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL, RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
MAY , 1970	--	--	--	--	--	--	--	--	--	--
OCT 21...	--	--	--	--	--	--	--	--	--	--
MAY 05...	--	<100	--	<900	--	<250	--	<100	--	--
MAY 11...	--	<150	--	<200	--	<250	--	250	--	--
OCT 04...	--	<100	--	<200	--	<250	--	<150	--	--
OCT 24...	--	<100	--	<200	--	<250	--	310	--	--
OCT 25...	--	--	--	--	--	--	--	--	120	7
OCT 25...	3	--	<20	--	--	--	<20	--	80	3
NOV 07...	<2	--	--	--	--	--	--	--	110	12
OCT 22...	2	--	<20	--	--	--	<20	--	270	21
OCT 19...	--	--	2	--	--	--	3	--	100	10
OCT 31...	<2	--	3	--	--	--	3	--	140	110
NOV 14...	--	20	--	--	--	--	--	--	--	--
NOV 10...	8	--	2	--	1	--	6	--	350	180

DATE	LITHIUM, TOTAL, RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL, RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL, RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL, RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDEDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (T/DAY)
MAY , 1970	--	--	--	--	--	--	--	--	--	--
OCT 21...	--	--	--	--	--	--	--	--	--	--
MAY 05...	<50	<250	--	<250	--	<20	--	--	8	.83
MAY 11...	<50	<250	--	<250	--	<20	--	--	9	2.2
OCT 04...	<50	<250	--	<250	--	<50	--	--	3	.55
OCT 24...	<50	<250	--	<250	--	<20	--	--	--	--
OCT 04...	--	--	140	--	8	--	20	--	--	--
OCT 25...	--	--	120	--	14	--	30	--	--	--
NOV 07...	--	--	80	--	5	--	<20	--	--	--
OCT 22...	--	--	210	--	6	--	120	--	--	--
OCT 19...	--	--	230	--	8	--	<20	.30	--	--
OCT 31...	--	--	70	--	3	--	100	.10	--	--
NOV 14...	--	--	--	--	--	20	--	--	--	--
NOV 10...	--	--	80	--	3	--	450	--	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued
 (Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.)

01472170 - PICKERING CREEK NEAR EAGLE, PA a/

DATE	TIME	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) _{e/}	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0-45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)	
OCT 22, 1969	--	84215 ^{b/}	3.0	150	6.9	11.0	--	16	--	<1	
FEB 18, 1970	--	84215	4.7	150	7.6	3.0	--	<1	--	<1	
MAY 04, 1971	--	84215	2.4	111	7.8	12.0	--	190	--	24	
SEP 28, 1971	--	84215	1.5	100	8.0	13.0	--	32000	--	2700	
MAY 03, 1971	--	84215	2.3	165	7.9	10.0	--	1000	630	90	
SEP 27, 1971	--	84215	1.6	150	7.4	14.0	--	28000	720	1800	
OCT 03, 1972	0735	84215	2.4	161	6.9	9.5	--	11700	1200	720	
OCT 02, 1973	0815	1028 ^{c/}	--	200	7.6	14.5	12.0	43300	1600	1200	
OCT 23, 1974	1450	1028	--	135	7.7	10.5	10.6	--	--	--	
NOV 03, 1975	0845	1028	--	190	7.4	11.0	11.9	--	--	--	
OCT 21, 1976	0845	1028	--	190	7.1	10.0	11.2	--	--	--	
OCT 19, 1977	0930	80010 ^{d/}	--	205	7.2	10.5	10.8	--	--	--	
OCT 30, 1978	1400	80010	--	270	7.5	10.0	13.0	--	--	--	
NOV 01, 1979	1415	80010	--	220	7.8	13.0	11.8	--	--	--	
OCT 30, 1980	1250	80010	--	245	6.9	11.5	11.7	--	--	--	
DATE		HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT 22, 1969	--	--	--	--	--	--	--	--	--	--	--
FEB 18, 1970	--	--	--	--	--	--	--	--	--	--	--
MAY 04, 1971	--	--	--	13	--	4.8	--	7.5	--	1.5	--
SEP 28, 1971	--	--	--	18	--	5.3	--	8.1	--	3.5	--
MAY 03, 1971	--	--	--	17	--	5.1	--	6.5	--	1.3	--
SEP 27, 1971	--	--	--	15	--	4.8	--	7.7	--	2.5	--
OCT 03, 1972	--	--	--	19	--	5.2	--	5.5	--	1.5	--
OCT 02, 1973	67	33	--	17	--	5.9	--	6.5	--	2.0	--
OCT 23, 1974	64	26	--	16	--	5.8	--	6.0	--	2.0	--
NOV 03, 1975	74	34	--	21	--	5.2	--	6.0	--	2.0	--
OCT 21, 1976	56	26	--	14	--	5.2	--	5.7	--	4.7	--
OCT 19, 1977	73	27	--	19	--	6.1	--	7.9	--	2.6	--
OCT 30, 1978	79	37	--	21	--	6.5	--	7.5	--	2.4	--
NOV 01, 1979	--	--	--	--	--	--	--	--	--	--	--
OCT 30, 1980	72	--	--	19	--	5.9	--	6.8	--	2.0	--

^{a/} Additional data are available for 1965.

^{b/} Chester County Health Department Laboratory, Pennsylvania.

^{c/} U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

^{d/} U.S. Geological Survey Central Laboratory Atlanta, Georgia.

^{e/} Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

01472170 - PICKERING CREEK NEAR EAGLE, PA--Continued

DATE	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG C, DIS- SOLVED (MG/L)
OCT 22, 1969	--	--	--	16	15	--	--	--	--
FEB 18, 1970	--	--	--	17	31	--	--	--	--
MAY 04, 1970	--	--	--	20	21	--	--	--	120
SEP 28, 1970	--	--	--	14	18	--	--	--	136
MAY 03, 1971	--	--	--	15	12	--	--	--	105
SEP 27, 1971	--	--	--	15	12	--	--	--	144
OCT 03, 1972	--	--	--	30	15	--	--	--	110
OCT 02, 1973	41	0	34	11	17	.80	19	--	--
OCT 23, 1974	46	0	38	13	17	.10	19	123	--
NOV 03, 1975	49	0	40	14	14	.10	17	118	--
OCT 01, 1976	36	0	30	21	13	.10	14	110	--
OCT 19, 1977	56	0	46	18	17	.10	19	127	--
OCT 30, 1978	51	0	42	17	16	.10	17	121	--
NOV 01, 1979	--	--	9	16	18	.10	17	--	--
OCT 30, 1980	--	--	--	16	19	.00	22	124	--

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	NITRO- GEN NITRATE TOTAL (MG/L AS N)	NITRO- GEN NITRITE TOTAL (MG/L AS N)	NITRO- GEN NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN AMMONIA TOTAL (MG/L AS N)	NITRO- GEN ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)
OCT 22, 1969	--	.25	--	--	--	--	--	--	--	.020
FEB 18, 1970	--	.47	--	--	--	--	--	--	--	.050
MAY 04, 1970	--	.39	--	--	--	--	--	--	--	.010
SEP 28, 1970	--	1.3	<.010	--	--	--	--	--	.030	.010
MAY 03, 1971	--	1.6	.010	--	.280	.37	--	--	.050	.010
SEP 27, 1971	--	2.2	<.010	--	.010	.52	--	--	.050	.020
OCT 03, 1972	--	2.7	<.010	--	.060	.28	--	--	.030	.020
OCT 02, 1973	104	2.0	.002	2.0	.040	.88	.92	2.9	.040	.010
OCT 23, 1974	100	1.9	--	--	.080	.78	.86	--	.040	.020
NOV 03, 1975	100	2.0	--	--	.010	.66	.67	--	.020	.010
OCT 01, 1976	96	1.2	.010	1.2	.100	.63	.73	1.9	.170	.040
OCT 19, 1977	120	.43	<.010	.43	.020	.29	.31	.74	.090	<.010
OCT 30, 1978	110	1.7	.010	1.7	.030	.25	.28	2.0	<.010	.010
NOV 01, 1979	--	--	--	2.5	.020	.44	.46	3.0	.060	--
OCT 30, 1980	--	1.8	.000	1.8	.050	.08	.13	1.9	.040	.020

01472170 - PICKERING CREEK NEAR EAGLE, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
OCT 22, 1969	--	--	--	--	--	--	--	--	--	--
FEB 18, 1970	--	--	--	--	--	--	--	--	--	--
MAY 04, 1970	--	<100	--	<200	--	<250	--	<150	--	--
SEP 28, 1970	--	<100	--	<900	--	<250	--	<100	--	--
MAY 03, 1971	--	<150	--	<200	--	<250	--	250	--	--
SEP 27, 1971	--	<100	--	<200	--	<250	--	550	--	--
OCT 03, 1972	--	<100	--	<200	--	<250	--	440	--	--
OCT 02, 1973	<2	--	ND	--	ND	--	<20	660	--	<2
OCT 23, 1974	<2	--	ND	--	ND	--	<20	--	140	2
NOV 03, 1975	ND	--	ND	--	ND	--	<20	--	60	2
OCT 21, 1976	<2	--	<20	--	2	--	<20	--	210	ND
OCT 19, 1977	ND	--	<2	--	ND	--	3	--	170	8
OCT 30, 1978	ND	--	ND	--	ND	--	ND	--	90	ND
NOV 01, 1979	--	10	--	--	--	10	--	--	--	--
OCT 30, 1980	3	--	.00	--	0	--	0	--	140	4
DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
OCT 22, 1969	--	--	--	--	--	--	--	--	--	--
FEB 18, 1970	--	--	--	--	--	--	--	--	--	--
MAY 04, 1970	<100	<250	--	<250	--	<50	--	--	11	.07
SEP 28, 1970	<50	<250	--	<250	--	<20	--	--	5	.02
MAY 03, 1971	<50	<250	--	<250	--	<20	--	--	12	.07
SEP 27, 1971	<50	<250	--	<250	--	<50	--	--	5	.02
OCT 03, 1972	<50	<250	--	<250	--	<20	--	--	20	.13
OCT 02, 1973	--	70	--	--	<2	--	30	--	--	--
OCT 23, 1974	--	--	40	--	3	--	<20	--	--	--
NOV 03, 1975	--	--	50	--	3	--	<20	--	--	--
OCT 21, 1976	--	--	90	--	5	--	20	--	--	--
OCT 19, 1977	--	--	80	--	3	--	<20	.00	--	--
OCT 30, 1978	--	--	10	--	ND	--	ND	.10	--	--
NOV 01, 1979	--	--	--	--	--	20	--	--	--	--
OCT 30, 1980	--	--	40	--	0	--	1	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01472174 - PICKERING CREEK NEAR CHESTER SPRINGS, PA ^{a/}

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) ^{g/}	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
OCT 22, 1969	--	84215 ^{a/}	8.7	125	7.2	12.0	--	38	--	<1
FEB 18, 1970	--	84215	11	140	7.4	5.0	--	2	--	13
MAY 05, 1970	--	84215	9.3	112	7.9	13.0	--	110	--	8
SEP 28, 1970	--	84215	2.9	145	8.2	13.0	--	>300000.0	--	1700
MAY 03, 1971	--	84215	7.8	165	8.1	10.5	--	10000	2900	960
SEP 27, 1971	--	84215	11	150	7.5	14.0	--	34000	520	1200
OCT 03, 1972	0940	84215	3.8	157	7.0	11.0	--	9000	600	1000
OCT 03, 1973	0905	1028 ^{c/}	4.6	190	7.6	15.0	11.8	29300	520	2000
OCT 23, 1974	1400	1028	4.0	125	7.5	9.5	10.8	--	--	--
NOV 03, 1975	1000	1028	6.5	190	7.4	11.5	10.4	--	--	--
OCT 21, 1976	1000	1028	9.4	200	7.0	10.5	10.8	--	--	--
OCT 19, 1977	1030	80010 ^{c/}	5.6	190	7.1	10.5	10.4	--	--	--
OCT 30, 1978	1330	80010	4.1	230	7.3	10.0	11.6	--	--	--
NOV 01, 1979	1530	80010	9.3	210	7.3	12.0	9.8	--	--	--
OCT 30, 1980	1030	80010	2.6	175	6.8	7.5	12.0	--	--	--

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM TOTAL, RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL, RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL, RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL, RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT 22, 1969	--	--	--	--	--	--	--	--	--	--
FEB 18, 1970	--	--	--	--	--	--	--	--	--	--
MAY 05, 1970	--	--	16	--	7.6	--	7.9	--	1.6	--
SEP 28, 1970	--	--	17	--	4.8	--	7.5	--	3.4	--
MAY 03, 1971	--	--	18	--	4.9	--	6.3	--	1.4	--
SEP 27, 1971	--	--	15	--	4.7	--	6.9	--	2.2	--
OCT 03, 1972	--	--	18	--	4.4	--	5.3	--	1.4	--
OCT 02, 1973	63	20	--	17	--	5.0	--	6.5	--	1.9
OCT 23, 1974	66	24	--	18	--	5.0	--	6.0	--	1.8
NOV 03, 1975	72	28	--	19	--	6.0	--	6.0	--	2.0
OCT 21, 1976	55	21	--	14	--	4.9	--	5.7	--	4.7
OCT 19, 1977	71	28	--	19	--	5.7	--	6.7	--	2.8
OCT 30, 1978	72	27	--	20	--	5.3	--	6.5	--	2.2
NOV 01, 1979	--	--	--	--	--	--	--	--	--	--
OCT 30, 1980	72	--	--	20	--	5.4	--	6.4	--	2.0

^{a/} Additional data are available from 1967 to 1969.
^{b/} Chester County Health Department Laboratory, Pennsylvania.
^{c/} U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.
^{d/} U.S. Geological Survey Central Laboratory Atlanta, Georgia.
^{e/} Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

TABLE 2.-- Water-quality data for surface-water sites--Continued
 (Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25 Celsius;
 Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter;
 T/DAY, tons per day; dashes indicate no data.)

01472174 - PICKERING CREEK NEAR CHESTER SPRINGS, PA--Continued

DATE	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
OCT , 1969	--	--	--	89	5.0	--	--	--	--	--
FEB , 1970	--	--	--	13	25	--	--	--	--	--
MAY , 1970	--	--	--	17	6.3	--	--	--	106	--
SEP , 1970	--	--	--	9.1	14	--	--	--	137	--
MAY , 1971	--	--	--	14	9.1	--	--	--	120	--
SEP , 1971	--	--	--	15	14	--	--	--	121	--
OCT , 1972	--	--	--	29	11	--	--	--	187	--
OCT , 1973	52	0	43	13	12	.70	18	--	--	100
OCT , 1974	51	0	42	13	15	.10	18	107	--	100
NOV , 1975	54	0	44	16	11	.10	17	117	--	100
OCT , 1976	41	0	34	21	12	.10	14	110	--	97
OCT , 1977	53	0	43	18	13	.10	17	118	--	110
OCT , 1978	55	0	45	14	14	.10	19	115	--	110
NOV , 1979	--	--	32	14	12	.10	17	--	--	--
OCT , 1980	--	--	--	18	15	.00	21	114	--	--

DATE	NITRO- GEN NITRATE TOTAL (MG/L AS N)	NITRO- GEN NITRITE TOTAL (MG/L AS N)	NITRO- GEN NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN AMMONIA TOTAL (MG/L AS N)	NITRO- GEN ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)
OCT , 1969	.07	--	--	--	--	--	--	--	--
FEB , 1970	.50	--	--	--	--	--	--	--	--
MAY , 1970	.50	--	--	--	--	--	--	--	--
SEP , 1970	1.6	<.010	--	--	--	--	.020	.010	--
MAY , 1971	1.9	.020	--	.210	.14	--	.070	.010	--
SEP , 1971	2.6	<.010	--	.120	.36	--	.100	.010	--
OCT , 1972	2.9	<.010	--	.010	.23	--	.040	.010	--
OCT , 1973	2.3	.001	2.3	.050	.81	.86	3.2	.040	.020
OCT , 1974	2.0	--	--	.070	.57	.64	--	.020	.010
NOV , 1975	1.8	--	--	<.010	.49	.49	--	.020	<.010
OCT , 1976	1.4	.010	1.4	.070	.63	.70	2.1	.130	.040
OCT , 1977	1.6	.010	1.6	.040	.54	.58	2.2	.050	.010
OCT , 1978	1.8	.010	1.8	.040	.39	.43	2.2	.070	<.010
NOV , 1979	--	--	2.5	.090	.44	.53	3.0	.010	--
OCT , 1980	2.0	.010	2.0	.050	.08	.13	2.1	.030	.010

01472174 - PICKERING CREEK NEAR CHESTER SPRINGS, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
OCT 22, 1969	--	--	--	--	--	--	--	--	--	--
FEB 18, 1970	--	--	--	--	--	--	--	--	--	--
MAY 05, 1970	--	<100	--	<200	--	<250	--	<150	--	--
SEP 28, 1970	--	<100	--	<900	--	<250	--	<100	--	--
MAY 03, 1971	--	<150	--	<200	--	<250	--	300	--	--
SEP 27, 1971	--	<100	--	<200	--	<250	--	<150	--	--
OCT 03, 1972	--	<100	--	<200	--	<250	--	<500	--	--
OCT 02, 1973	<2	--	ND	--	ND	--	ND	200	--	ND
OCT 23, 1974	ND	--	ND	--	ND	--	ND	--	120	<2
NOV 03, 1975	ND	--	ND	--	ND	--	ND	--	20	<2
OCT 21, 1976	<2	--	<20	--	2	--	<20	--	220	4
OCT 19, 1977	ND	--	<2	--	ND	--	2	--	130	7
OCT 30, 1978	ND	--	ND	--	<2	--	<2	--	640	2
NOV 01, 1979	--	10	--	--	--	10	--	--	--	--
OCT 30, 1980	4	--	1	--	0	--	0	--	120	3
DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
OCT 22, 1969	--	--	--	--	--	--	--	--	--	--
FEB 18, 1970	--	--	--	--	--	--	--	--	--	--
MAY 05, 1970	<100	<250	--	<250	--	<50	--	--	6	.15
SEP 28, 1970	<50	<250	--	<250	--	<20	--	--	2	.02
MAY 03, 1971	<50	<250	--	<250	--	<20	--	--	8	.17
SEP 27, 1971	50	<250	--	<250	--	<50	--	--	6	.18
OCT 03, 1972	<50	<250	--	<250	--	<40	--	--	7	.07
OCT 02, 1973	--	30	--	--	ND	--	<20	--	--	--
OCT 23, 1974	--	--	40	--	2	--	<20	--	--	--
NOV 03, 1975	--	--	40	--	3	--	<20	--	--	--
OCT 21, 1976	--	--	60	--	5	--	20	--	--	--
OCT 19, 1977	--	--	70	--	2	--	<20	.00	--	--
OCT 30, 1978	--	--	60	--	<2	--	<20	.00	--	--
NOV 01, 1979	--	--	--	--	--	10	--	--	--	--
OCT 30, 1980	--	--	50	--	0	--	0	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued

[Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

014721854 - PICKERING CREEK AT MERLIN, PA

DATE	TIME	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) ^d	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)	
NOV 10, 1969	--	84215 ^a	24	175	7.0	12.0	--	--	--	--	
FEB 18, 1970	--	84215	27	120	7.3	5.0	--	6	--	2	
MAY 05, 1970	--	84215	29	109	8.7	16.0	--	8	--	<1	
SEP 28, 1970	--	84215	11	120	8.4	14.0	--	>300000.0	--	3000	
MAY 03, 1971	--	84215	22	160	8.3	13.5	--	1000	130	41	
SEP 27, 1971	--	84215	28	155	7.3	15.0	--	32000	440	1200	
OCT 03, 1972	1105	84215	18	149	6.1	12.0	--	6800	120	1100	
OCT 02, 1973	0955	1028 ^b	--	190	6.9	15.0	11.6	17000.	200	1000	
OCT 23, 1974	1315	1028	--	125	8.2	8.5	10.4	--	--	--	
NOV 03, 1975	1100	1028	--	200	7.7	12.5	11.8	--	--	--	
OCT 22, 1976	0815	1028	--	180	7.2	8.5	11.2	--	--	--	
OCT 19, 1977	1130	80010 ^c	--	190	7.1	10.5	10.5	--	--	--	
OCT 30, 1978	1500	80010	--	245	7.2	10.0	11.2	--	--	--	
NOV 05, 1979	1500	80010	--	173	6.5	9.0	12.2	--	--	--	
OCT 30, 1980	0900	80010	--	210	7.4	7.0	11.7	--	--	--	
DATE		HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
NOV 10, 1969	--	--	--	--	--	--	--	--	--	--	--
FEB 18, 1970	--	--	--	--	--	--	--	--	--	--	--
MAY 05, 1970	--	--	--	15	--	5.6	--	8.1	--	1.4	--
SEP 28, 1970	--	--	--	17	--	2.9	--	4.5	--	2.2	--
MAY 03, 1971	--	--	--	16	--	4.8	--	7.1	--	1.2	--
SEP 27, 1971	--	--	--	15	--	4.6	--	7.1	--	2.2	--
OCT 03, 1972	--	--	--	16	--	4.0	--	5.4	--	1.5	--
OCT 02, 1973	61	19	--	16	--	5.2	--	9.0	--	2.4	--
OCT 23, 1974	66	23	--	18	--	5.2	--	6.4	--	2.0	--
NOV 03, 1975	77	35	--	21	--	6.0	--	6.6	--	2.0	--
OCT 22, 1976	60	26	--	15	--	5.4	--	6.0	--	3.2	--
OCT 19, 1977	69	36	--	18	--	5.9	--	7.0	--	2.8	--
OCT 30, 1978	73	30	--	20	--	5.6	--	6.9	--	2.2	--
NOV 05, 1979	--	--	--	--	--	--	--	--	--	--	--
OCT 30, 1980	75	--	--	20	--	6.1	--	7.3	--	2.2	--

a/ Chester County Health Department Laboratory, Pennsylvania.

b/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

c/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.

d/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

014721854 - PICKERING CREEK AT MERLIN, PA--Continued

		BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
DATE											
NOV	, 1969	--	--	--	--	--	--	--	--	--	--
FEB	, 1970	--	--	--	15	26	--	--	--	98	--
MAY	, 1970	--	--	--	18	8.4	--	--	--	101	--
SEP	, 1970	--	--	--	14	11	--	--	--	129	--
MAY	, 1971	--	--	--	14	12	--	--	--	167	--
SEP	, 1971	--	--	--	11	14	--	--	--	118	--
OCT	, 1972	--	--	--	29	11	--	--	--	105	--
OCT	, 1973	52	0	43	13	13	.20	19	--	--	103
OCT	, 1974	52	0	43	15	14	.10	18	109	--	100
NOV	, 1975	51	0	42	16	14	.20	17	128	--	110
OCT	, 1976	42	0	34	19	15	.10	16	108	--	100
OCT	, 1977	40	0	33	20	15	.10	17	134	--	110
OCT	, 1978	52	0	43	15	16	.10	18	117	--	110
NOV	, 1979	--	--	34	17	14	.10	17	--	--	--
OCT	, 1980	--	--	--	22	17	.00	20	130	--	--
		NITRO- GEN NITRATE TOTAL (MG/L AS N)	NITRO- GEN NITRITE TOTAL (MG/L AS N)	NITRO- GEN NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN AMMONIA TOTAL (MG/L AS N)	NITRO- GEN ORGANIC TOTAL (MG/L AS N)	NITRO- AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	
DATE											
NOV	, 1969	--	--	--	--	--	--	--	--	--	
FEB	, 1970	.36	--	--	--	--	--	--	--	.020	
MAY	, 1970	1.1	--	--	--	--	--	--	--	<.010	
SEP	, 1970	.83	<.010	--	--	--	--	--	.010	--	
MAY	, 1971	.95	.010	--	.020	.07	--	--	.070	<.010	
SEP	, 1971	1.6	<.010	--	.050	.24	--	--	.110	<.010	
OCT	, 1972	1.6	<.010	--	.010	.07	--	--	.020	<.010	
OCT	, 1973	1.6	.001	1.5	.12	.72	.84	--	.03	.02	
OCT	, 1974	1.6	--	--	.070	.90	.97	--	.040	.020	
NOV	, 1975	1.5	--	--	<.010	.54	.54	--	.040	.030	
OCT	, 1976	1.1	.020	1.1	.060	.29	.35	1.5	.040	.020	
OCT	, 1977	1.3	<.010	1.3	<.010	.36	.36	1.7	.030	.010	
OCT	, 1978	1.2	.010	1.2	.040	.13	.17	1.4	.010	<.010	
NOV	, 1979	--	--	1.6	.010	.14	.15	1.8	.010	--	
OCT	, 1980	1.4	.000	1.4	.040	.15	.19	1.6	.020	.010	

014721854 - PICKERING CREEK AT MERLIN, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
NOV , 1969	--	--	--	--	--	--	--	--	--	--
FEB , 1970	--	--	--	--	--	--	--	--	--	--
MAY , 1970	--	--	--	--	--	--	--	--	--	--
SEP , 1970	--	--	--	--	--	--	--	--	--	--
MAY , 1971	--	<100	--	<900	--	<250	--	<100	--	--
SEP , 1971	--	<150	--	<200	--	<250	--	300	--	--
OCT , 1972	--	<100	--	<200	--	<250	--	<150	--	--
OCT , 1973	--	<100	--	<200	--	<250	--	<500	--	--
OCT , 1974	<2	--	ND	--	ND	--	<20	120	--	2.0
NOV , 1975	ND	--	ND	--	ND	--	ND	--	140	2
OCT , 1976	ND	--	ND	--	ND	--	ND	--	120	4
OCT , 1977	<2	--	<20	--	ND	--	<20	--	150	250
OCT , 1978	ND	--	<2	--	ND	--	2	--	170	7
NOV , 1979	<2	--	ND	--	ND	--	<2	--	170	2
OCT , 1980	--	10	--	--	--	0	--	--	--	--
	4	--	1	--	0	--	1	--	110	4
DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
NOV , 1969	--	--	--	--	--	--	--	--	--	--
FEB , 1970	--	--	--	--	--	--	--	--	--	--
MAY , 1970	--	--	--	--	--	--	--	--	--	--
SEP , 1970	--	<250	--	--	--	--	--	--	7	.55
MAY , 1971	<50	<250	--	<250	--	<20	--	--	3	.09
SEP , 1971	<50	<250	--	<250	--	<20	--	--	4	.24
OCT , 1972	<50	<250	--	<250	--	<50	--	--	3	.23
OCT , 1973	<50	<250	--	<250	--	<20	--	--	6	.30
OCT , 1974	--	20	--	--	ND	--	<20	--	--	--
NOV , 1975	--	--	40	--	5	--	<20	--	--	--
OCT , 1976	--	--	40	--	4	--	<20	--	--	--
OCT , 1977	--	--	80	--	4	--	<20	--	--	--
OCT , 1978	--	--	50	--	2	--	ND	.00	--	--
NOV , 1979	--	--	20	--	<2	--	ND	.00	--	--
OCT , 1980	--	--	--	--	--	0	--	--	--	--
	--	--	40	--	0	--	04	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued
 [Units: CFS, cubic foot per second; US/CM, micromhos per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

014721884 - PICKERING CREEK AT CHARLESTOWN ROAD BRIDGE AT CHARLESTOWN, PA

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) ^d	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
NOV 11, 1969	--	84215 ^a /	18	175	7.0	18.0	--	21	--	<1
FEB 18, 1970	--	84215	41	120	7.0	4.0	--	<1	--	<1
MAY 03, 1971	--	84215	25	160	8.2	11.5	--	<1000	140	<10
SEP 27, 1971	--	84215	49	160	7.4	15.0	--	27000	400	760
OCT 03, 1972	1215	84215	24	142	6.6	15.0	--	2600	230	800
OCT 01, 1973	1225	1028 ^b /	--	195	7.1	15.0	13.4	16000	72	460
OCT 23, 1974	1230	1028	--	130	7.7	9.0	11.1	--	--	--
NOV 03, 1975	1245	1028	--	190	7.8	14.0	12.0	--	--	--
OCT 22, 1976	0945	1028	--	180	7.2	9.0	11.8	--	--	--
OCT 19, 1977	1200	80010 ^c /	--	195	7.2	11.0	10.7	--	--	--
OCT 30, 1978	1530	80010	--	270	7.3	10.0	12.8	--	--	--
OCT 29, 1979	1400	80010	--	230	7.6	10.5	12.1	--	--	--
OCT 29, 1980	1440	80010	--	240	7.1	10.0	11.5	--	--	--

DATE	HARD- NESS (MG/L AS CACO ₃)	HARD- NESS NONCAR- BONATE (MG/L CACO ₃)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL, RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL, RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL, RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
NOV 11, 1969	--	--	--	--	--	--	--	--	--	--
FEB 18, 1970	--	--	--	--	--	--	--	--	--	--
MAY 03, 1971	--	--	16	--	5.2	--	6.9	--	1.3	--
SEP 27, 1971	--	--	14	--	4.5	--	6.9	--	2.1	--
OCT 03, 1972	--	--	16	--	4.2	--	5.8	--	1.5	--
OCT 01, 1973	65	25	--	17	--	5.5	--	6.7	--	2.1
OCT 23, 1974	65	24	--	17	--	5.4	--	6.6	--	2.0
NOV 03, 1975	71	28	--	18	--	5.6	--	6.9	--	2.1
OCT 22, 1976	61	27	--	15	--	5.6	--	6.1	--	3.5
OCT 19, 1977	74	40	--	19	--	6.4	--	7.3	--	2.8
OCT 30, 1978	77	33	--	21	--	6.0	--	7.0	--	2.3
OCT 29, 1979	--	--	--	--	--	--	--	--	--	--
OCT 29, 1980	76	--	--	20	--	6.3	--	7.8	--	2.5

^a/ Chester County Health Department Laboratory, Pennsylvania.

^b/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

^c/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.

^d/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

TABLE 2.-- Water-quality data for surface-water sites--Continued

[Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

014721884 - PICKERING CREEK AT CHARLESTOWN ROAD BRIDGE AT CHARLESTOWN, PA--Continued

DATE	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
NOV , 1969	--	--	--	11	10	--	--	--	--	--
FEB , 1970	--	--	--	7.7	25	--	--	--	--	--
MAY , 1971	--	--	--	16	10	--	--	--	105	--
SEP , 1971	--	--	--	14	12	--	--	--	132	--
OCT , 1972	--	--	--	21	12	--	--	--	105	--
OCT , 1973	49	0	40	15	14	.70	17	--	--	102
OCT , 1974	50	0	41	15	14	.20	18	115	--	100
NOV , 1975	52	0	43	16	15	.10	17	115	--	110
OCT , 1976	41	0	34	19	15	.10	16	113	--	100
OCT , 1977	41	0	34	21	15	.10	18	129	--	110
OCT , 1978	54	0	44	16	20	.10	18	127	--	120
OCT , 1979	--	--	35	--	--	.10	18	--	--	--
OCT , 1980	--	--	--	26	18	.00	19	138	--	--

DATE	NITRO- GEN NITRATE TOTAL (MG/L AS N)	NITRO- GEN NITRITE TOTAL (MG/L AS N)	NITRO- GEN NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN AMMONIA TOTAL (MG/L AS N)	NITRO- GEN ORGANIC TOTAL (MG/L AS N)	NITRO- GEN AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)
NOV , 1969	.16	--	--	--	--	--	--	--	.140
FEB , 1970	.41	--	--	--	--	--	--	--	--
MAY , 1971	1.5	.010	--	--	.17	--	--	.140	<.010
SEP , 1971	1.8	<.010	--	.030	.64	--	--	.040	.010
OCT , 1972	1.6	<.010	--	.010	.10	--	--	.040	<.010
OCT , 1973	1.6	--	--	.070	.93	1.0	--	.390	.390
OCT , 1974	1.5	--	--	.100	.72	.82	--	.030	.020
NOV , 1975	1.4	--	--	<.010	.47	.47	--	.030	.020
OCT , 1976	.67	.010	.68	.050	.15	.20	.88	.040	.030
OCT , 1977	1.2	<.010	1.2	<.010	.78	.78	2.0	.030	.010
OCT , 1978	1.1	.010	1.1	.010	.28	.29	1.4	.020	.010
OCT , 1979	--	--	1.6	.010	1.6	1.6	3.2	.200	--
OCT , 1980	1.4	.000	1.4	.030	.26	.29	1.7	.020	.010

014721884 - PICKERING CREEK AT CHARLESTOWN ROAD BRIDGE AT CHARLESTOWN, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
NOV , 1969	--	--	--	--	--	--	--	--	--	--
FEB , 1970	--	--	--	--	--	--	--	--	--	--
MAY , 1971	--	<150	--	<200	--	<250	--	320	--	--
SEP , 1971	--	<100	--	<200	--	<250	--	<150	--	--
OCT , 1972	--	<100	--	<200	--	<250	--	<500	--	--
OCT , 1973	3	--	ND	--	<2	--	20	280	--	4
OCT , 1974	ND	--	ND	--	ND	--	<20	--	150	2
NOV , 1975	<2	--	ND	--	2	--	<20	--	100	3
OCT , 1976	<2	--	<20	--	ND	--	ND	--	180	79
OCT , 1977	ND	--	<2	--	ND	--	2	--	180	7
OCT , 1978	ND	--	ND	--	ND	--	<2	--	150	<2
OCT , 1979	--	10	--	--	--	10	--	--	--	--
OCT , 1980	3	--	1	--	0	--	0	--	100	3

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
NOV , 1969	--	--	--	--	--	--	--	--	--	--
FEB , 1970	--	--	--	--	--	--	--	--	--	--
MAY , 1971	<50	<250	--	<250	--	<20	--	--	4	.27
SEP , 1971	<50	<250	--	<250	--	<50	--	--	3	.40
OCT , 1972	<50	<250	--	<250	--	<20	--	--	5	.33
OCT , 1973	--	40	--	--	2	--	30	--	--	--
OCT , 1974	--	--	40	--	2	--	<20	--	--	--
NOV , 1975	--	--	30	--	3	--	<20	--	--	--
OCT , 1976	--	--	80	--	2	--	<20	--	--	--
OCT , 1977	--	--	40	--	2	--	ND	.00	--	--
OCT , 1978	--	--	<10	--	ND	--	<20	.00	--	--
OCT , 1979	--	--	--	--	--	10	--	--	--	--
OCT , 1980	--	--	40	--	0	--	0	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius;
 Deg C, degrees Celsius; mg/L, milligrams
 per liter; COLS per 100 ML, colonies per
 100 milliliters; UG/L, micrograms per liter;
 T/DAY, tons per day; dashes indicate no data.]

01472190 - PICKERING CREEK NEAR PHOENIXVILLE, PA a/

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) <u>e</u> /	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCOCCI FECAL, (COLS. PER 100 ML)	
NOV 12, 1969											
FEB 18, 1970	--	84215 <u>b</u> /	17	165	7.5	8.0	--	1900	--	<1	
MAY 05, 1970	--	84215	45	150	7.2	4.0	--	21	--	2	
SEP 28, 1970	--	84215	46	109	8.8	17.0	--	20	--	2	
MAY 03, 1971	--	84215	19	125	8.0	15.0	--	21000	--	2500	
SEP 27, 1971	--	84215	30	165	8.2	11.5	--	<1000	260	180	
OCT 23, 1971	--	84215	74	150	7.5	15.0	--	15000	410	720	
OCT 03, 1972	1100	--	--	--	--	--	--	--	--	--	
OCT 01, 1973	1300	84215	32	150	6.7	15.0	--	2100	90	420	
OCT 23, 1974	1405	1028 <u>c</u> /	26	200	7.9	16.5	13.6	18700	36	190	
NOV 03, 1975	1100	1028	26	185	7.6	6.5	11.0	--	--	--	
OCT 22, 1976	1400	1028	--	200	7.3	15.0	11.6	--	--	--	
OCT 19, 1977	1030	1028	--	190	7.4	9.0	12.2	--	--	--	
OCT 30, 1978	1415	1028	--	200	7.3	12.5	11.2	--	--	--	
OCT 29, 1979	1600	80010 <u>d</u> /	--	280	7.2	11.0	12.0	--	--	--	
OCT 30, 1980	1515	80010	--	180	7.7	10.5	12.0	--	--	--	
	1445	80010	12	226	7.3	11.0	11.7	--	--	--	
DATE		HARD- NESS (MG/L AS CACO3)	HARD- NONCAR- BONATE (MG/L CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
NOV 12, 1969											
FEB 18, 1970	--	--	--	--	--	--	--	--	--	--	--
MAY 05, 1970	--	--	--	--	--	--	--	--	--	--	--
SEP 28, 1970	--	--	--	14	--	5.0	--	6.6	--	1.5	--
MAY 03, 1971	--	--	--	17	--	5.3	--	7.1	--	3.1	--
SEP 27, 1971	--	--	--	16	--	5.3	--	7.5	--	1.3	--
OCT 23, 1971	--	--	--	15	--	5.1	--	7.2	--	2.1	--
OCT 03, 1972	68	25	--	18	--	5.6	--	7.0	--	1.7	--
OCT 01, 1973	--	--	--	16	--	4.2	--	5.8	--	1.4	--
OCT 23, 1974	63	24	--	16	--	5.5	--	7.2	--	2.2	--
NOV 03, 1975	68	25	--	18	--	5.6	--	7.0	--	1.7	--
OCT 22, 1976	74	32	--	19	--	6.5	--	7.0	--	2.1	--
OCT 19, 1977	60	26	--	15	--	5.5	--	5.1	--	3.5	--
OCT 30, 1978	75	36	--	19	--	6.6	--	7.6	--	2.8	--
OCT 29, 1979	71	33	--	19	--	5.8	--	6.5	--	2.3	--
OCT 30, 1980	--	--	--	--	--	--	--	--	--	--	--
	83	--	--	22	--	6.9	--	8.2	--	2.5	--

a/ Additional data are available from 1967 to 1969.

b/ Chester County Health Department Laboratory, Pennsylvania.

c/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania.

d/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.

e/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

01472190 - PICKERING CREEK NEAR PHOENIXVILLE, PA--Continued

	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
DATE										
NOV 12, 1969	--	--	--	12	10	--	--	--	--	--
FEB 18, 1970	--	--	--	18	20	--	--	--	--	--
MAY 05, 1970	--	--	--	19	7.4	--	--	--	114	--
SEP 28, 1970	--	--	--	4.1	12	--	--	--	122	--
MAY 03, 1971	--	--	--	17	10	--	--	--	104	--
SEP 27, 1971	--	--	--	15	14	--	--	--	134	--
OCT 23, 1971	--	--	--	18	14	.20	17	124	--	110
OCT 03, 1972	--	--	--	31	12	--	--	--	103	--
OCT 01, 1973	48	<0	39	16	14	.70	17	--	--	102
OCT 23, 1974	53	0	43	18	14	.20	17	124	--	108
NOV 03, 1975	51	0	42	17	15	.20	16	125	--	110
OCT 22, 1976	42	0	34	21	13	.10	16	118	--	100
OCT 19, 1977	48	0	39	22	17	.10	17	--	--	120
OCT 30, 1978	46	0	38	14	20	.10	19	128	--	110
OCT 29, 1979	--	--	35	19	17	.10	18	--	--	--
OCT 30, 1980	--	--	--	26	20	.00	20	141	--	--
	NITRO- GEN NITRATE TOTAL (MG/L AS N)	NITRO- GEN NITRITE TOTAL (MG/L AS N)	NITRO- GEN NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN AMMONIA TOTAL (MG/L AS N)	NITRO- GEN ORGANIC TOTAL (MG/L AS N)	NITRO- GEN AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	
DATE										
NOV 12, 1969	.15	--	--	--	--	--	--	--	--	
FEB 18, 1970	.38	--	--	--	--	--	--	--	--	
MAY 05, 1970	.25	--	--	--	--	--	--	--	--	
SEP 28, 1970	.85	.010	--	--	--	--	--	.010	--	
MAY 03, 1971	.84	.020	--	.110	.03	--	--	.050	<.010	
SEP 27, 1971	1.3	<.010	--	.010	.18	--	--	.060	.010	
OCT 23, 1971	--	--	--	--	--	--	--	--	.020	
OCT 03, 1972	1.6	.000	--	.010	.07	--	--	.030	.010	
OCT 01, 1973	1.3	<.010	1.3	.050	.63	.68	2.0	.030	.020	
OCT 23, 1974	1.6	--	--	.120	.73	.85	--	.030	.020	
NOV 03, 1975	1.4	--	--	<.010	.66	.66	--	.030	.020	
OCT 22, 1976	.73	.010	.74	.050	.25	.30	1.0	.040	.030	
OCT 19, 1977	1.2	<.010	1.2	<.010	.42	.42	1.6	.030	.010	
OCT 30, 1978	1.8	.010	1.8	.060	.17	.23	2.0	.030	.020	
OCT 29, 1979	--	--	1.6	.000	.36	.36	2.0	.010	--	
OCT 30, 1980	1.5	.000	1.5	.040	.05	.05	1.6	.020	.010	

01472190 - PICKERING CREEK NEAR PHOENIXVILLE, PA--Continued

DATE	CADMIUM TOTAL DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
NOV , 1969										
FEB , 1970	--	--	--	--	--	--	--	--	--	--
MAY , 1970	--	--	--	--	--	--	--	--	--	--
SEP , 1970	--	<100	--	<200	--	<250	--	<150	--	--
MAY , 1971	--	<100	--	<900	--	<250	--	<100	--	--
SEP , 1971	--	<150	--	<200	--	<250	--	200	--	--
OCT , 1971	--	<100	--	<200	--	<250	--	<150	--	--
OCT , 1972	--	--	--	--	--	--	--	--	120	2
OCT , 1973	--	<100	--	<200	--	<250	--	<500	--	--
OCT , 1974	ND	--	30	--	<2	--	<20	190	--	2
NOV , 1975	ND	--	ND	--	ND	--	ND	--	120	2
OCT , 1976	ND	--	ND	--	ND	--	ND	--	40	<2
OCT , 1977	<2	--	<20	--	ND	--	ND	--	160	ND
OCT , 1978	ND	--	<2	--	ND	--	3	--	150	9
OCT , 1979	ND	--	ND	--	ND	--	<2	--	260	3
OCT , 1980	--	20	--	--	--	10	--	--	--	--
OCT , 1980	3	--	1	--	0	--	0	--	70	3
DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
NOV , 1969										
FEB , 1970	--	--	--	--	--	--	--	--	--	--
MAY , 1970	--	--	--	--	--	--	--	--	19	2.3
SEP , 1970	<100	<250	--	<250	--	<50	--	--	5	.62
MAY , 1971	<50	<250	--	<250	--	<20	--	--	4	.21
SEP , 1971	<50	<250	--	<250	--	<20	--	--	4	.32
OCT , 1971	<50	<250	--	<250	--	<50	--	--	3	.60
OCT , 1972	--	--	--	--	3	--	--	--	--	--
OCT , 1973	<50	80	--	<250	--	<20	--	--	4	.35
OCT , 1974	--	<10	--	--	ND	--	20	--	--	--
NOV , 1975	--	--	<10	--	3	--	<20	--	--	--
OCT , 1976	--	--	20	--	2	--	<20	--	--	--
OCT , 1977	--	--	70	--	4	--	20	--	--	--
OCT , 1978	--	--	20	--	3	--	<20	.00	--	--
OCT , 1979	--	--	30	--	ND	--	<20	.00	--	--
OCT , 1980	--	--	--	--	--	0	--	--	--	--
OCT , 1980	--	--	10	--	0	--	0	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued
 [Units: CFS, cubic foot per second; US/CM, micromhos per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01473167 - LITTLE VALLEY CREEK AT HOWELLVILLE, PA

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) _d	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
NOV 09, 1971	--	84215 _a /	--	425	7.7	6.0	--	4600	36	80
NOV 24, 1972	1120	84215	--	420	8.4	14.0	--	550	180	92
OCT 12, 1973	0905	1028 _b /	--	520	7.8	11.5	11.0	49000	760	180
OCT 23, 1974	0930	1028	--	350	7.7	6.5	10.4	--	--	--
NOV 11, 1975	0900	1028	--	480	7.1	10.0	11.6	--	--	--
OCT 29, 1976	0900	1028	--	580	7.7	7.0	12.0	--	--	--
OCT 31, 1977	1400	80010 _c /	--	510	8.4	12.5	13.2	--	--	--
OCT 27, 1978	1345	80010	--	750	8.0	12.0	11.0	--	--	--
DEC 28, 1978	1130	80010	--	550	7.8	3.0	--	--	--	--
NOV 05, 1979	1000	80010	--	476	7.7	8.5	11.6	--	--	--
OCT 31, 1980	0910	80010	--	534	7.7	7.0	11.9	--	--	--

DATE	HARD- NESS (MG/L AS CaCO ₃)	HARD- NESS NONCAR- BONATE (MG/L AS CaCO ₃)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS Ca)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS Mg)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS Na)	SODIUM, DIS- SOLVED (MG/L AS Na)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
NOV 09, 1971	--	--	45	--	16	--	19	--	2.2	--
NOV 24, 1972	--	--	40	--	14	--	26	--	2.4	--
OCT 12, 1973	190	56	--	49	--	17	--	28	--	3.1
OCT 23, 1974	200	54	--	51	--	18	--	27	--	2.4
NOV 11, 1975	190	54	--	48	--	17	--	24	--	2.7
OCT 29, 1976	220	66	--	54	--	20	--	28	--	3.0
OCT 31, 1977	220	55	--	57	--	20	--	32	--	3.1
OCT 27, 1978	240	44	--	45	--	32	--	21	--	3.1
DEC 28, 1978	--	--	--	--	--	--	--	--	--	--
NOV 05, 1979	--	--	--	--	--	--	--	--	--	--
OCT 31, 1980	200	--	--	52	--	18	--	26	--	2.2

_a/ Chester County Health Department Laboratory, Pennsylvania.
_b/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.
_c/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.
_d/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

TABLE 2.-- Water-quality data for surface-water sites--Continued
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; ug/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01473167 - LITTLE VALLEY CREEK AT HOWELLVILLE, PA--Continued

DATE	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTIT- UENTS, DIS- SOLVED (MG/L)
NOV , 1971	--	--	--	36	42	--	--	--	238	--
NOV , 1972	--	--	--	36	51	--	--	--	299	--
OCT , 1973	170	0	137	39	47	.50	6.5	--	--	272
OCT , 1974	180	0	148	38	47	.40	7.1	297	--	280
NOV , 1975	170	0	136	31	42	.20	7.8	274	--	250
OCT , 1976	180	0	151	41	50	.20	8.5	314	--	300
OCT , 1977	210	0	170	43	55	.20	7.5	343	--	320
OCT , 1978	240	0	200	45	34	.10	7.5	320	--	310
DEC , 1978	--	--	--	--	--	--	--	--	--	--
NOV , 1979	--	--	140	32	33	.30	7.2	--	--	--
OCT , 1980	--	--	--	33	47	.10	7.5	303	--	--

DATE	NITRO- GEN NITRATE TOTAL (MG/L AS N)	NITRO- GEN NITRITE TOTAL (MG/L AS N)	NITRO- GEN NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN AMMONIA TOTAL (MG/L AS N)	NITRO- GEN ORGANIC TOTAL (MG/L AS N)	NITRO- GEN AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)
NOV , 1971	3.4	.030	--	.050	.28	--	--	.050	.050
NOV , 1972	3.2	.060	--	.020	.33	--	--	.220	.180
OCT , 1973	3.6	.005	3.6	.040	.36	.40	4.0	.220	.190
OCT , 1974	3.1	--	--	.190	1.1	1.3	--	.190	.170
NOV , 1975	4.3	--	--	.010	.54	.55	--	.130	.110
OCT , 1976	3.5	.050	3.5	.060	.34	.40	3.9	.190	.170
OCT , 1977	3.5	.030	3.5	.040	.35	.39	3.9	.170	.150
OCT , 1978	1.9	.020	1.9	.010	.30	.31	2.2	.030	.010
DEC , 1978	--	--	--	--	--	--	--	--	--
NOV , 1979	--	--	3.0	.060	.19	.25	3.3	.060	--
OCT , 1980	2.6	.000	2.6	.030	.20	.23	2.8	.100	.010

01473167 - LITTLE VALLEY CREEK AT HOWELLVILLE, PA--Continued

DATE	CADMIUM TOTAL DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
NOV , 1971	--	<100	--	<200	--	<250	--	<150	--	--
NOV 09... 1972	--	<100	--	<200	--	<250	--	230	--	--
NOV 24... 1972	--	<100	--	<200	--	<250	--	230	--	--
OCT 12... 1973	ND	--	<20	--	ND	--	ND	--	30	2
OCT 23... 1974	ND	--	ND	--	ND	--	<20	--	<10	<2
NOV 23... 1975	<2	--	ND	--	<2	--	ND	--	<10	3
OCT 11... 1976	<2	--	<20	--	ND	--	<20	--	20	3
OCT 29... 1977	ND	--	2	--	ND	--	3	--	30	2
OCT 31... 1978	2	--	2	--	5	--	<2	--	170	13
DEC 27... 1978	--	--	--	--	--	--	--	--	--	--
NOV 28... 1979	--	10	--	--	--	10	--	--	--	--
OCT 05... 1980	--	--	--	--	--	--	--	--	--	--
OCT 31... 1980	1	--	3	--	0	--	0	--	10	0

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
NOV , 1971	<50	<250	--	<250	--	<50	--	--	--	--
NOV 09... 1972	<50	<250	--	<250	--	<20	--	--	--	--
NOV 24... 1972	<50	<250	--	<250	--	<20	--	--	--	--
OCT 12... 1973	--	--	60	--	8	--	50	--	--	--
OCT 23... 1974	--	--	30	--	4	--	<20	--	--	--
NOV 23... 1975	--	--	20	--	5	--	30	--	--	--
OCT 11... 1976	--	--	40	--	2	--	20	--	--	--
OCT 29... 1977	--	--	30	--	ND	--	<20	.10	--	--
OCT 31... 1978	--	--	20	--	<2	--	ND	.00	--	--
DEC 27... 1978	--	--	--	--	--	--	--	--	--	--
NOV 28... 1979	--	--	--	--	--	20	--	--	--	--
OCT 05... 1980	--	--	--	--	--	--	--	--	--	--
OCT 31... 1980	--	--	7	--	0	--	0	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01473168 - VALLEY CREEK NEAR VALLEY FORGE, PA

DATE	TIME	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) _d	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
NOV , 1971	--	84215 _a /	--	440	7.7	6.5	--	5800	40	130
OCT , 1972	0715	84215	--	390	8.3	12.5	--	500	150	200
OCT , 1973	0835	1028 _b /	--	520	7.8	12.0	10.8	8000	420	220
OCT , 1974	1015	1028	--	355	7.5	7.0	11.4	--	--	--
NOV , 1975	1030	1028	--	520	8.1	11.5	11.0	--	--	--
OCT , 1976	0945	1028	--	580	8.0	7.0	12.0	--	--	--
OCT , 1977	1430	80010 _c /	--	540	8.2	11.0	12.4	--	--	--
OCT , 1978	1300	80010	--	520	6.4	13.0	12.6	--	--	--
NOV , 1979	1100	80010	--	553	7.2	8.0	12.8	--	--	--
OCT , 1980	1030	80010	--	604	7.8	7.5	12.8	--	--	--

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
NOV , 1971	--	--	42	--	25	--	19	--	2.6	--
OCT , 1972	--	--	38	--	24	--	19	--	2.5	--
OCT , 1973	241	6	--	30	--	30	--	20	--	3.0
OCT , 1974	220	38	--	43	--	28	--	20	--	2.2
NOV , 1975	240	47	--	48	--	28	--	20	--	3.0
OCT , 1976	260	63	--	46	--	35	--	22	--	3.1
OCT , 1977	280	69	--	49	--	38	--	24	--	3.2
OCT , 1978	190	63	--	51	--	16	--	29	--	2.8
NOV , 1979	--	--	--	--	--	--	--	--	--	--
OCT , 1980	240	--	--	44	--	31	--	29	--	3.2

_a/ Chester County Health Department Laboratory, Pennsylvania.

_b/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

_c/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.

_d/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

01473168 - VALLEY CREEK NEAR VALLEY FORGE, PA--Continued

DATE	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS RESIDUE AT 180 DEG. C SOLVED (MG/L)	SOLIDS RESIDUE AT 105 DEG. C, Dis- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, Dis- SOLVED (MG/L)
NOV ., 1971										
OCT ., 1972	--	--	--	32	27	--	--	--	245	--
OCT ., 1973	--	--	--	31	27	--	--	--	267	--
OCT ., 1974	240	0	193	33	30	.20	5.8	--	--	270
NOV ., 1975	230	0	185	34	29	.20	6.3	284	--	270
OCT ., 1976	230	0	188	30	31	.10	7.6	291	--	280
OCT ., 1977	240	0	196	35	34	.10	7.6	308	--	300
OCT ., 1978	250	0	210	69	38	.10	7.2	336	--	350
NOV ., 1979	160	0	130	40	55	.50	6.9	311	--	280
OCT ., 1980	--	--	180	39	33	.10	7.1	--	--	--
	--	--	--	43	46	.00	7.3	333	--	--

DATE	NITRO- GEN NITRATE TOTAL (MG/L AS N)	NITRO- GEN NITRITE TOTAL (MG/L AS N)	NITRO- GEN NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN AMMONIA TOTAL (MG/L AS N)	NITRO- GEN ORGANIC TOTAL (MG/L AS N)	NITRO- GEN AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)
NOV ., 1971									
OCT ., 1972	2.1	.030	--	.210	.23	--	--	.010	.020
OCT ., 1973	2.1	.010	--	.020	.22	--	--	.060	.030
OCT ., 1974	2.0	.005	2.0	--	.26	--	--	.040	.010
NOV ., 1975	2.0	--	--	.080	1.1	1.2	--	.080	.040
OCT ., 1976	2.7	--	--	.010	.54	.55	--	.070	.020
OCT ., 1977	1.9	.010	1.9	.030	.17	.20	2.1	.050	.030
OCT ., 1978	1.7	.010	1.7	.110	.44	.55	2.3	.040	.020
NOV ., 1979	2.8	.020	2.8	.100	.27	.37	3.2	.130	.100
OCT ., 1980	--	--	2.1	.060	.20	.26	2.4	.020	--
	2.0	.020	2.0	.140	.23	.37	2.4	.070	.030

01473168 - VALLEY CREEK NEAR VALLEY FORGE, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOVERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
NOV , 1971	--	<100	--	<200	--	<250	--	<150	--	--
OCT , 1972	--	<100	--	<250	--	<250	--	500	--	--
OCT , 1973	ND	--	<20	--	ND	--	ND	--	20	2
OCT , 1974	ND	--	ND	--	ND	--	<20	--	20	<2
NOV , 1975	<2	--	ND	--	<2	--	ND	--	<10	4
OCT , 1976	<2	--	<20	--	ND	--	<20	--	20	5
OCT , 1977	ND	--	<2	--	ND	--	9	--	120	<2
OCT , 1978	2	--	4	--	4	--	4	--	60	7
NOV , 1979	--	10	--	--	--	10	--	--	--	--
OCT , 1980	2	--	4	--	0	--	0	--	10	0

DATE	LITHIUM TOTAL RECOVERABLE (UG/L AS LI)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
NOV , 1971	<100	<250	--	<250	--	<50	--	--	--	--
OCT , 1972	<50	<250	--	<250	--	<20	--	--	--	--
OCT , 1973	--	--	30	--	4	--	20	--	--	--
OCT , 1974	--	--	20	--	2	--	20	--	--	--
NOV , 1975	--	--	30	--	2	--	<20	--	--	--
OCT , 1976	--	--	30	--	3	--	<20	--	--	--
OCT , 1977	--	--	60	--	<2	--	<20	.00	--	--
OCT , 1978	--	--	<10	--	6	--	ND	.10	--	--
NOV , 1979	--	--	--	--	--	10	--	--	--	--
OCT , 1980	--	--	30	--	0	--	0	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued

[Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01475300 - DARBY CREEK AT WATERLOO MILLS NEAR DEVON, PA

DATE	TIME	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTANTANEOUS (CFS)	STREAM- FLOW MEAN DAILY (CFS)	SPE- CIFIC CON- DUCTANCE (US/CM) _d	PH (STANDARD ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
FEB 10, 1970	--	84215a/	14	--	120	7.8	3.0	--	1600	--	830
MAY 27, 1970	--	84215	8.3	--	145	8.1	16.0	--	130	--	300
OCT 06, 1970	--	84215	2.3	--	145	7.6	14.0	--	830	--	160
MAY 11, 1971	--	84215	6.6	--	200	7.4	14.0	--	5000	150	52
OCT 05, 1971	--	84215	6.1	--	200	7.6	17.0	--	23000	250	260
JUN 07, 1972	1043	--	--	7.0	240	7.2	18.0	8.7	--	250	--
JUL 12, 1972	0925	--	--	7.6	245	7.8	22.0	9.5	--	370	--
AUG 09, 1972	0928	--	--	5.1	220	--	21.0	8.4	--	990	--
SEP 13, 1972	0944	--	--	4.4	240	4.9	17.0	8.2	--	200	--
OCT 04, 1972	1066	--	--	3.0	385	7.0	14.0	10.0	--	900	--
NOV 16, 1972	0700	84215	4.1	3.4	200	7.2	9.0	--	1300	40	250
NOV 15, 1972	0955	--	--	17	220	6.9	7.0	11.0	--	2500	--
DEC 06, 1972	0945	--	--	29	240	6.9	9.0	11.9	--	400	--
JAN 10, 1973	0946	--	--	8.5	280	7.2	1.0	14.8	--	50000	--
FEB 07, 1973	1000	--	--	20	230	6.5	5.0	12.8	--	880	--
OCT 04, 1973	1245	1028b/	4.1	4.4	220	6.5	17.5	11.2	44300	--	520
OCT 22, 1973	1330	1028	4.7	4.6	110	7.2	7.5	11.2	--	--	--
NOV 07, 1973	1430	1028	6.9	8.4	220	7.7	15.5	10.4	--	--	--
OCT 28, 1976	0845	1028	4.5	4.9	335	7.2	5.5	11.9	--	--	--
OCT 31, 1977	1130	80010a/	4.5	4.5	230	7.4	11.0	11.2	--	--	--
OCT 27, 1978	1145	80010	4.7	4.8	320	7.4	11.5	10.0	--	--	--
OCT 30, 1979	1300	80010	10.0	9.9	210	7.2	10.5	11.8	--	--	--
OCT 31, 1980	1300	80010	4.0	2.4	275	6.8	8.5	10.7	--	--	--

a/ Chester County Health Department Laboratory, Pennsylvania.
 b/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.
 c/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.
 d/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

TABLE 2.-- Water-quality data for surface-water sites--Continued
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25 Celsius;
 Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01475300 - DARBY CREEK AT WATERLOO MILLS NEAR DEVON, PA--Continued

DATE	HARD- NESS (MG/L AS CaCO3)	HARD- NESS, NONCAR- BONATE (MG/L CaCO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS Ca)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS Mg)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS Na)	SODIUM, DIS- SOLVED (MG/L AS Na)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
FEB , 1970	--	--	6.7	--	1.3	--	2.6	--	.5	--
MAY 10...	--	--	13	--	6.1	--	8.8	--	2.0	--
OCT 27...	--	--	--	--	7.6	--	16	--	3.4	--
MAY 06...	--	--	17	--	7.8	--	12	--	2.0	--
MAY 11...	--	--	18	--	7.5	--	12	--	2.5	--
OCT 05...	--	--	--	--	--	--	--	--	--	--
JUN 07...	--	--	--	--	--	--	--	--	--	--
JUL 12...	--	--	--	--	--	--	--	--	--	--
AUG 09...	--	--	--	--	--	--	--	--	--	--
SEP 13...	--	--	--	--	--	--	--	--	--	--
OCT 04...	--	--	--	--	--	--	--	--	--	--
NOV 16...	--	--	21	--	7.4	--	12	--	2.4	--
DEC 15...	--	--	--	--	--	--	--	--	--	--
JAN 06...	--	--	--	--	--	--	--	--	--	--
JAN 10...	--	--	--	--	--	--	--	--	--	--
FEB 07...	--	--	--	--	--	--	--	--	--	--
OCT 04...	77	28	--	18	--	7.9	--	11	--	3.3
OCT 22...	62	23	--	15	--	6.0	--	6.5	--	2.0
NOV 07...	81	28	--	19	--	8.1	--	11	--	2.4
OCT 28...	97	26	--	23	--	9.7	--	13	--	2.9
OCT 31...	110	30	--	24	--	11	--	15	--	3.1
OCT 27...	93	28	--	22	--	9.2	--	11	--	2.6
OCT 30...	--	--	--	--	--	--	--	--	--	--
OCT 31...	89	--	--	21	--	8.9	--	9.5	--	2.7

01475300 - DARBY CREEK AT WATERLOO MILLS NEAR DEVON, PA--Continued

DATE	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LINIT FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS RESIDUE AT 180 DEG C SOLVED (MG/L)	SOLIDS RESIDUE AT 105 DEG C, DIS- SOLVED (MG/L)
FEB , 1970	--	--	--	7.9	2.1	--	--	--	240
MAY 10...	--	--	--	7.9	11	--	--	--	162
OCT 27...	--	--	--	19	26	--	--	--	146
MAY , 1971	--	--	--	34	14	--	--	--	144
OCT 06...	--	--	--	15	16	--	--	--	153
JUN , 1972	--	--	--	--	--	--	--	--	--
JUL 07...	--	--	--	--	--	--	--	--	--
AUG 12...	--	--	--	--	--	--	--	--	--
SEP 09...	--	--	--	--	--	--	--	--	--
OCT 13...	--	--	--	--	--	--	--	--	--
NOV 04...	--	--	--	--	--	--	--	--	--
DEC , 1972	--	--	--	26	18	--	--	--	142
JAN , 1973	--	--	--	--	--	--	--	--	--
FEB 10...	--	--	--	--	--	--	--	--	--
OCT 07...	--	--	--	--	--	--	--	--	--
OCT 04...	61	0	50	21	15	.30	12	--	--
OCT 22, 1974	48	0	39	13	11	.10	18	101	--
NOV 07, 1975	65	0	53	18	17	.10	14	144	--
OCT 28, 1976	86	0	71	29	22	.10	17	169	--
OCT 31, 1977	91	0	75	22	23	.10	16	167	--
OCT 27, 1978	79	0	65	20	20	.10	13	148	--
OCT , 1979	--	--	34	18	17	.10	15	--	--
OCT , 1980	--	--	--	28	22	.10	16	157	--
OCT 31...	--	--	--	--	--	--	--	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued
 (Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius;
 Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter;
 T/DAY, tons per day; dashes indicate no data.)

01475300 - DARBY CREEK AT WATERLOO MILLS NEAR DEVON, PA--Continued

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	NITRO- GEN NITRATE TOTAL (MG/L AS N)	NITRO- GEN NITRITE TOTAL (MG/L AS N)	NITRO- GEN NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN AMMONIA TOTAL (MG/L AS N)	NITRO- GEN ORGANIC TOTAL (MG/L AS N)	NITRO- GEN AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)
FEB , 1970										
10...	--	.38	--	--	--	--	--	--	--	.070
MAY										
27...	--	2.2	--	--	--	--	--	--	--	.192
OCT										
06...	--	3.3	.030	--	--	--	--	--	.732	.771
MAY , 1971										
11...	--	2.4	.060	--	1.08	.26	--	--	.232	.173
OCT										
05...	--	2.9	.070	--	.010	.66	--	--	.370	.130
JUN , 1972										
07...	--	2.8	.125	--	.320	--	--	--	.300	--
JUL										
12...	--	3.4	.070	--	.260	--	--	--	.690	--
AUG										
09...	--	2.6	.060	--	.200	.12	--	--	.310	--
SEP										
13...	--	4.3	.075	--	.400	--	--	--	.400	--
OCT										
04...	--	4.4	.035	--	.280	--	--	--	.540	--
16...	--	3.0	.090	--	.330	.26	--	--	.440	.370
NOV										
15...	--	2.7	.012	--	.380	--	--	--	.150	--
DEC , 1972										
06...	--	2.8	.040	--	.300	--	--	--	1.72	--
JAN , 1973										
10...	--	3.4	.010	--	.400	--	--	--	.890	--
FEB										
07...	--	2.8	.010	--	.310	--	--	--	.110	--
OCT										
04...	120	3.2	--	--	.100	.52	.62	--	.300	.250
OCT , 1974										
22...	95	2.0	--	--	.060	.62	.68	--	.020	.010
NOV , 1975										
07...	120	2.5	--	--	.010	.72	.73	--	.230	.200
OCT , 1976										
28...	160	2.0	.070	2.1	.410	.14	.55	2.7	.290	.220
OCT , 1977										
31...	160	2.6	.010	2.6	.050	.38	.43	3.0	.270	.250
OCT , 1978										
27...	140	2.0	.020	2.0	.070	.43	.50	2.5	.040	.020
OCT , 1979										
30...	--	--	--	2.3	.070	.58	.65	3.0	.110	--
OCT , 1980										
31...	--	1.5	.010	1.5	.040	.04	.08	1.6	.050	.030

01475300 - DARBY CREEK AT WATERLOO MILLS NEAR DEVON, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL/ RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL/ RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL/ RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL/ RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
FEB , 1970	--	<100	--	<200	--	<250	--	<150	--	--
MAY 10...	--	--	--	--	--	--	--	--	--	--
MAY 27...	--	--	--	--	--	--	--	--	--	--
OCT 06...	--	<100	--	<900	--	<250	--	<100	--	--
MAY , 1971	--	<150	--	<200	--	<250	--	350	--	--
OCT 11...	--	<100	--	<200	--	<250	--	<150	--	--
OCT 05...	--	--	--	--	--	--	--	--	--	--
JUN , 1972	--	--	--	--	--	--	--	--	--	--
OCT 07...	--	--	--	--	--	--	--	--	--	--
JUL 12...	--	--	--	--	--	--	--	--	--	--
AUG 09...	--	--	--	--	--	--	--	--	--	--
SEP 13...	--	--	--	--	--	--	--	--	--	--
OCT 04...	--	--	--	--	--	--	--	--	--	--
NOV 16...	--	<100	--	<200	--	<250	--	<430	--	--
DEC , 1972	--	--	--	--	--	--	--	--	--	--
OCT 06...	--	--	--	--	--	--	--	--	--	--
JAN , 1973	--	--	--	--	--	--	--	--	--	--
FEB 10...	--	--	--	--	--	--	--	--	--	--
OCT 07...	--	--	--	--	--	--	--	--	--	--
OCT 04...	ND	--	<20	--	ND	--	ND	--	100	2
OCT 22...	<2	--	ND	--	ND	--	<20	--	50	2
NOV 07...	<2	--	ND	--	ND	--	ND	--	90	<2
OCT 28...	<2	--	<20	--	ND	--	<20	--	130	3
OCT 31...	4	--	ND	--	ND	--	3	--	90	3
OCT 27...	ND	--	ND	--	ND	--	2	--	100	3
OCT 30...	--	10	--	--	--	10	--	--	--	--
OCT 31...	2	--	1	--	0	--	0	--	100	1

01475300 - DARBY CREEK AT WATERLOO MILLS NEAR DEVON, PA--Continued

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
FEB , 1970										
10...	<100	<250	--	<250	--	<50	--	--	249	9.7
MAY										
27...	--	--	--	--	--	--	--	--	23	.52
OCT										
06...	<50	<250	--	<250	--	<20	--	--	2	.01
MAY , 1971										
11...	<50	<250	--	<250	--	<20	--	--	5	.09
OCT										
05...	<50	<250	--	<250	--	<50	--	--	4	.07
JUN , 1972										
07...	--	--	--	--	--	--	--	--	--	--
JUL										
12...	--	--	--	--	--	--	--	--	--	--
AUG										
09...	--	--	--	--	--	--	--	--	--	--
SEP										
13...	--	--	--	--	--	--	--	--	--	--
OCT										
04...	--	--	--	--	--	--	--	--	--	--
16...	<50	<250	--	<250	--	<20	--	--	6	.07
NOV										
15...	--	--	--	--	--	--	--	--	--	--
DEC , 1972										
06...	--	--	--	--	--	--	--	--	--	--
JAN , 1973										
10...	--	--	--	--	--	--	--	--	--	--
FEB										
07...	--	--	--	--	--	--	--	--	--	--
OCT										
04...	--	--	30	--	2	--	<20	--	--	--
OCT , 1974										
22...	--	--	<10	--	3	--	<20	--	--	--
NOV , 1975										
07...	--	--	20	--	2	--	20	--	--	--
OCT , 1976										
28...	--	--	70	--	4	--	<20	--	--	--
OCT , 1977										
31...	--	--	30	--	ND	--	<20	.00	--	--
OCT , 1978										
27...	--	--	40	--	2	--	ND	.10	--	--
OCT , 1979										
30...	--	--	--	--	--	10	--	--	--	--
OCT , 1980										
31...	--	--	30	--	0	--	0	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued

(Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.)

01475830 - CRUM CREEK NEAR PAOLI, PA

DATE	TIME	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTANTANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) _d	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
FEB 10, 1970	--	84215 _a /	9.2	100	7.5	3.0	--	720	--	210
MAY 27, 1970	--	84215	8.1	120	7.9	21.0	--	<1	--	36
OCT 06, 1970	--	84215	2.5	110	7.8	14.0	--	200	--	70
MAY 11, 1971	--	84215	6.8	170	7.3	14.0	--	5400	120	47
OCT 05, 1971	--	84215	6.2	170	7.4	17.0	--	9800	140	240
OCT 16, 1972	0830	84215	4.2	140	7.3	8.5	--	690	45	180
OCT 05, 1973	0745	1028 _b /	--	180	6.5	17.5	11.0	14300	330	240
OCT 22, 1974	1500	1028	--	167	7.4	7.0	10.2	--	--	--
NOV 10, 1975	1030	1028	--	180	7.5	16.0	9.6	--	--	--
OCT 28, 1976	0945	1028	--	220	7.1	6.0	12.2	--	--	--
OCT 31, 1977	0930	80010 _c /	--	210	7.3	9.0	11.8	--	--	--
OCT 27, 1978	1045	80010	--	200	7.2	12.0	10.6	--	--	--
OCT 30, 1979	1400	80010	--	183	6.8	10.5	12.4	--	--	--
OCT 31, 1980	1500	80010	--	190	7.1	9.0	11.9	--	--	--

DATE	HARD- NESS (MG/L AS CaCO ₃)	HARD- NESS, NONCAR- BONATE (MG/L CaCO ₃)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS Ca)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS Mg)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS Na)	SODIUM, DIS- SOLVED (MG/L AS Na)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
FEB 10, 1970	--	--	8.0	--	3.2	--	8.8	--	1.4	--
MAY 27, 1970	--	--	10	--	6.1	--	7.8	--	1.7	--
OCT 06, 1970	--	--	--	--	6.3	--	7.4	--	1.6	--
MAY 11, 1971	--	--	12	--	7.5	--	9.5	--	1.6	--
OCT 05, 1971	--	--	13	--	7.1	--	10	--	1.9	--
OCT 16, 1972	--	--	14	--	6.6	--	8.0	--	1.6	--
OCT 05, 1973	60	18	--	12	--	7.4	--	8.0	--	2.1
OCT 22, 1974	80	20	--	12	--	7.2	--	7.5	--	1.3
NOV 10, 1975	63	22	--	13	--	7.3	--	8.5	--	2.1
OCT 28, 1976	73	20	--	14	--	9.3	--	8.7	--	2.0
OCT 31, 1977	81	21	--	16	--	10	--	9.8	--	2.2
OCT 27, 1978	78	22	--	16	--	9.2	--	8.4	--	2.2
OCT 30, 1979	--	--	--	--	--	--	--	--	--	--
OCT 31, 1980	73	--	--	15	--	8.7	--	6.8	--	1.8

_a/ Chester County Health Department Laboratory, Pennsylvania.

_b/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

_c/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.

_d/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

TABLE 2.-- Water-quality data for surface-water sites--Continued
 (Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.)

01475830 - CRUM CREEK NEAR PAOLI, PA--Continued

DATE	BICARBONATE FET-FLD (MG/L AS HCO3)	CARBONATE FET-FLD (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLORIDE, DIS- SOLVED (MG/L AS CL)	FLUORIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS RESIDUE AT 105 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
FEB , 1970										
10...	--	--	--	19	5.3	--	--	--	179	--
MAY 27...	--	--	--	7.4	11	--	--	--	137	--
OCT 08...	--	--	--	7.7	16	--	--	--	67	--
MAY 11, 1971	--	--	--	14	13	--	--	--	95	--
OCT 05...	--	--	--	8.0	10	--	--	--	112	--
OCT 16, 1972	--	--	--	27	10	--	--	--	109	--
OCT 05, 1973	52	0	43	11	11	.30	13	--	--	91
OCT 22, 1974	49	0	40	13	11	.20	15	101	--	91
NOV 10, 1975	50	0	41	11	14	.10	11	106	--	92
OCT 28, 1976	64	0	53	16	14	.10	16	128	--	110
OCT 31, 1977	73	0	60	14	15	.10	15	128	--	120
OCT 27, 1978	68	0	56	13	15	.10	14	118	--	110
OCT 30, 1979	--	--	42	14	16	.10	13	--	--	--
OCT 31, 1980	--	--	--	16	14	.00	18	110	--	--

DATE	NITROGEN NITRATE TOTAL (MG/L AS N)	NITROGEN NITRITE TOTAL (MG/L AS N)	NITROGEN NO2+NO3 TOTAL (MG/L AS N)	NITROGEN AMMONIA TOTAL (MG/L AS N)	NITROGEN ORGANIC TOTAL (MG/L AS N)	NITROGEN AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)
FEB , 1970									
10...	1.4	--	--	--	--	--	--	--	.042
MAY 27...	2.7	--	--	--	--	--	--	--	.030
OCT 08...	2.4	.010	--	--	--	--	--	<.010	<.010
MAY 11, 1971	2.4	.020	--	.100	.16	--	--	.040	.010
OCT 05...	3.2	.010	--	.060	.92	--	--	.040	<.010
OCT 16, 1972	3.0	<.010	--	.010	.12	--	--	.020	.020
OCT 05, 1973	2.7	--	--	.070	.46	.53	--	.030	.020
OCT 22, 1974	2.0	--	--	.130	.86	.99	--	.030	.010
NOV 10, 1975	2.7	--	--	<.010	.69	.69	--	.020	<.010
OCT 28, 1976	2.1	.010	2.1	.050	.20	.25	2.4	.030	.010
OCT 31, 1977	1.8	.010	1.8	.010	.18	.19	2.0	.010	.010
OCT 27, 1978	2.2	.010	2.2	.040	.23	.27	2.5	.010	<.010
OCT 30, 1979	--	--	2.4	.070	.84	.91	3.3	.020	--
OCT 31, 1980	1.7	.000	1.7	.040	.15	.19	1.9	.020	.010

01475830 - CRUM CREEK NEAR PAOLI, PA--Continued

DATE	CADMIUM TOTAL DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
FEB , 1970	--	<100	--	<200	--	<250	--	<150	--	--
MAY 10...	--	--	--	--	--	--	--	--	--	--
MAY 27...	--	--	--	--	--	--	--	--	--	--
OCT 06...	--	<100	--	<900	--	<250	--	<100	--	--
MAY , 1971	--	<150	--	<200	--	<250	--	230	--	--
OCT 11...	--	<100	--	<200	--	<250	--	<150	--	--
OCT 05...	--	<100	--	<200	--	<250	--	<150	--	--
OCT , 1972	--	<100	--	<200	--	<250	--	270	--	--
OCT 16...	--	<100	--	<200	--	<250	--	270	--	--
OCT , 1973	ND	--	<20	--	ND	--	ND	--	150	2
OCT , 1974	ND	--	ND	--	ND	--	ND	--	120	2
NOV , 1975	<2	--	<20	--	ND	--	ND	--	100	4
OCT , 1976	<2	--	<20	--	<2	--	ND	--	140	3
OCT 28...	ND	--	ND	--	ND	--	2	--	120	4
OCT 31...	ND	--	ND	--	ND	--	ND	--	70	3
OCT , 1978	ND	--	ND	--	ND	--	ND	--	70	3
OCT , 1979	--	10	--	--	--	10	--	--	--	--
OCT 30...	--	10	--	--	--	10	--	--	--	--
OCT , 1980	3	--	.00	--	0	--	0	--	80	0
OCT 31...	3	--	.00	--	0	--	0	--	80	0

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
FEB , 1970	<100	<250	--	<250	--	<50	--	--	--	--
MAY 10...	--	--	--	--	--	--	--	--	12	.25
MAY 27...	--	--	--	--	--	--	--	--	1	.00
OCT 06...	<50	<250	--	<250	--	<20	--	--	6	.11
MAY , 1971	<50	<250	--	<250	--	<20	--	--	3	.05
OCT 11...	<50	<250	--	<250	--	<20	--	--	3	.03
OCT 05...	--	--	20	--	2	--	<20	--	--	--
OCT , 1972	--	--	50	--	2	--	<20	--	--	--
OCT 16...	--	--	20	--	2	--	<20	--	--	--
OCT , 1973	--	--	20	--	4	--	<20	--	--	--
OCT 05...	--	--	<10	--	ND	--	ND	.00	--	--
OCT , 1974	--	--	50	--	3	--	ND	.00	--	--
OCT 22...	--	--	--	--	--	0	--	--	--	--
OCT , 1975	--	--	--	--	--	0	--	--	--	--
OCT 10...	--	--	--	--	--	0	--	--	--	--
OCT , 1976	--	--	--	--	--	0	--	--	--	--
OCT 28...	--	--	--	--	--	0	--	--	--	--
OCT , 1977	--	--	10	--	0	--	0	.00	--	--
OCT 31...	--	--	10	--	0	--	0	.00	--	--
OCT , 1978	--	--	10	--	0	--	0	.00	--	--
OCT , 1979	--	--	10	--	0	--	0	.00	--	--
OCT 30...	--	--	10	--	0	--	0	.00	--	--
OCT , 1980	--	--	10	--	0	--	0	.00	--	--
OCT 31...	--	--	10	--	0	--	0	.00	--	--

01475840 - CRUM CREEK AT WHITEHORSE, PA

DATE	TIME	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) ^d	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	GOLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	GOLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
FEB , 1970										
10...	--	84215 ^a /	--	85	7.6	3.0	--	490	--	50
MAY										
27...	--	84215	12	100	7.8	17.0	--	680	--	410
OCT										
06...	--	84215	5.4	100	7.7	15.0	--	100	--	150
MAY , 1971										
11...	--	84215	13	165	7.2	15.0	--	3700	190	110
OCT										
05...	--	84215	12	160	7.5	17.0	--	8000	60	240
OCT , 1972										
16...	0925	84215	8.0	155	7.4	8.5	--	770	60	270
OCT , 1973										
05...	0810	1028 ^b /	--	186	6.7	17.5	11.0	17300	250	260
OCT , 1974										
22...	1535	1028	--	120	7.3	7.5	10.2	--	--	--
OCT , 1975										
31...	1415	1028	--	180	7.6	8.5	12.4	--	--	--
OCT , 1976										
28...	1030	1028	--	190	7.2	5.0	12.2	--	--	--
OCT , 1977										
31...	1030	80010 ^c /	--	195	7.5	9.5	12.0	--	--	--
OCT , 1978										
27...	1000	80010	--	200	7.4	11.5	10.2	--	--	--
OCT , 1979										
30...	1430	80010	--	163	6.9	10.0	12.3	--	--	--
NOV , 1980										
10...	1215	80010	--	200	7.1	9.0	11.9	--	--	--

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
FEB , 1970										
10...	--	--	5.0	--	2.3	--	3.4	--	1.0	--
MAY										
27...	--	--	8.8	--	5.7	--	7.9	--	1.6	--
OCT										
06...	--	--	--	--	5.9	--	7.1	--	1.9	--
MAY , 1971										
11...	--	--	11	--	7.1	--	8.9	--	1.3	--
OCT										
05...	--	--	12	--	6.4	--	8.4	--	1.7	--
OCT , 1972										
16...	--	--	14	--	6.6	--	9.8	--	1.6	--
OCT , 1973										
05...	60	17	--	12	--	7.2	--	8.7	--	2.2
OCT , 1974										
22...	60	19	--	12	--	7.2	--	8.3	--	1.5
OCT , 1975										
31...	68	25	--	14	--	8.0	--	8.3	--	1.8
OCT , 1976										
28...	65	17	--	13	--	8.0	--	7.5	--	1.9
OCT , 1977										
31...	89	36	--	23	--	7.7	--	8.3	--	3.4
OCT , 1978										
27...	67	19	--	14	--	7.8	--	7.4	--	2.3
OCT , 1979										
30...	--	--	--	--	--	--	--	--	--	--
NOV , 1980										
10...	65	--	--	14	--	7.4	--	7.3	--	1.8

^a/ Chester County Health Department Laboratory, Pennsylvania.^b/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.^c/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.^d/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

01475840 - CRUM CREEK AT WHITEHORSE, PA--Continued

DATE	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LINEITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
FEB , 1970										
10...	--	--	--	10	3.2	--	--	--	164	--
MAY										
27...	--	--	--	15	6.3	--	--	--	153	--
OCT										
06...	--	--	--	5.8	3.0	--	--	--	81	--
MAY , 1971										
11...	--	--	--	12	11	--	--	--	113	--
OCT										
05...	--	--	--	5.5	11	--	--	--	105	--
OCT , 1972										
16...	--	--	--	21	12	--	--	--	111	--
OCT , 1973										
05...	53	0	43	14	14	.30	14	--	--	99
OCT , 1974										
22...	50	0	41	15	12	.20	15	99	--	96
OCT , 1975										
31...	52	0	43	14	12	.10	15	110	--	99
OCT , 1976										
28...	58	0	48	16	12	.10	17	107	--	100
OCT , 1977										
31...	65	0	53	--	--	--	--	--	--	--
OCT , 1978										
27...	59	0	48	12	13	.10	16	114	--	100
OCT , 1979										
30...	--	--	37	13	12	.10	15	--	--	--
NOV , 1980										
10...	--	--	--	11	12	.10	18	108	--	--

DATE	NITRO- GEN NITRATE TOTAL (MG/L AS N)	NITRO- GEN NITRITE TOTAL (MG/L AS N)	NITRO- GEN NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN AMMONIA TOTAL (MG/L AS N)	NITRO- GEN ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)
FEB , 1970									
10...	1.2	--	--	--	--	--	--	--	.020
MAY									
27...	1.9	--	--	--	--	--	--	--	.040
OCT									
06...	2.4	<.010	--	--	--	--	--	.045	.010
MAY , 1971									
11...	1.7	.010	--	.130	.20	--	--	.022	.010
OCT									
05...	2.5	<.010	--	.010	.37	--	--	.032	<.010
OCT , 1972									
16...	2.5	<.010	--	.010	.01	--	--	.020	.010
OCT , 1973									
05...	2.1	--	--	.140	.67	.81	--	.020	.020
OCT , 1974									
22...	2.0	--	--	.090	.91	1.0	--	.020	.010
OCT , 1975									
31...	2.3	--	--	<.010	.54	.54	--	.010	.010
OCT , 1976									
28...	1.7	.010	1.7	.030	.22	.25	2.0	.030	.010
OCT , 1977									
31...	1.6	<.010	1.6	<.010	.14	.14	1.7	.010	<.010
OCT , 1978									
27...	1.7	.010	1.7	.030	.31	.34	2.0	.010	<.010
OCT , 1979									
30...	--	--	2.0	.060	.79	.85	2.9	.010	--
NOV , 1980									
10...	1.2	.000	1.2	.040	.14	.18	1.4	.020	.010

01475840 - CRUM CREEK AT WHITEHORSE, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
FEB , 1970										
10...	--	<100	--	<200	--	<250	--	<150	--	--
MAY										
27...	--	--	--	--	--	--	--	--	--	--
OCT										
06...	--	<100	--	<900	--	<250	--	<100	--	--
MAY , 1971										
11...	--	<150	--	<200	--	<250	--	500	--	--
OCT										
05...	--	<100	--	<200	--	<250	--	<100	--	--
OCT , 1972										
16...	--	<100	--	<200	--	<250	--	320	--	--
OCT , 1973										
05...	ND	--	<20	--	ND	--	ND	--	100	2
OCT , 1974										
22...	ND	--	ND	--	ND	--	ND	--	90	<2
OCT , 1975										
31...	ND	--	ND	--	ND	--	<20	--	100	8
OCT , 1976										
28...	<2	--	<20	--	ND	--	ND	--	130	5
OCT , 1977										
31...	ND	--	ND	--	ND	--	5	--	90	6
OCT , 1978										
27...	ND	--	ND	--	<2	--	2	--	70	6
OCT , 1979										
30...	--	20	--	--	--	10	--	--	--	--
NOV , 1980										
10...	2	--	1	--	1	--	2	--	160	1

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
FEB , 1970										
10...	<100	<250	--	<250	--	<50	--	--	--	--
MAY										
27...	--	--	--	--	--	--	--	--	11	.36
OCT										
06...	<50	<250	--	<250	--	<20	--	--	1	.01
MAY , 1971										
11...	<50	<250	--	<250	--	<20	--	--	4	.14
OCT										
05...	<50	<250	--	<250	--	<20	--	--	3	.10
OCT , 1972										
16...	<50	<250	--	<250	--	<20	--	--	--	--
OCT , 1973										
05...	--	--	20	--	2	--	20	--	--	--
OCT , 1974										
22...	--	--	20	--	2	--	<20	--	--	--
OCT , 1975										
31...	--	--	20	--	3	--	<20	--	--	--
OCT , 1976										
28...	--	--	20	--	4	--	ND	--	--	--
OCT , 1977										
31...	--	--	50	--	ND	--	<20	.00	--	--
OCT , 1978										
27...	--	--	<10	--	2	--	<20	.00	--	--
OCT , 1979										
30...	--	--	--	--	--	10	--	--	--	--
NOV , 1980										
10...	--	--	20	--	0	--	1	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued

[Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; US/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01476430 - RIDLEY CREEK AT GOSHENVILLE, PA

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) _d /	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.43 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)	
FEB , 1970											
10...	--	84215 _a /	--	60	7.1	3.0	--	940	--	560	
MAY 28...	--	84215	5.5	80	8.1	15.0	--	86	--	100	
OCT 06...	--	84215	2.1	95	7.5	13.0	--	6000	--	270	
JUN , 1971											
08...	--	84215	--	140	7.8	18.0	--	5000	290	680	
OCT 05...	--	84215	5.2	115	7.2	17.0	--	9800	61	170	
OCT , 1972											
16...	1215	84215	3.5	140	7.4	9.5	--	--	--	--	
OCT , 1973											
05...	0855	1028 _b /	--	170	7.0	17.0	10.8	8300	210	210	
OCT , 1974											
23...	0815	1028	--	95	7.0	4.0	13.5	--	--	--	
OCT , 1975											
21...	0900	1028	--	170	7.0	6.5	11.8	--	--	--	
OCT , 1976											
20...	1000	1028	--	220	7.3	10.0	11.0	--	--	--	
OCT , 1977											
19...	1530	80010 _c /	--	160	7.1	12.5	10.0	--	--	--	
OCT , 1978											
24...	1300	80010	--	125	7.1	11.0	10.6	--	--	--	
OCT , 1979											
31...	1030	80010	--	149	6.6	8.0	12.4	--	--	--	
NOV , 1980											
17...	1330	80010	--	190	7.0	4.0	13.4	--	--	--	
DATE		HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL/ RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL/ RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL/ RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
FEB , 1970											
10...	--	--	--	4.5	--	3.0	--	3.2	--	1.4	--
MAY 28...	--	--	--	7.2	--	4.8	--	6.3	--	1.3	--
OCT 06...	--	--	--	10	--	5.6	--	12	--	1.8	--
JUN , 1971											
08...	--	--	--	8.0	--	5.4	--	7.3	--	1.7	--
OCT 05...	--	--	--	8.9	--	4.8	--	5.8	--	1.4	--
OCT , 1972											
16...	--	--	--	12	--	5.2	--	11	--	1.5	--
OCT , 1973											
05...	50	19	--	10	--	6.1	--	9.0	--	2.1	--
OCT , 1974											
23...	53	23	--	11	--	6.1	--	8.1	--	1.2	--
OCT , 1975											
31...	54	24	--	11	--	6.4	--	7.6	--	1.6	--
OCT , 1976											
20...	54	20	--	11	--	6.4	--	9.6	--	2.0	--
OCT , 1977											
19...	54	29	--	11	--	6.5	--	7.8	--	2.1	--
OCT , 1978											
24...	54	19	--	11	--	6.4	--	8.8	--	1.8	--
OCT , 1979											
31...	--	--	--	--	--	--	--	--	--	--	--
NOV , 1980											
17...	60	--	--	13	--	6.7	--	8.6	--	2.1	--

_a/ Chester County Health Department Laboratory, Pennsylvania.

_b/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

_c/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.

_d/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

TABLE 2.-- Water-quality data for surface-water sites--Continued
 (Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25 Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.)

01476430 - RIDLEY CREEK AT GOSHENVILLE, PA--Continued

DATE	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
FEB , 1970										
10...	--	--	--	4.9	5.3	--	--	--	172	--
MAY 28...	--	--	--	3.3	8.4	--	--	--	93	--
OCT 06...	--	--	--	16	23	--	--	--	100	--
JUN 08... 1971	--	--	--	11	10	--	--	--	92	--
OCT 05... 1972	--	--	--	5.5	9.1	--	--	--	89	--
OCT 16... 1973	--	--	--	22	16	--	--	--	103	--
OCT 05... 1974	38	0	31	12	14	.40	12	--	--	84
OCT 23... 1975	36	0	30	15	11	.20	12	92	--	82
OCT 31... 1976	36	0	30	14	12	<.10	11	89	--	81
OCT 20... 1977	41	0	34	13	15	.10	12	108	--	90
OCT 19... 1978	31	0	25	15	13	<.10	12	103	--	83
OCT 24... 1979	43	0	35	14	15	.10	12	93	--	90
OCT 31... 1980	--	--	23	14	15	.10	9.9	--	--	--
NOV 17...	--	--	--	15	14	.10	12	115	--	--

DATE	NITRO- GEN NITRATE TOTAL (MG/L AS N)	NITRO- GEN NITRITE TOTAL (MG/L AS N)	NITRO- GEN NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN AMMONIA TOTAL (MG/L AS N)	NITRO- GEN ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)
FEB , 1970									
10...	1.2	--	--	--	--	--	--	--	.030
MAY 28...	2.3	--	--	--	--	--	--	--	.030
OCT 06...	2.4	.010	--	--	--	--	--	.100	.091
JUN 08... 1971	3.1	.012	--	.000	.03	--	--	.150	.030
OCT 05... 1972	2.3	<.010	--	.010	.35	--	--	.094	.030
OCT 16... 1973	3.0	<.010	--	.020	.18	--	--	.240	.220
OCT 05... 1974	2.3	.001	2.3	.030	.73	.76	3.1	.150	.150
OCT 23... 1975	2.4	--	--	.040	.73	.77	--	.170	.150
OCT 31... 1976	2.5	--	--	<.010	.58	.58	--	.090	.070
OCT 20... 1977	2.0	.010	2.0	.080	.25	.33	2.3	.090	.090
OCT 19... 1978	2.3	.010	2.3	.010	.53	.54	2.8	.090	.060
OCT 24... 1979	2.0	.010	2.0	.080	.35	.43	2.4	.080	.060
OCT 31... 1980	--	--	2.5	.060	1.5	1.6	4.1	.050	--
NOV 17...	2.0	.010	2.0	.020	.27	.29	2.3	.050	.030

01476430 - RIDLEY CREEK AT GOSHENVILLE, PA--Continued

DATE	CADMIUM TOTAL DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
FEB , 1970										
10...	--	<100	--	<200	--	<250	--	<150	--	--
MAY										
28...	--	--	--	--	--	--	--	--	--	--
OCT										
06...	--	<100	--	<900	--	<250	--	<100	--	--
JUN , 1971										
08...	--	<150	--	<200	--	<250	--	380	--	--
OCT										
05...	--	<100	--	<200	--	<250	--	<150	--	--
OCT , 1972										
16...	--	<100	--	<200	--	<250	--	160	--	--
OCT , 1973										
05...	ND	--	ND	--	ND	--	ND	280	--	ND
OCT , 1974										
23...	ND	--	ND	--	ND	--	<20	--	90	2
OCT , 1975										
31...	<2	--	ND	--	ND	--	<20	--	120	3
OCT , 1976										
20...	ND	--	<20	--	<2	--	ND	--	100	24
OCT , 1977										
19...	ND	--	<2	--	ND	--	2	--	120	7
OCT , 1978										
24...	ND	--	ND	--	ND	--	4	--	160	5
OCT , 1979										
31...	--	10	--	--	--	10	--	--	--	--
NOV , 1980										
17...	0	--	.00	--	1	--	1	--	90	0

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
FEB , 1970										
10...	<100	<250	--	<250	--	<50	--	--	--	--
MAY										
28...	--	--	--	--	--	--	--	--	6	.09
OCT										
06...	<100	<250	--	<250	--	<20	--	--	1	.00
JUN , 1971										
08...	<50	<250	--	<250	--	<20	--	--	--	--
OCT										
05...	<50	<250	--	<250	--	<20	--	--	3	.04
OCT , 1972										
16...	<50	<250	--	<250	--	<20	--	--	--	--
OCT , 1973										
05...	--	40	--	--	<2	--	<20	--	--	--
OCT , 1974										
23...	--	--	30	--	2	--	ND	--	--	--
OCT , 1975										
31...	--	--	70	--	4	--	<20	--	--	--
OCT , 1976										
20...	--	--	120	--	4	--	<20	--	--	--
OCT , 1977										
19...	--	--	50	--	3	--	ND	.00	--	--
OCT , 1978										
24...	--	--	40	--	3	--	ND	.00	--	--
OCT , 1979										
31...	--	--	--	--	--	10	--	--	--	--
NOV , 1980										
17...	--	--	30	--	1	--	0	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued
 (Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.)

01476435 - RIDLEY CREEK AT DUTTON MILL NEAR WEST CHESTER, PA

DATE	TIME	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAM- FLOW- INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) _d	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS. PER 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
FEB , 1970										
10...	--	84215 _a /	--	95	6.8	3.0	--	580	--	120
MAY 28...	--	84215	12	60	8.3	15.0	--	14	--	52
OCT 06...	--	84215	4.6	95	7.3	13.0	--	3200	--	260
JUN , 1971										
08...	--	84215	--	140	7.9	19.0	--	3400	670	660
OCT 05...	--	84215	--	125	7.4	18.0	--	2800	210	160
OCT 16...	--	84215	--	135	7.4	9.0	--	1800	420	310
OCT 16...	0950	1028 _b /	--	175	6.8	17.5	11.4	0300	1100	230
OCT 22...	1600	1028	--	115	7.5	10.5	9.7	--	--	--
OCT 31...	1045	1028	--	160	7.3	7.0	12.1	--	--	--
OCT 20...	0915	1028	--	190	7.1	10.0	11.0	--	--	--
OCT 27...	1100	80010 _c /	--	170	6.9	17.0	10.0	--	--	--
OCT 24...	1345	80010	--	135	7.0	11.5	11.4	--	--	--
OCT 30...	1530	80010	--	147	6.9	10.5	12.2	--	--	--
NOV 17...	1430	80010	--	170	7.2	4.5	14.0	--	--	--

DATE	HARD- NESS (MG/L AS CaCO3)	HARD- NESS NONCAR- BONATE (MG/L AS CaCO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS Ca)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS Mg)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS Na)	SODIUM, DIS- SOLVED (MG/L AS Na)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
FEB , 1970										
10...	--	--	8.8	--	3.9	--	5.9	--	1.4	--
MAY 28...	--	--	8.0	--	5.0	--	6.3	--	1.3	--
OCT 06...	--	--	10	--	5.7	--	8.4	--	1.8	--
JUN , 1971										
08...	--	--	8.5	--	5.8	--	7.1	--	2.7	--
OCT 05...	--	--	10	--	3.0	--	6.6	--	1.5	--
OCT 16...	--	--	11	--	4.9	--	8.2	--	1.7	--
OCT 05...	52	18	--	10	--	6.6	--	8.2	--	1.8
OCT 22...	51	20	--	10	--	6.4	--	7.1	--	1.8
OCT 31...	56	26	--	12	--	6.3	--	6.8	--	1.6
OCT 20...	55	19	--	11	--	6.8	--	8.9	--	2.4
OCT 27...	56	23	--	11	--	6.9	--	8.0	--	2.6
OCT 24...	55	19	--	11	--	6.6	--	8.0	--	1.8
OCT 30...	--	--	--	--	--	--	--	--	--	--
NOV 17...	57	--	--	12	--	6.6	--	7.4	--	1.8

a/ Chester County Health Department Laboratory, Pennsylvania.

b/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

c/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.

d/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

01476435 - RIDLEY CREEK AT DUTTON MILL NEAR WEST CHESTER, PA--Continued

DATE	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LINTY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
FEB , 1970										
10...	--	--	--	12	7.4	--	--	--	99	--
MAY										
28...	--	--	--	32	6.3	--	--	--	166	--
OCT										
06...	--	--	--	20	14	--	--	--	80	--
JUN , 1971										
08...	--	--	--	7.4	9.0	--	--	--	95	--
OCT										
05...	--	--	--	9.9	10	--	--	--	90	--
OCT , 1972										
16...	--	--	--	3.8	13	--	--	--	88	--
OCT , 1973										
05...	42	0	34	12	12	.30	14	--	--	86
OCT , 1974										
22...	38	0	31	13	12	.20	15	89	--	84
OCT , 1975										
31...	37	0	30	13	11	.10	13	100	--	82
OCT , 1976										
20...	45	0	37	11	15	.10	15	108	--	93
OCT , 1977										
27...	40	0	33	14	13	.10	15	97	--	91
OCT , 1978										
24...	44	0	36	13	14	.10	14	96	--	90
OCT , 1979										
30...	--	--	24	14	15	.10	13	--	--	--
NOV , 1980										
17...	--	--	--	13	13	.10	15	113	--	--

DATE	NITRO- GEN NITRATE TOTAL (MG/L AS N)	NITRO- GEN NITRITE TOTAL (MG/L AS N)	NITRO- GEN NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN AMMONIA TOTAL (MG/L AS N)	NITRO- GEN ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)
FEB , 1970									
10...	2.9	--	--	--	--	--	--	--	.085
MAY									
28...	2.4	--	--	--	--	--	--	--	.010
OCT									
06...	2.1	.012	--	--	--	--	--	.023	.020
JUN , 1971									
08...	3.0	.040	--	.150	.02	--	--	.114	.030
OCT									
05...	2.3	.010	--	.010	.61	--	--	.060	.010
OCT , 1972									
16...	2.9	.010	--	.010	.35	--	--	.100	.080
OCT , 1973									
05...	1.9	--	--	.120	.36	.48	--	.060	.050
OCT , 1974									
22...	2.1	--	--	.070	1.2	1.3	--	.090	.070
OCT , 1975									
31...	2.7	--	--	.090	.68	.77	--	.060	.030
OCT , 1976									
20...	2.0	.010	2.0	.110	.37	.48	2.5	.080	.050
OCT , 1977									
27...	1.9	.020	1.9	.030	.34	.37	2.3	.060	.040
OCT , 1978									
24...	2.2	.010	2.2	.090	.26	.35	2.6	.030	.020
OCT , 1979									
30...	--	--	2.5	.200	.19	.39	2.9	.040	--
NOV , 1980									
17...	2.4	.000	2.4	.020	.51	.53	2.9	.030	.020

01476435 - RIDLEY CREEK AT DUTTON MILL NEAR WEST CHESTER, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
FEB , 1970										
10...	--	<100	--	<200	--	<250	--	<150	--	--
MAY 28...	--	--	--	--	--	--	--	--	--	--
OCT 06...	--	<100	--	<900	--	<250	--	<100	--	--
JUN , 1971	--	<150	--	<200	--	<250	--	600	--	--
OCT 08...	--	<100	--	<200	--	<250	--	<150	--	--
05...	--	<100	--	<200	--	<250	--	<150	--	--
OCT 16, 1972	--	<100	--	<200	--	<250	--	290	--	--
OCT 16, 1973	ND	--	ND	--	ND	--	ND	340	--	<2
OCT 22, 1974	ND	--	ND	--	ND	--	<20	--	160	2
OCT 31, 1975	ND	--	ND	--	ND	--	<20	--	60	4
OCT 20, 1976	<2	--	<20	--	2	--	<20	--	150	46
OCT 27, 1977	5	--	ND	--	ND	--	<2	--	210	130
OCT 24, 1978	ND	--	ND	--	<2	--	4	--	140	4
OCT 30, 1979	--	10	--	--	--	0	--	--	--	--
NOV 17, 1980	0	--	.00	--	0	--	1	--	110	0

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
FEB , 1970										
10...	<100	<250	--	<250	--	<50	--	--	460	--
MAY 28...	--	--	--	--	--	--	--	--	16	.52
OCT 06...	<50	<250	--	<250	--	<20	--	--	8	.10
JUN , 1971	<50	<250	--	<250	--	<20	--	--	--	--
OCT 08...	<50	<250	--	<250	--	<20	--	--	4	--
05...	<50	<250	--	<250	--	<20	--	--	--	--
OCT 16, 1972	--	50	--	--	ND	--	<20	--	--	--
OCT 16, 1973	--	--	40	--	3	--	ND	--	--	--
OCT 05, 1974	--	--	50	--	3	--	30	--	--	--
OCT 22, 1975	--	--	60	--	9	--	20	--	--	--
OCT 31, 1976	--	--	40	--	3	--	<20	.00	--	--
OCT 20, 1977	--	--	80	--	3	--	ND	.00	--	--
OCT 27, 1978	--	--	--	--	--	0	--	--	--	--
OCT 24, 1979	--	--	50	--	6	--	0	.00	--	--
NOV 17, 1980	--	--	--	--	--	--	--	--	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01476790 - EAST BRANCH CHESTER CREEK AT GREEN HILL, PA

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) _d /	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCT FECAL, (COLS. PER 100 ML)
MAR , 1970										
07...	--	84215 _a /	3.3	125	7.9	6.0	--	--	--	--
MAY 22...	--	84215	3.2	145	7.4	20.0	--	<1	--	6
OCT 26...	--	84215	.80	98	7.5	11.0	--	2300	--	420
MAY 17, 1971	--	84215	2.6	175	7.2	12.0	--	14800	440	170
OCT 11...	--	84215	2.3	170	6.7	12.0	--	37000	350	1000
OCT 10, 1972	0730	84215	1.5	161	6.5	9.0	--	500	50	200
OCT 05, 1973	1035	1028 _b /	--	190	6.5	15.5	11.2	8300	64	140
OCT 29, 1974	1415	1028	--	214	6.6	12.5	7.8	--	--	--
NOV 09, 1975	1500	1028	--	200	6.6	14.5	9.9	--	--	--
OCT 21, 1976	1545	1028	--	250	6.9	15.0	10.2	--	--	--
OCT 18, 1977	1130	80010 _c /	--	200	6.3	12.5	11.5	--	--	--
OCT 24, 1978	1020	80010	--	160	5.6	9.5	10.8	--	--	--
OCT 31, 1979	1115	80010	--	199	6.3	10.5	11.8	--	--	--
NOV 03, 1980	0845	80010	--	205	6.5	6.0	11.8	--	--	--

DATE	HARD- NESS (MG/L AS CaCO3)	HARD- NESS NONCAR- BONATE (MG/L AS CaCO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS Ca)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS Mg)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS Na)	SODIUM, DIS- SOLVED (MG/L AS Na)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
MAR , 1970	--	--	--	--	--	--	--	--	--	--
MAY 22...	--	--	11	--	7.0	--	7.8	--	1.6	--
OCT 26...	--	--	10	--	5.6	--	7.5	--	1.8	--
MAY 17, 1971	--	--	11	--	6.4	--	11	--	2.0	--
OCT 11...	--	--	11	--	3.5	--	7.0	--	1.8	--
OCT 10, 1972	--	--	12	--	4.8	--	7.6	--	1.3	--
OCT 05, 1973	60	39	--	14	--	6.0	--	9.2	--	1.7
OCT 29, 1974	75	67	--	20	--	6.2	--	8.6	--	1.6
NOV 03, 1975	65	40	--	14	--	7.3	--	10	--	1.5
OCT 21, 1976	65	33	--	15	--	6.8	--	12	--	2.3
OCT 18, 1977	61	34	--	13	--	6.9	--	11	--	1.7
OCT 24, 1978	60	55	--	12	--	7.3	--	11	--	2.2
OCT 31, 1979	--	--	--	--	--	--	--	--	--	--
NOV 03, 1980	47	--	--	9.1	--	6.0	--	11	--	1.2

a/ Chester County Health Department Laboratory, Pennsylvania.

b/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

c/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.

d/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

TABLE 2.-- Water-quality data for surface-water sites--Continued
 (Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25 Celsius;
 Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.)

01476790 - EAST BRANCH CHESTER CREEK AT GREEN HILL, PA--Continued

DATE	BICAR- BONATE FET-FLD (MG/L AS ECO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LINIT FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG C, DIS- SOLVED (MG/L)
MAR , 1970									
MAY 07...	--	--	--	--	--	--	--	--	102
MAY 22...	--	--	--	24	15	--	--	--	128
OCT 26...	--	--	--	22	19	--	--	--	56
MAY 17... 1971	--	--	--	11	3.7	--	--	--	135
OCT 11...	--	--	--	15	20	--	--	--	132
OCT 10... 1972	--	--	--	11	19	--	--	--	109
OCT 05... 1973	26	0	21	13	20	.40	9.6	--	--
OCT 29... 1974	11	0	9	16	23	.10	8.9	124	--
NOV 03... 1975	30	0	25	13	24	<.10	7.7	119	--
OCT 21... 1976	40	0	33	18	26	.10	8.6	140	--
OCT 18... 1977	33	0	27	12	22	<.10	8.0	127	--
OCT 24... 1978	6	0	5	23	27	<.10	7.3	214	--
OCT 31... 1979	--	--	19	14	27	.10	7.9	--	--
NOV 03... 1980	--	--	--	12	23	.00	7.9	94	--

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	NITRO- GEN NITRATE TOTAL (MG/L AS N)	NITRO- GEN NITRITE TOTAL (MG/L AS N)	NITRO- GEN NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN AMMONIA TOTAL (MG/L AS N)	NITRO- GEN ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)
MAR , 1970										
MAY 07...	--	--	--	--	--	--	--	--	--	--
MAY 22...	--	4.1	--	--	--	--	--	--	--	.023
OCT 26...	--	3.3	<.010	--	--	--	--	--	.013	<.010
MAY 17... 1971	--	4.7	.020	--	.050	.09	--	--	.045	.010
OCT 11...	--	3.2	.010	--	.010	.57	--	--	.052	<.010
OCT 10... 1972	--	4.2	.010	--	.010	.12	--	--	.020	.010
OCT 05... 1973	95	4.5	--	--	.080	.31	.38	--	.030	.020
OCT 29... 1974	90	4.7	--	--	.020	.38	.40	--	.030	.020
NOV 03... 1975	92	4.5	--	--	<.010	.54	.54	--	.020	.010
OCT 21... 1976	110	3.5	.010	3.5	.050	.25	.30	3.8	.050	.030
OCT 18... 1977	91	5.0	<.010	5.0	.060	.12	.18	5.2	.010	<.010
OCT 24... 1978	97	5.5	<.010	5.5	<.010	11	11	17	.010	<.010
OCT 31... 1979	--	--	--	4.2	.000	.19	.19	4.4	.010	--
NOV 03... 1980	--	5.6	.000	5.6	.040	.30	.34	5.9	.080	.030

01476790 - EAST BRANCH CHESTER CREEK AT GREEN HILL, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
MAR , 1970	--	--	--	--	--	--	--	--	--	--
OCT 07...	--	--	--	--	--	--	--	--	--	--
MAY 22...	--	<200	--	<500	--	<250	--	<250	--	--
OCT 26...	--	<100	--	<900	--	<250	--	<100	--	--
MAY 17, 1971	--	<150	--	<200	--	<250	--	150	--	--
OCT 11...	--	<100	--	<200	--	<250	--	<150	--	--
OCT 10, 1972	--	<100	--	<200	--	<250	--	<500	--	--
OCT 05, 1973	ND	--	ND	--	6	--	<20	90	--	<2
OCT 29, 1974	<2	--	ND	--	ND	--	<20	--	30	2
NOV 03, 1975	ND	--	ND	--	3	--	<20	--	30	ND
OCT 21, 1976	ND	--	<20	--	<2	--	ND	--	50	<2
OCT 18, 1977	ND	--	<2	--	ND	--	3	--	30	8
OCT 24, 1978	<2	--	ND	--	<2	--	7	--	70	12
OCT 31, 1979	--	10	--	--	--	10	--	--	--	--
NOV 03, 1980	2	--	1	--	0	--	0	--	30	0

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
MAR , 1970	--	--	--	--	--	--	--	--	--	--
OCT 22...	<100	<250	--	<250	--	<250	--	--	--	--
OCT 26...	<50	<250	--	<250	--	<20	--	--	--	--
MAY 17, 1971	<50	<250	--	<250	--	<20	--	--	10	.07
OCT 11...	<50	<250	--	<250	--	<50	--	--	13	.08
OCT 10, 1972	<50	<250	--	<250	--	<20	--	--	4	.02
OCT 05, 1973	--	30	--	--	ND	--	<20	--	--	--
OCT 29, 1974	--	--	30	--	5	--	<20	--	--	--
NOV 03, 1975	--	--	40	--	2	--	20	--	--	--
OCT 21, 1976	--	--	50	--	3	--	20	--	--	--
OCT 18, 1977	--	--	60	--	2	--	<20	.00	--	--
OCT 24, 1978	--	--	4200	--	21	--	250	.10	--	--
OCT 31, 1979	--	--	--	--	--	10	--	--	--	--
NOV 03, 1980	--	--	20	--	0	--	3	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01476830 - EAST BRANCH CHESTER CREEK AT MILLTOWN, PA

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) _d	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS. PER 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
FEB , 1970										
28...	--	84215a/	10	110	7.3	2.0	--	--	--	--
MAY 16...	--	84215	13	160	--	16.0	--	<1	--	<1
OCT 26...	--	84215	2.5	115	8.0	14.0	--	4300	--	600
MAY , 1971										
17...	--	84215	7.6	185	7.1	16.0	--	3200	3100	350
OCT 11...	--	84215	7.0	165	7.2	15.0	--	122000	2200	3500
OCT , 1972										
10...	0820	84215	4.6	171	6.9	9.0	--	3700	2000	2100
OCT , 1973										
05...	1120	1028b/	--	240	7.2	19.5	12.4	1600	1200	360
OCT , 1974										
29...	1530	1028	--	140	7.1	14.0	8.8	--	--	--
OCT , 1975										
31...	0945	1028	--	230	7.6	8.0	13.4	--	--	--
OCT , 1976										
21...	1445	1028	--	230	7.4	13.5	10.8	--	--	--
OCT , 1977										
18...	1245	80010c/	--	240	6.6	13.5	11.0	--	--	--
OCT , 1978										
24...	1130	80010	--	175	6.9	11.5	11.0	--	--	--
OCT , 1979										
31...	0830	80010	--	250	6.5	8.0	11.8	--	--	--
NOV , 1980										
03...	1030	80010	--	249	6.4	9.0	12.4	--	--	--

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
FEB , 1970	--	--	--	--	--	--	--	--	--	--
MAY 16...	--	--	20	--	10	--	11	--	2.2	--
OCT 26...	--	--	15	--	7.1	--	7.1	--	4.0	--
MAY , 1971										
17...	--	--	15	--	7.2	--	9.5	--	2.9	--
OCT 11...	--	--	8.1	--	2.4	--	3.7	--	1.3	--
OCT , 1972										
10...	--	--	13	--	7.0	--	7.5	--	2.9	--
OCT , 1973										
05...	73	23	--	15	--	8.6	--	8.5	--	3.2
OCT , 1974										
29...	76	31	--	18	--	7.5	--	8.1	--	4.0
OCT , 1975										
31...	83	35	--	19	--	8.7	--	9.1	--	3.6
OCT , 1976										
21...	76	31	--	17	--	8.2	--	5.3	--	5.2
OCT , 1977										
18...	83	30	--	19	--	8.7	--	9.8	--	3.6
OCT , 1978										
24...	85	35	--	19	--	9.2	--	9.3	--	4.2
OCT , 1979										
31...	--	--	--	--	--	--	--	--	--	--
NOV , 1980										
03...	91	--	--	20	--	10	--	9.6	--	2.8

a/ Chester County Health Department Laboratory, Pennsylvania.

b/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

c/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.

d/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

01476830 - EAST BRANCH CHESTER CREEK AT MILLTOWN, PA--Continued

DATE	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
FEB , 1970										
28...	--	--	--	--	--	--	--	--	121	--
MAY										
16...	--	--	--	33	13	--	--	--	136	--
OCT										
26...	--	--	--	27	12	--	--	--	85	--
MAY , 1971										
17...	--	--	--	22	11	--	--	--	154	--
OCT										
11...	--	--	--	19	11	--	--	--	140	--
OCT , 1972										
10...	--	--	--	9.3	17	--	--	--	112	--
OCT , 1973										
05...	61	0	50	16	15	.30	15	--	--	110
OCT , 1974										
29...	55	0	45	20	19	.10	9.9	127	--	110
OCT , 1975										
31...	58	0	48	19	18	<.10	13	138	--	120
OCT , 1976										
21...	55	0	45	22	11	.10	13	125	--	110
OCT , 1977										
18...	64	0	53	23	20	.10	12	150	--	130
OCT , 1978										
24...	61	0	50	22	20	.10	15	142	--	130
OCT , 1979										
31...	--	--	41	23	19	.10	15	--	--	--
NOV , 1980										
03...	--	--	--	22	24	.00	17	150	--	--

DATE	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)
FEB , 1970									
28...	--	--	--	--	--	--	--	--	--
MAY									
16...	4.1	--	--	--	--	--	--	--	.013
OCT									
26...	1.7	.024	--	.130	.18	--	--	.100	.040
MAY , 1971									
17...	3.3	.020	--	.070	.19	--	--	.072	.013
OCT									
11...	1.4	.020	--	.010	.83	--	--	.120	.040
OCT , 1972									
10...	2.3	.030	--	.030	.53	--	--	.060	.030
OCT , 1973									
05...	2.1	.001	2.1	.120	.64	.76	2.9	.040	.010
OCT , 1974									
29...	2.2	--	--	.070	1.0	1.1	--	.200	.050
OCT , 1975									
31...	2.7	--	--	.030	.71	.74	--	.050	.020
OCT , 1976									
21...	1.4	.020	1.4	.080	.45	.53	1.9	.370	.060
OCT , 1977									
18...	1.7	.020	1.7	.430	.21	.64	2.3	.050	.010
OCT , 1978									
24...	2.0	.050	2.0	.060	.46	.52	2.5	.100	<.010
OCT , 1979									
31...	--	--	2.6	.160	1.2	1.4	4.0	.030	--
NOV , 1980									
03...	2.4	.030	2.4	.060	.19	.25	2.7	.040	.010

01476830 - EAST BRANCH CHESTER CREEK AT MILLTOWN, PA--Continued

DATE	CADMIUM TOTAL DIS- SOLVED (UG/L AS CD)	CHROMIUM TOTAL RECOV- ERABLE (UG/L AS CR)	CHROMIUM TOTAL DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, TOTAL DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, TOTAL DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, TOTAL DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL DIS- SOLVED (UG/L AS PB)
FEB , 1970	--	--	--	--	--	--	--	--	--	--
MAY 28...	--	--	--	--	--	--	--	--	--	--
MAY 16...	--	--	--	--	--	--	--	--	--	--
OCT 26...	--	<100	--	<900	--	<250	--	<100	--	--
MAY 17, 1971	--	<150	--	<200	--	<250	--	400	--	--
OCT 11...	--	<100	--	<200	--	<250	--	<150	--	--
OCT 10, 1972	--	<100	--	<200	--	<250	--	1200	--	--
OCT 05, 1973	ND	--	ND	--	5	--	<20	360	--	<2
OCT 29, 1974	<2	--	ND	--	ND	--	ND	--	80	<2
OCT 31, 1975	<2	--	ND	--	ND	--	<20	--	100	2
OCT 21, 1976	<2	--	<20	--	<2	--	ND	--	230	2
OCT 18, 1977	ND	--	<2	--	ND	--	4	--	<10	8
OCT 24, 1978	ND	--	ND	--	2	--	<2	--	230	5
OCT 31, 1979	--	10	--	--	--	10	--	--	--	--
NOV 03, 1980	3	--	2	--	0	--	0	--	90	0

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGANESE TOTAL RECOV- ERABLE (UG/L AS MN)	MANGANESE TOTAL DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, TOTAL DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, TOTAL DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
FEB , 1970	--	--	--	--	--	--	--	--	--	--
MAY 16...	--	<250	--	--	--	--	--	--	--	--
OCT 26...	<50	--	--	<250	--	<20	--	--	--	--
MAY 17, 1971	<50	<250	--	<250	--	<20	--	--	27	.56
OCT 11...	<50	<250	--	<250	--	<50	--	--	25	.47
OCT 10, 1972	<50	<250	--	<250	--	<20	--	--	20	.25
OCT 05, 1973	--	110	--	--	ND	--	<20	--	--	--
OCT 29, 1974	--	--	100	--	<2	--	<20	--	--	--
OCT 31, 1975	--	--	120	--	2	--	<20	--	--	--
OCT 21, 1976	--	--	120	--	2	--	<20	--	--	--
OCT 18, 1977	--	--	90	--	3	--	ND	.00	--	--
OCT 24, 1978	--	--	140	--	3	--	ND	.00	--	--
OCT 31, 1979	--	--	--	--	--	10	--	--	--	--
NOV 03, 1980	--	--	80	--	0	--	2	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius;
 Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter;
 T/DAY, tons per day; dashes indicate no data.]

01476835 - EAST BRANCH CHESTER CREEK AT WESTTOWN SCHOOL, PA

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) _d	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
FEB , 1970										
21...	--	84215 _a /	6.9	130	8.0	10.0	--	120	--	<1
MAY 09...	--	84215	10	165	7.9	15.0	--	<1	--	<1
OCT 26...	--	84215	4.4	140	8.0	14.0	--	>300000.0	--	620
MAY 17... 1971	--	84215	13	180	7.1	17.0	--	20400	3000	750
OCT 11... 1972	--	84215	12	150	7.0	15.0	--	348000.0	7200	12000
OCT 10... 1973	0945	84215	7.8	178	6.5	9.5	--	28000	400	660
OCT 05... 1974	1155	1028 _b /	--	260	6.9	20.0	11.4	72000	6600	420
OCT 29... 1975	1600	1028	--	132	6.8	13.5	9.2	--	--	--
OCT 31... 1976	1245	1028	--	250	7.1	10.0	10.1	--	--	--
OCT 28... 1977	1130	1028	--	245	7.0	8.0	11.8	--	--	--
OCT 18... 1978	1400	80010 _c /	--	220	6.9	12.5	10.6	--	--	--
OCT 24... 1979	1515	80010	--	190	7.2	14.0	11.2	--	--	--
OCT 31... 1980	1315	80010	--	228	6.8	7.0	10.9	--	--	--
NOV 03...	1230	80010	--	270	6.9	9.5	11.7	--	--	--
DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
FEB , 1970	--	--	--	--	--	--	--	--	--	--
MAY 09...	--	--	7.3	--	4.7	--	7.4	--	2.0	--
OCT 26...	--	--	16	--	6.9	--	9.4	--	4.6	--
MAY 17... 1971	--	--	14	--	6.8	--	8.1	--	3.2	--
OCT 11... 1972	--	--	14	--	4.5	--	7.0	--	2.3	--
OCT 10... 1973	--	--	16	--	6.9	--	9.0	--	2.7	--
OCT 05... 1974	75	27	--	17	--	7.8	--	11	--	3.9
OCT 29... 1975	80	32	--	19	--	8.0	--	10	--	3.4
OCT 31... 1976	91	38	--	23	--	8.2	--	10	--	3.5
OCT 28... 1977	82	35	--	18	--	9.0	--	10	--	3.8
OCT 18... 1978	77	34	--	18	--	7.7	--	10	--	4.4
OCT 24... 1979	87	35	--	20	--	9.0	--	12	--	4.5
OCT 31... 1980	--	--	--	--	--	--	--	--	--	--
NOV 03...	93	--	--	21	--	9.9	--	12	--	3.5

_a/ Chester County Health Department Laboratory, Pennsylvania.

_b/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

_c/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.

_d/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

TABLE 2.-- Water-quality data for surface-water sites--Continued
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25 Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01476835 - EAST BRANCH CHESTER CREEK AT WESTTOWN SCHOOL, PA--Continued

DATE	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
FEB., 1970										
21...	--	--	--	22	20	--	--	--	--	--
MAY										
09...	--	--	--	38	6.3	--	--	--	120	--
OCT										
26...	--	--	--	26	15	--	--	--	82	--
MAY., 1971										
17...	--	--	--	17	12	--	--	--	130	--
OCT										
11...	--	--	--	19	12	--	--	--	129	--
OCT., 1972										
10...	--	--	--	18	18	--	--	--	116	--
OCT., 1973										
05...	58	0	48	21	15	.40	17	--	--	120
OCT., 1974										
29...	59	0	48	24	16	.20	18	142	--	130
OCT., 1975										
31...	65	0	53	24	16	.20	17	145	--	130
OCT., 1976										
28...	57	0	47	27	17	.10	17	141	--	130
OCT., 1977										
18...	53	0	43	22	16	.10	11	133	--	120
OCT., 1978										
24...	63	0	52	26	20	.10	16	155	--	140
OCT., 1979										
31...	--	--	42	24	19	.10	16	--	--	--
NOV										
03...	--	--	--	30	25	.00	18	157	--	--

DATE	NITRO- GEN NITRATE TOTAL (MG/L AS N)	NITRO- GEN NITRITE TOTAL (MG/L AS N)	NITRO- GEN NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN AMMONIA TOTAL (MG/L AS N)	NITRO- GEN ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)
FEB., 1970									
21...	2.2	--	--	--	--	--	--	--	.100
MAY									
09...	1.9	--	--	--	--	--	--	--	.250
OCT									
26...	2.1	.021	--	1.28	--	--	--	.050	.330
MAY., 1971									
17...	2.3	.040	--	.320	.29	--	--	.160	.033
OCT									
11...	1.4	.030	--	.010	.70	--	--	.193	.013
OCT., 1972									
10...	2.5	.030	--	.010	.18	--	--	.230	.200
OCT., 1973									
05...	2.2	.001	2.2	.270	.73	1.0	3.2	.510	.460
OCT., 1974									
29...	2.0	--	--	.610	.79	1.4	--	.590	.480
OCT., 1975									
31...	2.3	--	--	.900	1.1	2.0	--	.370	.230
OCT., 1976									
28...	2.9	.010	2.9	.070	.28	.35	3.3	.350	.290
OCT., 1977									
18...	1.8	.110	1.9	.160	1.8	2.0	3.9	.340	.180
OCT., 1978									
24...	3.2	.020	3.2	.070	.47	.54	3.7	.640	.550
OCT., 1979									
31...	--	--	2.8	.180	1.2	1.4	4.2	.220	--
NOV									
03...	3.7	.030	3.7	.270	.12	.39	4.1	.640	.510

01476635 - EAST BRANCH CHESTER CREEK AT WESTTOWN SCHOOL, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
FEB , 1970	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
MAY	--	--	--	--	--	--	--	--	--	--
09...	--	<200	--	<500	--	<250	--	<250	--	--
OCT	--	--	--	--	--	--	--	--	--	--
26...	--	<100	--	<900	--	<250	--	<100	--	--
MAY , 1971	--	--	--	--	--	--	--	--	--	--
17...	--	<150	--	<200	--	<250	--	880	--	--
OCT	--	--	--	--	--	--	--	--	--	--
11...	--	<100	--	<200	--	<250	--	<150	--	--
OCT , 1972	--	--	--	--	--	--	--	--	--	--
10...	--	<100	--	<200	--	<250	--	500	--	--
OCT , 1973	ND	--	ND	--	3	--	ND	460	--	ND
05...	ND	--	ND	--	ND	--	ND	--	180	<2
OCT , 1974	ND	--	ND	--	ND	--	ND	--	130	2
29...	<2	--	ND	--	ND	--	<20	--	110	5
OCT , 1975	<2	--	ND	--	ND	--	<20	--	110	8
31...	<2	--	ND	--	ND	--	<20	--	210	2
OCT , 1976	<2	--	<20	--	ND	--	<20	--	--	--
28...	ND	--	<2	--	ND	--	4	--	--	--
OCT , 1977	ND	--	<2	--	ND	--	5	--	--	--
18...	ND	--	ND	--	ND	--	--	--	--	--
OCT , 1978	ND	--	ND	--	ND	--	--	--	--	--
24...	--	10	--	--	--	10	--	--	--	--
OCT , 1979	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--
NOV , 1980	4	--	1	--	0	--	2	--	80	0
03...	--	--	--	--	--	--	--	--	--	--

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
FEB , 1970	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
MAY	--	--	--	--	--	--	--	--	--	--
09...	<100	<250	--	<250	--	<250	--	--	--	--
OCT	--	--	--	--	--	--	--	--	--	--
26...	<50	<250	--	<250	--	<20	--	--	--	--
MAY , 1971	--	--	--	--	--	--	--	--	--	--
17...	<50	280	--	<250	--	<20	--	--	41	1.4
OCT	--	--	--	--	--	--	--	--	--	--
11...	<50	<250	--	<250	--	<50	--	--	38	1.2
OCT , 1972	--	--	--	--	--	--	--	--	--	--
10...	<50	<250	--	<250	--	<20	--	--	5	.11
OCT , 1973	--	140	--	--	ND	--	<20	--	--	--
05...	--	--	140	--	3	--	<20	--	--	--
OCT , 1974	--	--	120	--	2	--	<20	--	--	--
29...	--	--	100	--	<2	--	<20	--	--	--
OCT , 1975	--	--	70	--	2	--	<20	.00	--	--
31...	--	--	70	--	<2	--	ND	.00	--	--
OCT , 1976	--	--	--	--	--	0	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
OCT , 1977	--	--	370	--	0	--	2	.00	--	--
18...	--	--	--	--	--	--	--	--	--	--
OCT , 1978	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--
OCT , 1979	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--
NOV , 1980	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued
 (Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.)

01476840 - TRIBUTARY (GOOSE CREEK) TO EAST BRANCH CHESTER CREEK NEAR WEST CHESTER, PA

DATE	TIME	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM)g/	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCOCCI FECAL, (COLS. PER 100 ML)
MAR , 1970										
14...	--	84215g/	9.1	425	7.7	6.0	--	--	--	--
MAY 01...	--	84215	14	750	8.0	24.0	--	<1	--	5
OCT 26...	--	84215	2.0	600	7.5	15.0	--	4800	--	10
MAY , 1971										
17...	--	84215	--	980	7.6	18.0	--	2200	31	8
OCT 11...	--	84215	--	460	7.6	15.0	--	268000	2700	600
OCT , 1972										
10...	1115	84215	--	800	6.4	12.0	--	19000	220	670
OCT , 1973										
02...	1225	1028b/	--	940	7.3	21.0	--	19000	220	670
OCT , 1974										
29...	1630	1028	--	700	7.3	16.0	6.5	--	--	--
NOV , 1975										
07...	1530	1028	--	980	7.5	18.5	5.9	--	--	--
OCT , 1976										
20...	1045	1028	--	900	7.5	15.0	5.6	--	--	--
OCT , 1977										
18...	1515	80010g/	--	950	7.3	15.0	7.2	--	--	--
OCT , 1978										
24...	1515	80010	--	1030	7.6	14.5	4.6	--	--	--
OCT , 1979										
31...	1430	80010	--	1010	7.3	9.0	5.9	--	--	--
NOV , 1980										
03...	1430	80010	--	1250	5.4	13.5	7.7	--	--	--

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL, RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL, RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL, RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
MAR , 1970	--	--	--	--	--	--	--	--	--	--
MAY 01...	--	--	19	--	10	--	61	--	16	--
OCT 26...	--	--	39	--	12	--	67	--	22	--
MAY , 1971										
17...	--	--	36	--	13	--	42	--	13	--
OCT 11...	--	--	42	--	15	--	28	--	14	--
OCT , 1972										
10...	--	--	32	--	11	--	58	--	16	--
OCT , 1973										
05...	150	23	--	38	--	13	--	76	--	26
OCT , 1974										
29...	170	34	--	44	--	14	--	100	--	32
NOV , 1975										
07...	150	150	--	38	--	14	--	76	--	28
OCT , 1976										
20...	150	22	--	37	--	14	--	64	--	25
OCT , 1977										
18...	170	33	--	46	--	14	--	72	--	27
OCT , 1978										
24...	170	130	--	46	--	14	--	75	--	27
OCT , 1979										
31...	--	--	--	--	--	--	--	--	--	--
NOV , 1980										
03...	160	--	--	39	--	15	--	110	--	31

a/ Chester County Health Department Laboratory, Pennsylvania.

b/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

c/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.

g/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

01476840 - TRIBUTARY (GOOSE CREEK) TO EAST BRANCH CHESTER CREEK NEAR WEST CHESTER, PA--CONTINUED

DATE	BICARBONATE FET-FLD (MG/L AS HCO3)	CARBONATE FET-FLD (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLORIDE, DIS- SOLVED (MG/L AS CL)	FLUORIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS RESIDUE AT 180 DEG C DIS- SOLVED (MG/L)	SOLIDS RESIDUE AT 105 DEG C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
MAR , 1970	--	--	--	--	--	--	--	--	--	--
MAY 14...	--	--	--	--	--	--	--	--	--	--
OCT 01...	--	--	--	--	96	--	--	--	425	--
OCT 26...	--	--	--	100	110	--	--	--	487	--
MAY 17, 1971	--	--	--	73	59	--	--	--	144	--
OCT 11...	--	--	--	60	41	--	--	--	315	--
OCT 10, 1972	--	--	--	110	98	--	--	--	462	--
OCT 05, 1973	150	0	126	94	110	.90	23	--	--	460
OCT 29, 1974	160	0	134	99	150	.70	21	564	--	540
NOV 07, 1975	8	0	7	94	120	.30	23	490	--	400
OCT 20, 1976	160	0	128	94	100	.10	22	496	--	430
OCT 18, 1977	170	0	140	100	140	.10	20	525	--	500
OCT 24, 1978	56	0	46	99	160	.20	21	533	--	470
OCT 31, 1979	--	--	110	91	130	.10	22	--	--	--
NOV 03, 1980	--	--	--	110	150	.10	24	624	--	--

DATE	NITROGEN NITRATE TOTAL (MG/L AS N)	NITROGEN NITRITE TOTAL (MG/L AS N)	NITROGEN NO2+NO3 TOTAL (MG/L AS N)	NITROGEN AMMONIA TOTAL (MG/L AS N)	NITROGEN ORGANIC TOTAL (MG/L AS N)	NITROGEN AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)
MAR , 1970	--	--	--	--	--	--	--	--	--
MAY 01...	3.8	--	--	--	--	--	--	--	4.31
OCT 26...	5.5	.640	--	3.70	.02	--	--	6.00	--
MAY 17, 1971	5.9	.182	--	14.0	1.0	--	--	2.32	2.25
OCT 11...	4.0	.240	--	10.0	1.7	--	--	.451	.350
OCT 10, 1972	2.3	.540	--	27.5	3.4	--	--	5.70	3.70
OCT 05, 1973	7.0	--	--	.190	2.7	2.9	--	6.50	5.90
OCT 29, 1974	7.9	--	--	.600	4.8	5.4	--	6.30	5.10
NOV 07, 1975	5.6	--	--	26.0	5.0	31	--	4.40	4.00
OCT 20...	2.2	.540	2.7	24.0	7.0	31	34	3.10	3.40
OCT 18, 1977	2.1	.610	2.7	31.0	33	64	67	5.40	4.50
OCT 24, 1978	1.7	.690	2.4	33.0	6.0	39	41	5.20	4.70
OCT 31, 1979	--	--	17	27.0	100	130	150	7.30	--
NOV 03, 1980	30	1.20	31	12.0	3.0	15	46	6.20	5.60

01475840 - TRIBUTARY (GOOSE CREEK) TO EAST BRANCH CHESTER CREEK NEAR WEST CHESTER, PA--CONTINUED

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, TOTAL DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, TOTAL DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, TOTAL DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, TOTAL DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL DIS- SOLVED (UG/L AS PB)
MAR , 1970	--	--	--	--	--	--	--	--	--	--
MAY 14...	--	--	--	--	--	--	--	--	--	--
MAY 01...	--	<200	--	<500	--	<250	--	<250	--	--
OCT 26...	--	<100	--	<900	--	<250	--	<250	--	--
MAY 17, 1971	--	<150	--	<200	--	<250	--	800	--	--
OCT 31...	--	<100	--	<200	--	<250	--	2200	--	--
OCT 10, 1972	--	<100	--	<200	--	<250	--	1500	--	--
OCT 05, 1973	20	--	30	--	ND	--	30	1000	--	4
OCT 29, 1974	4	--	<20	--	ND	--	50	--	140	3
NOV 07, 1975	<2	--	ND	--	ND	--	20	--	150	6
OCT 20, 1976	<2	--	<20	--	ND	--	30	--	320	91
OCT 18, 1977	ND	--	2	--	ND	--	ND	--	180	7
OCT 24, 1978	<2	--	ND	--	<2	--	38	--	680	5
OCT 31, 1979	--	10	--	--	--	50	--	--	--	--
NOV 03, 1980	3	--	6	--	0	--	33	--	200	2

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, TOTAL DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, TOTAL DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, TOTAL DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, PENDE- D (MG/L)	SEDI- MENT, DIS- CHARGE, PENDE- D (T/DAY)
MAR , 1970	--	--	--	--	--	--	--	--	--	--
MAY 14...	--	--	--	--	--	--	--	--	--	--
MAY 01...	<100	<250	--	<250	--	<250	--	--	--	--
OCT 26...	<50	670	--	<250	--	<40	--	--	--	--
MAY 17, 1971	850	300	--	<250	--	<50	--	--	270	--
OCT 31...	<60	400	--	<250	--	<60	--	--	18	--
OCT 10, 1972	<70	<250	--	<250	--	<70	--	--	--	--
OCT 05, 1973	--	290	--	--	4	--	80	--	--	--
OCT 29, 1974	--	--	200	--	6	--	90	--	--	--
NOV 07, 1975	--	--	140	--	4	--	120	--	--	--
OCT 20, 1976	--	--	200	--	5	--	90	--	--	--
OCT 18, 1977	--	--	190	--	2	--	80	10	--	--
OCT 24, 1978	--	--	280	--	5	--	360	70	--	--
OCT 31, 1979	--	--	--	--	--	360	--	--	--	--
NOV 03, 1980	--	--	3000	--	3	--	340	40	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued

{Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.}

01478120 - EAST BRANCH WHITE CLAY CREEK AT AVONDALE, PA

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) _d	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCOCCI FECAL, (COLS. PER 100 ML)	
JUN , 1970											
02...	--	84215 _a /	10	190	8.0	22.0	--	5500	--	12	
OCT 27...	--	84215	4.8	200	8.4	12.0	--	900	--	570	
MAY 18...	--	84215	12	210	7.3	16.0	--	5000	740	210	
OCT 12...	--	84215	10	230	7.0	14.0	--	2000	2800	1000	
OCT 17...	1000	84215	8.3	228	8.0	12.0	--	1200	440	340	
OCT 08...	1040	1028 _b /	--	310	6.8	15.0	7.2	6000	360	440	
OCT 30...	1035	1028	--	293	7.1	11.5	9.0	--	--	--	
NOV 06...	1100	1028	--	280	7.9	10.5	12.3	--	--	--	
OCT 29...	1445	1028	--	320	7.7	9.0	12.2	--	--	--	
NOV 01...	1330	80010 _c /	--	260	8.3	13.0	13.4	--	--	--	
OCT 25...	1230	80010	--	295	7.7	9.0	12.8	--	--	--	
NOV 06...	1330	80010	--	272	6.8	8.0	13.2	--	--	--	
NOV 20...	1500	80010	--	340	7.7	6.0	12.2	--	--	--	
DATE		HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
JUN , 1970											
02...	--	--	--	22	--	11	--	7.0	--	3.0	--
OCT 27...	--	--	--	22	--	11	--	6.6	--	3.7	--
MAY 18...	--	--	--	26	--	12	--	6.3	--	2.5	--
OCT 12...	--	--	--	29	--	12	--	6.6	--	3.9	--
OCT 17...	--	--	--	30	--	11	--	7.0	--	2.4	--
OCT 08...	110	34	--	26	--	12	--	7.5	--	2.7	--
OCT 30...	120	32	--	29	--	12	--	6.2	--	2.4	--
NOV 06...	120	42	--	29	--	12	--	6.4	--	2.6	--
OCT 29...	120	38	--	28	--	12	--	6.7	--	3.0	--
NOV 01...	130	53	--	29	--	13	--	7.4	--	3.0	--
OCT 25...	130	47	--	30	--	13	--	6.6	--	2.9	--
NOV 06...	--	--	--	--	--	--	--	--	--	--	--
NOV 20...	120	--	--	27	--	12	--	7.9	--	2.7	--

^a/ Chester County Health Department Laboratory, Pennsylvania.

^b/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

^c/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.

^d/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

TABLE 2.-- Water-quality data for surface-water sites--Continued
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25 Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UC/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01478120 - EAST BRANCH WHITE CLAY CREEK AT AVONDALE, PA--Continued

DATE	BICARBONATE FET-FLD (MG/L AS HCO3)	CARBONATE FET-FLD (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLORIDE, DIS- SOLVED (MG/L AS CL)	FLUORIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
JUN , 1970										
OCT 02...	--	--	--	23	11	--	--	--	211	--
OCT 27...	--	--	--	31	17	--	--	--	144	--
MAY 18... 1971	--	--	--	24	11	--	--	--	58	--
OCT 12...	--	--	--	24	13	--	--	--	199	--
OCT 17... 1972	--	--	--	27	14	--	--	--	155	--
OCT 08... 1973	98	0	80	21	14	.40	14	--	--	150
OCT 30... 1974	110	0	90	23	13	.10	12	173	--	150
NOV 06... 1975	97	0	80	23	14	<.10	13	162	--	150
OCT 29... 1976	99	0	81	24	14	.10	16	174	--	150
NOV 01... 1977	88	0	73	23	14	<.10	14	174	--	150
OCT 25... 1978	100	0	82	24	14	.10	15	167	--	150
NOV 06... 1979	--	--	73	25	13	.10	15	--	--	--
NOV 20... 1980	--	--	--	29	16	.10	16	183	--	--

DATE	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)
JUN , 1970									
OCT 02...	3.7	--	--	--	--	--	--	--	.084
OCT 27...	2.5	.021	--	--	.03	--	--	.050	.033
MAY 18... 1971	4.2	.010	--	--	.03	--	--	.060	.020
OCT 12...	3.5	.010	--	.490	.66	--	--	.114	.030
OCT 17... 1972	4.3	.010	--	.010	.16	--	--	.080	.060
OCT 08... 1973	3.8	<.010	3.8	.030	.43	.46	4.3	.090	.070
OCT 30... 1974	4.5	--	--	.020	.35	.38	--	.030	.020
NOV 06... 1975	4.3	--	--	<.010	.53	.53	--	.020	.010
OCT 29... 1976	4.0	.010	4.0	.040	.26	.30	4.3	.060	.040
NOV 01... 1977	3.6	.010	3.6	.020	.42	.44	4.0	.040	.020
OCT 25... 1978	4.4	.010	4.4	.040	.13	.17	4.6	.040	.030
NOV 06... 1979	--	--	4.6	.010	.22	.23	4.8	.020	--
NOV 20... 1980	4.0	.010	4.0	.000	.23	.23	4.2	.040	.020

01478120 - EAST BRANCH WHITE CLAY CREEK AT AVONDALE, PA--Continued

DATE	CADMIUM TOTAL DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
JUN , 1970	--	--	--	--	--	--	--	--	--	--
OCT 02...	--	--	--	--	--	--	--	--	--	--
OCT 27...	--	<100	--	<900	--	<250	--	<100	--	--
MAY 18...	--	<150	--	<200	--	<250	--	<200	--	--
OCT 12...	--	<100	--	<200	--	<250	--	<150	--	--
OCT 17...	--	<100	--	<200	--	<250	--	230	--	--
OCT 17...	<2	--	ND	--	ND	--	ND	200	--	ND
OCT 30...	ND	--	ND	--	ND	--	ND	--	30	ND
NOV 06...	<2	--	ND	--	ND	--	ND	--	20	2
OCT 29...	<2	--	<20	--	ND	--	ND	--	40	3
NOV 01...	ND	--	<2	--	ND	--	3	--	50	130
OCT 25...	ND	--	ND	--	<2	--	ND	--	<10	4
NOV 06...	--	10	--	--	--	0	--	--	--	--
NOV 20...	2	--	1	--	1	--	1	--	20	1

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
JUN , 1970	--	--	--	--	--	--	--	--	14	.38
OCT 02...	--	--	--	--	--	--	--	--	--	--
OCT 27...	<50	<250	--	<250	--	<20	--	--	--	--
MAY 18...	<50	<250	--	<250	--	<20	--	--	11	.37
OCT 12...	<50	<250	--	<250	--	<50	--	--	4	.11
OCT 17...	<50	<250	--	<250	--	<20	--	--	5	.11
OCT 17...	--	20	--	--	ND	--	20	--	--	--
OCT 30...	--	--	20	--	3	--	<20	--	--	--
NOV 06...	--	--	20	--	<2	--	<20	--	--	--
OCT 29...	--	--	80	--	<2	--	<20	--	--	--
NOV 01...	--	--	60	--	ND	--	<20	.00	--	--
OCT 25...	--	--	20	--	2	--	ND	.00	--	--
NOV 06...	--	--	--	--	--	10	--	--	--	--
NOV 20...	--	--	20	--	0	--	1	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued
 (Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.)

01478190 - EAST BRANCH WHITE CLAY CREEK AT WICKERTON, PA

DATE	TIME	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) ^{a/}	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
JUN , 1970										
OCT 02...	--	84215 ^{a/}	9.2	110	7.2	22.0	--	630	--	16
OCT 27...	--	84215	4.9	120	8.3	12.0	--	1300	--	520
MAY 18... 1971	--	84215	12	150	7.4	18.0	--	5000	510	88
OCT 12... 1972	--	84215	10	145	7.4	14.0	--	6000	14000	7300
OCT 17... 1973	1120	84215	8.8	145	7.6	12.5	--	1400	250	220
OCT 08... 1974	1145	1028 ^{b/}	--	180	6.8	16.0	--	9400	230	200
OCT 30... 1974	1105	1028	--	180	7.0	12.5	10.2	--	--	--
NOV 06... 1975	1245	1028	--	170	7.8	13.0	12.0	--	--	--
NOV 01... 1976	0930	1028	--	190	7.0	8.0	11.2	--	--	--
NOV 01... 1977	1500	80010 ^{c/}	--	160	7.6	13.5	12.4	--	--	--
OCT 25... 1978	1545	80010	--	255	6.8	11.0	13.2	--	--	--
NOV 08... 1979	1130	80010	--	167	6.4	8.0	12.4	--	--	--
NOV 20... 1980	1230	80010	--	220	7.2	6.0	13.1	--	--	--

DATE	HARD- NESS (MG/L AS CaCO3)	HARD- NESS NONCAR- BONATE (MG/L AS CaCO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS Ca)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, TOTAL/ RECOV- ERABLE (MG/L AS Mg)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)	SODIUM, TOTAL/ RECOV- ERABLE (MG/L AS Na)	SODIUM, DIS- SOLVED (MG/L AS Na)	POTAS- SIUM, TOTAL/ RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
JUN , 1970										
OCT 02...	--	--	9.6	--	4.7	--	6.7	--	3.1	--
OCT 27...	--	--	16	--	5.3	--	7.4	--	3.4	--
MAY 18... 1971	--	--	12	--	5.5	--	6.5	--	2.9	--
OCT 12... 1972	--	--	13	--	5.2	--	5.9	--	4.3	--
OCT 17... 1973	--	--	13	--	5.7	--	8.7	--	2.8	--
OCT 08... 1974	55	22	--	12	--	6.2	--	8.4	--	3.0
OCT 30... 1974	55	20	--	13	--	5.5	--	7.5	--	3.2
NOV 06... 1975	58	24	--	14	--	5.6	--	6.4	--	2.9
NOV 01... 1976	57	24	--	13	--	5.9	--	5.7	--	5.6
NOV 01... 1977	65	23	--	15	--	6.8	--	9.0	--	3.9
OCT 25... 1978	61	25	--	14	--	6.3	--	8.0	--	3.4
NOV 08... 1979	--	--	--	--	--	--	--	--	--	--
NOV 20... 1980	63	--	--	14	--	6.8	--	9.1	--	3.7

^{a/} Chester County Health Department Laboratory, Pennsylvania.
^{b/} U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.
^{c/} U.S. Geological Survey Central Laboratory Atlanta, Georgia.
^{d/} Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

01478190 - EAST BRANCH WHITE CLAY CREEK AT WICKERTON, PA--Continued

DATE	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LINTY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
JUN , 1970	--	--	--	11	8.4	--	--	--	173	--
OCT 02...	--	--	--	17	12	--	--	--	66	--
MAY , 1971	--	--	--	25	9.6	--	--	--	87	--
OCT 18...	--	--	--	15	9.4	--	--	--	132	--
OCT 12...	--	--	--	18	12	--	--	--	85	--
OCT 17...	41	0	34	9.1	12	.30	15	--	--	86
OCT 08...	43	0	35	13	12	.10	13	113	--	89
NOV 30...	41	0	34	10	12	.10	11	93	--	82
NOV 06...	40	0	33	21	13	.10	14	110	--	98
NOV 01...	52	0	43	--	--	--	--	--	--	--
NOV 01...	44	0	36	12	14	.10	13	109	--	93
OCT 25...	--	--	27	15	12	.10	14	--	--	--
NOV 08...	--	--	--	17	15	.10	15	128	--	--
NOV 20...	--	--	--	--	--	--	--	--	--	--

DATE	NITRO- GEN NITRATE TOTAL (MG/L AS N)	NITRO- GEN NITRITE TOTAL (MG/L AS N)	NITRO- GEN NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN AMMONIA TOTAL (MG/L AS N)	NITRO- GEN ORGANIC TOTAL (MG/L AS N)	NITRO- GEN AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)
JUN , 1970	3.7	--	--	--	--	--	--	--	.232
OCT 02...	2.7	.060	--	.110	.04	--	--	.330	.290
MAY , 1971	3.8	.042	--	.240	.08	--	--	.180	.190
OCT 18...	3.1	.030	--	.960	.76	--	--	.210	.092
OCT 12...	4.8	.121	--	.330	.37	--	--	.570	.480
OCT 17...	4.4	<.010	4.4	.130	.66	.78	5.2	--	--
OCT 08...	4.2	--	--	.170	.61	.78	--	.340	.290
NOV 30...	4.3	--	--	.010	.72	.73	--	.170	.150
NOV 06...	2.7	.050	2.7	.080	.66	.75	3.5	.130	.060
NOV 01...	3.6	.080	3.7	.480	.52	1.0	4.7	.310	.270
NOV 01...	4.7	.160	4.9	.130	.29	.42	5.3	.310	.300
OCT 25...	--	--	4.3	.010	.43	.44	4.7	.100	--
NOV 08...	3.8	.060	3.9	.610	.09	.70	4.6	.300	.270
NOV 20...	--	--	--	--	--	--	--	--	--

01478190 - EAST BRANCH WHITE CLAY CREEK AT WICKERTON, PA--Continued

DATE	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)
JUN , 1970	--	--	--	--	--	--	--	--	--	--
OCT 02...	--	--	--	--	--	--	--	--	--	--
OCT 27...	--	<100	--	<900	--	<250	--	<100	--	--
MAY 18...	--	<150	--	<200	--	<250	--	180	--	--
OCT 12...	--	<100	--	<200	--	<250	--	150	--	--
OCT 17...	--	<100	--	<200	--	<250	--	240	--	--
OCT 08...	ND	--	ND	--	3	--	ND	170	--	ND
OCT 30...	ND	--	ND	--	ND	--	ND	--	80	ND
NOV 06...	ND	--	ND	--	ND	--	ND	--	60	2
NOV 01...	<2	--	<20	--	ND	--	<20	--	200	4
NOV 01...	ND	--	<2	--	ND	--	3	--	180	2
OCT 25...	ND	--	ND	--	<2	--	3	--	50	3
NOV 06...	--	10	--	--	--	0	--	--	--	--
NOV 20...	1	--	1	--	1	--	3	--	90	2

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
JUN , 1970	--	<250	--	--	--	--	--	--	16	.40
OCT 27...	<50	450	--	<250	--	<20	--	--	--	--
MAY 18...	<50	<250	--	<250	--	<20	--	--	6	.19
OCT 12...	<50	<250	--	<250	--	<50	--	--	5	.14
OCT 17...	<50	<250	--	<250	--	<20	--	--	3	.07
OCT 08...	--	30	--	--	ND	--	<20	--	--	--
OCT 30...	--	--	30	--	4	--	<20	--	--	--
NOV 06...	--	--	20	--	<2	--	<20	--	--	--
NOV 01...	--	--	70	--	3	--	<20	--	--	--
NOV 01...	--	--	70	--	ND	--	20	.10	--	--
OCT 25...	--	--	30	--	<2	--	ND	.10	--	--
NOV 06...	--	--	--	--	--	10	--	--	--	--
NOV 20...	--	--	50	--	0	--	3	.10	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01478220 - WEST BRANCH WHITE CLAY CREEK NEAR CHESTERVILLE, PA

DATE	TIME	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) _d	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
JUN , 1970										
02...	--	84215 _a /	7.3	100	7.8	24.0	--	22	--	<1
OCT 27...	--	84215	3.9	90	7.3	11.0	--	490	--	130
MAY , 1971										
24...	--	84215	9.7	130	7.3	18.0	--	2000	200	130
OCT 12...	--	84215	9.9	115	7.4	15.0	--	9000	1100	2200
OCT 17 , 1972	1245	84215	8.2	100	7.8	13.5	--	500	84	150
OCT 08 , 1973	1245	1028 _b /	--	140	7.2	17.5	--	9000	75	170
OCT 30 , 1974	1145	1028	--	130	6.9	12.5	10.8	--	--	--
NOV , 1975	1330	1028	--	130	8.0	13.0	11.9	--	--	--
NOV 06 , 1976	1030	1028	--	170	7.0	8.0	11.6	--	--	--
NOV 01 , 1977	1530	80010 _c /	--	140	7.4	13.0	12.0	--	--	--
OCT 26 , 1978	0845	80010	--	170	6.7	10.0	12.0	--	--	--
NOV 08 , 1979	1030	80010	--	139	6.6	6.5	12.8	--	--	--
NOV 20 , 1980	1345	80010	--	200	7.3	5.0	13.6	--	--	--

DATE	HARD- NESS (MG/L AS CaCO3)	HARD- NESS NONCAR- BONATE (MG/L AS CaCO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
JUN , 1970	--	--	6.8	--	3.1	--	6.6	--	2.6	--
OCT 27...	--	--	9.0	--	3.5	--	6.6	--	4.3	--
MAY , 1971	--	--	9.0	--	3.6	--	6.8	--	2.3	--
OCT 12...	--	--	8.4	--	3.3	--	6.2	--	3.6	--
OCT 17 , 1972	--	--	8.7	--	3.4	--	6.0	--	2.5	--
OCT 08 , 1973	39	18	--	9.0	--	3.9	--	6.5	--	2.8
OCT 30 , 1974	40	15	--	9.7	--	3.8	--	5.5	--	2.6
NOV 06 , 1975	41	20	--	11	--	3.4	--	5.7	--	3.0
NOV 01 , 1976	49	17	--	12	--	4.6	--	5.5	--	6.8
NOV 01 , 1977	45	18	--	11	--	4.3	--	7.0	--	4.4
OCT 26 , 1978	45	24	--	11	--	4.2	--	6.4	--	2.9
NOV 06 , 1979	--	--	--	--	--	--	--	--	--	--
NOV 20 , 1980	51	--	--	12	--	5.2	--	7.7	--	3.5

_a/ Chester County Health Department Laboratory, Pennsylvania.

_b/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

_c/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.

_d/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

TABLE 2.-- Water-quality data for surface-water sites--Continued
 (Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.)

01478220 - WEST BRANCH WHITE CLAY CREEK NEAR CHESTERVILLE, PA--Continued

DATE	BICARBONATE FET-FLD (MG/L AS HCO3)	CARBONATE FET-FLD (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CA CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLORIDE, DIS- SOLVED (MG/L AS CL)	FLUORIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
JUN , 1970										
OCT 02...	--	--	--	19	7.4	--	--	--	94	--
OCT 27...	--	--	--	16	12	--	--	--	50	--
MAY , 1971										
OCT 24...	--	--	--	13	9.1	--	--	--	64	--
OCT 12...	--	--	--	17	6.6	--	--	--	97	--
OCT 17...	--	--	--	18	8.8	--	--	--	62	--
OCT 08...	25	0	21	10	11	.40	13	--	--	69
OCT 30...	30	0	25	12	8.8	.10	12	80	--	69
NOV 06...	27	0	22	12	9.3	.10	11	86	--	69
NOV 01...	39	0	32	29	10	.10	13	107	--	100
OCT 01...	33	0	27	15	9.7	<.10	13	91	--	81
OCT 26...	26	0	21	12	11	.10	12	92	--	73
NOV 06...	--	--	20	17	10	.10	13	--	--	--
NOV 20...	--	--	--	19	14	.10	15	109	--	--

DATE	NITRO- GEN NITRATE TOTAL (MG/L AS N)	NITRO- GEN NITRITE TOTAL (MG/L AS N)	NITRO- GEN NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN AMMONIA TOTAL (MG/L AS N)	NITRO- GEN ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTEO, TOTAL (MG/L AS P)
JUN , 1970									
OCT 02...	2.4	--	--	--	--	--	--	--	.131
OCT 27...	1.9	.010	--	.130	.03	--	--	.010	.010
MAY , 1971									
OCT 24...	2.8	<.010	--	--	.08	--	--	.030	.000
OCT 12...	2.2	<.010	--	.520	.83	--	--	.062	.010
OCT 17...	3.4	<.010	--	.010	.24	--	--	.020	.020
OCT 08...	2.3	--	--	.070	.66	.73	--	.040	.020
OCT 30...	3.2	--	--	.030	.53	.56	--	.020	.010
NOV 06...	2.9	--	--	<.010	.56	.56	--	.010	<.010
NOV 01...	2.0	.010	2.0	.080	.50	.58	2.6	.080	.050
NOV 01...	2.0	.010	2.0	.050	.33	.38	2.4	.010	<.010
OCT 26...	2.5	.010	2.5	.060	.31	.37	2.9	.010	<.010
NOV 06...	--	--	--	.040	.15	.19	--	.100	--
NOV 20...	3.0	.010	3.0	.010	.15	.16	3.2	.020	.000

01478220 - WEST BRANCH WHITE CLAY CREEK NEAR CHESTERVILLE, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
JUN , 1970										
02...	--	--	--	--	--	--	--	--	--	--
OCT 27...	--	<100	--	<900	--	<250	--	<100	--	--
MAY , 1971										
24...	--	<150	--	<200	--	<250	--	150	--	--
OCT 12...	--	<100	--	<200	--	<250	--	<150	--	--
OCT 17, 1972										
17...	--	<100	--	<200	--	<250	--	160	--	--
OCT , 1973										
08...	ND	--	ND	--	4	--	ND	90	--	ND
OCT , 1974										
30...	ND	--	ND	--	ND	--	ND	--	90	ND
NOV , 1975										
06...	ND	--	ND	--	<2	--	ND	--	90	2
NOV , 1976										
01...	<2	--	<20	--	ND	--	<20	--	170	5
NOV , 1977										
01...	ND	--	ND	--	ND	--	ND	--	140	ND
OCT , 1978										
26...	<2	--	ND	--	<2	--	<2	--	90	13
NOV , 1979										
06...	--	10	--	--	--	10	--	--	--	--
NOV , 1980										
20...	0	--	1	--	1	--	3	--	100	1

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
JUN , 1970										
02...	--	--	--	--	--	--	--	--	9	.18
OCT 27...	<50	500	--	<250	--	<20	--	--	--	--
MAY , 1971										
24...	<50	<250	--	<250	--	<20	--	--	3	.08
OCT 12...	<50	<250	--	<250	--	<50	--	--	5	.13
OCT 17, 1972										
17...	<50	<250	--	<250	--	<20	--	--	3	.07
OCT , 1973										
08...	--	20	--	--	ND	--	<20	--	--	--
OCT , 1974										
30...	--	--	40	--	2	--	20	--	--	--
NOV , 1975										
06...	--	--	40	--	<2	--	<20	--	--	--
NOV , 1976										
01...	--	--	50	--	<2	--	<20	--	--	--
NOV , 1977										
01...	--	--	60	--	ND	--	20	.00	--	--
OCT , 1978										
26...	--	--	30	--	<2	--	ND	.00	--	--
NOV , 1979										
06...	--	--	--	--	--	10	--	--	--	--
NOV , 1980										
20...	--	--	150	--	0	--	2	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01479680 - WEST BRANCH RED CLAY CREEK AT KENNETT SQUARE, PA

DATE	TIME	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- TANCE (US/CM) ^{a/}	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
JUN , 1970										
OCT 02...	--	84215 ^{a/}	12	150	7.5	20.0	--	--	--	--
OCT 27...	--	84215	5.2	360	7.9	14.0	--	--	--	190000
MAY 18... 1971	--	84215	14	215	7.6	5.0	--	145000	28000	940
OCT 12... 1972	--	84215	12	225	7.5	12.0	--	8000	16000	1400
OCT 17... 1972	0840	84215	9.0	215	7.5	11.5	--	5000	9800	1600
OCT 08... 1973	0955	1028 ^{b/}	--	280	6.7	15.0	10.0	>990000	47000	5200
OCT 30... 1974	1015	1028	--	240	7.1	11.5	10.2	--	--	--
NOV 06... 1975	1030	1028	--	240	7.5	10.5	11.6	--	--	--
OCT 29... 1976	1245	1028	--	320	7.3	8.0	12.2	--	--	--
NOV 01... 1977	1000	80010 ^{c/}	--	250	7.3	11.5	12.4	--	--	--
OCT 25... 1978	1145	80010	--	320	7.3	10.0	12.0	--	--	--
NOV 06... 1979	0800	80010	--	229	6.1	6.5	11.8	--	--	--
NOV 17... 1980	0930	80010	--	275	7.3	4.5	14.0	--	--	--

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
JUN , 1970										
OCT 02...	--	--	15	--	7.4	--	8.8	--	3.1	--
OCT 27...	--	--	33	--	15	--	19	--	19	--
MAY 18... 1971	--	--	18	--	8.8	--	7.9	--	3.4	--
OCT 12... 1972	--	--	22	--	8.2	--	8.0	--	5.9	--
OCT 17... 1972	--	--	23	--	9.7	--	10	--	3.3	--
OCT 08... 1973	94	28	--	21	--	10	--	9.5	--	3.6
OCT 30... 1974	96	32	--	22	--	10	--	7.0	--	2.8
NOV 06... 1975	95	33	--	22	--	9.8	--	7.0	--	3.3
OCT 29... 1976	96	33	--	22	--	10	--	8.8	--	3.5
NOV 01... 1977	100	35	--	23	--	11	--	8.0	--	3.4
OCT 25... 1978	110	40	--	25	--	11	--	9.0	--	3.2
NOV 06... 1979	--	--	--	--	--	--	--	--	--	--
NOV 17... 1980	110	--	--	25	--	11	--	7.2	--	3.1

^{a/} Chester County Health Department Laboratory, Pennsylvania.

^{b/} U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

^{c/} U.S. Geological Survey Central Laboratory Atlanta, Georgia.

^{d/} Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

01479680 - WEST BRANCH RED CLAY CREEK AT KENNETT SQUARE, PA--continued

DATE	BICARBONATE FET-FLD (MG/L AS HCO3)	CARBONATE FET-FLD (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLORIDE, DIS- SOLVED (MG/L AS CL)	FLUORIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS RESIDUE AT 180 DEG C DIS- SOLVED (MG/L)	SOLIDS RESIDUE AT 105 DEG C DIS- SOLVED (MG/L)	SUM OF SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
JUN . 1970										
OCT . 02 . . .	--	--	--	12	7.4	--	--	--	103	--
OCT . 27 . . .	--	--	--	52	33	--	--	--	361	--
MAY . 18 . . . 1971	--	--	--	43	11	--	--	--	166	--
OCT . 12 . . .	--	--	--	26	13	--	--	--	173	--
OCT . 17 . . . 1972	--	--	--	28	14	--	--	--	130	--
OCT . 08 . . . 1973	81	0	66	20	15	.40	15	--	--	130
OCT . 30 . . . 1974	78	0	64	21	11	.20	14	149	--	130
NOV . 06 . . . 1975	76	0	62	22	11	.10	13	118	--	130
OCT . 29 . . . 1976	77	0	63	23	15	.10	17	150	--	140
NOV . 01 . . . 1977	83	0	68	22	12	<.10	15	150	--	140
OCT . 25 . . . 1978	83	0	68	24	15	.10	16	152	--	140
NOV . 06 . . . 1979	--	--	54	24	11	.10	15	--	--	--
NOV . 17 . . . 1980	--	--	--	22	13	.10	15	169	--	--

DATE	NITROGEN NITRATE TOTAL (MG/L AS N)	NITROGEN NITRITE TOTAL (MG/L AS N)	NITROGEN NO2+NO3 TOTAL (MG/L AS N)	NITROGEN AMMONIA TOTAL (MG/L AS N)	NITROGEN ORGANIC TOTAL (MG/L AS N)	NITROGEN AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)
JUN . 1970									
OCT . 02 . . .	--	1.0	--	--	--	--	--	--	.110
OCT . 27 . . .	--	1.8	.230	--	2.21	.07	--	3.10	2.60
MAY . 18 . . . 1971	--	3.7	.020	--	--	.24	--	.010	.230
OCT . 12 . . .	--	2.8	.010	--	.590	.96	--	.120	.033
OCT . 17 . . . 1972	--	3.8	.020	--	.460	.35	--	.190	.140
OCT . 08 . . . 1973	130	3.7	.010	3.7	.200	.56	.76	.060	.050
OCT . 30 . . . 1974	130	4.3	--	--	.050	.43	.48	.050	.030
NOV . 06 . . . 1975	130	4.3	--	--	.010	.64	.65	.050	.030
OCT . 29 . . . 1976	140	3.5	.030	3.5	.090	.26	.35	.090	.040
NOV . 01 . . . 1977	140	3.2	.010	3.2	.080	.51	.60	.040	.010
OCT . 25 . . . 1978	140	3.7	.040	3.7	.100	.17	.27	.030	.030
NOV . 06 . . . 1979	--	--	--	3.7	.010	.22	.23	.060	--
NOV . 17 . . . 1980	--	4.0	.010	4.0	.010	.44	.45	.050	.030

01479680 - WEST BRANCH RED CLAY CREEK AT KENNETT SQUARE, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
JUN . 1970										
02...	--	--	--	--	--	--	--	--	--	--
OCT . 1971										
27...	--	<100	--	<900	--	<250	--	200	--	--
MAY . 1971										
18...	--	<150	--	<200	--	<250	--	180	--	--
OCT . 1972										
12...	--	<100	--	<200	--	<250	--	<150	--	--
OCT . 1973										
17...	--	<100	--	<200	--	<250	--	<320	--	--
OCT . 1974										
08...	ND	--	ND	--	ND	--	ND	120	--	<2
NOV . 1975										
30...	ND	--	ND	--	ND	--	ND	--	70	ND
OCT . 1976										
06...	ND	--	ND	--	<2	--	ND	--	50	<2
NOV . 1977										
29...	<2	--	<20	--	ND	--	ND	--	60	4
OCT . 1978										
01...	ND	--	<2	--	ND	--	3	--	90	5
NOV . 1979										
06...	ND	--	ND	--	<2	--	<2	--	60	5
NOV . 1980										
17...	2	--	.00	--	1	--	1	--	50	1

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
JUN . 1970										
02...	--	--	--	--	--	--	--	--	5	.16
OCT . 1971										
27...	<50	420	--	<250	--	<20	--	--	--	--
MAY . 1971										
18...	<50	<250	--	<250	--	<20	--	--	7	.26
OCT . 1972										
12...	<50	<250	--	<250	--	<50	--	--	7	.23
OCT . 1973										
17...	<50	--	--	<250	--	<20	--	--	--	--
OCT . 1974										
08...	--	60	--	--	ND	--	30	--	--	--
NOV . 1975										
30...	--	--	30	--	3	--	ND	--	--	--
OCT . 1976										
06...	--	--	40	--	2	--	<20	--	--	--
NOV . 1977										
29...	--	--	60	--	ND	--	<20	--	--	--
OCT . 1978										
01...	--	--	40	--	ND	--	20	.00	--	--
NOV . 1979										
25...	--	--	50	--	3	--	ND	.00	--	--
NOV . 1980										
06...	--	--	--	--	--	10	--	--	--	--
NOV . 1980										
17...	--	--	40	--	0	--	2	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued
 (Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.)

01479800 - EAST BRANCH RED CLAY CREEK NEAR FIVE POINT, PA

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW- INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) _d	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS. PER 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
JUN , 1970										
OCT 02...	--	84215a/	9.1	135	8.0	17.0	--	--	--	--
OCT 27...	--	84215	4.6	170	8.1	11.0	--	1000	--	280
MAY 18... 1971	--	84215	13	235	7.3	12.0	--	38000	850	320
OCT 12... 1972	--	84215	12	215	7.6	15.0	--	68000	3900	3200
OCT 17... 1973	0730	84215	8.0	215	7.4	11.0	--	3700	530	660
OCT 08... 1974	0910	1028b/	--	290	7.1	14.0	--	34300	400	230
OCT 30... 1975	0945	1028	--	260	7.0	11.0	11.0	--	--	--
NOV 06... 1976	0900	1028	--	240	7.6	10.5	12.5	--	--	--
OCT 29... 1977	1330	1028	--	310	7.4	8.0	13.2	--	--	--
NOV 01... 1978	1130	80010c/	--	240	7.9	11.0	14.4	--	--	--
OCT 25... 1979	1045	80010	--	320	7.2	8.5	13.0	--	--	--
NOV 06... 1980	0900	80010	--	257	6.3	6.0	12.4	--	--	--
NOV 17...	1100	80010	--	280	7.4	3.5	16.3	--	--	--

DATE	HARD- NESS (MG/L AS CaCO ₃)	HARD- NESS NONCAR- BONATE (MG/L AS CaCO ₃)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS Ca)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS Mg)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS Na)	SODIUM, DIS- SOLVED (MG/L AS Na)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
JUN , 1970	--	--	16	--	7.4	--	8.0	--	2.9	--
OCT 02...	--	--	23	--	9.0	--	11	--	5.3	--
OCT 27... 1971	--	--	22	--	8.8	--	8.5	--	4.5	--
MAY 18...	--	--	22	--	8.2	--	7.5	--	5.1	--
OCT 12... 1972	--	--	27	--	7.3	--	10	--	3.0	--
OCT 17... 1973	92	30	--	21	--	9.6	--	12	--	4.5
OCT 08... 1974	100	48	--	24	--	10	--	10	--	3.2
OCT 30... 1975	98	41	--	24	--	9.3	--	8.0	--	3.3
NOV 06... 1976	100	46	--	25	--	10	--	13	--	4.5
OCT 29... 1977	110	45	--	26	--	11	--	12	--	4.5
NOV 01... 1978	110	48	--	27	--	10	--	9.0	--	3.5
OCT 25... 1979	--	--	--	--	--	--	--	--	--	--
NOV 06... 1980	110	--	--	27	--	10	--	12	--	3.6
NOV 17...										

a/ Chester County Health Department Laboratory, Pennsylvania.

b/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

c/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.

d/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

TABLE 2.-- Water-quality data for surface-water sites--Continued
 (Units: CFS, cubic foot per second; US/CM, microinches per centimeter at 25° Celsius;
 Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.)

01479800 - EAST BRANCH RED CLAY CREEK NEAR FIVE POINT, PA--Continued

DATE	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG C SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG C, DIS- SOLVED (MG/L)	SOLIDS SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
JUN , 1970										
OCT 02...	--	--	--	--	8.4	--	--	--	172	--
OCT 27...	--	--	--	25	18	--	--	--	153	--
MAY 18 , 1971	--	--	--	30	14	--	--	--	149	--
OCT 12...	--	--	--	30	12	--	--	--	178	--
OCT 17 , 1972	--	--	--	38	16	--	--	--	137	--
OCT 08 , 1973	75	0	62	27	17	.30	16	--	--	140
OCT 30 , 1974	65	0	53	28	17	.10	14	168	--	140
NOV 06 , 1975	69	0	57	29	15	.10	14	117	--	140
OCT 29 , 1976	71	0	58	32	24	.10	19	182	--	160
NOV 01 , 1977	79	0	65	33	21	.10	15	179	--	160
OCT 25 , 1978	74	0	61	33	20	.10	17	166	--	160
NOV 06 , 1979	--	--	52	33	15	.10	56	--	--	--
NOV 17 , 1980	--	--	--	39	18	.10	17	191	--	--

DATE	NITRO- GEN NITRATE TOTAL (MG/L AS N)	NITRO- GEN NITRITE TOTAL (MG/L AS N)	NITRO- GEN NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN AMMONIA TOTAL (MG/L AS N)	NITRO- GEN ORGANIC TOTAL (MG/L AS N)	NITRO- GEN AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)
JUN , 1970									
OCT 02...	2.2	--	--	--	--	--	--	--	.013
OCT 27...	2.2	.020	--	.010	.01	--	--	.052	.030
MAY 18 , 1971	3.8	.030	--	.070	.24	--	--	.072	.023
OCT 12...	3.3	.020	--	.600	.94	--	--	.101	.030
OCT 17 , 1972	4.0	.011	--	.020	.26	--	--	.070	.060
OCT 08 , 1973	3.3	< .010	3.3	.080	.80	.88	4.2	.030	.030
OCT 30 , 1974	8.1	--	--	.040	.49	.53	--	.030	.030
NOV 06 , 1975	3.6	--	--	.010	.78	.79	--	.030	.010
OCT 29 , 1976	3.1	.020	3.1	.040	.31	.35	3.5	.050	.020
NOV 01 , 1977	2.6	.010	2.6	.020	.33	.35	3.0	.050	.030
OCT 25 , 1978	4.0	.020	4.0	.090	.01	.10	4.1	.060	.040
NOV 06 , 1979	--	--	--	--	--	--	--	--	--
NOV 17 , 1980	3.4	.020	3.4	.010	.30	.31	3.7	.180	.080

01479800 - EAST BRANCH RED CLAY CREEK NEAR FIVE POINT, PA--Continued

DATE	CADMIUM TOTAL DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, TOTAL DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, TOTAL DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, TOTAL DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, TOTAL DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL DIS- SOLVED (UG/L AS PB)
JUN , 1970	--	--	--	--	--	--	--	--	--	--
OCT 02...	--	--	--	--	--	--	--	--	--	--
MAY , 1971	--	<100	--	<900	--	<250	--	<100	--	--
OCT 18...	--	<150	--	<200	--	<250	--	1500	--	--
OCT 12...	--	<100	--	<200	--	<250	--	<150	--	--
OCT 17...	--	<100	--	<200	--	<250	--	<210	--	--
OCT 08...	ND	--	ND	--	ND	--	<20	110	--	2
OCT 30...	ND	--	ND	--	ND	--	ND	--	50	ND
NOV 06...	<2	--	ND	--	ND	--	ND	--	40	<2
OCT 29...	<2	--	<20	--	ND	--	<20	--	80	2
NOV 01...	ND	--	ND	--	ND	--	4	--	110	6
OCT 25...	ND	--	ND	--	<2	--	2	--	40	<2
NOV 06...	--	10	--	--	--	10	--	--	--	--
NOV 17...	2	--	.00	--	0	--	1	--	60	0

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE TOTAL DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, TOTAL DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, TOTAL DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
JUN , 1970	--	--	--	--	--	--	--	--	10	.25
OCT 27...	<500	<250	--	<250	--	<200	--	--	--	--
MAY , 1971	<50	300	--	<250	--	<20	--	--	14	.50
OCT 12...	--	<250	--	<250	--	<50	--	--	6	.19
OCT 17...	<50	<250	--	<250	--	<20	--	--	5	.11
OCT 08...	--	50	--	--	<2	--	20	--	--	--
OCT 30...	--	--	20	--	3	--	<20	--	--	--
NOV 06...	--	--	30	--	3	--	<20	--	--	--
OCT 29...	--	--	120	--	4	--	ND	--	--	--
NOV 01...	--	--	70	--	ND	--	<20	.00	--	--
OCT 25...	--	--	30	--	3	--	ND	.00	--	--
NOV 06...	--	--	--	--	--	10	--	--	--	--
NOV 17...	--	--	40	--	1	--	0	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01480434 - WEST BRANCH BRANDYWINE CREEK AT ROCK RUN, PA

DATE	TIME	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) ^d	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DTS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
NOV 11, 1970	--	84215 ^a	28	129	6.9	11.0	--	1900	--	100
MAY 25, 1971	--	84215	50	160	7.2	18.0	--	5500	390	97
OCT 19, 1971	--	84215	49	155	7.5	12.0	--	12600	80	80
OCT 02, 1972	0915	84215	17	145	7.0	10.5	--	12200	92	740
OCT 10, 1973	1145	1028 ^b	35	180	6.9	17.0	10.2	60000.0	1900	1500
OCT 29, 1974	1000	1028	20	174	6.8	8.0	10.0	--	--	--
OCT 30, 1975	0900	1028	57	180	7.6	11.5	9.6	--	--	--
OCT 19, 1976	1015	1028	37	190	7.3	7.5	12.2	--	--	--
NOV 02, 1977	1530	80010 ^c	24	180	8.5	14.5	11.4	--	--	--
NOV 02, 1978	1630	80010	27	240	6.9	12.0	--	--	--	--
NOV 02, 1979	1245	80010	67	180	7.2	10.0	12.0	--	--	--
NOV 14, 1980	1015	80010	13	210	7.5	6.5	12.4	--	--	--

DATE	HARD- NESS (MG/L AS CaCO3)	HARD- NESS, NONCAR- BONATE (MG/L CaCO3)	CALCIUM TOTAL RECov- ERABLE (MG/L AS Ca)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, TOTAL RECov- ERABLE (MG/L AS Mg)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)	SODIUM, TOTAL RECov- ERABLE (MG/L AS Na)	SODIUM, DIS- SOLVED (MG/L AS Na)	POTAS- SIUM, TOTAL RECov- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
NOV 11, 1970	--	--	13	--	5.5	--	6.5	--	4.5	--
MAY 25, 1971	--	--	12	--	5.7	--	6.1	--	1.8	--
OCT 19, 1971	--	--	13	--	5.7	--	6.6	--	2.4	--
OCT 02, 1972	--	--	15	--	5.6	--	5.4	--	1.9	--
OCT 10, 1973	56	18	--	13	--	5.8	--	8.0	--	2.6
OCT 29, 1974	68	29	--	17	--	6.2	--	6.3	--	2.4
OCT 30, 1975	70	32	--	18	--	6.0	--	5.9	--	2.5
OCT 19, 1976	60	21	--	14	--	6.0	--	6.4	--	2.3
NOV 02, 1977	67	27	--	16	--	6.5	--	6.8	--	2.8
NOV 02, 1978	71	26	--	17	--	6.9	--	6.3	--	2.6
NOV 02, 1979	--	--	--	--	--	--	--	--	--	--
NOV 14, 1980	69	--	--	17	--	6.4	--	6.0	--	2.9

^a/ Chester County Health Department Laboratory, Pennsylvania.

^b/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

^c/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.

^d/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

01480434 - WEST BRANCH BRANDYWINE CREEK ROCK RUN, PA--Continued

DATE	BICARBONATE FET-FLD (MG/L AS HCO3)	CARBONATE FET-FLD (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLORIDE, DIS- SOLVED (MG/L AS CL)	FLUORIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
NOV , 1970										
11... 1971	--	--	--	21	12	--	--	--	122	--
MAY... 1971	--	--	--	22	8.6	--	--	--	57	--
25... 1971	--	--	--	21	13	--	--	--	117	--
OCT... 1972	--	--	--	29	11	--	--	--	85	--
19... 1972										
02... 1973										
10... 1973	46	0	38	13	12	.20	12	--	--	89
29... 1974	48	0	39	16	13	.20	14	115	--	99
02... 1975	46	0	38	16	12	.10	14	115	--	97
30... 1976	47	0	39	17	13	.10	17	110	--	99
19... 1977	49	0	40	17	12	.10	14	106	--	99
NOV... 1977										
02... 1978	55	0	45	15	12	.10	13	110	--	100
NOV... 1978										
02... 1979	--	--	32	16	11	.10	13	--	--	--
NOV... 1980										
02... 1980	--	--	--	17	14	.10	14	124	--	--
14... 1980										

DATE	NITRO- GEN NITRATE TOTAL (MG/L AS N)	NITRO- GEN NITRITE TOTAL (MG/L AS N)	NITRO- GEN NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN AMMONIA TOTAL (MG/L AS N)	NITRO- GEN ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)
NOV , 1970									
11... 1971	1.9	.010	--	<.010	<.01	--	--	.040	.040
MAY... 1971									
25... 1971	2.3	<.010	--	.140	.04	--	--	.050	.000
OCT... 1972	2.8	<.010	--	.010	.58	--	--	.050	.020
19... 1972									
02... 1973	2.0	<.000	--	.000	.17	--	--	.030	.000
10... 1974	2.3	--	--	.040	.50	.54	--	.020	.000
29... 1975	2.1	--	--	.030	.38	.41	--	.020	.000
02... 1976	2.7	--	--	.000	.67	.67	--	.040	.020
30... 1976									
19... 1977	2.4	.010	2.4	.150	.15	.30	2.7	.080	.060
NOV... 1977									
02... 1978	2.0	.010	2.0	.010	.31	.32	2.3	.040	.010
NOV... 1978									
02... 1979	2.2	.010	2.2	<.000	.28	.28	2.5	.010	.010
NOV... 1979									
02... 1980	--	--	--	.050	.24	.29	--	2.60	--
NOV... 1980									
14... 1980	2.2	--	2.2	.010	.25	.26	2.5	.020	.010

01480434 - WEST BRANCH BRANDYWINE CREEK AT ROCK RUN, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
NOV , 1970	--	<100	--	<900	--	<250	--	150	--	--
MAY , 1971	--	<150	--	<200	--	<250	--	450	--	--
OCT , 1971	--	<100	--	<200	--	<250	--	<150	--	--
OCT , 1972	--	<100	--	<200	--	<250	--	<500	--	--
OCT , 1973	--	--	--	--	--	--	<20	290	--	<2
OCT , 1974	<2	--	--	--	<2	--	<20	--	130	<2
OCT , 1975	<2	--	--	--	--	--	--	--	200	4
OCT , 1976	--	--	<20	--	<2	--	--	--	90	58
NOV , 1977	--	--	--	--	--	--	<2	--	160	2
NOV , 1978	--	--	--	--	--	--	<2	--	140	--
NOV , 1979	--	10	--	--	--	10	--	--	--	--
NOV , 1980	1	--	--	--	1	--	1	--	100	--

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, CHARGE, SUS- PENDED (T/DAY)
NOV , 1970	<50	<250	--	<250	--	<20	--	--	8	.60
MAY , 1971	<50	<250	--	<250	--	<20	--	--	0	.02
OCT , 1971	<50	<250	--	<250	--	<50	--	--	3	.39
OCT , 1972	<50	<250	--	<250	--	<20	--	--	6	.28
OCT , 1973	--	50	--	--	--	--	20	--	--	--
OCT , 1974	--	--	30	--	2	--	<20	--	--	--
OCT , 1975	--	--	40	--	2	--	20	--	--	--
OCT , 1976	--	--	40	--	4	--	<20	--	--	--
NOV , 1977	--	--	30	--	--	--	<20	--	--	--
NOV , 1978	--	--	20	--	<2	--	--	--	--	--
NOV , 1979	--	--	--	--	--	10	--	--	--	--
NOV , 1980	--	--	30	--	3	--	--	--	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued

(Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.)

01480629 - BUCK RUN AT DOE RUN, PA

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) _d /	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
NOV 08, 1971	--	84215 _a /	--	155	8.1	6.0	--	9200	340	400
NOV 27, 1972	--	84215	--	160	7.4	7.0	--	116000.0	3200	2800
OCT 10, 1973	1050	1028 _b /	--	210	6.7	16.5	10.2	21000	580	200
OCT 29, 1974	1035	1028	--	197	6.9	9.5	11.2	--	--	--
NOV 11, 1975	1430	1028	--	190	7.6	12.0	12.1	--	--	--
OCT 28, 1976	1345	1028	--	180	7.0	7.0	12.3	--	--	--
NOV 02, 1977	1430	80010 _c /	--	220	7.4	14.5	10.8	--	--	--
OCT 26, 1978	1630	80010	--	250	6.9	11.0	11.0	--	--	--
NOV 07, 1979	1000	80010	--	176	6.5	9.0	12.0	--	--	--
NOV 13, 1980	1030	80010	--	205	6.8	5.0	13.1	--	--	--

DATE	HARD- NESS (MG/L AS CaCO ₃)	HARD- NESS NONCAR- BONATE (MG/L CaCO ₃)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS Ca)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS Mg)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS Na)	SODIUM, DIS- SOLVED (MG/L AS Na)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
NOV 08, 1971	--	--	14	--	6.0	--	7.1	--	2.2	--
NOV 27, 1972	--	--	16	--	5.6	--	7.2	--	2.8	--
OCT 10, 1973	68	33	--	17	--	6.3	--	9.0	--	2.6
OCT 29, 1974	68	31	--	17	--	6.2	--	8.1	--	2.0
NOV 11, 1975	67	33	--	16	--	6.5	--	7.5	--	3.4
OCT 28, 1976	68	34	--	16	--	6.7	--	8.3	--	2.6
NOV 02, 1977	75	33	--	19	--	6.8	--	10	--	2.7
OCT 26, 1978	70	34	--	18	--	6.2	--	8.1	--	2.3
NOV 07, 1979	--	--	--	--	--	--	--	--	--	--
NOV 13, 1980	72	--	--	19	--	6.0	--	6.6	--	2.5

^a/ Chester County Health Department Laboratory, Pennsylvania.^b/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.^c/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.^d/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

TABLE 2.-- Water-quality data for surface-water sites--Continued
 (Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.)

01480629 - BUCK RUN AT DOE RUN, PA--Continued

DATE	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
NOV 08, 1971	--	--	--	8.8	13	--	--	--	62	--
NOV 27, 1972	--	--	--	23	16	--	--	--	120	--
OCT 10, 1973	43	0	35	16	16	.30	5.8	--	--	94
OCT 29, 1974	45	0	37	15	17	.10	8.0	122	--	96
NOV 11, 1975	42	0	34	14	17	.10	9.2	123	--	95
OCT 28, 1976	42	0	34	18	17	.10	10	121	--	100
NOV 02, 1977	53	0	43	18	19	<.10	8.5	131	--	110
OCT 26, 1978	45	0	37	16	16	.10	8.1	125	--	97
NOV 07, 1979	--	--	25	17	14	.00	8.1	--	--	--
NOV 13, 1980	--	--	--	17	18	.10	7.1	124	--	--

DATE	NITRO- GEN NITRATE TOTAL (MG/L AS N)	NITRO- GEN NITRITE TOTAL (MG/L AS N)	NITRO- GEN NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN AMMONIA TOTAL (MG/L AS N)	NITRO- GEN ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)
NOV 08, 1971	3.9	.010	--	<.010	.56	--	--	.100	.090
NOV 27, 1972	3.9	.020	--	.100	.90	--	--	.204	.120
OCT 10, 1973	4.2	.00	4.2	.040	.57	.61	--	.240	.23
OCT 29, 1974	3.8	--	--	.080	.63	.71	--	.150	.130
NOV 11, 1975	3.6	--	--	.020	.84	.86	--	.110	.070
OCT 28, 1976	3.6	.020	3.6	.210	.29	.50	4.1	.070	.020
NOV 02, 1977	3.8	.020	3.8	.080	.92	1.0	4.8	.090	.050
OCT 26, 1978	4.4	.040	4.4	.100	.37	.47	4.9	.090	.070
NOV 07, 1979	--	--	4.5	.100	.38	.48	5.0	.030	--
NOV 13, 1980	4.8	.010	4.8	.010	.24	.25	5.1	.110	.090

01480629 - BUCK RUN AT DOE RUN, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
NOV . 1971	--	<100	--	<200	--	<250	--	<150	--	--
NOV . 1972	--	<100	--	<200	--	<250	--	710	--	--
OCT . 1973	ND	--	ND	--	ND	--	20	--	120	<2
OCT . 1974	ND	--	ND	--	ND	--	ND	--	140	<2
NOV . 1975	<2	--	ND	--	<2	--	ND	--	160	80
OCT . 1976	<2	--	<20	--	ND	--	ND	--	90	4
NOV . 1977	<2	--	ND	--	ND	--	3	--	130	5
OCT . 1978	<2	--	ND	--	3	--	2	--	150	7
NOV . 1979	--	10	--	--	--	0	--	--	--	--
NOV . 1980	1	--	.00	--	1	--	2	--	110	0

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
NOV . 1971	<50	<250	--	<250	--	<50	--	--	--	--
NOV . 1972	<50	<250	--	<250	--	<20	--	--	--	--
OCT . 1973	--	--	40	--	6	--	20	--	--	--
OCT . 1974	--	--	60	--	2	--	<20	--	--	--
NOV . 1975	--	--	50	--	2	--	30	--	--	--
OCT . 1976	--	--	50	--	6	--	<20	--	--	--
NOV . 1977	--	--	100	--	ND	--	<20	.00	--	--
OCT . 1978	--	--	60	--	ND	--	ND	.10	--	--
NOV . 1979	--	--	--	--	--	10	--	--	--	--
NOV . 1980	--	--	40	--	0	--	3	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued
 (Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.)

01480632 - DOE RUN AT SPRINGDELL, PA

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) _d	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
NOV 08, 1971	--	84215 _a	--	105	7.9	6.0	--	4800	110	180
NOV 27, 1972	--	84215	--	120	7.3	7.0	--	63000	1200	820
OCT 10, 1973	1030	1028 _b	--	140	6.9	16.5	--	35000	1700	540
OCT 29, 1974	1100	1028	--	121	6.9	11.0	10.8	--	--	--
NOV 11, 1975	1330	1028	--	140	7.5	13.0	11.2	--	--	--
OCT 28, 1976	1415	1028	--	145	6.9	8.0	12.2	--	--	--
NOV 02, 1977	1330	80010 _c	--	160	7.6	15.5	11.0	--	--	--
OCT 26, 1978	1545	80010	--	175	6.9	11.0	11.2	--	--	--
NOV 07, 1979	1045	80010	--	127	6.1	9.0	11.9	--	--	--
NOV 13, 1980	0900	80010	--	130	6.7	4.5	11.8	--	--	--

DATE	HARD- NESS (MG/L AS CaCO ₃)	HARD- NESS NONCAR- BONATE (MG/L AS CaCO ₃)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS Ca)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS Mg)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS Na)	SODIUM, DIS- SOLVED (MG/L AS Na)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
NOV 08, 1971	--	--	8.5	--	4.1	--	4.5	--	1.8	--
NOV 27, 1972	--	--	11	--	4.1	--	4.0	--	2.4	--
OCT 10, 1973	43	20	--	10	--	4.4	--	4.8	--	1.9
OCT 29, 1974	42	21	--	10	--	4.2	--	4.2	--	1.6
NOV 11, 1975	50	25	--	12	--	4.8	--	4.4	--	4.0
OCT 28, 1976	48	18	--	11	--	5.0	--	4.5	--	2.2
NOV 02, 1977	43	19	--	10	--	4.4	--	5.1	--	2.4
OCT 26, 1978	46	25	--	11	--	4.5	--	4.8	--	2.0
NOV 07, 1979	--	--	--	--	--	--	--	--	--	--
NOV 13, 1980	44	--	--	11	--	4.1	--	3.6	--	1.9

_a/ Chester County Health Department Laboratory, Pennsylvania.
_b/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.
_c/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.
_d/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

01480632 - DOE RUN AT SPRINGDELL, PA

DATE	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LINTY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
NOV 08, 1971	--	--	--	8.2	8.8	--	--	--	35	--
NOV 27, 1972	--	--	--	18	8.9	--	--	--	86	--
OCT 10, 1973	28	0	23	6.8	9.7	.30	7.2	--	--	59
OCT 29, 1974	25	0	21	6.1	10	.20	8.5	88	--	57
NOV 11, 1975	30	0	25	9.9	11	.10	9.1	89	--	70
OCT 28, 1976	37	0	30	11	11	.10	11	83	--	74
NOV 02, 1977	29	0	24	7.6	10	<.10	8.8	80	--	63
OCT 26, 1978	26	0	21	7.7	10	<.10	8.9	88	--	62
NOV 07, 1979	--	--	16	11	10	.00	9.2	--	--	--
NOV 13, 1980	--	--	--	13	12	.10	9.6	95	--	--

DATE	NITRO- GEN NITRATE TOTAL (MG/L AS N)	NITRO- GEN NITRITE TOTAL (MG/L AS N)	NITRO- GEN NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN AMMONIA TOTAL (MG/L AS N)	NITRO- GEN ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)
NOV 08, 1971	3.4	<.010	--	<.010	.25	--	--	<.010	<.010
NOV 27, 1972	4.3	<.010	--	<.010	.47	--	--	.070	.030
OCT 10, 1973	3.4	--	--	.030	.58	.61	--	.020	.000
OCT 29, 1974	3.2	--	--	.010	.41	.42	--	.010	.010
NOV 11, 1975	4.1	--	--	.030	.82	.85	--	.080	.020
OCT 28, 1976	3.7	.010	3.7	.060	.24	.30	4.0	.050	.030
NOV 02, 1977	3.4	.010	3.4	<.010	.27	.27	3.7	.040	<.010
OCT 26, 1978	4.2	.010	4.2	.080	.32	.40	4.6	.040	.040
NOV 07, 1979	--	--	4.4	.040	.01	.05	4.5	.020	--
NOV 13, 1980	3.7	.000	3.7	.000	.30	.30	4.0	.010	.010

01480632 - DOE RUN AT SPRINGDELL, PA--Continued

DATE	CADMIUM TOTAL DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
NOV 08, 1971	--	<100	--	<200	--	<250	--	<150	--	--
NOV 27, 1972	--	<100	--	<200	--	<250	--	520	--	--
OCT 10, 1973	ND	--	<20	--	ND	--	ND	--	40	<2
OCT 29, 1974	ND	--	ND	--	ND	--	<20	--	60	<2
NOV 11, 1975	2	--	ND	--	<2	--	ND	--	110	4
OCT 28, 1976	<2	--	<20	--	ND	--	ND	--	30	2
NOV 02, 1977	ND	--	ND	--	ND	--	<2	--	40	3
OCT 26, 1978	ND	--	ND	--	<2	--	2	--	140	3
NOV 07, 1979	--	10	--	--	--	0	--	--	--	--
NOV 13, 1980	1	--	1	--	0	--	1	--	40	0

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
NOV 08, 1971	<50	<250	--	<250	--	<50	--	--	--	--
NOV 27, 1972	<50	<250	--	<250	--	<50	--	--	--	--
OCT 10, 1973	--	--	20	--	2	--	<20	--	--	--
OCT 29, 1974	--	--	<10	--	ND	--	<20	--	--	--
NOV 11, 1975	--	--	<10	--	6	--	<20	--	--	--
OCT 28, 1976	--	--	60	--	ND	--	<20	--	--	--
NOV 02, 1977	--	--	20	--	ND	--	<20	.00	--	--
OCT 26, 1978	--	--	40	--	3	--	ND	.00	--	--
NOV 07, 1979	--	--	--	--	--	10	--	--	--	--
NOV 13, 1980	--	--	20	--	0	--	3	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01480640 - WEST BRANCH BRANDYWINE CREEK AT WAWASET, PA a/

DATE	TIME	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM) ^{e/}	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
NOV. 11, 1970	--	84215 ^{b/}	120	155	7.6	13.0	--	2000	--	30
MAY 25, 1971	--	84215	110	180	7.2	19.0	--	6800	620	150
OCT 19, 1971	--	84215	280	175	7.8	14.0	--	48000	300	120
OCT 02, 1972	1030	84215	65	184	6.6	13.0	--	14300	250	350
OCT 10, 1973	0830	1028 ^{c/}	--	230	6.9	16.5	9.0	26300	720	240
OCT 29, 1974	1130	1028	--	201	7.0	11.0	9.9	--	--	--
OCT 30, 1975	0940	1028	--	200	7.5	13.0	9.8	--	--	--
OCT 19, 1976	1130	1028	--	260	7.3	9.5	11.8	--	--	--
OCT 27, 1977	1430	80010 ^{d/}	--	230	7.3	17.0	9.8	--	--	--
NOV 03, 1978	1200	80010	--	380	7.5	10.5	12.0	--	--	--
NOV 02, 1978	1400	80010	--	190	7.0	14.0	11.9	--	--	--
NOV 12, 1980	1400	80010	--	280	7.4	6.5	13.0	--	--	--

DATE	HARDNESS (MG/L AS CaCO ₃)	HARDNESS NONCARBONATE (MG/L AS CaCO ₃)	CALCIUM TOTAL RECOVERABLE (MG/L AS Ca)	CALCIUM DISSOLVED (MG/L AS Ca)	MAGNESIUM TOTAL RECOVERABLE (MG/L AS Mg)	MAGNESIUM DISSOLVED (MG/L AS Mg)	SODIUM, TOTAL RECOVERABLE (MG/L AS Na)	SODIUM, DISSOLVED (MG/L AS Na)	POTASSIUM, TOTAL RECOVERABLE (MG/L AS K)	POTASSIUM, DISSOLVED (MG/L AS K)
NOV. 11, 1970	--	--	17	--	6.5	--	9.4	--	4.1	--
MAY 25, 1971	--	--	15	--	6.4	--	8.6	--	2.2	--
OCT 19, 1971	--	--	15	--	6.2	--	8.0	--	2.7	--
OCT 02, 1972	--	--	18	--	6.3	--	9.0	--	2.5	--
OCT 10, 1974	72	25	--	17	--	7.2	--	11	--	3.0
OCT 29, 1975	79	33	--	20	--	7.0	--	11	--	3.2
OCT 30, 1976	67	26	--	16	--	6.6	--	7.8	--	2.9
OCT 19, 1977	74	30	--	18	--	7.0	--	9.3	--	3.3
OCT 27, 1977	80	27	--	20	--	7.3	--	10	--	3.8
NOV 03, 1978	83	37	--	21	--	7.5	--	9.9	--	3.0
NOV 02, 1978	--	--	--	--	--	--	--	--	--	--
NOV 12, 1980	83	--	--	21	--	7.3	--	9.6	--	3.6

a/ Additional data are available from 1945 to 1978.

b/ Chester County Health Department Laboratory, Pennsylvania.

c/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

d/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.

e/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

TABLE 2.-- Water-quality data for surface-water sites--Continued
 (Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25 Celsius;
 Deg C, degrees Celsius; mg/L, milligrams
 per liter; COLS per 100 ML, colonies per
 100 milliliters; UG/L, micrograms per liter;
 T/DAY, tons per day; dashes indicate no data.)

01480640 - WEST BRANCH BRANDYWINE CREEK AT WAWASET, PA--Continued

DATE	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG C, DIS- SOLVED (MG/L)
NOV , 1970									
MAY , 1971	--	--	--	19	15	--	--	--	132
OCT , 1971				22	11	--	--	--	93
OCT , 1972	--	--	--	22	13	--	--	--	115
OCT , 1973	--	--	--	34	15	--	--	--	118
OCT , 1974	57	0	47	18	15	.40	9.3	--	--
OCT , 1975	56	0	46	21	19	.30	8.5	135	--
OCT , 1976	50	0	41	19	14	.20	10	124	--
OCT , 1977	54	0	44	20	16	.20	12	122	--
NOV , 1978	64	0	53	21	17	.20	10	129	--
NOV , 1979	56	0	46	20	17	.10	9.4	120	--
NOV , 1980	--	--	38	18	13	.20	9.7	--	--
NOV , 1980	--	--	--	24	24	.30	9.4	149	--

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	NITRO- GEN NITRATE TOTAL (MG/L AS N)	NITRO- GEN NITRITE TOTAL (MG/L AS N)	NITRO- GEN NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN AMMONIA TOTAL (MG/L AS N)	NITRO- GEN ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)
NOV , 1970										
MAY , 1971	--	2.5	.030	--	<.010	<.01	--	--	.010	.212
OCT , 1971	--	3.4	.033	--	.030	<.01	--	--	.203	.105
OCT , 1972	--	3.9	.030	--	.010	.44	--	--	.200	.134
OCT , 1973	--	3.5	.040	--	.040	.19	--	--	.290	.260
OCT , 1974	110	3.6	--	--	.050	.82	.87	--	.250	.250
OCT , 1975	120	2.9	--	--	.010	.52	.53	--	.190	.170
OCT , 1976	100	3.2	--	--	<.010	.70	.70	--	.140	.090
OCT , 1977	110	2.9	.020	2.9	.050	.23	.28	3.2	.100	.100
NOV , 1978	120	2.8	.030	2.8	.020	.36	.38	3.2	.150	.110
NOV , 1979	120	2.9	.030	2.9	.030	.35	.38	3.3	.170	.150
NOV , 1980	--	--	--	--	.030	.14	.17	--	2.10	--
NOV , 1980	--	3.1	.020	3.1	.000	.36	.36	3.5	.200	.170

01480640 - WEST BRANCH BRANDYWINE CREEK AT WAWASET, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
NOV . 1970	--	<100	--	<900	--	<250	--	230	--	--
MAY . 1971	--	<150	--	<200	--	<250	--	250	--	--
OCT . 1971	--	<100	--	<200	--	<250	--	<150	--	--
OCT . 1972	--	<100	--	<200	--	<250	--	<500	--	--
OCT . 1973	ND	--	ND	--	3	--	<20	390	--	<2
OCT . 1974	ND	--	ND	--	ND	--	ND	--	100	<2
OCT . 1975	2	--	ND	--	<2	--	ND	--	80	22
OCT . 1976	ND	--	<20	--	<2	--	ND	--	80	70
OCT . 1977	ND	--	<2	--	ND	--	4	--	170	6
NOV . 1978	ND	--	ND	--	ND	--	3	--	130	<2
NOV . 1979	--	10	--	--	--	10	--	--	--	--
NOV . 1980	1	--	.00	--	0	--	4	--	100	2

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
NOV . 1970	<50	<250	--	<250	--	<20	--	--	10	3.2
MAY . 1971	<50	<250	--	<250	--	<20	--	--	18	5.3
OCT . 1971	<50	<250	--	<250	--	<50	--	--	3	2.3
OCT . 1972	<50	<250	--	<250	--	<20	--	--	5	.88
OCT . 1973	--	60	--	--	24	--	20	--	--	--
OCT . 1974	--	--	30	--	17	--	90	--	--	--
OCT . 1975	--	--	60	--	10	--	<20	--	--	--
OCT . 1976	--	--	30	--	11	--	<20	--	--	--
OCT . 1977	--	--	70	--	10	--	ND	.10	--	--
NOV . 1978	--	--	30	--	5	--	ND	.00	--	--
NOV . 1979	--	--	--	--	--	10	--	--	--	--
NOV . 1980	--	--	40	--	11	--	3	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued
 (Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius;
 Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter;
 T/DAY, tons per day; dashes indicate no data.)

01480647 - EAST BRANCH BRANDYWINE CREEK NEAR STRUBLE DAM, PA

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) ^d	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	FORM, TOTAL, IMMED. (COLS. PER 100 ML)	FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
OCT , 1971	--	84215 ^a /	--	195	6.8	16.0	--	182000	26000	39700
OCT , 1972	--	84215	--	155	7.2	8.0	--	1300	420	320
OCT , 1973	0815	1028 ^b /	--	200	6.4	10.5	9.0	69000	5300	660
OCT , 1974	1340	1028	--	192	7.3	10.5	8.1	--	--	--
OCT , 1975	1545	1028	--	200	7.4	16.0	9.0	--	--	--
OCT , 1976	0830	1028	--	200	6.9	8.5	11.0	--	--	--
OCT , 1977	1030	80010 ^c /	--	180	6.8	13.0	11.9	--	--	--
NOV , 1978	1330	80010	--	240	7.2	14.0	12.8	--	--	--
NOV , 1979	0830	80010	--	158	6.8	7.5	10.6	--	--	--
NOV , 1980	1000	80010	--	180	7.2	8.0	11.6	--	--	--

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM TOTAL RECov- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECov- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECov- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECov- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT , 1971	--	--	14	--	6.8	--	5.6	--	6.6	--
OCT , 1972	--	--	17	--	6.5	--	5.2	--	3.5	--
OCT , 1973	70	25	--	17	--	6.8	--	6.5	--	3.5
OCT , 1974	70	36	--	18	--	6.2	--	7.2	--	1.8
OCT , 1975	65	23	--	16	--	6.0	--	5.4	--	4.3
OCT , 1976	63	25	--	15	--	6.2	--	5.8	--	3.4
OCT , 1977	66	17	--	16	--	6.3	--	6.3	--	3.5
NOV , 1978	64	23	--	16	--	5.9	--	6.2	--	3.1
NOV , 1979	--	--	--	--	--	--	--	--	--	--
NOV , 1980	67	--	--	16	--	6.5	--	6.4	--	3.1

^a/ Chester County Health Department Laboratory, Pennsylvania.

^b/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

^c/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.

^d/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

01480647 - EAST BRANCH BRANDYWINE CREEK NEAR STRUBLE DAM, PA--Continued

DATE	BICARBONATE FET-FLD (MG/L AS HCO3)	CARBONATE FET-FLD (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLORIDE, DIS- SOLVED (MG/L AS CL)	FLUORIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS RESIDUE AT 180 DEG C DIS- SOLVED (MG/L)	SOLIDS RESIDUE AT 105 DEG C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
OCT , 1971	--	--	--	24	11	--	--	--	126	--
OCT 25... 1972	--	--	--	13	11	--	--	--	108	--
OCT 31... 1973	56	0	46	11	11	.20	11	--	--	95
OCT 11... 1974	43	0	35	12	13	.10	20	134	--	100
OCT 25... 1975	51	0	42	13	11	.20	11	130	--	93
OCT 29... 1976	46	0	38	11	11	.10	14	146	--	89
OCT 19... 1977	60	0	49	12	11	.10	7.5	112	--	92
NOV 25... 1978	50	0	41	11	12	.10	12	110	--	91
NOV 02... 1979	--	--	35	14	11	.10	9.0	--	--	--
NOV 08... 1980	--	--	--	12	13	.20	14	124	--	--
NOV 07...										

DATE	NITROGEN NITRATE TOTAL (MG/L AS N)	NITROGEN NITRITE TOTAL (MG/L AS N)	NITROGEN NO2+NO3 TOTAL (MG/L AS N)	NITROGEN AMMONIA TOTAL (MG/L AS N)	NITROGEN ORGANIC TOTAL (MG/L AS N)	NITROGEN AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL, (MG/L AS P)	PHOSPHORUS, ORTHO, TOTAL, (MG/L AS P)
OCT , 1971	1.8	.030	--	.030	3.1	--	--	.190	.030
OCT 25... 1972	1.9	.030	--	.020	.68	--	--	.050	.010
OCT 31... 1973	2.7	--	--	.150	1.2	1.3	--	.040	.010
OCT 11... 1974	.63	--	--	.050	.53	.58	--	.070	.040
OCT 25... 1975	2.7	--	--	.180	1.2	1.4	--	.060	.010
OCT 29... 1976	2.7	.030	2.7	.130	.55	.68	3.4	.100	.020
OCT 19... 1977	2.2	.010	2.2	.060	.59	.65	2.9	.040	<.010
NOV 25... 1978	2.5	.010	2.5	.300	.64	.94	3.4	.010	<.010
NOV 02... 1979	--	--	--	.100	.78	.88	--	.040	--
NOV 08... 1980	2.4	.020	2.4	.300	.50	.80	3.2	.070	.030
NOV 07...									

01480647 - EAST BRANCH BRANDYWINE CREEK NEAR STRUBLE DAM, PA--Continued

DATE	CADMIUM TOTAL DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, TOTAL DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL DIS- SOLVED (UG/L AS CO)	COBALT, TOTAL DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL DIS- SOLVED (UG/L AS CU)	COPPER, TOTAL DIS- SOLVED (UG/L AS CU)	IRON, TOTAL DIS- SOLVED (UG/L AS FE)	IRON, TOTAL DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL DIS- SOLVED (UG/L AS PB)
OCT 25, 1971	--	<100	--	<200	--	<250	--	1300	--	--
OCT 31, 1972	--	<100	--	<200	--	<250	--	1200	--	--
OCT 11, 1973	ND	--	ND	--	ND	--	ND	--	200	<2
OCT 25, 1974	ND	--	ND	--	ND	--	ND	--	70	<2
OCT 29, 1975	16	--	ND	--	ND	--	ND	--	600	90
OCT 19, 1976	<2	--	<20	--	2	--	<20	--	60	110
OCT 25, 1977	<2	--	ND	--	ND	--	<2	--	70	9
NOV 02, 1978	ND	--	ND	--	ND	--	3	--	90	<2
NOV 08, 1979	--	10	--	--	--	0	--	--	--	--
NOV 07, 1980	0	--	1	--	1	--	1	--	370	0

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
OCT 25, 1971	<50	<250	--	<250	--	<50	--	--	--	--
OCT 31, 1972	<50	<250	--	<250	--	<20	--	--	--	--
OCT 11, 1973	--	--	200	--	ND	--	<20	--	--	--
OCT 25, 1974	--	--	100	--	2	--	20	--	--	--
OCT 29, 1975	--	--	410	--	3	--	30	--	--	--
OCT 19, 1976	--	--	90	--	10	--	30	--	--	--
OCT 25, 1977	--	--	80	--	<2	--	<20	.00	--	--
NOV 02, 1978	--	--	70	--	2	--	ND	.00	--	--
NOV 08, 1979	--	--	--	--	--	10	--	--	--	--
NOV 07, 1980	--	--	160	--	0	--	3	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01480648 - EAST BRANCH BRANDYWINE CREEK NEAR CUPOLA, PA

DATE	TIME	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) ^d /	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
NOV , 1971	--	84215 ^a /	--	130	8.0	6.0	--	6400	260	2500
OCT , 1972	--	84215	--	145	7.2	7.0	--	2200	440	490
OCT , 1973	0630	84215	--	145	7.2	7.0	--	2200	440	490
OCT , 1973	1000	1028 ^b /	--	185	6.5	16.5	9.4	28000	1900	940
OCT , 1974	1025	1028	--	161	--	9.5	--	--	--	--
OCT , 1975	1405	1028	--	161	--	9.5	--	--	--	--
OCT , 1976	0815	1028	--	160	7.5	11.5	9.5	--	--	--
OCT , 1976	0920	1028	--	165	7.2	7.0	11.0	--	--	--
OCT , 1977	0930	80010 ^c /	--	180	6.9	11.5	11.0	--	--	--
NOV , 1978	1245	80010	--	240	7.2	11.0	18.0	--	--	--
NOV , 1979	1600	80010	--	160	6.5	10.0	11.0	--	--	--
NOV , 1980	1115	80010	--	210	7.2	9.0	11.6	--	--	--

DATE	HARD- NESS (MG/L AS CaCO ₃)	HARD- NESS NONCAR- BONATE (MG/L AS CaCO ₃)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS Ca)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS Mg)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS Na)	SODIUM, DIS- SOLVED (MG/L AS Na)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
NOV , 1971	--	--	13	--	5.1	--	7.4	--	2.3	--
OCT , 1972	--	--	17	--	6.0	--	5.4	--	3.3	--
OCT , 1973	65	20	--	16	--	6.0	--	7.0	--	2.9
OCT , 1974	63	25	--	17	--	5.1	--	7.1	--	1.7
OCT , 1975	62	19	--	16	--	5.3	--	5.4	--	3.3
OCT , 1976	60	21	--	15	--	5.4	--	6.0	--	3.0
OCT , 1977	70	16	--	18	--	6.0	--	6.8	--	3.0
NOV , 1978	140	61	--	31	--	16	--	10	--	2.6
NOV , 1979	--	--	--	--	--	--	--	--	--	--
NOV , 1980	64	--	--	16	--	5.9	--	6.9	--	2.7

^a/ Chester County Health Department Laboratory, Pennsylvania.

^b/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

^c/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.

^d/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

01480648 - EAST BRANCH BRANDYWINE CREEK NEAR CUPOLA, PA--Continued

DATE	BICARBONATE FET-FLD (MG/L) AS HCO3)	CARBONATE FET-FLD (MG/L) AS CO3)	ALKALINITY FIELD (MG/L) AS CACO3)	SULFATE DIS- SOLVED (MG/L) AS SO4)	CHLORIDE DIS- SOLVED (MG/L) AS CL)	FLUORIDE DIS- SOLVED (MG/L) AS F)	SILICA, DIS- SOLVED (MG/L) AS SIO2)	SOLIDS, RESIDUE AT 180 DEG C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
NOV 08, 1971	--	--	--	15	13	--	--	--	80	--
OCT 31, 1972	--	--	--	9.1	10	--	--	--	111	--
OCT 11, 1973	55	0	45	10	9.9	.40	15	--	--	94
OCT 25, 1974	48	0	39	9.3	9.2	.20	24	129	--	97
OCT 30, 1975	52	0	43	12	10	.20	15	115	--	93
OCT 19, 1976	47	0	39	9.6	9.9	.10	18	106	--	91
OCT 25, 1977	66	0	54	12	9.9	.10	14	109	--	100
NOV 02, 1978	100	0	82	40	21	.10	5.3	208	--	180
NOV 07, 1979	--	--	37	13	9.1	.10	13	--	--	--
NOV 07, 1980	--	--	--	11	11	.10	18	127	--	--

DATE	NITROGEN NITRATE TOTAL (MG/L) AS N)	NITROGEN NITRITE TOTAL (MG/L) AS N)	NITROGEN NO2+NO3 TOTAL (MG/L) AS N)	NITROGEN AMMONIA TOTAL (MG/L) AS N)	NITROGEN ORGANIC TOTAL (MG/L) AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L) AS N)	NITROGEN TOTAL (MG/L) AS N)	PHOSPHORUS, TOTAL (MG/L) AS P)	PHOSPHORUS, ORTHO, TOTAL (MG/L) AS P)
NOV 08, 1971	3.0	.010	--	<.010	.98	--	--	.040	.010
OCT 31, 1972	2.4	.020	--	<.010	.66	--	--	.050	.020
OCT 11, 1973	3.0	.000	3.0	.070	.87	.94	--	.040	.010
OCT 25, 1974	3.4	--	--	.030	.54	.57	--	.040	.020
OCT 30, 1975	2.8	--	--	.080	1.2	1.3	--	.060	.010
OCT 19, 1976	2.7	.020	2.7	.140	.39	.53	3.2	.060	.030
OCT 25, 1977	2.4	.010	2.4	.050	.38	.43	2.8	.990	.960
NOV 02, 1978	4.0	.030	4.0	.070	.33	.40	4.4	.090	.080
NOV 07, 1979	--	--	2.5	.060	.73	.79	3.3	.380	--
NOV 07, 1980	2.7	.020	2.7	.130	.41	.54	3.2	.040	.020

01480648 - EAST BRANCH BRANDYWINE CREEK NEAR CUPOLA, PA--Continued

DATE	CADMIUM TOTAL DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, TOTAL DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL DIS- SOLVED (UG/L AS CO)	COBALT, TOTAL DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL DIS- SOLVED (UG/L AS CU)	COPPER, TOTAL DIS- SOLVED (UG/L AS CU)	IRON, TOTAL DIS- SOLVED (UG/L AS FE)	IRON, TOTAL DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL DIS- SOLVED (UG/L AS PB)
NOV . 1971	--	<100	--	<200	--	<250	--	700	--	--
OCT . 1972	--	<100	--	<200	--	<250	--	950	--	--
OCT . 1973	ND	--	<20	--	ND	--	ND	--	130	<2
OCT . 1974	ND	--	ND	--	ND	--	ND	--	50	<2
OCT . 1975	<2	--	ND	--	ND	--	ND	--	430	3
OCT . 1976	<2	--	<20	--	2	--	ND	--	60	53
OCT . 1977	ND	--	ND	--	ND	--	ND	--	70	3
NOV . 1978	ND	--	ND	--	ND	--	3	--	60	2
NOV . 1979	--	<10	--	--	--	0	--	--	--	--
NOV . 1980	1	--	.00	--	1	--	0	--	270	0

DATE	LITHIUM TOTAL DIS- SOLVED (UG/L AS LI)	MANGA- NESE, TOTAL DIS- SOLVED (UG/L AS MN)	MANGA- NESE, TOTAL DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL DIS- SOLVED (UG/L AS NI)	NICKEL, TOTAL DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL DIS- SOLVED (UG/L AS ZN)	ZINC, TOTAL DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
NOV . 1971	<50	<250	--	<250	--	<50	--	--	--	--
OCT . 1972	<50	<250	--	<250	--	<20	--	--	--	--
OCT . 1973	--	--	90	--	<2	--	<20	--	--	--
OCT . 1974	--	--	70	--	4	--	<20	--	--	--
OCT . 1975	--	--	180	--	2	--	<20	--	--	--
OCT . 1976	--	--	70	--	<2	--	20	--	--	--
OCT . 1977	--	--	60	--	<2	--	ND	.00	--	--
NOV . 1978	--	--	40	--	3	--	ND	.00	--	--
NOV . 1979	--	--	--	--	--	10	--	--	--	--
NOV . 1980	--	--	90	--	0	--	0	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued
 [Units: CFS, cubic foot per second; US/CM, micromhos per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01480653 - EAST BRANCH BRANDYWINE CREEK AT GLENMOORE, PA a/

DATE	TIME	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCTANCE (US/CM) <u>a/</u>	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
OCT , 1971										
25...	--	84215 <u>b/</u>	--	160	7.4	15.5	--	146000	11000	26500
OCT , 1972										
31...	0930	84215	--	158	7.4	7.0	--	950	230	280
OCT , 1973										
11...	0840	1028 <u>c/</u>	--	185	7.0	14.0	9.0	24000	400	210
OCT , 1974										
25...	1300	1028	--	156	7.8	9.0	9.5	--	--	--
OCT , 1975										
29...	1445	1028	--	200	7.5	14.5	11.6	--	--	--
OCT , 1976										
20...	1430	1028	--	180	7.4	10.0	11.8	--	--	--
OCT , 1977										
25...	1130	80010 <u>d/</u>	--	160	7.1	12.0	11.5	--	--	--
NOV , 1978										
02...	1015	80010	--	200	7.0	8.5	11.8	--	--	--
NOV , 1979										
08...	1000	80010	--	146	6.6	6.5	11.6	--	--	--
NOV , 1980										
14...	1330	80010	--	210	7.1	7.0	13.1	--	--	--

DATE	HARD- NESS (MG/L AS CaCO3)	HARD- NESS NONCAR- BONATE (MG/L CaCO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS Ca)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS Mg)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS Na)	SODIUM, DIS- SOLVED (MG/L AS Na)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT , 1971										
25...	--	--	13	--	5.1	--	5.9	--	5.0	--
OCT , 1972										
31...	--	--	18	--	7.3	--	6.6	--	2.8	--
OCT , 1973										
11...	56	14	--	14	--	5.1	--	7.0	--	2.3
OCT , 1974										
25...	58	15	--	15	--	5.0	--	6.6	--	1.4
OCT , 1975										
29...	71	33	--	18	--	6.4	--	6.1	--	2.6
OCT , 1976										
20...	51	12	--	13	--	4.5	--	6.6	--	2.9
OCT , 1977										
25...	56	22	--	14	--	5.2	--	7.0	--	2.3
NOV , 1978										
02...	44	4	--	11	--	4.1	--	7.4	--	2.3
NOV , 1979										
08...	--	--	--	--	--	--	--	--	--	--
NOV , 1980										
14...	58	--	--	15	--	4.9	--	6.6	--	2.2

a/ Additional data are available from 1966 to 1959.

b/ Chester County Health Department Laboratory, Pennsylvania.

c/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

d/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.

e/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

TABLE 2.-- Water-quality data for surface-water sites--Continued

[Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01480653 - EAST BRANCH BRANDYWINE CREEK AT GLENMOORE, PA--Continued

DATE	BICARBONATE FET-FLD (MG/L AS HCO3)	CARBONATE FET-FLD (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLORIDE, DIS- SOLVED (MG/L AS CL)	FLUORIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
OCT 25, 1971	--	--	--	27	9.1	--	--	--	120	--
OCT 31, 1972	--	--	--	20	11	--	--	--	122	--
OCT 11, 1973	51	0	42	10	8.8	.30	16	--	--	89
OCT 25, 1974	52	0	43	10	8.7	.20	19	106	--	92
OCT 29, 1975	46	0	38	25	10	.20	17	129	--	110
OCT 20, 1976	48	0	39	13	11	.10	19	100	--	94
OCT 25, 1977	42	0	34	12	9.5	.10	14	107	--	85
NOV 02, 1978	49	0	40	10	9.8	.10	18	110	--	87
NOV 08, 1979	--	--	30	13	9.3	.10	15	--	--	--
NOV 14, 1980	--	--	--	12	11	.10	19	119	--	--

DATE	NITROGEN NITRATE TOTAL (MG/L AS N)	NITROGEN NITRITE TOTAL (MG/L AS N)	NITROGEN NO2+NO3 TOTAL (MG/L AS N)	NITROGEN AMMONIA TOTAL (MG/L AS N)	NITROGEN ORGANIC TOTAL (MG/L AS N)	NITROGEN AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)
OCT 25, 1971	1.1	<.010	--	<.010	1.1	--	--	.160	.040
OCT 31, 1972	2.1	<.010	--	.080	.34	--	--	.030	.020
OCT 11, 1973	2.2	--	--	.080	.59	.67	--	.030	.010
OCT 25, 1974	2.7	--	--	.020	.61	.63	--	.020	.010
OCT 29, 1975	3.2	--	--	.180	.82	1.0	--	.050	.010
OCT 20, 1976	2.4	.010	2.4	.070	.31	.38	2.8	.350	.300
OCT 25, 1977	2.0	.010	2.0	.010	.29	.30	2.3	.020	.010
NOV 02, 1978	2.5	.010	2.5	.060	.45	.51	3.0	.020	.010
NOV 08, 1979	--	--	2.8	.030	.29	.32	3.1	2.50	--
NOV 14, 1980	2.5	.000	2.5	.010	.40	.41	2.9	.030	.030

01480653 - EAST BRANCH BRANDYWINE CREEK AT GLENMOORE, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOVERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
OCT 25, 1971	--	<100	--	<200	--	<250	--	750	--	--
OCT 31, 1972	--	<100	--	<200	--	<250	--	420	--	--
OCT 11, 1973	ND	--	ND	--	ND	--	ND	--	140	<2
OCT 25, 1974	<2	--	ND	--	ND	--	ND	--	70	<2
OCT 29, 1975	<2	--	ND	--	ND	--	ND	--	180	4
OCT 20, 1976	<2	--	<20	--	<2	--	ND	--	100	15
OCT 25, 1977	<2	--	ND	--	ND	--	<2	--	110	11
NOV 02, 1978	ND	--	ND	--	ND	--	3	--	90	<2
NOV 08, 1979	--	<10	--	--	--	10	--	--	--	--
NOV 14, 1980	1	--	.00	--	1	--	1	--	80	0

DATE	LITHIUM TOTAL RECOVERABLE (UG/L AS LI)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHYLENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDIMENT, SUS- PENDED (MG/L)	SEDIMENT, DIS- CHARGE, SUS- PENDED (T/DAY)
OCT 25, 1971	<50	<250	--	<250	--	<20	--	--	--	--
OCT 31, 1972	<50	<250	--	<250	--	<20	--	--	--	--
OCT 11, 1973	--	--	<10	--	ND	--	ND	--	--	--
OCT 25, 1974	--	--	20	--	3	--	20	--	--	--
OCT 29, 1975	--	--	40	--	2	--	150	--	--	--
OCT 20, 1976	--	--	50	--	2	--	20	--	--	--
OCT 25, 1977	--	--	30	--	2	--	<20	.00	--	--
NOV 02, 1978	--	--	20	--	ND	--	ND	.00	--	--
NOV 08, 1979	--	--	--	--	--	0	--	--	--	--
NOV 14, 1980	--	--	40	--	1	--	0	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued

[Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01480656 - INDIAN RUN NEAR SPRINGTON, PA ^{a/}

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) ^{a/}	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
NOV , 1971										
OCT 08... 1972	--	84215 ^{b/}	--	100	8.1	7.0	--	3100	56	120
OCT 31... 1973	0845	84215	--	125	7.5	6.5	--	200	20	67
OCT 11... 1974	0800	1028 ^{c/}	--	160	6.8	12.5	10.0	7700	80	140
OCT 21... 1974	1500	1028	--	80	7.7	9.5	9.8	--	--	--
NOV 10... 1975	1330	1028	--	140	7.3	15.5	10.1	--	--	--
OCT 20... 1976	1515	1028	--	170	7.3	10.5	11.6	--	--	--
OCT 25... 1977	1230	80010 ^{d/}	--	165	7.1	11.5	11.6	--	--	--
NOV 02... 1978	1130	80010	--	220	7.1	8.5	13.0	--	--	--
NOV 08... 1979	1045	80010	--	135	6.8	7.0	12.6	--	--	--
NOV 07... 1980	1315	80010	--	210	6.8	9.0	10.8	--	--	--

DATE	HARD- NESS (MG/L AS K)	HARD- NESS NONCAR- BONATE (MG/L AS K)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
NOV , 1971										
OCT 08... 1972	--	--	11	--	2.8	--	5.5	--	1.3	--
OCT 31... 1973	--	--	15	--	4.0	--	6.6	--	1.6	--
OCT 11... 1974	54	12	--	15	--	4.0	--	7.5	--	1.6
OCT 25... 1974	56	9	--	16	--	4.0	--	7.1	--	1.0
NOV 10... 1975	47	9	--	14	--	3.0	--	6.0	--	1.7
OCT 20... 1976	51	12	--	14	--	3.8	--	6.6	--	2.0
OCT 25... 1977	54	17	--	15	--	4.1	--	8.8	--	1.7
NOV 02... 1978	60	17	--	17	--	4.2	--	9.7	--	1.8
NOV 08... 1979	--	--	--	--	--	--	--	--	--	--
NOV 07... 1980	58	--	--	16	--	4.3	--	9.1	--	1.4

^{a/} Additional data are available from 1967 to 1969.^{b/} Chester County Health Department Laboratory, Pennsylvania.^{c/} U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.^{d/} U.S. Geological Survey Central Laboratory Atlanta, Georgia.^{e/} Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

01480656 - INDIAN RUN NEAR SPRINGTON, PA--Continued

DATE	BICARBONATE FET-FLD (MG/L AS HCO3)	CARBONATE FET-FLD (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLORIDE DIS- SOLVED (MG/L AS CL)	FLUORIDE DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
NOV 08, 1971	--	--	--	11	8.8	--	--	--	59	--
OCT 31, 1972	--	--	--	9.6	9.7	--	--	--	107	--
OCT 11, 1973	57	0	47	7.4	8.1	.30	22	--	--	91
OCT 25, 1974	58	0	48	7.9	7.3	.20	25	130	--	97
NOV 10, 1975	46	0	38	7.3	7.4	.20	19	106	--	81
OCT 20, 1976	47	0	39	6.4	7.5	.10	25	114	--	89
OCT 23, 1977	45	--	37	8.9	8.6	<.10	26	122	--	95
NOV 02, 1978	52	0	43	6.8	13	.10	26	117	--	100
NOV 08, 1979	--	--	32	7.7	7.9	.10	23	--	--	--
NOV 07, 1980	--	--	--	9.1	10	.10	29	125	--	--

DATE	NITROGEN NITRATE TOTAL (MG/L AS N)	NITROGEN NITRITE TOTAL (MG/L AS N)	NITROGEN NO2+NO3 TOTAL (MG/L AS N)	NITROGEN AMMONIA TOTAL (MG/L AS N)	NITROGEN ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)
NOV 08, 1971	1.6	<.010	--	<.010	.92	--	--	<.010	<.010
OCT 31, 1972	1.9	<.010	--	<.010	.14	--	--	.020	.010
OCT 11, 1973	2.9	.010	2.9	.030	.48	.51	--	.020	.010
OCT 25, 1974	2.7	--	--	.010	.46	.47	--	.040	.030
NOV 10, 1975	2.7	--	--	.030	.90	.93	--	.110	.050
OCT 20, 1976	2.4	.010	2.4	.060	.32	.38	2.8	.190	.040
OCT 23, 1977	2.9	.010	2.9	.030	.43	.46	3.4	.130	.080
NOV 02, 1978	2.8	.010	2.8	.100	.33	.43	3.2	.120	.110
NOV 08, 1979	--	--	2.5	.000	.20	.20	2.7	.050	--
NOV 07, 1980	3.0	.000	3.0	.000	.08	.08	3.1	.170	.160

01480656 - INDIAN RUN NEAR SPRINGTON, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
NOV 08, 1971	--	<100	--	<200	--	<250	--	<150	--	--
OCT 31, 1972	--	<100	--	<200	--	<250	--	190	--	--
OCT 11, 1973	ND	--	<20	--	ND	--	ND	--	50	<2
OCT 25, 1974	ND	--	ND	--	ND	--	ND	--	40	<2
NOV 10, 1975	3	--	ND	--	<2	--	ND	--	150	10
OCT 20, 1976	<2	--	<20	--	<2	--	<20	--	100	8
OCT 25, 1977	ND	--	ND	--	ND	--	<2	--	50	5
NOV 02, 1978	ND	--	ND	--	<2	--	2	--	60	2
NOV 08, 1979	--	20	--	--	--	0	--	--	--	--
NOV 07, 1980	0	--	1	--	1	--	2	--	50	0

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
NOV 08, 1971	<50	<250	--	<250	--	<50	--	--	--	--
OCT 31, 1972	<50	<250	--	<250	--	<20	--	--	--	--
OCT 11, 1973	--	--	<10	--	<2	--	20	--	--	--
OCT 25, 1974	--	--	<10	--	3	--	30	--	--	--
NOV 10, 1975	--	--	30	--	2	--	20	--	--	--
OCT 20, 1976	--	--	50	--	2	--	20	--	--	--
OCT 25, 1977	--	--	<10	--	<2	--	ND	.00	--	--
NOV 02, 1978	--	--	20	--	<2	--	ND	.00	--	--
NOV 08, 1979	--	--	--	--	--	10	--	--	--	--
NOV 07, 1980	--	--	7	--	1	--	0	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01480700 - EAST BRANCH BRANDYWINE CREEK NEAR DOWNINGTOWN, PA a/

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) ^{a/}	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
NOV , 1970										
MAY , 1971		84215 ^{b/}	45	100	6.9	11.0	--	22000.0	--	--
OCT , 1971		84215	64	150	7.0	16.0	--	11000.	1800	240
OCT , 1972		84215	73	150	7.4	10.0	--	8600	400	120
OCT , 1973		84215	68	150	6.8	10.5	--	15700	410	1200
OCT , 1974	1220	1028 ^{c/}	22	180	7.5	17.0	11.0	15300	460	280
OCT , 1975	0915	1028	32	90	6.9	9.5	10.8	--	--	--
OCT , 1976	1340	1028	77	180	7.8	16.0	10.2	--	--	--
OCT , 1977	1630	1028	48	190	7.5	11.5	11.0	--	--	--
OCT , 1978	1400	80010 ^{d/}	41	175	7.2	14.5	11.1	--	--	--
NOV , 1979	1130	80010	31	275	7.4	9.0	12.2	--	--	--
NOV , 1980	0930	80010	84	185	6.7	11.0	11.2	--	--	--
NOV , 1980	0845	80010	20	200	7.4	7.5	11.8	--	--	--

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
NOV , 1970										
MAY , 1971	--	--	13	--	4.8	--	7.6	--	6.0	--
OCT , 1971	--	--	12	--	4.6	--	7.8	--	1.6	--
OCT , 1972	--	--	12	--	4.4	--	7.1	--	2.1	--
OCT , 1973	--	--	14	--	4.3	--	6.1	--	1.9	--
OCT , 1974	56	21	--	14	--	5.1	--	7.5	--	2.2
OCT , 1975	56	19	--	14	--	5.0	--	7.5	--	2.0
OCT , 1976	60	27	--	16	--	4.8	--	6.6	--	2.3
OCT , 1977	51	16	--	14	--	4.0	--	8.0	--	2.5
OCT , 1978	56	24	--	14	--	5.1	--	8.4	--	2.6
NOV , 1979	67	29	--	17	--	6.0	--	8.2	--	2.6
NOV , 1980	--	--	--	--	--	--	--	--	--	--
NOV , 1980	64	--	--	17	--	5.2	--	7.2	--	2.3

a/ Additional data are available from 1954 to 1977.

b/ Chester County Health Department Laboratory, Pennsylvania.

c/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

d/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.

e/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

TABLE 2.-- Water-quality data for surface-water sites--Continued
 (Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.)

01480700 - EAST BRANCH BRANDYWINE CREEK NEAR DOWNINGTOWN, PA--Continued

DATE	BICARBONATE FET-FLD (MG/L AS HCO3)	CARBONATE FET-FLD (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLORIDE, DIS- SOLVED (MG/L AS CL)	FLUORIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
NOV 11, 1970	--	--	--	18	17	--	--	--	111	--
MAY 25, 1971	--	--	--	21	11	--	--	--	92	--
OCT 19, 1971	--	--	--	22	12	--	--	--	110	--
OCT 02, 1972	--	--	--	30	12	--	--	--	81	--
OCT 10, 1973	43	0	35	13	13	.40	15	--	--	91
OCT 29, 1974	45	0	37	15	13	.20	13	114	--	92
OCT 29, 1975	40	0	33	18	12	.20	13	112	--	93
OCT 18, 1976	44	0	36	13	14	.10	15	103	--	92
OCT 25, 1977	39	0	32	15	14	.10	12	104	--	91
OCT 30, 1978	46	0	38	16	13	.10	15	102	--	100
NOV 02, 1979	--	--	26	15	11	.10	13	--	--	--
NOV 14, 1980	--	--	--	18	18	.10	15	122	--	--

DATE	NITROGEN NITRATE TOTAL (MG/L AS N)	NITROGEN NITRITE TOTAL (MG/L AS N)	NITROGEN NO2+NO3 TOTAL (MG/L AS N)	NITROGEN AMMONIA TOTAL (MG/L AS N)	NITROGEN ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)
NOV 11, 1970	.88	<.010	--	--	--	--	--	.020	.010
MAY 25, 1971	2.0	<.010	--	.060	--	--	--	.023	<.010
OCT 19, 1971	2.4	<.010	--	.010	.47	--	--	.040	.130
OCT 02, 1972	2.1	<.010	--	.060	.31	--	--	.030	.010
OCT 10, 1973	1.8	.010	1.8	.020	.49	.51	2.3	.010	<.010
OCT 29, 1974	1.4	--	--	.100	.45	.55	--	.020	.010
OCT 29, 1975	1.7	--	--	<.010	.63	.63	--	.020	.010
OCT 18, 1976	1.3	.010	1.3	.250	.45	.70	2.0	.070	.060
OCT 25, 1977	1.2	.010	1.2	.010	.29	.30	1.5	.020	.010
OCT 30, 1978	.40	<.010	.40	.090	.22	.31	.71	.010	.010
NOV 02, 1979	--	--	--	.030	.48	.51	--	.160	--
NOV 14, 1980	1.9	.000	1.9	.020	.31	.33	2.2	.020	.010

01480700 - EAST BRANCH BRANDYWINE CREEK NEAR DOWNINGTOWN, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHROMIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHROMIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
NOV , 1970	--	<100	--	<900	--	<250	--	100	--	--
MAY , 1971	--	<150	--	<200	--	<250	--	230	--	--
OCT , 1971	--	<100	--	<50	--	<250	--	<150	--	--
OCT , 1972	--	<100	--	<10	--	<250	--	<500	--	--
OCT , 1973	<2	--	ND	--	ND	--	ND	140	--	ND
OCT , 1974	<2	--	ND	--	ND	--	ND	--	330	<2
OCT , 1975	<2	--	ND	--	ND	--	ND	--	80	5
OCT , 1976	<2	--	<20	--	2	--	<20	--	50	ND
OCT , 1977	ND	--	ND	--	ND	--	<2	--	60	4
OCT , 1978	ND	--	ND	--	ND	--	ND	--	90	3
NOV , 1979	--	10	--	--	--	10	--	--	--	--
NOV , 1980	2	--	.00	--	1	--	2	--	110	0

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGANESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGANESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
NOV , 1970	<50	<250	--	<250	--	<20	--	--	8	.98
MAY , 1971	<50	<250	--	<250	--	<20	--	--	3	.52
OCT , 1971	<50	<250	--	<250	--	<50	--	--	4	.79
OCT , 1972	<50	<250	--	<250	--	<20	--	--	4	.73
OCT , 1973	--	20	--	--	ND	--	<20	--	--	--
OCT , 1974	--	--	140	--	2	--	<20	--	--	--
OCT , 1975	--	--	<10	--	2	--	<20	--	--	--
OCT , 1976	--	--	90	--	5	--	20	--	--	--
OCT , 1977	--	--	60	--	2	--	ND	.00	--	--
OCT , 1978	--	--	40	--	ND	--	ND	.00	--	--
NOV , 1979	--	--	--	--	--	10	--	--	--	--
NOV , 1980	--	--	80	--	4	--	0	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued

[Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01480903 - VALLEY CREEK AT MULLSTEINS MEADOWS NEAR DOWNINGTOWN, PA

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) _d /	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
NOV , 1971										
OCT 08 , 1972	--	84215 _a /	--	235	7.6	6.0	--	3400	150	130
OCT 24 , 1973	0715	84215	--	298	7.6	12.0	--	1700	180	150
OCT 12 , 1974	0950	1028 _b /	--	320	8.0	13.0	11.8	14000	250	76
OCT 29 , 1974	--	--	--	--	--	--	--	--	--	--
NOV 10 , 1975	0800	1028	--	300	7.6	15.5	9.2	--	--	--
OCT 21 , 1976	1230	1028	--	320	7.6	12.0	11.4	--	--	--
OCT 26 , 1977	0930	80010 _c /	--	320	7.6	13.0	10.2	--	--	--
NOV 02 , 1978	1515	80010	--	420	7.7	12.0	13.6	--	--	--
NOV 02 , 1979	1045	80010	--	306	7.4	10.5	12.8	--	--	--
NOV 19 , 1980	1300	80010	--	325	7.2	5.5	13.8	--	--	--

DATE	HARD- NESS (MG/L AS CaCO ₃)	HARD- NESS, NONCAR- BONATE (MG/L CaCO ₃)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS Ca)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS Mg)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS Na)	SODIUM, DIS- SOLVED (MG/L AS Na)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
NOV , 1971	--	--	25	--	10	--	9.6	--	2.0	--
OCT 24 , 1972	--	--	32	--	14	--	13	--	2.2	--
OCT 12 , 1973	130	36	--	29	--	14	--	12	--	2.5
OCT 29 , 1974	--	--	--	--	--	--	--	--	--	--
NOV 10 , 1975	130	37	--	31	--	12	--	9.1	--	2.2
OCT 21 , 1976	99	29	--	25	--	9.0	--	9.8	--	3.6
OCT 26 , 1977	170	62	--	34	--	21	--	11	--	3.2
NOV 02 , 1978	64	21	--	17	--	5.3	--	7.2	--	2.7
NOV 02 , 1979	--	--	--	--	--	--	--	--	--	--
NOV 19 , 1980	110	--	--	27	--	11	--	18	--	2.1

_a/ Chester County Health Department Laboratory, Pennsylvania.

_b/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

_c/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.

_d/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

TABLE 2.-- Water-quality data for surface-water sites--Continued

[Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UC/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01480903 - VALLEY CREEK AT MULLSTEINS MEADOWS NEAR DOWNINGTOWN, PA--Continued

DATE	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
NOV ., 1971										
OCT ., 1972	--	--	--	16	18	--	--	--	126	--
OCT ., 1973	--	--	--	34	18	--	--	--	202	--
OCT ., 1974	110	0	94	25	18	.20	4.6	--	--	160
NOV ., 1975	--	--	--	--	--	--	--	--	--	--
OCT ., 1976	110	0	90	24	17	<.10	6.1	173	--	160
OCT ., 1977	87	0	71	27	19	.10	7.5	146	--	140
NOV ., 1978	130	0	110	50	19	.10	4.5	204	--	210
NOV ., 1979	52	0	43	11	11	.10	17	118	--	97
NOV ., 1980	--	--	91	28	17	.10	6.3	--	--	--
NOV ., 1980	--	--	--	31	27	.10	7.3	185	--	--

DATE	NITRO- GEN NITRATE TOTAL (MG/L AS N)	NITRO- GEN NITRITE TOTAL (MG/L AS N)	NITRO- GEN NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN AMMONIA TOTAL (MG/L AS N)	NITRO- GEN ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)
NOV ., 1971									
OCT ., 1972	2.8	.020	--	.050	.41	--	--	.121	.124
OCT ., 1973	3.4	.020	--	<.010	.39	--	--	.390	.320
OCT ., 1974	2.7	.010	2.7	.030	.58	.61	--	.340	.350
NOV ., 1975	--	--	--	--	--	--	--	--	--
OCT ., 1976	2.7	--	--	<.010	.67	.67	--	.090	.070
OCT ., 1977	1.3	.010	1.3	.010	.57	.58	1.9	.120	.070
NOV ., 1978	2.9	.060	3.0	.020	.23	.25	3.3	.080	.060
NOV ., 1979	2.6	.010	2.6	.040	.40	.44	3.0	.020	.010
NOV ., 1980	--	--	3.5	.040	.44	.48	4.0	.920	--
NOV ., 1980	2.1	.010	2.1	.010	.21	.22	2.3	.140	.120

01480903 - VALLEY CREEK AT MULLSTEINS MEADOWS NEAR DOWNINGTOWN, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
NOV 08, 1971	--	<100	--	<200	--	<250	--	<150	--	--
OCT 24, 1972	--	<100	--	<200	--	<250	--	300	--	--
OCT 12, 1973	ND	--	ND	--	ND	--	ND	--	90	<2
OCT 29, 1974	--	--	--	--	--	--	--	--	--	--
NOV 10, 1975	ND	--	ND	--	ND	--	ND	--	20	2
OCT 21, 1976	ND	--	<20	--	2	--	<20	--	90	3
OCT 26, 1977	ND	--	<2	--	ND	--	<2	--	30	5
NOV 02, 1978	ND	--	ND	--	ND	--	2	--	70	2
NOV 02, 1979	--	20	--	--	--	0	--	--	--	--
NOV 19, 1980	1	--	1	--	1	--	3	--	40	3

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
NOV 08, 1971	<50	<250	--	<250	--	<50	--	--	--	--
OCT 24, 1972	<50	<250	--	<250	--	<20	--	--	--	--
OCT 12, 1973	--	--	<10	--	ND	--	ND	--	--	--
OCT 29, 1974	--	--	--	--	--	--	--	--	--	--
NOV 10, 1975	--	--	20	--	3	--	20	--	--	--
OCT 21, 1976	--	--	60	--	4	--	<20	--	--	--
OCT 26, 1977	--	--	<10	--	3	--	<20	.00	--	--
NOV 02, 1978	--	--	40	--	ND	--	20	.00	--	--
NOV 02, 1979	--	--	--	--	--	10	--	--	--	--
NOV 19, 1980	--	--	20	--	0	--	1	.10	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01480950 - EAST BRANCH BRANDYWINE CREEK AT WAWASET, PA a/

DATE	TIME	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPF- CIFIC CON- DUC- TANCE (US/CM) <u>g/</u>	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCEI FECAL, (COLS. PER 100 ML)
NOV , 1970										
11... 1970		84215b/	110	200	--	14.0	--	2700	--	300
MAY , 1971										
25... 1971		84215	130	195	7.6	19.0	--	2600	200	130
OCT , 1971										
19... 1971		84215	110	215	7.8	14.5	--	5000	100	720
OCT , 1972										
02... 1972	1215	84215	92	232	6.9	15.0	--	41000	150	200
OCT , 1973										
10... 1973	0845	1028c/	--	290	7.2	16.5	7.0	60000	2800	310
OCT , 1974										
29... 1974	1145	1028	--	162	7.1	12.0	10.1	--	--	--
OCT , 1975										
30... 1975	1045	1028	--	250	7.5	13.0	10.3	--	--	--
OCT , 1976										
19... 1976	--	1028	--	285	7.8	10.0	12.0	--	--	--
OCT , 1977										
26... 1977	1115	80010d/	--	245	--	13.5	9.6	--	--	--
NOV , 1978										
03... 1978	1030	80010	--	390	7.4	10.5	12.0	--	--	--
NOV , 1979										
02... 1979	1445	80010	--	223	6.7	13.0	12.1	--	--	--
NOV , 1980										
12... 1980	1230	80010	--	390	7.4	6.5	12.3	--	--	--

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
NOV , 1970										
11... 1970	--	--	22	--	8.6	--	13	--	3.7	--
MAY , 1971										
25... 1971	--	--	19	--	8.2	--	11	--	1.9	--
OCT , 1971										
19... 1971	--	--	18	--	8.4	--	8.8	--	2.2	--
OCT , 1972										
02... 1972	--	--	24	--	8.3	--	13	--	2.6	--
OCT , 1973										
10... 1973	90	24	--	21	--	9.1	--	17	--	3.1
OCT , 1974										
29... 1974	100	28	--	25	--	10	--	15	--	3.1
OCT , 1975										
30... 1975	87	26	--	21	--	8.3	--	9.5	--	2.6
OCT , 1976										
19... 1976	97	34	--	24	--	9.0	--	13	--	3.3
OCT , 1977										
26... 1977	110	39	--	26	--	11	--	14	--	3.4
NOV , 1978										
03... 1978	110	35	--	26	--	10	--	16	--	3.2
NOV , 1979										
02... 1979	--	--	--	--	--	--	--	--	--	--
NOV , 1980										
12... 1980	110	--	--	26	--	10	--	19	--	4.8

a/ Additional data are available from 1925 to 1974.

b/ Chester County Health Department Laboratory, Pennsylvania.

c/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

d/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.

e/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

TABLE 2.-- Water-quality data for surface-water sites--Continued
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01480950 - EAST BRANCH BRANDYWINE CREEK AT WAWASET, PA--Continued

DATE	BICARBONATE FET-FLD (MG/L AS HCO3)	CARBONATE FET-FLD (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLORIDE DIS- SOLVED (MG/L AS CL)	FLUORIDE DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
NOV 11, 1970	--	--	--	29	18	--	--	--	188	--
MAY 25, 1971	--	--	--	30	14	--	--	--	130	--
OCT 19, 1971	--	--	--	27	14	--	--	--	165	--
OCT 02, 1972	--	--	--	45	20	--	--	--	149	--
OCT 10, 1973	86	0	71	24	18	.30	13	--	--	150
OCT 29, 1974	93	0	76	27	19	.20	11	177	--	160
OCT 30, 1975	74	0	61	23	15	.10	12	142	--	130
OCT 19, 1976	77	0	63	27	18	.10	13	157	--	150
OCT 26, 1977	86	--	71	28	19	.10	9.7	168	--	150
NOV 03, 1978	87	0	71	34	22	.10	11	197	--	170
NOV 02, 1979	--	--	50	21	15	.10	11	--	--	--
NOV 12, 1980	--	--	--	34	30	.20	13	208	--	--

DATE	NITROGEN NITRATE TOTAL (MG/L AS N)	NITROGEN NITRITE TOTAL (MG/L AS N)	NITROGEN NO2+NO3 TOTAL (MG/L AS N)	NITROGEN AMMONIA TOTAL (MG/L AS N)	NITROGEN ORGANIC TOTAL (MG/L AS N)	NITROGEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)
NOV 11, 1970	1.4	.060	--	<.010	<.01	--	--	.340	.330
MAY 25, 1971	3.0	.024	--	.370	.09	--	--	.220	.141
OCT 19, 1971	3.9	.020	--	<.010	.71	--	--	.265	.144
OCT 02, 1972	2.8	.114	--	.400	.76	--	--	.550	.540
OCT 10, 1973	2.3	.003	2.3	.200	.78	.98	3.3	.640	.640
OCT 29, 1974	1.7	--	--	.480	.82	1.3	--	.530	.430
OCT 30, 1975	2.3	--	--	.060	.67	.73	--	.220	.190
OCT 19, 1976	1.9	.050	1.9	.190	.39	.58	2.5	.430	.440
OCT 26, 1977	2.2	.040	2.2	.100	.33	.43	2.6	.530	.500
NOV 03, 1978	2.7	.060	2.8	.150	.50	.65	3.5	.560	.540
NOV 02, 1979	--	--	--	.020	.24	.26	--	.290	--
NOV 12, 1980	2.2	.040	2.2	1.90	.90	2.8	5.0	1.20	1.00

01480950 - EAST BRANCH BRANDYWINE CREEK AT WAWASET, PA--Continued

DATE	CADMIUM TOTAL DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
NOV , 1970										
11... 1970	--	<100	--	<900	--	<250	--	<100	--	--
MAY , 1971										
25... 1971	--	<150	--	<200	--	<250	--	550	--	--
OCT , 1971										
19... 1972	--	<100	--	<200	--	<250	--	<150	--	--
OCT , 1972										
02... 1973	--	<100	--	<200	--	<250	--	<500	--	--
OCT , 1973										
10... 1974	ND	--	ND	--	5	--	<20	350	--	2
OCT , 1974										
29... 1975	ND	--	ND	--	<2	--	ND	--	190	2
OCT , 1975										
30... 1976	<2	--	ND	--	ND	--	ND	--	40	12
OCT , 1976										
19... 1977	<2	--	<20	--	<2	--	<20	--	90	69
OCT , 1977										
26... 1978	ND	--	<2	--	ND	--	2	--	100	7
NOV , 1978										
03... 1979	ND	--	ND	--	ND	--	5	--	110	2
NOV , 1979										
02... 1980	--	10	--	--	--	10	--	--	--	--
NOV , 1980										
12... 1980	1	--	6	--	1	--	9	--	80	1

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
NOV , 1970										
11... 1970	<50	<250	--	<250	--	<20	--	--	13	3.9
MAY , 1971										
25... 1971	<50	<250	--	<250	--	<20	--	--	10	3.5
OCT , 1971										
19... 1972	<50	<250	--	<250	--	<50	--	--	3	.89
OCT , 1972										
02... 1973	<50	<250	--	<250	--	<20	--	--	3	.75
OCT , 1973										
10... 1974	--	80	--	--	ND	--	20	--	--	--
OCT , 1974										
29... 1975	--	--	80	--	6	--	<20	--	--	--
OCT , 1975										
30... 1976	--	--	20	--	2	--	<20	--	--	--
OCT , 1976										
19... 1977	--	--	50	--	14	--	20	--	--	--
OCT , 1977										
26... 1978	--	--	50	--	3	--	<20	.00	--	--
NOV , 1978										
03... 1979	--	--	--	--	--	--	--	--	--	--
NOV , 1979										
02... 1980	--	--	--	--	--	10	--	--	--	--
NOV , 1980										
12... 1980	--	--	70	--	4	--	9	.10	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued
 (Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UC/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.)

01481030 - BRANDYWINE CREEK NEAR CHADDS FORD, PA

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) ^{a/}	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
NOV , 1970										
11... 1970	--	84215 ^{a/}	250	185	7.3	14.0	--	2800	--	300
MAY , 1971										
25... 1971	--	84215	260	195	7.6	19.0	--	2200	400	77
OCT , 1971										
19... 1971	--	84215	500	315	7.9	14.5	--	14600	30	180
OCT , 1972										
02... 1972	1315	84215	170	195	6.9	16.0	--	17300	220	140
OCT , 1973										
10... 1973	0800	1028 ^{b/}	151	250	7.1	16.0	8.6	23000	760	220
OCT , 1974										
30... 1974	0910	1028	156	245	6.8	11.0	9.2	--	E110	--
OCT , 1975										
30... 1975	1130	1028	425	210	7.4	13.5	10.0	--	--	--
OCT , 1976										
19... 1976	1345	1028	198	270	7.7	9.5	11.6	--	--	--
OCT , 1977										
27... 1977	1330	80010 ^{c/}	246	240	7.3	15.0	9.4	--	--	--
NOV , 1978										
03... 1978	1430	80010	185	300	7.7	10.5	12.8	--	--	--
NOV , 1979										
05... 1979	1330	80010	665	202	6.5	9.0	12.0	--	--	--
NOV , 1980										
12... 1980	1545	80010	111	281	7.6	6.0	12.0	--	--	--

DATE	HARD- NESS (MG/L AS CaCO3)	HARD- NESS NONCAR- BONATE (MG/L AS CaCO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS Ca)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS Mg)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS Na)	SODIUM, DIS- SOLVED (MG/L AS Na)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
NOV , 1970										
11... 1970	--	--	21	--	7.4	--	13	--	4.3	--
MAY , 1971										
25... 1971	--	--	15	--	6.8	--	8.5	--	2.1	--
OCT , 1971										
19... 1971	--	--	17	--	6.9	--	8.1	--	2.5	--
OCT , 1972										
02... 1972	--	--	20	--	7.1	--	10	--	2.6	--
OCT , 1973										
10... 1973	81	24	--	19	--	8.2	--	13	--	3.2
OCT , 1974										
30... 1974	83	26	--	20	--	8.0	--	12	--	3.1
OCT , 1975										
30... 1975	81	32	--	20	--	7.5	--	8.0	--	2.6
OCT , 1976										
19... 1976	82	31	--	20	--	7.7	--	11	--	3.0
OCT , 1977										
27... 1977	87	34	--	21	--	8.3	--	11	--	3.5
NOV , 1978										
03... 1978	93	39	--	23	--	8.7	--	11	--	3.0
NOV , 1979										
05... 1979	--	--	--	--	--	--	--	--	--	--
NOV , 1980										
12... 1980	95	--	--	24	--	8.6	--	13	--	3.9

^{a/} Chester County Health Department Laboratory, Pennsylvania.

^{b/} U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

^{c/} U.S. Geological Survey Central Laboratory Atlanta, Georgia.

^{d/} Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

01481030 - BRANDYWINE CREEK NEAR CHADDS FORD, PA--Continued

DATE	BICARBONATE FET-FLD (MG/L AS HCO3)	CARBONATE FET-FLD (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLORIDE DIS- SOLVED (MG/L AS CL)	FLUORIDE DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS RESIDUE AT 180 DEG C SOLVED (MG/L)	SOLIDS RESIDUE AT 105 DEG C DIS- SOLVED (MG/L)	SOLIDS SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
NOV , 1970										
11... 1970	--	--	--	24	16	--	--	--	156	--
MAY , 1971										
25... 1971	--	--	--	25	11	--	--	--	111	--
OCT , 1971										
19... 1972	--	--	--	25	9.3	--	--	--	116	--
OCT , 1972										
02... 1973	--	--	--	38	16	--	--	--	122	--
OCT , 1973										
10... 1974	69	0	57	22	16	.30	11	--	--	130
OCT , 1974										
30... 1975	69	0	57	23	17	.30	9.7	150	--	130
OCT , 1975										
30... 1976	60	0	49	21	14	.30	11	133	--	110
OCT , 1976										
19... 1977	62	0	51	23	17	.10	13	136	--	130
OCT , 1977										
27... 1978	65	0	53	25	17	.10	11	139	--	130
NOV , 1978										
03... 1979	66	0	54	25	18	.10	10	152	--	130
NOV , 1979										
05... 1980	--	--	44	22	14	.10	12	--	--	--
NOV , 1980										
12... 1980	--	--	--	27	25	.20	11	177	--	--

DATE	NITROGEN NITRATE TOTAL (MG/L AS N)	NITROGEN NITRITE TOTAL (MG/L AS N)	NITROGEN NO2+NO3 TOTAL (MG/L AS N)	NITROGEN AMMONIA TOTAL (MG/L AS N)	NITROGEN ORGANIC TOTAL (MG/L AS N)	NITROGEN AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS OTHER TOTAL (MG/L AS P)
NOV , 1970									
11... 1970	1.9	.060	--	<.000	<.00	--	--	.300	.300
MAY , 1971									
25... 1971	2.7	.030	--	.260	<.00	--	--	.170	.110
OCT , 1971									
19... 1972	3.2	.020	--	<.000	.60	--	--	.200	.120
OCT , 1972									
02... 1973	2.7	.050	--	.090	.47	--	--	.330	.300
OCT , 1973									
10... 1974	2.4	.010	2.4	.090	.73	.82	3.2	.380	.370
OCT , 1974									
30... 1975	2.3	--	--	.090	.60	.69	--	.280	.240
OCT , 1975									
30... 1976	2.7	--	--	.050	.81	.86	--	.160	.130
OCT , 1976									
19... 1977	2.4	.040	2.4	.180	.42	.60	3.0	.260	.140
OCT , 1977									
27... 1978	2.2	.030	2.2	.060	.40	.46	2.7	.280	.230
NOV , 1978									
03... 1979	2.6	.030	2.6	.090	.20	.29	2.9	.240	.230
NOV , 1979									
05... 1980	--	--	2.2	.010	.31	.32	2.5	.150	--
NOV , 1980									
12... 1980	2.5	.030	2.5	.560	.54	1.1	3.6	.510	.460

01481030 - BRANDYWINE CREEK NEAR CHADDS FORD, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL/ RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL/ RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL/ RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL/ RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
NOV , 1970	--	<100	--	<900	--	<250	--	240	--	--
MAY , 1971	--	<150	--	<200	--	<250	--	380	--	--
OCT , 1971	--	<100	--	<200	--	<250	--	<150	--	--
OCT , 1972	--	<100	--	<200	--	<250	--	<100	--	--
OCT , 1973	--	--	--	--	--	--	--	370	--	2
OCT , 1974	--	--	--	--	--	--	--	--	180	<2
OCT , 1975	<2	--	<20	--	<2	--	--	--	60	6
OCT , 1976	<2	--	<20	--	2	--	--	--	80	93
OCT , 1977	--	--	<2	--	--	--	3	--	160	10
NOV , 1978	--	--	--	--	--	--	3	--	170	3
NOV , 1979	--	10	--	--	--	0	--	--	--	--
NOV , 1980	1	--	4	--	1	--	5	--	120	--

DATE	LITHIUM TOTAL/ RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL/ RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL/ RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL/ RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
NOV , 1970	<50	<250	--	<250	--	<20	--	--	21	14
MAY , 1971	<50	<250	--	<250	--	<20	--	--	10	7.0
OCT , 1971	<50	<250	--	<250	--	<50	--	--	--	--
OCT , 1972	<50	<250	--	<250	--	<20	--	--	6	2.8
OCT , 1973	--	60	--	--	7	--	20	--	--	--
OCT , 1974	--	--	80	--	11	--	<20	--	--	--
OCT , 1975	--	--	30	--	6	--	<20	--	--	--
OCT , 1976	--	--	30	--	7	--	<20	--	--	--
OCT , 1977	--	--	70	--	6	--	<20	--	--	--
NOV , 1978	--	--	60	--	3	--	--	--	--	--
NOV , 1979	--	--	--	--	--	20	--	--	--	--
NOV , 1980	--	--	60	--	7	--	5	.10	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued
 [Units: CFS, cubic foot per second; US/CM, micromhos per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01494900 - EAST BRANCH BIG ELK CREEK AT ELKVIEW, PA

DATE	TIME	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAM-FLOW INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM) _d	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, TOTAL, IMMEDIATE (COLS. PER 100 ML)	COLI-FORM, FECAL, 0.45 UM-MF (COLS./100 ML)	STREP-TOCOCOCCI FECAL, (COLS. PER 100 ML)
JUN , 1970										
03...	--	84215 _a /	9.1	75	7.0	19.0	--	370	--	10
NOV 03...	--	84215	5.1	60	6.8	11.0	--	1300	--	200
MAY , 1971										
24...	--	84215	13	115	7.2	17.0	--	670	90	260
OCT 18...	--	84215	12	115	7.4	12.5	--	44000	340	170
OCT 23...	0740	84215	7.2	105	6.5	8.5	--	930	150	200
OCT 09...	0900	1028 _b /	--	120	6.6	15.0	9.8	6600	240	96
OCT 30...	0100	1028	--	120	6.9	12.5	--	--	--	--
NOV 12...	1245	1028	--	130	7.0	10.5	11.5	--	--	--
NOV 01...	1110	1028	--	160	6.2	9.0	11.7	--	--	--
NOV 02...	1200	80010 _c /	--	135	7.0	14.0	10.8	--	--	--
OCT 25...	1500	80010	--	145	7.4	10.0	12.0	--	--	--
NOV 05...	1500	80010	--	145	--	8.5	11.8	--	--	--
NOV 20...	0830	80010	--	150	7.0	3.0	13.6	--	--	--

DATE	HARD-NESS (MG/L AS CaCO ₃)	HARD-NESS, NONCARBONATE (MG/L AS CaCO ₃)	CALCIUM, TOTAL RECOVERABLE (MG/L AS Ca)	CALCIUM, DIS-SOLVED (MG/L AS Ca)	MAGNESIUM, TOTAL RECOVERABLE (MG/L AS Mg)	MAGNESIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, TOTAL RECOVERABLE (MG/L AS Na)	SODIUM, DIS-SOLVED (MG/L AS Na)	POTASSIUM, TOTAL RECOVERABLE (MG/L AS K)	POTASSIUM, DIS-SOLVED (MG/L AS K)
JUN , 1970										
03...	--	--	19	--	3.7	--	7.2	--	3.1	--
NOV 03...	--	--	6.5	--	3.1	--	5.0	--	4.3	--
MAY , 1971										
24...	--	--	7.3	--	3.6	--	4.8	--	3.7	--
OCT 18...	--	--	10	--	3.3	--	5.0	--	2.2	--
OCT 23...	--	--	7.2	--	3.7	--	5.6	--	2.2	--
OCT 09...	35	17	--	7.5	--	3.9	--	5.7	--	2.1
OCT 30...	36	15	--	8.5	--	3.6	--	5.0	--	1.8
NOV 12...	46	23	--	12	--	4.0	--	5.0	--	2.7
NOV 01...	46	16	--	10	--	5.2	--	6.4	--	4.3
NOV 02...	40	15	--	9.1	--	4.3	--	6.8	--	3.1
OCT 25...	41	18	--	9.0	--	4.5	--	6.5	--	3.6
NOV 06...	--	--	--	--	--	--	--	--	--	--
NOV 20...	46	--	--	10	--	5.0	--	6.9	--	3.3

a/ Chester County Health Department Laboratory, Pennsylvania.

b/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

c/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.

d/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

TABLE 2.-- Water-quality data for surface-water sites--Continued
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01494900 - EAST BRANCH BIG ELK CREEK AT ELKVIEW, PA--Continued

DATE	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LINTY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
JUN , 1970										
03...	--	--	--	13	5.3	--	--	--	157	--
NOV 03...	--	--	--	36	7.7	--	--	--	91	--
MAY , 1971										
24...	--	--	--	6.0	8.2	--	--	--	46	--
OCT 18...	--	--	--	2.7	6.1	--	--	--	64	--
OCT 23 , 1972	--	--	--	13	6.7	--	--	--	52	--
OCT 09 , 1973	26	0	21	3.1	8.5	.20	11	--	--	53
OCT 30 , 1974	25	0	21	5.0	8.5	<.10	9.8	71	--	55
NOV 12 , 1975	28	0	23	7.2	9.8	.20	11	91	--	66
NOV 01 , 1976	36	0	30	13	12	.10	12	91	--	81
NOV 02 , 1977	30	0	25	6.4	9.6	.10	9.1	79	--	63
OCT 25 , 1978	28	0	23	4.9	11	.10	10	93	--	63
NOV 06 , 1979	--	--	23	9.9	11	.10	12	--	--	--
NOV 20 , 1980	--	--	--	12	12	.10	13	103	--	--

DATE	NITRO- GEN NITRATE TOTAL (MG/L AS N)	NITRO- GEN NITRITE TOTAL (MG/L AS N)	NITRO- GEN NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN AMMONIA TOTAL (MG/L AS N)	NITRO- GEN ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)
JUN , 1970									
03...	2.6	--	--	--	--	--	--	--	.013
NOV 03...	1.9	.010	--	--	--	--	--	.020	.010
MAY , 1971									
24...	3.6	.010	--	.200	.28	--	--	.090	.040
OCT 18...	3.7	.010	--	.010	.33	--	--	.050	.010
OCT 23 , 1972	3.6	<.010	--	.050	.01	--	--	.040	.030
OCT 09 , 1973	3.6	.004	3.6	.100	.24	.34	3.9	.050	.040
OCT 30 , 1974	3.8	--	--	.060	.54	.60	--	.090	.070
NOV 12 , 1975	4.5	--	--	.010	.59	.60	--	.090	.070
NOV 01 , 1976	3.3	.030	3.3	.050	.35	.40	3.7	.100	.060
NOV 02 , 1977	3.4	.020	3.4	.070	.29	.36	3.8	.180	.140
OCT 25 , 1978	4.2	.180	4.4	.090	.46	.55	5.0	.200	.170
NOV 06 , 1979	--	--	--	.090	1.2	1.3	--	.160	--
NOV 20 , 1980	4.0	.010	4.0	.050	.15	.20	4.2	.080	.060

01494900 - EAST BRANCH BIG ELK CREEK AT ELKVIEW, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
JUN , 1970										
03...	--	--	--	--	--	--	--	--	--	--
NOV 03...	--	<100	--	<900	--	<250	--	<100	--	--
MAY 24...	--	<150	--	<200	--	<250	--	160	--	--
OCT 18...	--	<100	--	<200	--	<250	--	<150	--	--
OCT 23...	--	<100	--	<200	--	<250	--	950	--	--
OCT 09...	ND	--	ND	--	ND	--	ND	90	--	ND
OCT 30...	ND	--	ND	--	ND	--	<20	--	80	ND
NOV 12...	<2	--	<20	--	ND	--	ND	--	30	5
NOV 01...	2	--	<20	--	ND	--	<20	--	150	5
NOV 02...	<2	--	ND	--	ND	--	4	--	90	5
OCT 25...	<2	--	ND	--	<2	--	<2	--	100	8
NOV 06...	--	10	--	--	--	10	--	--	--	--
NOV 20...	1	--	.00	--	1	--	2	--	70	1

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
JUN , 1970										
NOV 03...	--	--	--	--	--	--	--	--	7	.17
MAY 24...	<50	<250	--	<250	--	<20	--	--	--	--
OCT 18...	<50	<250	--	<250	--	<20	--	--	4	.14
OCT 23...	<50	<250	--	<250	--	<50	--	--	2	.06
OCT 09...	<50	<250	--	<250	--	<20	--	--	--	--
OCT 30...	--	20	--	--	ND	--	<20	--	--	--
NOV 12...	--	--	30	--	<2	--	30	--	--	--
NOV 01...	--	--	30	--	2	--	<20	--	--	--
NOV 02...	--	--	70	--	5	--	<20	--	--	--
OCT 25...	--	--	50	--	ND	--	20	.00	--	--
NOV 06...	--	--	<10	--	<2	--	ND	.10	--	--
NOV 20...	--	--	--	--	--	20	--	--	--	--
NOV 20...	--	--	30	--	0	--	4	.10	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01494950 - WEST BRANCH BIG ELK CREEK NEAR OXFORD, PA

DATE	TIME	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI, FECAL, (COLS. PER 100 ML)
JUN , 1970										
03...	--	84215a/	9.9	110	8.0	20.0	--	1800	--	<1
NOV 03...	--	84215	6.3	80	7.1	12.0	--	1100	--	120
MAY 24... 1971	--	84215	14	120	7.5	17.0	--	95000	3600	3500
OCT 18... 1972	--	84215	12	120	7.4	12.5	--	14000	460	380
OCT 23... 1972	0920	84215	7.2	110	7.2	9.0	--	2100	230	180
OCT 09... 1973	0940	1028b/	--	140	6.6	15.0	9.8	12000	560	160
OCT 30... 1974	1235	1028	--	131	7.3	14.0	--	--	--	--
NOV 12... 1975	1400	1028	--	150	7.0	10.5	11.8	--	--	--
NOV 01... 1976	1230	1028	--	140	6.9	10.0	11.3	--	--	--
NOV 02... 1977	1230	80010c/	--	160	7.4	15.0	12.2	--	--	--
OCT 25... 1978	1415	80010	--	190	7.1	11.5	13.2	--	--	--
NOV 06... 1979	1545	80010	--	136	5.7	9.0	12.7	--	--	--
NOV 20... 1980	1000	80010	--	150	7.2	4.0	14.0	--	--	--

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
JUN , 1970	--	--	6.6	--	3.9	--	6.0	--	4.1	--
NOV 03...	--	--	7.8	--	3.4	--	6.5	--	2.8	--
MAY 24... 1971	--	--	7.8	--	4.0	--	6.5	--	2.4	--
OCT 18...	--	--	8.7	--	3.5	--	6.7	--	2.5	--
OCT 23... 1972	--	--	6.3	--	3.6	--	6.6	--	2.1	--
OCT 09... 1973	38	17	--	8.0	--	4.4	--	9.0	--	2.4
OCT 30... 1974	36	16	--	8.0	--	3.9	--	6.0	--	2.6
NOV 12... 1975	48	24	--	12	--	4.5	--	6.8	--	3.2
NOV 01... 1976	65	36	--	19	--	4.2	--	5.1	--	3.6
NOV 02... 1977	--	--	--	--	--	--	--	--	--	--
OCT 25... 1978	45	26	--	10	--	4.8	--	7.5	--	2.3
NOV 06... 1979	--	--	--	--	--	--	--	--	--	--
NOV 20... 1980	47	--	--	9.9	--	5.3	--	8.8	--	3.1

a/ Chester County Health Department Laboratory, Pennsylvania.

b/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

c/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.

d/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

01494950 - WEST BRANCH BIG ELK CREEK NEAR OXFORD, PA--Continued

DATE	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS RESIDUE AT 180 DEG. C SOLVED (MG/L)	SOLIDS RESIDUE AT 103 DEG. C DIS- SOLVED (MG/L)	SOLIDS SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
JUN , 1970	--	--	--	2.7	7.4	--	--	--	138	--
NOV 03 , 1970	--	--	--	18	9.8	--	--	--	101	--
MAY 24 , 1971	--	--	--	9.9	9.5	--	--	--	54	--
OCT 18 , 1971	--	--	--	6.3	10	--	--	--	64	--
OCT 23 , 1972	--	--	--	13	9.2	--	--	--	76	--
OCT 09 , 1973	25	0	21	4.5	12	.30	9.9	--	--	63
OCT 30 , 1974	24	0	20	6.3	11	<.10	9.3	77	--	59
NOV 12 , 1975	30	0	25	7.9	13	.10	11	92	--	73
NOV 01 , 1976	35	0	29	12	9.7	.10	12	83	--	83
NOV 02 , 1977	30	0	25	10	15	<.10	9.2	94	--	--
OCT 25 , 1978	23	0	19	6.8	14	.10	9.3	95	--	66
NOV 05 , 1979	--	--	19	9.2	12	.10	11	--	--	--
NOV 20 , 1980	--	--	--	12	14	.10	13	105	--	--

DATE	NITRO- GEN NITRATE TOTAL (MG/L AS N)	NITRO- GEN NITRITE TOTAL (MG/L AS N)	NITRO- GEN NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN AMMONIA TOTAL (MG/L AS N)	NITRO- GEN ORGANIC TOTAL (MG/L AS N)	NITRO- GEN AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)
JUN , 1970	2.9	--	--	--	--	--	--	--	.013
NOV 03 , 1970	2.2	.030	--	--	--	--	--	.150	.150
MAY 24 , 1971	4.6	.020	--	.150	.05	--	--	.060	.020
OCT 18 , 1971	4.0	.011	--	.010	.72	--	--	.110	.040
OCT 23 , 1972	4.0	.013	--	.060	.29	--	--	.140	.110
OCT 09 , 1973	4.3	--	--	.130	.20	.33	--	.200	.190
OCT 30 , 1974	4.7	--	--	.090	.56	.65	--	.180	.140
NOV 12 , 1975	4.5	--	--	.010	.70	.71	--	.130	.090
NOV 01 , 1976	3.0	.010	3.0	.070	.38	.45	3.5	.090	.080
NOV 02 , 1977	3.8	.030	3.8	.110	.48	.59	4.4	.190	.150
OCT 25 , 1978	4.4	.010	4.4	.060	.25	.31	4.7	.100	.090
NOV 05 , 1979	--	--	4.2	.070	.47	.54	4.7	.070	--
NOV 20 , 1980	4.5	.020	4.5	.000	.12	.12	4.6	.130	.100

01494950 - WEST BRANCH BIG ELK CREEK NEAR OXFORD, PA--Continued

DATE	CADMIUM TOTAL DIS- SOLVED (UG/L AS CD)	CHROMIUM TOTAL RECOV- ERABLE (UG/L AS CR)	CHROMIUM TOTAL DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, TOTAL DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, TOTAL DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, TOTAL DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL DIS- SOLVED (UG/L AS PB)
JUN , 1970	--	--	--	--	--	--	--	--	--	--
NOV 03...	--	--	--	--	--	--	--	--	--	--
MAY , 1971	--	<100	--	<200	--	<250	--	<100	--	--
OCT 24...	--	<150	--	<200	--	<150	--	160	--	--
OCT 18...	--	<100	--	<200	--	<250	--	<150	--	--
OCT 23...	--	<100	--	<200	--	<250	--	270	--	--
OCT 09...	ND	--	ND	--	ND	--	ND	170	--	ND
OCT 30...	ND	--	ND	--	ND	--	<20	--	80	ND
NOV 12...	<2	--	ND	--	ND	--	ND	--	50	7
NOV 01...	<2	--	<20	--	ND	--	<20	--	120	3
NOV 02...	--	--	--	--	--	--	--	--	--	--
OCT 25...	2	--	ND	--	2	--	2	--	50	2
NOV 06...	--	<10	--	--	--	0	--	--	--	--
NOV 20...	0	--	.00	--	1	--	20	--	50	3

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGANESE TOTAL RECOV- ERABLE (UG/L AS MN)	MANGANESE TOTAL DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, TOTAL DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, TOTAL DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
JUN , 1970	--	<250	--	--	--	--	--	--	70	1.9
NOV 03...	<50	<250	--	<250	--	<20	--	--	--	--
MAY , 1971	<50	<250	--	<250	--	<20	--	--	4	.15
OCT 18...	<50	<250	--	<250	--	<50	--	--	4	.13
OCT 23...	<50	<250	--	<250	--	<20	--	--	--	--
OCT 09...	--	20	--	--	<2	--	20	--	--	--
OCT 30...	--	--	30	--	2	--	<20	--	--	--
NOV 12...	--	--	30	--	3	--	20	--	--	--
NOV 01...	--	--	80	--	4	--	<20	--	--	--
NOV 02...	--	--	--	--	--	--	--	.00	--	--
OCT 25...	--	--	20	--	ND	--	ND	.10	--	--
NOV 06...	--	--	--	--	--	10	--	--	--	--
NOV 20...	--	--	30	--	0	--	3	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued
 [Units: CFS, cubic foot per second; US/CM, micromhos per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01578340 - EAST BRANCH OCTORARO CREEK AT CHRISTIANA, PA

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) ^a	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MP (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
JUN , 1970										
08...	--	84215 ^a	8.5	100	7.8	14.0	--	10000	--	390
NOV 03...	--	84215	20	160	7.2	11.0	--	8600	--	600
MAY , 1971										
24...	--	84215	14	195	7.1	12.0	--	17000	3900	320
OCT 18...	--	84215	13	195	7.6	13.0	--	136000	6300	2300
OCT 23, 1972	1130	84215	8.3	180	7.3	9.5	--	8300	1100	860
OCT 09, 1973	1040	1028 ^b	--	240	6.7	15.5	10.0	80000	22000	900
OCT 30, 1974	0140	1028	--	230	7.0	14.0	--	--	--	--
NOV 12, 1975	0900	1028	--	220	6.8	9.0	11.2	--	--	--
NOV 02, 1976	1410	1028	--	240	7.2	10.0	11.8	--	--	--
NOV 02, 1977	0830	80010 ^c	--	190	7.1	13.5	9.6	--	--	--
OCT 26, 1978	1115	80010	--	300	6.2	11.0	11.2	--	--	--
NOV 07, 1979	1230	80010	--	217	6.5	10.0	12.2	--	--	--
NOV 13, 1980	1530	80010	--	270	6.9	7.0	12.7	--	--	--

DATE	HARD- NESS (MG/L AS CACO ₃)	HARD- NESS, NONCAR- BONATE (MG/L CACO ₃)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
JUN , 1970	--	--	15	--	6.2	--	6.5	--	3.6	--
NOV 03...	--	--	16	--	6.8	--	7.5	--	3.6	--
MAY , 1971	--	--	16	--	7.6	--	6.9	--	2.5	--
OCT 18...	--	--	17	--	7.7	--	7.3	--	3.3	--
OCT 23, 1972	--	--	15	--	7.6	--	7.5	--	3.0	--
OCT 09, 1973	77	43	--	17	--	8.3	--	8.0	--	3.1
OCT 30, 1974	77	45	--	18	--	7.8	--	6.5	--	3.1
NOV 12, 1975	78	44	--	17	--	8.7	--	6.4	--	3.1
NOV 02, 1976	81	47	--	18	--	8.8	--	6.9	--	3.8
NOV 02, 1977	80	47	--	18	--	8.4	--	8.0	--	3.6
OCT 26, 1978	66	51	--	14	--	7.5	--	7.3	--	3.4
NOV 07, 1979	--	--	--	--	--	--	--	--	--	--
NOV 13, 1980	85	--	--	20	--	8.6	--	8.8	--	3.7

^a/ Chester County Health Department Laboratory, Pennsylvania.

^b/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

^c/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.

^d/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

TABLE 2.-- Water-quality data for surface-water sites--Continued
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01578340 - EAST BRANCH OCTORARO CREEK AT CHRISTIANA, PA--Continued

DATE	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
JUN . 1970	--	--	--	32	11	--	--	--	170	--
NOV . 03 . . .	--	--	--	28	14	--	--	--	138	--
MAY . 24 . . . 1971	--	--	--	24	8.2	--	--	--	107	--
OCT . 18 . . .	--	--	--	21	10	--	--	--	115	--
OCT . 23 . . . 1972	--	--	--	34	12	--	--	--	141	--
OCT . 09 . . . 1973	41	0	34	24	14	.30	15	--	--	110
OCT . 30 . . . 1974	39	0	32	25	14	.20	13	138	--	110
NOV . 12 . . . 1975	42	0	34	25	14	.10	14	149	--	110
NOV . 02 . . . 1976	42	0	34	28	14	.10	16	148	--	120
NOV . 02 . . . 1977	40	0	33	26	14	<.10	13	148	--	110
OCT . 26 . . . 1978	18	0	15	26	13	.10	14	160	--	94
NOV . 07 . . . 1979	--	--	27	27	13	.10	13	--	--	--
NOV . 13 . . . 1980	--	--	--	28	16	.10	16	163	--	--

DATE	NITRO- GEN NITRATE TOTAL (MG/L AS N)	NITRO- GEN NITRITE TOTAL (MG/L AS N)	NITRO- GEN NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN AMMONIA TOTAL (MG/L AS N)	NITRO- GEN ORGANIC TOTAL (MG/L AS N)	NITRO- GEN+AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)
JUN . 08 . . . 1970	4.7	--	--	--	--	--	--	--	.023
NOV . 03 . . .	3.9	.020	--	--	--	--	--	.010	.010
MAY . 24 . . . 1971	6.1	.020	--	.310	.24	--	--	.050	.010
OCT . 18 . . .	5.9	.013	--	.010	1.5	--	--	.140	.052
OCT . 23 . . . 1972	6.1	.020	--	.030	.38	--	--	.040	.020
OCT . 09 . . . 1973	5.5	.003	6.5	.130	.32	.45	7.0	.080	.060
OCT . 30 . . . 1974	5.1	--	--	.040	.56	.50	--	.040	.030
NOV . 12 . . . 1975	7.2	--	--	<.010	.72	.72	--	.060	.020
NOV . 02 . . . 1976	5.0	.030	6.0	.130	.32	.45	6.5	.080	.040
NOV . 02 . . . 1977	5.8	.020	5.8	.100	.47	.57	6.4	.040	.010
OCT . 26 . . . 1978	5.9	.030	6.9	.130	.43	.56	7.5	.060	.020
NOV . 07 . . . 1979	--	--	7.0	.070	.31	.38	7.4	.150	--
NOV . 13 . . . 1980	5.6	.040	6.6	.160	.73	.89	7.5	.320	.120

01578340 - EAST BRANCH OCTORARO CREEK AT CHRISTIANA, PA--Continued

DATE	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
JUN , 1970										
08...	--	<200	--	<500	--	--	--	<250	--	--
NOV 03...	--	<100	--	<900	--	<250	--	<100	--	--
MAY 24, 1971	--	<150	--	<200	--	<250	--	380	--	--
OCT 18...	--	<100	--	<200	--	<250	--	<150	--	--
OCT 23, 1972	--	<100	--	<200	--	<250	--	400	--	--
OCT 29, 1973	ND	--	ND	--	ND	--	ND	270	--	ND
OCT 30, 1974	<2	--	ND	--	ND	--	ND	--	80	ND
NOV 12, 1975	<2	--	ND	--	<2	--	ND	--	30	4
NOV 02, 1976	<2	--	<20	--	ND	--	ND	--	80	2
NOV 02, 1977	ND	--	ND	--	ND	--	4	--	90	8
OCT 26, 1978	<2	--	<2	--	2	--	<2	--	130	10
NOV 07, 1979	--	10	--	--	--	0	--	--	--	--
NOV 13, 1980	1	--	.00	--	1	--	7	--	70	0

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
JUN , 1970										
08...	<100	<250	--	<250	--	<250	--	--	21	.48
NOV 03...	<50	<250	--	<250	--	<20	--	--	--	--
MAY 24, 1971	<50	<250	--	<250	--	30	--	--	12	.45
OCT 18...	<50	<250	--	<250	--	<50	--	--	5	.18
OCT 23, 1972	<50	<250	--	<250	--	<20	--	--	--	--
OCT 29, 1973	--	20	--	--	ND	--	<20	--	--	--
OCT 30, 1974	--	--	30	--	4	--	<20	--	--	--
NOV 12, 1975	--	--	40	--	<2	--	20	--	--	--
NOV 02, 1976	--	--	80	--	3	--	ND	--	--	--
NOV 02, 1977	--	--	110	--	ND	--	<20	.00	--	--
OCT 26, 1978	--	--	30	--	<2	--	20	.10	--	--
NOV 07, 1979	--	--	--	--	--	10	--	--	--	--
NOV 13, 1980	--	--	60	--	0	--	4	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued

[Units: CFS, cubic foot per second; US/CM, microns per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01578343 - VALLEY CREEK NEAR ATGLEN, PA

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) ^d	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
JUN , 1970										
08...	--	84215 ^a	9.1	145	7.9	17.0	--	--	--	--
NOV										
03...	--	84215	5.4	180	7.1	11.0	--	1300	--	120
MAY , 1971										
24...	--	84215	9.8	200	7.4	14.0	--	20700	1100	270
OCT										
18...	--	84215	10	202	7.7	13.0	--	56000	1200	330
OCT , 1972										
23...	1245	84215	7.6	200	7.9	9.5	--	150	64	64
OCT , 1973										
09...	1125	1028 ^b	--	240	7.1	16.0	10.8	8000	800	240
OCT , 1974										
30...	0200	1028	--	250	7.1	14.0	--	--	--	--
NOV , 1975										
12...	1000	1028	--	240	7.2	9.5	11.5	--	--	--
NOV , 1976										
02...	1500	1028	--	240	7.4	10.0	11.6	--	--	--
NOV , 1977										
02...	0900	80010 ^c	--	235	7.3	14.0	10.0	--	--	--
OCT , 1978										
26...	1230	80010	--	255	6.7	10.5	10.6	--	--	--
NOV , 1979										
07...	1330	80010	--	227	6.5	11.0	11.2	--	--	--
NOV , 1980										
13...	1415	80010	--	262	6.8	7.0	11.8	--	--	--

DATE	HARD- NESS (MG/L AS CaCO3)	HARD- NESS NONCAR- BONATE (MG/L CaCO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
JUN , 1970										
08...	--	--	--	--	--	--	--	--	--	--
NOV										
03...	--	--	22	--	6.5	--	6.5	--	3.4	--
MAY , 1971										
24...	--	--	20	--	7.0	--	5.9	--	2.1	--
OCT										
18...	--	--	21	--	7.0	--	5.8	--	2.6	--
OCT , 1972										
23...	--	--	18	--	6.6	--	8.4	--	2.7	--
OCT , 1973										
09...	80	35	--	20	--	7.4	--	8.2	--	2.8
OCT , 1974										
30...	93	45	--	25	--	7.5	--	6.9	--	2.7
NOV , 1975										
12...	92	44	--	23	--	8.4	--	6.7	--	3.1
NOV , 1976										
02...	92	49	--	24	--	7.8	--	5.9	--	2.8
NOV , 1977										
02...	97	35	--	26	--	7.9	--	7.5	--	3.3
OCT , 1978										
26...	99	53	--	27	--	7.7	--	8.2	--	2.8
NOV , 1979										
07...	--	--	--	--	--	--	--	--	--	--
NOV , 1980										
13...	92	--	--	24	--	7.8	--	10	--	3.2

^a/ Chester County Health Department Laboratory, Pennsylvania.^b/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.^c/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.^d/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

01578343 - VALLEY CREEK NEAR ATGLEN, PA--Continued

DATE	BICARBONATE FET-FLD (MG/L AS HCO3)	CARBONATE FET-FLD (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLORIDE, DIS- SOLVED (MG/L AS CL)	FLUORIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
JUN 08, 1970	--	--	--	--	--	--	--	--	--	--
NOV 03, 1971	--	--	--	25	12	--	--	--	161	--
MAY 24, 1971	--	--	--	21	8.6	--	--	--	115	--
OCT 18, 1972	--	--	--	16	11	--	--	--	111	--
OCT 23, 1972	--	--	--	29	13	--	--	--	131	--
OCT 09, 1973	56	0	46	18	14	.30	10	--	--	110
OCT 30, 1974	59	0	48	20	15	.10	9.8	143	--	120
NOV 12, 1975	58	0	48	24	15	.10	12	157	--	120
NOV 02, 1976	53	0	43	22	13	.10	11	138	--	110
NOV 02, 1977	77	0	63	23	14	<.10	10	155	--	130
OCT 26, 1978	56	0	46	23	15	.10	9.4	152	--	120
NOV 07, 1979	--	--	41	24	13	.10	10	--	--	--
NOV 13, 1980	--	--	--	22	18	.10	12	165	--	--

DATE	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN NITRITE TOTAL (MG/L AS N)	NITRO- GEN NO ₂ +NO ₃ TOTAL (MG/L AS N)	NITRO- GEN AMMONIA TOTAL (MG/L AS N)	NITRO- GEN ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA, + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)
JUN , 1970									
08...	--	--	--	--	--	--	--	--	--
NOV 03...									
MAY , 1971	3.4	.030	--	--	--	--	--	.154	.160
24...	5.2	.012	--	.250	.11	--	--		
OCT 18...	6.1	.020	--	.010	.60	--	--	.060	.023
OCT , 1972								.180	.110
23...	5.3	.020	--	.020	.19	--	--	.200	.180
OCT , 1973									
09...	5.2	.071	5.3	.050	.21	.26	5.6	.130	.110
OCT , 1974								.130	.110
30...	5.2	--	--	.080	.51	.59	--		
NOV , 1975								.100	.070
12...	6.6	--	--	.010	.63	.64	--		
NOV , 1976								.080	.050
02...	5.1	.050	5.1	.100	.43	.53	5.6		
NOV , 1977								.080	.060
02...	4.8	.060	4.9	.130	.29	.42	5.3		
OCT , 1978								.100	.080
26...	5.3	.070	5.4	.080	--	--	--		
NOV , 1979								.360	--
07...	--	--	5.9	.010	.56	.57	6.5		
NOV , 1980								.160	.130
13...	2.1	.030	2.1	.140	3.5	3.6	5.7		

01578343 - VALLEY CREEK NEAR ATGLEN, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
JUN . 08 . . . 1970	--	--	--	--	--	--	--	--	--	--
NOV . 03 . . . 1971	--	<100	--	<900	--	<250	--	<100	--	--
MAY . 24 . . . 1971	--	<150	--	<200	--	<250	--	390	--	--
OCT . 18 . . . 1972	--	<100	--	<200	--	<250	--	<100	--	--
OCT . 23 . . . 1972	--	<100	--	<200	--	<250	--	250	--	--
OCT . 09 . . . 1973	ND	--	ND	--	3	--	ND	--	90	ND
OCT . 30 . . . 1974	ND	--	ND	--	ND	--	ND	--	60	<2
NOV . 12 . . . 1975	<2	--	ND	--	<2	--	<20	--	60	4
NOV . 02 . . . 1976	<2	--	<20	--	ND	--	<20	--	60	2
NOV . 02 . . . 1977	ND	--	<2	--	ND	--	2	--	80	4
OCT . 26 . . . 1978	ND	--	<2	--	<2	--	2	--	120	2
NOV . 07 . . . 1979	--	10	--	--	--	0	--	--	--	--
NOV . 13 . . . 1980	0	--	.00	--	2	--	3	--	50	0

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
JUN . 08 . . . 1970	--	--	--	--	--	--	--	--	24	.59
NOV . 03 . . . 1971	<50	<250	--	<250	--	<20	--	--	--	--
MAY . 24 . . . 1971	<50	<250	--	<250	--	<20	--	--	8	.21
OCT . 18 . . . 1972	<50	<250	--	<250	--	<50	--	--	11	.30
OCT . 23 . . . 1972	<50	<250	--	<250	--	<20	--	--	--	--
OCT . 09 . . . 1973	--	--	<10	--	ND	--	20	--	--	--
OCT . 30 . . . 1974	--	--	<10	--	3	--	ND	--	--	--
NOV . 12 . . . 1975	--	--	70	--	<2	--	20	--	--	--
NOV . 02 . . . 1976	--	--	60	--	3	--	<20	--	--	--
NOV . 02 . . . 1977	--	--	40	--	ND	--	<20	.00	--	--
OCT . 26 . . . 1978	--	--	20	--	ND	--	ND	.10	--	--
NOV . 07 . . . 1979	--	--	--	--	--	10	--	--	--	--
NOV . 13 . . . 1980	--	--	30	--	2	--	3	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01578345 - EAST BRANCH OCTORARO CREEK AT STEELVILLE, PA

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) ^d	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MP (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
JUN , 1970										
08...	--	84215 ^a	27	140	7.3	17.0	--	14	--	6
NOV 03...	--	84215	17	160	7.1	11.0	--	13400	--	250
MAY , 1971										
24...	--	84215	40	180	7.2	14.0	--	7300	1000	70
OCT 18...	--	84215	36	195	7.5	14.0	--	134000	270	100
OCT , 1972										
23...	1300	84215	24	185	7.9	11.0	--	3100	460	240
OCT 09...	1200	1028 ^b	--	240	7.3	16.5	10.2	7000	1300	210
OCT , 1974										
30...	0220	1028	--	245	7.1	13.0	--	--	--	--
NOV , 1975										
12...	1100	1028	--	230	7.3	10.0	11.3	--	--	--
NOV 01...	1345	1028	--	220	7.6	9.0	11.5	--	--	--
NOV , 1977										
02...	1030	80010 ^c	--	245	7.3	14.0	10.0	--	--	--
OCT , 1978										
26...	1330	80010	--	255	6.8	11.0	10.2	--	--	--
NOV , 1979										
07...	1430	80010	--	214	6.5	10.0	11.8	--	--	--
NOV , 1980										
13...	1300	80010	--	275	6.9	5.5	13.4	--	--	--

DATE	HARD- NESS (MG/L AS CaCO3)	HARD- NESS, NONCAR- BONATE (MG/L CaCO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS Ca)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS Mg)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS Na)	SODIUM, DIS- SOLVED (MG/L AS Na)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
JUN , 1970										
08...	--	--	20	--	7.1	--	7.7	--	3.4	--
NOV 03...	--	--	--	--	--	--	--	--	--	--
MAY , 1971										
24...	--	--	16	--	6.4	--	6.5	--	2.2	--
OCT 18...	--	--	18	--	6.5	--	6.5	--	2.8	--
OCT , 1972										
23...	--	--	15	--	6.2	--	8.1	--	2.8	--
OCT 09...	77	34	--	19	--	7.2	--	10	--	3.0
OCT , 1974										
30...	81	38	--	21	--	7.0	--	7.5	--	2.8
NOV , 1975										
12...	92	46	--	24	--	7.8	--	6.5	--	3.1
NOV , 1976										
01...	89	50	--	24	--	7.0	--	5.4	--	4.0
NOV , 1977										
02...	70	22	--	14	--	8.6	--	8.5	--	2.2
OCT , 1978										
26...	93	51	--	25	--	7.5	--	8.1	--	3.0
NOV , 1979										
07...	--	--	--	--	--	--	--	--	--	--
NOV , 1980										
13...	90	--	--	24	--	7.3	--	7.9	--	3.1

^a/ Chester County Health Department Laboratory, Pennsylvania.

^b/ U.S. Geological Survey Laboratory, Harrisburg, Pennsylvania and Albany, New York.

^c/ U.S. Geological Survey Laboratory, Atlanta, Georgia.

^d/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

TABLE 2.-- Water-quality data for surface-water sites--Continued

[Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 mL, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01578345 - EAST BRANCH OCTORARO CREEK AT STEELVILLE, PA--Continued

DATE	BICARBONATE FET-FLD (MG/L AS HCO3)	CARBONATE FET-FLD (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLORIDE, DIS- SOLVED (MG/L AS CL)	FLUORIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
JUN . 1970										
08 . . .	--	--	--	25	4.2	--	--	--	195	--
NOV . . .										
03 . . .	--	--	--	18	13	--	--	--	149	--
MAY . 1971										
24 . . .	--	--	--	25	9.1	--	--	--	114	--
OCT . . .										
18 . . .	--	--	--	16	13	--	--	--	102	--
OCT . 1972										
23 . . .	--	--	--	25	14	--	--	--	140	--
OCT . 1973										
09 . . .	52	0	43	21	14	.30	10	--	--	110
OCT . 1974										
30 . . .	53	0	43	23	20	.10	9.3	144	--	120
NOV . 1975										
12 . . .	56	0	46	22	14	.20	11	142	--	120
NOV . 1976										
01 . . .	47	0	39	22	12	.10	11	128	--	110
NOV . 1977										
02 . . .	58	0	48	13	12	<.10	16	119	--	100
OCT . 1978										
26 . . .	51	0	42	24	16	.10	9.3	148	--	120
NOV . 1979										
07 . . .	--	--	37	24	12	.10	9.3	--	--	--
NOV . 1980										
13 . . .	--	--	--	24	17	.10	11	156	--	--

DATE	NITROGEN NITRATE TOTAL (MG/L AS N)	NITROGEN NITRITE TOTAL (MG/L AS N)	NITROGEN NO2+NO3 TOTAL (MG/L AS N)	NITROGEN AMMONIA TOTAL (MG/L AS N)	NITROGEN ORGANIC TOTAL (MG/L AS N)	NITROGEN AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS ORTHO, TOTAL (MG/L AS P)
JUN . 1970									
08 . . .	4.0	--	--	--	--	--	--	--	.010
NOV . . .									
03 . . .	3.2	.021	--	--	.02	--	--	.261	.250
MAY . 1971									
24 . . .	4.4	.030	--	.100	--	--	--	.120	.052
OCT . . .									
18 . . .	6.3	.020	--	.010	.50	--	--	.160	.090
OCT . 1972									
23 . . .	4.9	.030	--	.050	.41	--	--	.190	.160
OCT . 1973									
09 . . .	5.4	--	--	.100	.30	.40	--	.210	.190
OCT . 1974									
30 . . .	4.3	--	--	.050	.59	.64	--	.100	.090
NOV . 1975									
12 . . .	5.3	--	--	.020	.72	.74	--	.110	.080
NOV . 1976									
01 . . .	4.1	.020	4.1	.050	.45	.50	4.6	.090	.050
NOV . 1977									
02 . . .	4.6	.050	4.6	.090	.34	.43	5.0	.130	.100
OCT . 1978									
26 . . .	5.3	.050	5.3	.090	.12	.21	5.5	.140	.110
NOV . 1979									
07 . . .	--	--	5.9	.020	.97	.99	6.9	.140	--
NOV . 1980									
13 . . .	5.5	.030	5.5	.090	.51	.60	6.1	.160	.130

01578345 - EAST BRANCH OCTORARO CREEK AT STEELVILLE, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PE)
JUN , 1970	--	<200	--	<500	--	--	--	<250	--	--
NOV 08...	--	<100	--	<900	--	<250	--	<100	--	--
MAY 24...	--	<150	--	<200	--	<250	--	230	--	--
OCT 18...	--	<100	--	<200	--	<250	--	<150	--	--
OCT 23...	--	<100	--	<200	--	<250	--	260	--	--
OCT 09...	ND	--	ND	--	ND	--	<20	120	--	<2
OCT 30...	ND	--	ND	--	ND	--	<20	--	80	ND
NOV 12...	<2	--	ND	--	ND	--	ND	--	50	5
NOV 01...	<2	--	<20	--	ND	--	<20	--	80	<2
NOV 02...	ND	--	ND	--	ND	--	<2	--	100	3
OCT 26...	<2	--	ND	--	ND	--	3	--	110	2
NOV 07...	--	100	--	--	--	0	--	--	--	--
NOV 13...	1	--	.00	--	1	--	3	--	60	2

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
JUN , 1970	<100	<250	--	<250	--	<250	--	--	24	1.8
NOV 03...	<500	<250	--	<250	--	<20	--	--	--	--
MAY 24...	<50	<250	--	<250	--	<20	--	--	14	1.5
OCT 18...	<50	<250	--	<250	--	<50	--	--	3	.29
OCT 23...	<50	<250	--	<250	--	<20	--	--	--	--
OCT 09...	--	<10	--	--	ND	--	20	--	--	--
OCT 30...	--	--	<10	--	<2	--	<20	--	--	--
NOV 12...	--	--	40	--	2	--	<20	--	--	--
NOV 01...	--	--	40	--	4	--	<20	--	--	--
NOV 02...	--	--	<10	--	ND	--	ND	.10	--	--
OCT 26...	--	--	20	--	<2	--	ND	.10	--	--
NOV 07...	--	--	--	--	--	10	--	--	--	--
NOV 13...	--	--	40	--	1	--	3	.00	--	--

Table 3.--Benthic-invertebrate data
[double dash indicates organism not present in sample]

		01472054 PIGEON CREEK NEAR BUCKTOWN, PA.					
DATE	MAY 6 70	SEP 29 70	MAY 4 71	SEP 28 71	OCT 9 72	OCT 3 73	
TIME	0000	0000	0000	0000	0000	0000	
TOTAL COUNT	110	94	186	26	288	486	
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT	
ARTHROPODA (ARTHROPODS)							
..ARACHNIDA							
..HYDRACARINA							
..UNKNOWN FAMILY							
..UNKNOWN GENUS	--	--	--	--	--	5	
..CRUSTACEA							
..ISOPODA							
..ASELLIDAE							
..ASELLUS	--	--	--	--	--	1	
..INSECTA							
..COLEOPTERA							
..LIMNORHINCHIDAE							
..DUBIRAPHIA	--	--	--	--	--	--	
..OPTIOSERVUS	--	--	--	--	1	14	
..STENELMIS	--	--	--	--	2	10	
..PELICOPRIIDAE							
..PELICOPRIA	--	--	--	--	--	1	
..PSEPHENUS	--	--	--	--	--	--	
..COLLEMBOLA	--	--	--	--	--	1	
..DIPTERA							
..CHIRONOMIDAE	14	--	33	--	14	10	
..BRILLIA	--	--	--	--	--	--	
..CARDIOCLADIUS	--	--	--	--	--	--	
..CONCHAPELOPIA	--	--	--	--	--	--	
..CRICOTOPUS	--	--	--	--	--	--	
..EUKIEFFERIELLA	--	--	--	--	--	--	
..LIMNOCHIRONOMUS	--	--	--	--	--	--	
..MICROTENDIPES	--	--	--	--	--	--	
..ORTHOCALDIUS	--	--	--	--	--	--	
..PARAMETRICONEMUS	--	--	--	--	--	--	
..RHEOTANYTARSUS	--	--	--	--	--	--	
..THIENEMANNIELLA	--	--	--	--	--	--	
..EMPIDIDAE							
..HEMEROCHROMIA	--	--	--	--	--	--	
..MUSCIDAE	--	--	--	--	1	--	
..SIMULIIDAE							
..SIMULIUM	--	6	4	10	--	1	
..UNKNOWN GENUS	--	--	--	--	--	--	
..TIPULIDAE							
..ANTOCHA	--	--	8	--	2	16	
..TIPULA	--	--	--	--	--	2	
..EPHEMEROPTERA							
..BAETIDAE							
..BAETIS	--	28	--	5	3	4	
..PSEUDOCLOEON	--	--	--	--	--	--	
..CAENIDAE	--	--	--	--	--	--	
..CAENIS	--	--	--	--	--	--	
..EPHEMERELLIDAE							
..EPHEMERELLA	64	--	93	--	3	6	
..HEPTAGENIIDAE							
..EPEORUS	1	--	--	--	--	--	
..STENGNEMA	8	11	3	4	75	22	
..SIPHONURIDAE							
..ISONYCHIA	--	--	--	--	12	--	
..TRICORYTHIDAE	--	--	--	--	--	--	
..TRICORYTHODES	--	--	--	--	--	--	
..MEGALOPTERA							
..CORYDALIDAE							
..CHAULIODES	--	--	--	--	--	--	
..CORYDALUS	--	--	--	--	--	--	
..NIGRONIA	--	--	--	--	--	--	
..PLECOPTERA							
..PEHLIDAE							
..ACHONEURIA	--	--	--	--	2	--	
..PERLODIDAE	--	--	--	--	--	2	
..TAENIOPTERYGIDAE	--	--	--	--	--	--	
..TAENIOPTERYX	--	--	--	--	--	--	
..TRICHOPTERA							
..GLOSSOSOMATIDAE	--	--	--	--	--	--	
..GLOSSOSOMA	--	--	--	--	2	22	
..HYDROPSYCHIDAE							
..CHEUMATOPSYCHE	19	8	18	--	72	78	
..HYDROPSYCHE	13	25	26	7	89	271	
..SYMPHYTOPSYCHE	--	--	--	--	--	--	
..HYDROPTILIDAE							
..LEUCOTRICHIA	--	--	--	--	--	3	
..LIMNAPHILIDAE	--	--	--	--	--	--	
..GOERA	--	--	--	--	--	--	
..UNKNOWN GENUS	--	--	--	--	--	--	
..MOLANNIDAE							
..MOLANNA	1	--	--	--	--	--	
..PHILOPOTAMIDAE							
..CHINARRA	--	--	--	--	9	14	
..DOLOPHILODES	--	--	--	--	1	3	
..WORMALDIA	--	--	--	--	--	--	
..POLYCENTROPIDIDAE	--	--	--	--	--	--	
..POLYCENTROPUS	--	--	--	--	--	--	
..PSYCHOMYIIDAE	--	--	--	--	--	--	
..PSYCHOMYIA	--	15	--	--	--	--	
MOLLUSCA (MOLLUSCS)							
..BIVALVIA							
..NUCULOIDEA							
..SPHAERIIDEA							
..UNKNOWN GENUS	--	--	--	--	--	--	
PLATYHELMINTHES (FLATWORMS)							
..TURBELLARIA							
..TRICLADIDA							
..UNKNOWN FAMILY							
..UNKNOWN GENUS	--	--	--	--	--	--	

01472054 PIGEON CREEK NEAR BUCKTOWN, PA.					
DATE	OCT 26 76	OCT 28 77	OCT 31 78	NOV 8 79	NOV 5 80
TIME	1250	1800	1530	1515	1345
TOTAL COUNT	554	125	39	117	440
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT
ARTHROPODA (ARTHROPODS)					
..ARACHNIDA					
..HYDRACARINA					
..UNKNOWN FAMILY					
..UNKNOWN GENUS	4	--	--	--	--
..CRUSTACEA					
..ISOPODA					
..ASELLIDAE	--	--	--	--	--
..ASELLUS					
..INSECTA					
..COLEOPTERA					
..DUBIRAPHIA	6	--	--	--	--
..OPTIOSERVUS	15	--	--	6	--
..STENELMIS	9	10	--	5	--
..PSEPHENIDAE					
..ECTOPRIA	--	1	--	--	--
..PSEPHENUS	--	--	--	1	--
..DIPTEMBOLO	--	--	--	--	--
..CHIROMOMIDAE	--	--	--	--	--
..BRILLIA	--	1	--	--	--
..CARDIOCLADIUS	3	--	--	--	--
..CONCHAPELOPIA	1	--	--	2	--
..CRICOTOPUS	--	9	--	17	5
..EUKIEFFERIELLA	--	--	2	--	1
..LIMNOCHIRONOMUS	--	--	--	1	--
..MICROTENDIPES	--	--	--	1	--
..ORTHOCLADIUS	12	--	4	--	--
..PARAMETRIOCNEMUS	--	--	--	1	1
..RHEOTANYTARSUS	11	--	--	2	--
..THIENEMANNIELLA	2	--	--	--	--
..EMPIIDAE					
..HEMERODROMIA	1	--	--	--	--
..MUSCIDAE	--	--	--	--	--
..SIMULIIDAE					
..SIMULIUM	12	--	1	--	8
..UNKNOWN GENUS	--	1	--	--	--
..TIPULIDAE					
..ANTOCHA	52	15	--	33	8
..TIPULA	--	--	--	--	--
..EPHEMEROPTERA					
..BAETIDAE					
..BAETIS	3	--	1	--	--
..PSEUDOCLOEON	--	--	--	1	--
..CAENIDAE					
..CAENIS	--	3	--	--	--
..EPHEMERELLIDAE					
..EPHEMERELLA	55	--	--	1	--
..HEPTAGENIIDAE	--	--	--	--	--
..EPEORUS					
..STENONEMA	48	1	1	3	24
..SIPHONURIDAE					
..ISONYCHIA	--	--	--	--	8
..TRICORYTHIDAE					
..TRICORYTHODES	1	--	--	--	--
..MEGALOPTERA					
..CORDALIDAE					
..CHAULIOIDES	--	--	--	--	6
..CORYDALUS	--	1	--	--	--
..NYGROMIA	1	--	--	--	--
..PLECOPTERA					
..PERLIDAE					
..ACRONURIA	1	2	--	--	--
..PERLODIDAE					
..TAENIOPTERYGIDAE	--	--	--	--	--
..TAENIOPTERYX	--	--	--	4	--
..TRICHOPTERA					
..GLOSSOSOMATIDAE					
..GLOSSOSOMA	19	--	3	--	--
..HYDROPSYCHIDAE					
..CHEIMAROPSYPHE	87	3	--	24	86
..HYDROPSYCHE	209	77	26	9	264
..SYMPHITOPSYCHE	--	--	--	4	--
..HYDROPTILIDAE					
..LEUCOTRICHIA	--	--	--	--	--
..LIMNEPHILIDAE					
..GOERA	2	--	--	--	--
..UNKNOWN GENUS	--	--	--	1	--
..MOLANNIDAE					
..MOLANNA	--	--	--	--	--
..PHILOPOTAMIDAE					
..CHIMARRA	19	--	--	--	24
..DOLOPHILODES	--	--	--	--	--
..NORMALDIA	2	--	--	--	--
..POLYCENTROPIDIDAE					
..POLYCENTROPUS	--	--	--	1	--
..PSYCHOMYIIDAE	--	--	--	--	--
..PSYCHOMYIA					
MOLLUSCA (MOLLUSCS)					
..BIVALVIA					
..NUCULOIDEA					
..SPHAERIIDAE					
..UNKNOWN GENUS	--	1	--	--	--
PLATYHELMINTHES (FLATWORMS)					
..TURBELLARIA					
..TRICLADIDA					
..UNKNOWN FAMILY					
..UNKNOWN GENUS	1	--	--	--	--

Table 3.--Benthic-invertebrate data--Continued
[double dash indicates organism not present in sample]

DATE TIME	01472065 PIGEON CREEK AT PORTERS MILL, PA.					
	MAY 5 70 0000	SEP 23 70 0000	MAY 4 71 0000	SEP 28 71 0000	OCT 9 72 0000	OCT 3 73 0000
TOTAL COUNT	115	132	31	37	125	361
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDRACARINA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	--	--
..INSECTA						
..COLEOPTERA						
..DIPYLODAE						
..HELIUS	--	--	--	--	--	--
..ELMIDAE						
..ANCYRONYX	--	--	--	--	--	--
..OPTIOSERVUS	--	--	--	--	--	4
..OULIMNUS	--	--	--	--	1	--
..STENELMIS	--	--	--	--	--	1
..PSEPHENIDAE						
..PSEPHENUS	--	--	--	--	--	1
..PTILODACTYLIDAE						
..ANCHYTARSUS	--	--	--	--	--	--
..COLLEMBOLA	--	--	--	--	--	--
..ENTOMOBRYIDAE						4
..DIPTERA						
..ATHERICIDAE=RHAGIONIDAE						
..ATHERIX	--	--	--	--	--	1
..CHIRONOMIDAE	21	--	8	--	59	2
..CRICOTOPUS	--	--	--	--	--	--
..EUKIEFFERIELLA	--	--	--	--	--	--
..MICROTENDIPES	--	--	--	--	--	--
..NANOCLADUS	--	--	--	--	--	--
..POLYPSILUM	--	--	--	--	--	--
..POTTHASTIA	--	--	--	--	--	--
..PSEUDODIAMESA	--	--	--	--	--	--
..RHETANTYARSUS	--	--	--	--	--	--
..THIENEMANNIELLA	--	--	--	--	--	--
..EMPIIDAE						
..HEMERODROMIA	--	--	--	--	--	--
..SIMULIIDAE		1	--	18	--	--
..SIMULIUM	--	--	--	--	--	--
..TIPULIDAE						
..ANTOCHA	1	--	3	--	1	3
..TIPULA	--	--	--	--	--	--
..EPHEMEROPTERA						
..BAETIDAE						
..BAETIS	--	26	--	2	20	17
..EPHEMERELLIDAE						
..EPHEMERELLA	42	--	6	--	3	1
..HEPTAGENIIDAE						
..STENONEMA	4	24	3	6	12	20
..SIPHONURIDAE						
..ISONYCHIA	--	--	--	--	--	2
..UNKNOWN GENUS	--	--	--	--	--	--
..HEMIPTERA						
..SALIDAE						
..UNKNOWN GENUS	--	--	--	--	--	--
..PLECOPTERA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	--	--
..NEMOURIDAE						
..AMPHINEMURA	--	--	--	--	--	--
..PSEUDOPHYLLA	--	--	--	--	--	--
..PERLLIDAE						
..ACHONEURIA	--	--	--	--	--	--
..PARAGNETINA	--	--	--	--	--	--
..TAENIOPTERYGIDAE	--	--	--	--	--	--
..TAENIOPTERYX	--	--	--	--	--	--
..TRICHOPTERA						
..BRACHYCENTRIDAE	--	--	--	--	--	--
..BRACHYCENTRUS	--	--	--	--	--	--
..MICRABEMA						
..GLOSSOSOMATIDAE	--	--	--	--	--	10
..GLOSSOSOMA						
..HYDROPSYCHIDAE						
..CHEUMATOPSYCHE	4	24	1	--	11	86
..HYDROPSYCHE	43	29	10	13	4	198
..SYMPHITOPSYCHE	--	--	--	--	--	--
..HYDROPTILIDAE	--	--	--	--	--	--
..LEUCOTRICHIA	--	--	--	--	--	--
..OCHROTRICHIA	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--
..LEPTOCERIDAE	--	--	--	--	--	--
..OECETIS	--	--	--	--	--	--
..LIMNETHILIDAE	--	--	--	--	--	--
..GOERA	--	--	--	--	--	--
..MOLANNIDAE	--	--	--	--	--	--
..MOLANNA	--	8	--	--	--	--
..PHILOPOTAMIDAE	--	--	--	--	--	--
..CHIMARRA	--	--	--	--	--	11
..DOLOPHILODES	--	--	--	--	14	--
..PHRYGANEIDAE						
..OLIGOSTOMIS	--	--	--	--	--	--
..POLYCENTROPODIDAE	--	--	--	--	--	--
..POLYCENTROPUS	--	--	--	--	--	--
..PSYCHOMYIIDAE	--	--	--	--	--	--
..PSYCHOMYIA	--	20	--	--	--	--
MOLLUSCA (MOLLUSCS)						
..GASTROPODA						
..BASOMMATOPHORA						
..ANCYLIDAE	--	--	--	--	--	--
..FERRISSIA	--	--	--	--	--	--
..LYMNAEIDAE	--	--	--	--	--	--
..LYMNARA	--	--	--	--	--	--

01472085 PIGEON CREEK AT PORTERS MILL, PA.

DATE TIME	OCT 24 74 0000	OCT 26 76 1430	OCT 20 77 1500	OCT 31 78 1445	NOV 8 79 1815	NOV 5 80 1500
TOTAL COUNT	131	579	42	110	290	254
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDRACARINA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS						
INSECTA						
..COLEOPTERA						
..DIPYLODIDAE						
..HELIIDUS						
..ELMIDAE						
..ANCYRONYX						
..OPTIOSERVUS						
..OULIMNIUS						
..STENELMIS						
..PSEPHENIDAE						
..PSEPHENUS						
..PTILODACTYLIDAE						
..ANCHYTARSUS						
..COLLEMBOLA						
..ENTOMOBRYIDAE						
..DIPTERA						
..ATHEICIDAE=RHAGIONIDAE						
..ATHEIX						
..CHIRONOMIDAE						
..CRICOTOPUS						
..EUKTIPERRIELLA						
..MICROTENDIPES						
..NANOCLADIUS						
..POLYPEDILUM						
..POTTHASTIA						
..PSEUDOCOTAMESA						
..RHOTANTYARSUS						
..THIENEMANNIELLA						
..EMPIDIDAE						
..HEMEROPTERIDAE						
..SIMULIIDAE						
..SIMULIUM						
..TIPULIDAE						
..ANTOCHA						
..TIPUL						
..EPHEMEROPTERA						
..BAETIDAE						
..BAETIS						
..EPHEMERELLIDAE						
..EPHEMERELLA						
..HEPTAGENIIDAE						
..STENONEMA						
..SIPHONURIDAE						
..ISONYCHIA						
..UNKNOWN GENUS						
..HEMIPTERA						
..SALDIDAE						
..UNKNOWN GENUS						
..PLECOPTERA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS						
..NEMOURIDAE						
..AMBAEMURA						
..PELTOPHERIDAE						
..PELTOPHERLA						
..PERLIDAE						
..ACRONEURIA						
..PARANEURIA						
..TAENIOPTERYGIDAE						
..TAENIOPTERYX						
..TRICHOPTERA						
..BRACHIOPTERIDAE						
..BRACHYCENTRUS						
..MICRASSEA						
..GLOSSOSOMATIDAE						
..GLOSSOSOMA						
..HYDROPSYCHIDAE						
..CHEUMATOPSYCHE						
..HYDROPSYCHE						
..SYMPLECTOPSYCHE						
..HYDROPTILIDAE						
..LEUCOTRICHTIA						
..OCHROTRICHTIA						
..UNKNOWN GENUS						
..LEPTOCERIDAE						
..OECETIS						
..LINNEPHILIDAE						
..COERA						
..MOLANNIDAE						
..MOLANNA						
..PHILOPOTAMIDAE						
..CHIMARRA						
..DOLOPHILODES						
..PHRYGANETIDAE						
..OLIGOSTOMIS						
..POLYCENTROPIDIDAE						
..POLYCENTROPUS						
..PSYCHOMYIDAE						
..PSYCHOMYIA						
MOLLUSCA (MOLLUSCS)						
..GASTROPODA						
..BASOMMATOPHORA						
..ANCYLIDAE						
..FERRISSIA						
..LYMNAEIDAE						
..LYMNAEA						

[double dash indicates organism not present in sample]

01472080 PIGEON CREEK NEAR PARKER FORD, PA.

172

01472080 PIGEON CREEK NEAR PARKER FORD, PA.

DATE TIME OCT 26 76 OCT 20 77 OCT 31 78 NOV 14 79 NOV 5 80

TOTAL COUNT 880 344 120 32 620

ORGANISM COUNT COUNT COUNT COUNT COUNT

ANNELIDA
..OLIGOCHAETA
..PROSOPORA
..LUMBRICULIDAE
..LUMBRICULUS -- -- -- 2 --

ARTHROPODA (ARTHROPODS)
..ARACHNIDA
..HYDRACARINA
..UNKNOWN FAMILY
..UNKNOWN GENUS
..INSECTA 5 -- 1 -- --
..COLEOPTERA

..DRYOPIDAE
..HELICHUS -- 1 1 -- --
..ELMIDAE
..DUBIRAPHIA -- 1 -- -- --
..OPTIOSERVUS 17 10 1 -- --
..DOLICANTUS -- 1 1 -- --
..PROMORRESIA -- 1 -- -- --
..STENELMIS 4 -- -- 1 8
..PSEPHENIDAE
..ECTOPHORA
..PSEPHENUS 1 -- -- -- 4
..DIPTERA

..ATHERICIDAE=RHAGIONIDAE
..ATHERIX -- -- -- -- --
..CHIRONOMIDAE
..ABLABESMYIA -- -- -- -- --
..CARDIOCLADIUS 2 -- -- -- --
..CONCHAPELOPIA 11 2 -- -- 4
..CRICOTOPUS 24 -- -- -- 40
..DIANESA

..EUKIEFFERIELLA -- 1 -- -- 16
..MICROTENDIPES 5 -- -- -- 32
..ORTHOGELADIUS 18 18 8 1 28
..POLYPEDILUM 3 -- 1 -- --
..PSECTROCLADIUS 19 1 3 -- 12
..RHETANTYTARSUS -- 1 2 -- 12
..TANYTARSUS -- 2 -- -- 8
..THISENMANNIELLA 9 -- 2 -- --
..EMPIDIDAE
..HEMERODROMIA 1 -- -- -- 12
..SIMULIIDAE

..SIMULIUM 6 1 1 -- 12
..TIPULIDAE
..ANTOCIA
..UNKNOWN GENUS 34 -- 1 3 104
..EPHEMEROPTERA

..BAETIDAE
..BAETIS -- 1 -- -- --
..PSEUDOCLOEON 1 1 -- -- --
..CAENIDAE

..CAENIS -- 1 -- -- --
..EPHEMERELLIDAE
..EPHEMERELLA 10 29 -- -- --
..HEPTAGENIIDAE
..STENONEMA 11 12 4 12 16
..SIPHONURIDAE

..ISONYCHIA 4 1 -- 1 24
..MEGALOPTERA
..CORYDALIDAE
..CHAULIODES -- -- -- -- 2
..CORTALUS 4 -- -- -- --
..C. CORNUTUS -- 1 -- -- --
..SIALIDAE

..SIALIS -- 1 -- -- --
..PLECOPTERA
..PERLIDAE
..ACRONEURIA -- 2 1 -- --
..PARAGNETINA 5 11 -- -- 8
..TAENIOPTERYGIDAE
..TAENIOPTERYX 2 6 1 -- 36

..TRICHOPTERA
..BRACHYCENTRIDAE
..MICROSOMA 4 -- -- -- 24
..GLOSSOSOMATIDAE
..GLOSSOSOMA -- -- 10 -- 12

..HYDROPSYCHIDAE
..CHEUMATOPSYCHE 253 100 13 2 96
..HYDROPSYCHE 322 100 14 3 88
..SYMPHITOPSYCHE
..HYDROPTILIDAE
..HYDROPTILA -- 8 -- -- 4
..LEUCOTRICHIA 10 1 -- -- 12
..OCHROTRICHIA 3 -- -- -- --

..LEPTOCERIDAE
..NECTOPSYCHE -- -- -- -- 4
..LINNEPHILIDAE
..GOERA 1 2 -- -- --
..MOLANNIDAE
..MOLANNA -- -- -- -- --
..PHILOPOTAMIDAE

..CHIMARRA
..POLYCENTROPIDAE 78 29 33 1 2
..POLYCENTROPUS 4 -- -- -- --
..PSYCHOMYIIDAE
..PSYCHOMYIA -- -- -- -- --

MOLLUSCA (MOLLUSCS)
..GASTROPODA
..BASOMMATOPHORA
..ANCYLIDAE
..FERRISSIA
..PHYSIDAE
..PHYSA -- 2 -- 1 --

PLATYHELMINTHES (FLATWORMS)
..TURBELLARIA
..TRICLADIDA
..UNKNOWN FAMILY
..UNKNOWN GENUS 1 -- -- -- --

Table 3.--Benthic-invertebrate data--Continued
[double dash indicates organism not present in sample]

		01472109 STONY RUN NEAR SPRING CITY, PA.					
DATE TIME	SEP 29, 70 0000	MAY 4, 71 0000	SEP 28, 71 0000	OCT 9, 72 0000	OCT 2, 73 0000	DEC 24, 74 0000	
TOTAL COUNT	124	61	30	508	391	177	
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT	
ANNELIDA							
..HIRUDINEA							
..UNKNOWN ORDER							
..UNKNOWN FAMILY							
..UNKNOWN GENUS	--	--	--	--	--	--	
..OLIGOCHAETA							
..PLESIOPODA							
..TUBIFICIDAE							
..UNKNOWN GENUS	--	--	--	--	--	--	
..UNKNOWN ORDER							
..UNKNOWN FAMILY							
..UNKNOWN GENUS	--	--	--	--	--	--	
ARTHROPODA (ARTHROPODS)							
..CRUSTACEA							
..AMPHIRODA							
..GAMMARIDAE							
..GAMMARUS	--	--	--	--	--	--	
..ISOPODA							
..ASELLIDAE							
..ASELLUS	--	--	--	--	--	--	1
..INSECTA							
..COLEOPTERA							
..DRYOPIDAE							
..HELICUS	--	--	--	--	--	--	
..ELMIDAE							
..OPTIOSERVUS	--	--	--	--	--	--	
..STENELMIS	--	--	--	5	2		3
..HYDROPHILIDAE							
..HYDROBIUS	--	--	--	--	--	--	
..PSEPHENIDAE							
..ECTOPRIA	--	--	--	--	--	--	
..ECTOPRIA NERVOSA	--	--	--	--	--	--	
..PSEPHENUS	--	--	--	--	--	--	
..DIPTERA							
..CHIRONOMIDAE	--	35	--	16	--	--	29
..CHIRONOMUS	--	--	--	--	--	--	
..CONCHAPELOPIA	--	--	--	--	--	--	
..COBYNONEURA	--	--	--	--	--	--	
..CRICOTOPUS	--	--	--	--	--	--	
..CRYPTOCHIRONOMUS	--	--	--	--	--	--	
..EUKETTERIELLA	--	--	--	--	--	--	
..LYMNOCHIRONOMUS	--	--	--	--	--	--	
..MICROPSECTRA	--	--	--	--	--	--	
..MICROTENDIPES	--	--	--	--	--	--	
..ORTHOCIDUS	--	--	--	--	--	--	
..PARAMETRIOCNEMUS	--	--	--	--	--	--	
..PARATANYTARSUS	--	--	--	--	--	--	
..POLYPEDILUM	--	--	--	--	--	--	
..RHEOTANYTARSUS	--	--	--	--	--	--	
..TANYTARSUS	--	--	--	--	--	--	
..TRIENEMANNIELLA	--	--	--	2	--	--	
..EMPIDIDAE				2			
..SIMULIIDAE							
..SIMULIUM	92	8	21	7	--	--	3
..TIPULIDAE							
..ANTOCHA	--	--	--	3	--	--	3
..TIPULA	--	--	--	--	--	--	
..EPHEMEROPTERA							
..BAETIDAE							
..BAETIS	--	--	--	3	2	--	--
..CAENIDAE							
..CAENIS	--	--	--	--	--	--	
..EPHEMERELLIDAE							
..EPHEMERELLA	--	--	--	--	1	--	--
..HEPTAGENIIDAE							
..STENONEMA	--	--	--	35	6	--	--
..SIPHONURIDAE							
..ISONYCHIA	--	--	--	2	--	--	--
..SIPHONURUS	--	--	--	--	--	--	
..HEMiptera							
..VELIIDAE							
..RHAGOVIELA	--	--	--	--	--	--	
..ODONATA							
..COENAGRIONIDAE							
..ENALLAGMA	--	--	--	--	--	--	
..PLECOPTERA							
..PERLIDAE							
..PARAGNETINA	--	--	--	--	--	--	
..TRICHOPTERA							
..HYDROPSYCHIDAE							
..CHEUMATOPSYCHE	--	10	--	97	67		41
..HYDROPSYCHE	32	8	9	334	313		95
..POTAMYIA	--	--	--	--	--	--	
..SYMPHITOPSYCHE	--	--	--	--	--	--	
..HYDROPTILIDAE							
..HYDROPTILIS	--	--	--	--	--	--	
..OCHROTRICHIA	--	--	--	--	--	--	
..PHILOPOTAMIDAE	--	--	--	1	--	--	2
..CHIMARRA							
..PSYCHOMYIDAE							
..PSYCHOMYIA	--	--	--	--	--	--	
..UNKNOWN FAMILY	--	--	--	3	--	--	
..UNKNOWN GENUS	--	--	--	--	--	--	
MOLLUSCA (MOLLUSCS)							
..GASTROPODA							
..BASOMMATOPHORA							
..ANCYLIDAE							
..FERUSIA	--	--	--	--	--	--	
..PHYSIDAE	--	--	--	--	--	--	
..PHYSA	--	--	--	--	--	--	
PLATYHELMINTHES (FLATWORMS)							
..TURBELLARIA							
..TURBELLARIA							
..TRICLADIDA							
..UNKNOWN FAMILY	--	--	--	--	--	--	
..UNKNOWN GENUS	--	--	--	--	--	--	

01472109 STONY RUN NEAR SPRING CITY, PA.

DATE TIME	OCT 28, 78 1000	OCT 20, 77 1130	OCT 31, 78 1115	NOV 9, 78 1115	NOV 5, 80 1130
TOTAL COUNT	285	34	158	132	272
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA					
..HIRUDINEA					
..UNKNOWN ORDER					
..UNKNOWN FAMILY					
..UNKNOWN GENUS	4	--	--	--	--
..OLIGOCHAETA					
..PLESIOPORA					
..TUBIFICIDAE	1	--	--	--	--
..UNKNOWN GENUS					
..UNKNOWN ORDER					
..UNKNOWN FAMILY	--	--	--	--	5
..UNKNOWN GENUS					
ARTHROPODA (ARTHROPODS)					
..CRUSTACEA					
..AMPHIPODA					
....GAMMARIDAE					
....GAMMARUS	1	--	--	--	--
....ISOPODA					
....ASELLIDAE					
....ASELLUS	2	1	--	--	--
..INSECTA					
....COLEOPTERA					
....DHYOPTIDAE					
....HELICHRUS	--	--	--	--	2
..ELMIDAE					
....OPTIOSERVUS	8	--	--	--	--
....STENELMIS	25	2	--	--	2
..HYDROPHILIDAE					
..HYDROBIUS	1	--	--	--	--
..PSEPHENIDAE					
....ECTOPRIA	1	1	--	--	--
....ECTOPRIA NERVOSA	--	--	1	--	--
..PSEPHENUS	3	--	--	--	--
..DIPTERA					
....CHIRONOMIDAE	--	--	--	--	--
....CHIRONOMUS	--	--	--	--	1
....CONCHAPELOPIA	9	--	1	3	17
....CORYNONEURA	2	--	--	--	--
....CRICOTOPIUS	16	--	1	--	--
....CRYPTOCHIRONOMUS	--	--	--	--	3
....EUKIEFFERIELLA	--	--	1	--	--
....LIMNOCHIRONOMUS	--	--	--	--	9
....MICROPECTRA	1	--	--	--	--
....MICROTENDIPES	14	--	--	--	--
....ORTHOCLADIUS	--	--	2	--	86
....PARAMETRICNEMUS	--	--	--	30	34
....PARATANYTARSUS	--	--	--	--	1
....POLYPEDILUM	--	--	--	--	6
....RHEOTANYTARSUS	2	--	1	--	1
....TANYTARSUS	--	--	1	--	3
....CHTENEMANNIELLA	10	--	--	--	1
..EMPIDAE					
....SIMULIIDAE					
....SIMULIUM	36	--	1	1	--
....TIPULIDAE					
....TIPULIDAE	1	--	--	3	3
....TIPULA					
..EPHEMEROPTERA					
....BAETIDAE					
....BAETIS	--	--	--	1	1
....CAENIDAE					
....CAENIS	1	1	--	--	2
....EPHEMERELLIDAE					
....EPHEMERELLA	--	--	--	--	--
....HEPTAGENIIDAE					
....STENONEMA	5	--	--	5	5
..SIPHONURIDAE					
....ISONYCHIA	--	--	--	1	--
....SIPHONURUS	--	1	--	--	--
..HEMIDPTERA					
....VELLIDAE					
....RHAGOVIELIA	1	--	--	--	--
..ODONATA					
....COENAGRIONIDAE					
....ENALLAGMA	--	--	--	--	1
..PLECOPTERA					
....PERLIDAE					
....PARAGNETINA	--	--	--	1	--
..TRICHOPTERA					
....HYDROPSYCHIDAE					
....CHIRONOMATOPSYCHE	58	2	58	52	24
....HYDROPSYCHE	62	17	66	20	24
....ROTUNDA	--	9	--	--	--
....SYMPHITOPSYCHE	--	--	2	4	--
..HYDROPTILIDAE					
....HYDROPTILA	--	--	--	--	20
....OCHROTRICHTIA	1	--	--	--	--
..PHILOPOTAMIDAE					
....CHIMARRA	13	--	1	8	15
..PSYCHOMYIIDAE					
....PSYCHOMYIA	4	--	--	--	3
..UNKNOWN FAMILY					
..UNKNOWN GENUS	--	--	--	--	--
MOLLUSCA (MOLLUSCS)					
..GASTROPODA					
....BASOMMATOPHORA					
....ANCYLIDAE					
....FERRISSIA	1	--	--	--	--
..PHYSIDAE					
....PHYSA	--	--	--	--	1
PLATYHELMINTHES (FLATWORMS)					
..TURBELLARIA					
....TRICLADIDA					
..UNKNOWN FAMILY					
..UNKNOWN GENUS	1	--	--	--	--

Table 3.--Benthic invertebrate data--Continued
(double dash indicates organism not present in sample)

DATE TIME	MAT 8 70 0000	SEP 28 70 0000	MAT 8 71 0000	SEP 28 71 0000	OCT 8 72 0000	OCT 8 73 0000
TOTAL COUNT	99	93	112	47	109	13
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA						
..OLIGOCHAETA						
..UNKNOWN ORDER						
..UNKNOWN FAMILY						
..UNKNOWN GENUS						
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDRACARINA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS						
CRUSTACEA						
..AMPHIPODA						
..GAMMARIDAE						
..GAMMARUS						
..TALITRIDAE						
..HYALLELLA						
..ISOPODA						
..ASCELLIDAE						
..ASELLUS						
INSECTA						
..COLEOPTERA						
..ELMIDAE						
..DUBIAPHIA						
..DPTIUSCINUS						
..STELMIS					2	
..PSEPHENIDAE						
..ECTOPHIA						
..PSEPHENUS				2		
..DIPTERA						
..CERATOPOGONIDAE=HELEIDAE						
..UNKNOWN GENUS						
..CHIRONOMIDAE	10		98	8	24	
..ABULHEMIA						
..BRILLIA						
..CONCHADELPHIA						
..CORYNONEURA						
..CRICOTOPUS						
..EURETHERIELLA						
..HYNCHITRONOMUS						
..MICROTENDIPES						
..ORTHOCALIDUS						
..SASACADOPHIA						
..PARAMETRICINEMUS						
..PARATANTYARSUS						
..PHAEOPSESTRA						
..POLYPEDILUM						
..PSEUDOCHEIRONOMUS						
..AHEOTANTYARSUS						
..CHITENANNIELLA						
..EMPIDIDAE					4	
..UNKNOWN GENUS						
..MUSCIDAE						
..UNKNOWN GENUS						
..SIMULIIDAE	20			37		
..TIPULIDAE						
..ANTOCIA					1	
..DICRANOTA						
..TIPULA						
HYMENOPTERA						
..BAETIDAE		6			4	
..BAETIS						
..CAENIDAE						
..CAENIS						
..EPHEMERELLIDAE						
..EPHEMERELLA	19				1	
..HEPTAGENIIDAE						
..STENACRON		24			12	
..STENACRONA	14					
..STIPHLONURIDAE						
..TOMBYCHIA						
..HEMITEPHA						
..CORIXIDAE						
..SIGARA						
..MEGALOPTERA						
..CORDALIDAE						
..NIGROMIA						
..SIALIDAE						
..SIALIS						
..ODONATA						
..AGRIIDAE						
..AGRION						
..COENAGRIONIDAE						
..COENAGRION		1				
DIPTERA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS						
..TRICHOPTERA						
..HELEICOPSYCHIDAE						
..HELEICOPSYCHE						
..HYDROPSYCHIDAE						
..HYDROPSYCHE	5	2	8		32	
..CHUDMATOPSYCHE						
..HYDROPSYCHE	31				24	
..POTAMIA						
..SYMPHYTOPSYCHE						
..HYDROPTILIDAE						
..HYDROPTILA						
..LEUCOTRICHIA					4	
..OCHROTRICHIA					1	

01472110 STONY RUN AT SPRING CITY, PA.						
DATE	OCT 24 74	OCT 26 76	OCT 20 77	OCT 12 78	NOV 9 79	NOV 5 80
TIME	0800	1045	1030	1216	1315	1008
TOTAL COUNT	155	495	200	171	124	850
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA						
...POLYCHAETA						
...UNKNOWN ORDER						
...UNKNOWN FAMILY						
...UNKNOWN GENUS	--	--	1	--	--	4
ARTHROPODA (ARTHROPODS)						
...ARACHNIDA						
...HYDRACarina						
...UNKNOWN FAMILY						
...UNKNOWN GENUS	--	--	--	--	--	2
CHUSTALIA						
...AMPHIRODA						
...GAMMARIDAE						
...TALITRIDAE	--	1	--	--	--	--
...HYALLELLA	--	--	2	--	--	--
...ISOPODA						
...ASCELLIDAE						
...ASCELLUS	8	8	2	--	1	--
INSECTA						
...COLEOPTERA						
...ELMIDAE						
...DUBIRAPHIA	--	--	9	--	--	2
...OPTIOSERVUS	--	2	14	--	--	2
...STELLIS	2	8	--	--	--	6
...PSEPHENTIDAE						
...ECTOPRIA						
...PSEPHENUS	4	11	8	--	2	--
DIPTERA						
...CEMATOPCOONIDAE=HELSIDAE			12	--	--	24
...UNKNOWN GENUS						
...CHIRONOMIDAE	27	--	--	--	--	2
...ABAPESMIA	--	--	8	--	--	--
...BRILLIA	--	--	--	--	--	2
...CONCHAELOPIA	--	--	--	1	2	14
...CORYNOMYIA	--	--	--	--	--	--
...CHICOTOPUS	--	28	--	--	--	--
...EULIOPHRELLA	--	--	--	--	--	--
...LIMNOCHIRONOMUS	--	--	2	--	--	--
...MICROTENDIPES	--	--	15	1	--	38
...ORTHOCLEADUS	--	--	--	--	--	--
...PARACALADOPELMA	--	--	1	--	5	66
...PARAMETRICNEMUS	--	--	--	6	--	4
...PARATANYTARSUS	--	--	--	--	--	26
...PHAENOPSECTRA	--	--	--	--	--	4
...POLYPODIDAE	--	--	--	--	--	--
...PSEUDOCHEIRONOMUS	--	--	--	1	--	2
...RHOTANYTARSUS	--	18	--	3	1	88
...CHIRONOMYIIDA	--	8	2	--	--	6
...EMPIDIDAE	--	--	--	--	--	4
...UNKNOWN GENUS	--	--	--	--	--	--
...MUSCIDAE	--	--	--	--	--	4
...UNKNOWN GENUS	--	--	--	--	--	4
...SIMULIIDAE	--	--	--	--	--	--
...SIMULIUM	--	45	--	7	--	6
...TIPULIDAE	--	--	--	--	--	--
...TIPULA	--	3	1	--	1	6
...DICRANOTA	--	--	--	--	--	4
...EPHEMEROPTERA	--	--	--	1	--	--
...BAETIDAE						
...CAENIDAE	4	6	2	3	--	--
...CAENIS	--	--	65	--	--	30
...EPHEMERELLIDAE	--	--	--	--	--	--
...EPHEMERELLA	2	1	--	--	--	--
...HEMIPSEPHENTIDAE	--	--	--	--	--	--
...STENACRON	--	--	--	--	--	--
...STENONEMA	8	36	8	3	32	52
...STENONEMIDAE	--	--	--	--	--	--
...SONTICHTA	--	--	--	--	--	14
...HEMIPSEPHENTIDAE	--	--	--	--	--	--
...CORIXIDAE	--	--	--	--	--	--
...SIGARA	--	--	1	--	--	--
...MEGALOPTERA	--	--	--	--	--	--
...CORYDALIDAE	--	--	--	--	--	--
...NIGRONIA	--	--	--	--	--	2
...STALIDAE	--	--	--	--	--	--
...STALIS	--	--	2	--	--	--
...ODONATA						
...AGRIDAE	--	--	--	--	--	--
...AGRIUM	--	--	1	--	--	--
...COENAGRIONIDAE	--	--	1	--	--	--
...ARGIA	--	--	--	--	--	--
...PLUTIDAE	--	--	--	--	--	--
...UNKNOWN FAMILY	--	--	--	--	--	--
...UNKNOWN GENUS	--	1	--	--	--	--
TRICHOPTERA						
...HELIOPHYCHIDAE	--	--	--	--	--	184
...HELIOPHYCHIL	--	--	--	--	--	--
...HYDROPSYCHIDAE	--	--	--	--	--	--
...CNEUMATOPSYCHE	25	42	5	12	64	38
...HYDROPSYCHE	23	73	4	86	18	34
...POTAMYA	--	--	5	--	--	--
...SYMBLITOPSYPHE	--	--	--	6	4	8
...HYDROPTILIDAE	--	--	--	--	--	--
...HYDROPTILA	--	--	--	--	--	--
...LEUCOTRICHIA	--	18	20	1	--	128
...OCHROTRICHIA	1	--	--	--	--	4
...LEPTOCERIDAE	--	--	--	--	--	--
...WESTICIDAE	--	--	--	--	--	12
...APATANIA	--	--	1	--	--	--
...PHILOPOTAMIDAE	--	--	--	--	--	--
...CHIMARRA	22	129	3	38	22	56
...DOLOPHILOPUS	1	--	--	--	--	--
...POLYCENTROPIDAE	--	--	--	--	--	--
...NEURECLIPSIS	--	--	5	--	--	24
...NYCTOPHYLAX	--	1	--	--	--	--
...POLYCENTROPUS	--	1	--	--	--	2
...PSYCHOMYIDAE	5	--	--	--	--	--
...PSYCHOMYIA	--	--	--	--	--	--
MOLLUSCA (MOLUSCS)						
...BIVALVIA						
...NUCULOIDEA						
...SPHAERIIDEA						
...UNKNOWN GENUS	1	3	--	--	--	2
GASTROPODA						
...BASOMMATOPHORA						
...ANCTIDAE	1	--	--	--	--	--
...FERRISSIA	1	--	--	--	--	--
...LYMNALIDAE	1	--	--	--	--	--
...LYMNAEA	1	--	--	--	--	--
...PHYSIS	1	--	--	--	--	--
...PLANORBIDAE	1	--	--	--	--	--
...HELISOMA	1	--	--	--	--	--
PLATYHELMINTHES (FLATWORMS)						
...TURBELLARIA	9	--	--	--	--	--
...TRICLADIDA	9	--	--	1	--	--
...FLAPARIDAE	--	--	1	--	2	--
...UNKNOWN GENUS	--	--	--	--	--	--
...UNKNOWN FAMILY	--	53	--	--	--	48
...UNKNOWN GENUS	--	--	--	--	--	--

Table 3.--Benthic-invertebrate data--Continued

[double dash indicates organism not present in sample]

01472129 FRENCH CREEK NEAR KNAUERTOWN, PA.

DATE TIME	OCT 30, 72 0000	OCT 3, 73 0000	OCT 24, 74 0000	OCT 27, 76 1200
TOTAL COUNT	64	343	166	138
ORGANISM	COUNT	COUNT	COUNT	COUNT
ANNELIDA				
..OLIGOCHAETA				
..UNKNOWN ORDER				
..UNKNOWN FAMILY				
..UNKNOWN GENUS	--	--	--	--
..UNKNOWN GENUS #1	--	--	--	--
ARTHROPODA (ARTHROPODS)				
..ARACHNIDA				
..HYDRAGARINA				
..UNKNOWN FAMILY				
..UNKNOWN GENUS	--	1	--	--
..INSECTA				
..COLEOPTERA				
..ELMIDAE	--	7	13	11
..OULIMNIUS	--	--	1	1
..PROMOESIA	--	4	9	5
..STERNELMIS	--			
..CHIRONOMIDAE	--	5	23	--
..CARDIACLIADUS	--	--	--	--
..CONCHAELOPIA	--	--	--	2
..CORYNEURA	--	--	--	--
..CRICOTOPUS	--	--	--	20
..EUKIEFFERIELLA	--	--	--	9
..MICROTENDIPES	--	--	--	9
..ORTHOCILIUS	--	--	--	--
..POLYPEDILUM	--	--	--	18
..RHEOTANYTARSUS	--	--	--	4
..THIENEMANNIELLA	--	--	--	--
..UNKNOWN GENUS	--	--	--	--
..EMPIDIDAE	--	--	--	--
..HEMERODROMIA	--	--	--	--
..UNKNOWN GENUS	--	--	--	--
..SIMULIIDAE	--	3	--	--
..SIMULIUM	--			
..TIPULIDAE	--	1	5	7
..ANTOCHA	--	1	--	--
..TIPULA	--			
..EPHEMEROPTERA				
..BAETIDAE	--	6	1	--
..BAETIS	--	--	--	--
..PSEUDOCLOEON	--	--	4	6
..EPHEMERELLIDAE	--	--	7	2
..EPHEMERELLA	--	4		
..HEPTAGENIIDAE	11	4	7	2
..STENOHEMA	--	--	--	--
..LEPTOPHLEBIDAE	3	--	--	--
..PARALEPTOPHLEBIA	--	--	--	--
..SIPHONURIDAE	1	--	1	--
..SIPHONURIA	--	--	--	--
..UNKNOWN GENUS	--	--	--	--
..HEMIPTERA				
..NAUCORIDAE	--	--	--	--
..PELOCORIDAE	--	--	--	--
..MEGALOPTERA				
..CORYDALIDAE	--	--	2	--
..CHAULIODES	--	--	--	--
..EUCOPTIDAE	--	--	--	--
..CAPNIDAE	--	--	--	--
..ALLOCAPNIA	--	--	--	--
..PERLIDAE	1	6	--	--
..ACRONEURIA	--	2	--	--
..PARAGNETIA	--	--	--	--
..PERLODIDAE	--	--	--	--
..UNKNOWN GENUS	--	--	--	--
..PTERONARCTIDAE	--	--	--	--
..ALLONARCTIS	--	--	--	--
..TAENIOPTERYGIDAE	2	--	--	2
..TAENIOPTERYX	--	--	--	--
..TRICHOPTERA				
..BRACHYCENTRIDAE	--	--	--	--
..BRACHYCENTRUS	--	--	--	--
..GLOSSOSOMATIDAE	--	4	4	6
..GLOSSOSOMA	--	--	--	--
..HYDROPSYCHIDAE	13	45	8	7
..CHEUMATOPSYCHE	11	232	68	17
..HYDROPSYCHE	--	--	--	--
..MACRONEMA	--	--	--	--
..SYMPHYTOPSYCHE	--	--	--	--
..HYDROPTILIDAE	--	--	--	--
..HYDROPTILIA	--	--	--	--
..LEUCOTRICHIA	--	--	3	--
..OCHROTRICHIA	4	--	--	--
..LEPTOCERIDAE	--	--	--	--
..MYSTACIDES	2	--	--	--
..OCEBETIS	--	--	--	--
..LIMNETHIDAE	--	--	--	--
..APATANIA	--	--	--	1
..GOERA	--	--	--	--
..MOLANNIDAE	--	1	--	--
..MOLANNA	--	--	--	--
..PHILOPOTAMIDAE	--	--	--	--
..CHIMARRA	11	21	7	3
..POLYCENTROPIDIDAE	--	--	--	--
..NEURICLIPSIS	5	--	--	--
..NYCTIOPHYLAX	--	--	--	--
..POLYCENTROPUS	--	--	2	--
..PSYCHOMYIA	--	--	--	2
..PSYCHOMYIDAE	--	--	--	--
..RHYACOPHILIDAE	--	--	2	--
..RHYACOPHILA	--	--	--	--
MOLLUSCA (MOLLUSCS)				
..GASTROPODA				
..BASOMMATOPHORA				
..PHYSIDAE	--	--	--	--
..PHYSA	--	--	--	--
PLATYHELMINTHES (PLATWORMS)				
..TURBELLARIA				
..TRICLADIA	--	--	8	--
..PLANARIIDAE	--	--	--	--
..UNKNOWN GENUS	--	--	--	--
..UNKNOWN FAMILY	--	--	--	8
..UNKNOWN GENUS	--	--	--	--

01472129 FRENCH CREEK NEAR KNAUERTOWN, PA.

DATE TIME OCT 21 77 NOV 1 78 NOV 8 79 NOV 8 80
1200 1420 1230 1530

TOTAL COUNT 491 427 151 1088

ORGANISM COUNT COUNT COUNT COUNT

ANNELIDA				
..OLIGOCHAETA				
..UNKNOWN ORDER				
..UNKNOWN FAMILY				
..UNKNOWN GENUS	--	--	--	4
..UNKNOWN GENUS #1	6	--	--	--
ARTHROPODA (ARTHROPODS)				
..ARACHNIDA				
..HYDRACARINA				
..UNKNOWN FAMILY				
..UNKNOWN GENUS	2	8	--	--
..INSECTA				
..COLEOPTERA				
..ELMIDAE				
..OPTIOSERVUS	10	4	--	12
..OULINIUS	--	--	2	--
..PROMORESTIA	--	--	--	8
..STENELMIS	5	3	--	--
..DIPTERA				
..CHIRONOMIDAE	--	--	--	--
..CARDIOCLADIUS	--	4	--	--
..CONCHAPELOPIA	7	4	--	18
..CORYCNEURA	--	--	--	--
..CRICOTOPUS	25	49	--	--
..EUKIEFFERIELLA	10	--	--	4
..MICROTENDIPES	--	--	--	--
..ORTHOCCLADIUS	--	--	22	112
..POLYFEDILUM	9	11	--	24
..RHECTANYTARSUS	30	96	7	119
..THIENEMANNIELLA	--	5	--	--
..UNKNOWN GENUS	11	--	--	--
..EMPIDIDAE	--	--	--	--
..HEMERODROMIA	2	--	--	--
..UNKNOWN GENUS	--	--	1	--
..SIMULIDAE	--	--	--	--
..SIMULIDAE	--	3	--	1
..TIPULIDAE	--	--	1	--
..ANTOCHA	22	9	33	20
..TIPULA	--	--	--	--
..EPHEMEROPTERA				
..BACTIUS	--	2	--	--
..PSEUDOCLOEON	--	--	1	--
..EPHEMERELLIDAE	--	--	--	--
..EPHEMERELLA	8	5	3	20
..HEPTAGENIIDAE	--	--	--	--
..STENONEMA	14	3	7	16
..LEPTOPHELEBIDAE	--	--	--	--
..PARALEPTOPHELEBIA	--	--	--	--
..GIPHLOURIDAE	--	--	--	--
..ISONYCHIA	1	--	--	--
..UNKNOWN GENUS	--	1	--	--
..MEMIPTERA				
..NAUCORIDAE				
..PELOCORIS	1	--	--	--
..MEGALOPTERA				
..CORALIDAE				
..CHAULIOIDES	--	--	--	--
..PLECOPTERA				
..CAPNIDAE				
..ALLOCAPNIA	--	--	1	--
..PERLIDAE	--	--	--	--
..ACRONEURIA	2	2	1	--
..PARAGNETINA	--	--	2	--
..PERLODIDAE	--	--	--	--
..UNKNOWN GENUS	--	--	--	12
..PTERONARCIDAE	--	--	--	1
..ALLOHARCIS	--	--	--	--
..TAENIOPTERYGIDAE	--	--	--	--
..TAENIOPTERYX	12	24	--	4
..TRICHOPTERA				
..BRACHYCENTRIDAE	--	--	2	--
..BRACHYCENTRUS	--	--	--	--
..GLOSSOSOMATIDAE	2	15	7	40
..GLOSSOSOMA				
..HYDROPSYCHIDAE	83	45	14	159
..CHEMATOPSYCHE	189	68	13	24
..HYDROPSYCHE	--	1	--	--
..MACRONEMA	--	32	8	309
..SYMPHITOPSYCHE	--	--	--	--
..HYDROPTILIDAE	1	6	--	8
..LEUCOTRICHIA	--	--	--	4
..OCHROTRICHIA	11	--	--	--
..LEPTOCERIDAE	--	--	--	--
..MYSTACIDAE	9	--	--	--
..OCECAYS	--	--	--	--
..LIMNAPHILIDAE	--	--	--	--
..APATANIA	3	--	--	4
..GOBE	--	--	--	--
..MOLANNIDAE	--	--	--	--
..MOLANNA	--	--	--	--
..PHILOPOTAMIDAE	--	--	--	--
..CHIMARRA	14	19	--	132
..POLYCENTROPODIDAE	--	--	--	--
..NEURECLIPSTIS	--	--	--	--
..NYCTIOPELAK	--	2	--	--
..POLYCENTROPUS	6	--	--	--
..PSYCHOMYIIDAE	--	--	--	--
..PSYCHOMYIA	8	--	19	21
..RHYNACOPHILIDAE	--	--	--	--
..RHYNACOPHILA	2	3	--	--
MOLLUSCA (MOLLUSCS)				
..GASTROPODA				
..BASONMATOPHORA				
..PHYSIDAE				
..PHYSA	2	--	--	--
PLATHELMINTHES (FLATWORMS)				
..TURBELLARIA				
..TRICLADIDA				
..PLANARIIDAE	--	--	7	--
..UNKNOWN GENUS	--	--	--	--
..UNKNOWN FAMILY	--	--	--	--
..UNKNOWN GENUS	--	--	--	12

Table 3.---Benthic invertebrate data---Continued
[double dash indicates organism not present in sample]

		01472138 FRENCH CREEK NEAR COVENTRYVILLE, PA.					
DATE	MAY 20, 70	OCT 5, 70	MAY 10, 71	OCT 4, 71	OCT 30, 72	OCT 4, 73	
TIME	0000	0000	0000	0000	0000	0000	
TOTAL COUNT	113	58	76	23	272	101	
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT	
ANNELIDA							
..OLIGOCHAETA							
..UNKNOWN ORDER							
..UNKNOWN FAMILY							
..UNKNOWN GENUS	--	--	--	--	--	--	
ARTHROPODA (ARTHROPODS)							
..ARACHNIDA							
..HYDRACARINA							
..UNKNOWN FAMILY							
..UNKNOWN GENUS	--	--	--	--	--	--	
INSECTA							
..COLEOPTERA							
..DORYTOIDEAE							
..MELICHTHUS	--	--	--	--	--	--	
..ELMIDAE							
..OPTIOSERVUS	--	--	--	--	3	--	
..OULIMNIUS	--	--	--	--	--	--	
..PROMORESIA	--	--	--	--	1	--	
..STENELMIS	--	--	--	--	--	1	
..PSEPHENIDAE	--	--	--	--	--	--	
..PSEPHENUS	--	--	3	2	--	--	
..PTILODACTYLIDAE	--	--	--	--	--	--	
..ANCHYTARSUS	--	--	--	--	--	--	
DIPTERA							
..ATHERICIDAE=RHAGIONIDAE							
..ATHERIX	1	--	--	--	--	--	
..CHAOBORIDAE	--	--	--	--	--	--	
..CHAOBORUS	--	--	--	--	1	--	
..CHIRONOMIDAE	6	1	30	--	77	1	
..CARDIOCLADIUS	--	--	--	--	--	--	
..CONICAPLOPIA	--	--	--	--	--	--	
..CRICOPUS	--	--	--	--	--	--	
..MICROTENDIPES	--	--	--	--	--	--	
..ORTHOCCLADIUS	--	--	--	--	--	--	
..POLYPEDILUM	--	--	--	--	--	--	
..PROCLADIUS	--	--	--	--	--	--	
..RHEOTANTYTARSUS	--	--	--	--	--	--	
..TANYTARSUS	--	--	--	--	--	--	
..THIENEMANNIELLA	--	--	--	--	--	--	
..EMPIDIDAE	--	--	--	--	1	--	
..UNKNOWN GENUS	--	--	--	--	--	--	
..SIMULIIDAE	--	--	--	--	--	--	
..SIMULIUM	--	--	2	--	--	2	
..TIPULIDAE	--	--	--	--	3	--	
..ANTOCHA	9	--	3	--	8	--	
EPHEMEROPTERA							
..BAETIDAE							
..BAETIS	23	10	3	--	3	2	
..PSEUDOCLOEON	--	--	--	--	--	--	
..CAENIDAE	--	--	--	--	--	--	
..CAENIS	--	--	--	--	--	--	
..EPHEMERELLIDAE							
..EPHEMERELLA	25	--	28	4	3	--	
..SERRATELLA	--	--	--	--	--	--	
HEPTAGENIIDAE							
..EPEORUS	3	14	--	--	--	--	
..STENONEMA	8	--	--	3	15	4	
..LEPTOPHLEBIDAE							
..PARALEPTOPHLEBIA	--	--	--	--	1	--	
..UNKNOWN GENUS	--	--	--	--	--	--	
SIPHONURIDAE							
..ISONYCHIA	1	--	--	--	3	1	
..SIPHONURUS	--	--	--	--	--	--	
LEPIDOPTERA							
..PYRALIDIDAE							
..PARARGYACTIS	--	--	--	--	--	--	
PLECOPTERA							
..PERLIDAE							
..ACRONEURIA	1	1	--	--	6	2	
..NEOPERLA	--	--	--	--	10	--	
..PARAGNETINA	--	--	--	--	--	--	
..PERLODIDAE	--	--	--	--	--	--	
..UNKNOWN GENUS	--	--	--	--	--	--	
..TAENIOPTERYGIDAE	--	--	--	--	3	--	
TRICHOPTERA							
..BRACHYCENTRIDAE							
..MICHASEMA	--	--	--	--	6	--	
..GLOSSOSOMATIDAE	--	--	--	--	--	2	
..GLOSSOSOMA	--	--	--	--	--	--	
..HYDROPSYCHIDAE							
..CHEUMATOPSYCHE	3	6	2	6	24	39	
..DIPLECTRONA	--	--	--	--	--	--	
..HYDROPSYCHE	32	14	5	8	87	33	
..POTAMYIA	--	--	--	--	--	--	
..SYMPHITOPSYCHE	--	--	--	--	--	--	
HYDROPTILIDAE							
..HYDROPTILA	--	--	--	--	6	--	
..LEUCOTRICHIA	--	--	--	--	--	--	
..OCHROTRICHIA	--	--	--	--	--	--	
..LIMNIPHILIDAE	--	--	--	--	1	--	
..APATANIA	--	--	--	--	--	--	
..GOERA	--	--	--	--	--	--	
MOLLUSCA (MOLLUSCS)							
..MOLLANIDAE		2	--	--	--	1	
..MOLLANNA	--	--	--	--	--	--	
PHILOPOTAMIDAE							
..CHIMARRA	--	--	--	--	6	10	
..DOLOPHILODES	--	--	--	--	--	--	
..POLYCENTROPIDAE							
..NYCTIOPHYLAX	--	--	--	--	--	--	
..PHYLOCENTROPUS	--	--	--	--	--	--	
..POLYCENTROPUS	--	--	--	--	--	2	
..PSYCHOMYIIDAE							
..LYPE	--	--	--	--	--	--	
..PSYCHOMYIA	--	10	--	--	3	--	
..RHYNCHOPHILIDAE	--	--	--	--	--	--	
..RHYNCHOPHILA	--	--	--	--	1	--	
GASTROPODA							
..BASOMMATOPHORA							
..ANCYLIDAE							
..FERRISSIA	--	--	--	--	--	1	

01472138 FRENCH CREEK NEAR COVENTRYVILLE, PA.

DATE TIME	OCT 24 74 0000	OCT 27 76 0830	OCT 21 77 0830	NOV 11 78 1118	NOV 8 79 0800	NOV 6 80 1300
TOTAL COUNT	31	180	380	23	163	684
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA						
..OLIGOCHAETA						
..UNKNOWN ORDER						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	2	--
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDRACARINA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	1	--	5	--
..INSECTA						
..COLEOPTERA						
..CURCULIONIDAE						
..HELIIDAE	--	1	--	--	--	--
..ELMIDAE						
..OPTIOSERVUS	--	3	--	--	2	8
..OULIMNIUS	--	--	--	--	1	--
..PROMORESTIA	--	--	--	--	--	4
..PSEPHENIDAE	--	--	13	--	--	--
..PSEPHENUS	--	1	--	--	2	4
..PTILODACTYLIDAE	--	--	--	--	--	--
..ANCHYTARSUS	--	--	1	--	--	--
..DIPTERA						
..ATHERICIDAE=RHAGIONIDAE						
..ATHERIX	--	--	3	--	1	--
..CHAEBORIDAE	--	--	--	--	--	--
..CHAEBORUS	--	--	--	--	--	--
..CHIRONOMIDAE	--	--	--	--	--	--
..CARDIOCLADIUS	--	--	1	--	--	--
..CONCHAPELODIA	--	--	--	--	1	--
..CRICOTOPUS	--	--	15	--	--	--
..MICROTENDIPES	--	--	--	--	--	4
..ORTHOCLADIUS	--	--	--	--	24	21
..POLYPELUM	--	--	2	--	1	--
..PROCLADIUS	--	--	1	--	--	--
..RHOTANTARSUS	--	--	7	--	2	78
..TANTARSUS	--	--	--	--	1	--
..THIENEMANNIELLA	--	5	--	--	--	--
..EMPIDIDAE	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	1	--
..SIMULIIDAE	--	--	--	--	--	--
..SIMULIUM	--	--	--	--	--	--
..TIPULIDAE	--	--	--	--	--	--
..ANTOCHA	3	5	10	--	15	16
..EPHEMEROPTERA						
..BAETIDAE						
..BAETIS	--	--	9	--	--	5
..PSEUDOCLOEON	--	--	--	1	3	--
..CAENIDAE	--	--	--	--	--	--
..CAENIS	--	--	--	--	1	--
..EPHEMERELLIDAE						
..EPHEMERELLA	--	28	--	--	11	--
..SEPHATIDAE	--	--	--	--	--	8
..HEMITELEPIDIDAE						
..EPEORUS	--	--	--	--	--	--
..STENONEMA	4	34	64	1	14	60
..LEPTOPHEBIDAE						
..PARALEPTOPHEBIA	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	4	--
..SIPHONURIDAE						
..ISONYCHIA	--	--	--	--	--	--
..SIPHONURUS	2	--	--	1	--	12
..LEPIDOPTERA						
..PYRALIDIDAE						
..PARARGYACTIS	--	--	14	1	--	8
..ECOPTERA						
..PERLIDAE						
..ACRONEURIA	--	--	3	--	7	2
..NEOPERLA	--	--	42	--	--	--
..PARAGNETINA	--	--	--	--	2	--
..PERLOIDAE						
..UNKNOWN GENUS	--	--	--	--	10	--
..TAENIOPTERYGIDAE						
..TAENIOPTERYX	--	5	--	--	3	--
..TRICHOPTERA						
..BRACHYCENTRIDAE						
..MICRASEMA	--	12	--	--	9	120
..GLOSSOSOMATIDAE						
..GLOSSOSOMA	1	4	1	--	--	--
..HYDROPSYCHIDAE						
..CHEUMATOPSYCHE	2	25	23	--	8	96
..DIPLECTRONA	--	--	--	--	1	--
..HYDROPSYCHE	9	17	93	5	--	--
..POTAMYA	--	--	--	--	--	--
..SYMPHITOPSYCHE	--	--	3	14	15	60
..HYDROPTILIDAE						
..HYDROPTILA	--	--	--	--	--	--
..LEUCOTRICHIA	--	--	1	--	1	8
..OCHROTRICHIA	--	3	--	--	--	--
..LIMNAPHILIDAE	--	--	--	--	--	--
..APATANIA	--	--	47	--	3	20
..GOERA	--	1	2	--	--	8
..MOLANNIDAE						
..MOLANNA	--	--	--	--	--	--
..PHILOPOTAMIDAE						
..CHIMARRA	5	12	8	--	--	8
..DOLOPHILODES						
..POLYCENTROPIDAE					3	--
..NYCTIOPHYLAX	--	--	--	--	1	--
..PHYLOCENTROPUS	--	--	12	--	--	--
..POLYCENTROPUS	--	2	--	--	--	9
..PSYCHOMYIIDAE						
..LYPE	--	--	1	--	--	--
..PSYCHOMYIA	--	1	--	--	5	132
..RHACOPHILIDAE						
..RHACOPHILA	--	--	--	--	3	--
MOLLUSCA (MOLLUSCS)						
..GASTROPODA						
..BASOMMATOPHORA						
..ANCYLIDAE						
..FERRISSIA	5	1	2	--	1	8

Table 3.--Benthic-invertebrate data--Continued

[double dash indicates organism not present in sample]

01472140 S BR FRENCH CR AT COVENTRYVILLE, PA.

DATE TIME	MAY 7, 70 0000	OCT 5, 70 0000	MAY 10, 71 0000	OCT 4, 71 0000	OCT 30, 72 0000	OCT 3, 73 0000
TOTAL COUNT	49	118	193	36	1053	288
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDRACARINA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS						1
..INSECTA						
..COLEOPTERA						
..ELMIDAE						
..OPTIOSERVUS				0	14	13
..OULIMNIUS				0	17	6
..STENELMIS						
..PSEPHENIDAE						
..PSEPHENUS				3		
..DIPTERA						
..CHIRONOMIDAE	9	1	28	0	53	3
..CONCHAPELOPIA						
..CRICOTOPUS						
..EUKIEFFERIELLA						
..MICROPSECTRA						
..NANOCLADIUS						
..ORTHOCLEIDIUS						
..PENTANEURA						
..POLYPEDILUM						
..RHEOTANYTARSUS						
..THIENEMANNIELLA						
..EMPIDIDAE					2	
..HEMERODROMIA						
..UNKNOWN GENUS						
..SIMULIDAE						
..SIMULIUM	3		4	0	15	1
..TIPULIDAE						
..ANTOCHA	1		7	0	3	
..EPHEMEROPTERA						
..BAETIDAE		10	2	0		3
..PSEUDOCLOSON						
..CAENIDAE						
..CAENIS						
..EPHEMERELLIDAE						
..EPHEMERELLA	5	3	51	1	98	
..HEPTAGENIIDAE						
..STENONEMA		23	5	10	29	5
..STPHLOURIDAE						
..ISONYCHIA				0	22	1
..LEPIDOPTERA						
..PYRALIDIDAE						
..PARABACTIS						8
..MEGALOPTERA						
..CORYDALIDAE						
..CHAULIODES						
..CORYDALUS	1				1	
..NIGROCNIA						
..ODONATA						
..GOMPHIDAE						1
..PLECOPTERA						
..PERLIDAE						
..ACRONEURIA	1		1	2		2
..NEOPERLA						
..PARAGNETINA					12	1
..TAENIOPTERYGIDAE						
..TAENIOPTERYX					1	
..TRICHOPTERA						
..BRACHYCENTRIDAE						
..MICRASEMA						
..GLOSSOMATIDAE						
..GLOSSOSOMA			1		13	1
..HYDROPSYCHIDAE						
..CHEUMATOPSYCHE	1	25	36	5	112	45
..HYDROPSYCHE	28	21	55	8	370	178
..MACRONEMA					9	4
..SYMPHITOPSYCHE						
..UNKNOWN GENUS				7		
..HYDROPTILDAE						
..HYDROPTILA					3	
..LEUCOTRICHIA						1
..OCHROTRICHIA						
..LIMNephilidae						
..GOERA						
..MOLANNIDAE						
..MOLANNA						2
..PHILOPOTAMIDAE						
..CHIMARRA					278	11
..DOLOPHILODES						
..POLYCENTROPIDIDAE						
..POLYCENTROPUS						1
..PSYCHOMYIIDAE						
..PSYCHOMYIA		29	3			
..RHVACOPHILIDAE						
..RHVACOPHILA						
MOLLUSCA (MOLLUSCS)						
..BIVALVIA						
..NUCULOIDEA						
..SPHAERIIDAE						
..UNKNOWN GENUS						
..GASTROPODA						
..BASOMMATOPHORA						
..ANCYLIDAE						
..FERRISSIA						
PLATYHELMINTHES (FLATWORMS)						
..TUBELLARIA						
..TRICLADIDA						
..PLANARIIDAE						
..UNKNOWN FAMILY						
..UNKNOWN GENUS						

01472140 S BR FRENCH CR AT COVENTRYVILLE, PA.						
DATE TIME	OCT 25 74 0000	OCT 27 76 0830	OCT 21 77 1030	NOV 1 78 1215	NOV 8 79 0800	NOV 8 80 1400
TOTAL COUNT	271	972	942	71	137	1499
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ARTHROPODA (ARTHROPODS)						
..AHACHNIDA						
..HYDRACARINA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	3	2	--	--	12
INSECTA						
..COLEOPTERA						
..ELMIDAE						
..OPTIOSERVUS	8	31	60	--	8	60
..OULIMNIUS	--	5	--	--	--	--
..STENELMIS	8	20	12	2	7	--
..PSEPHENIDAE						
..ECTOPHIA	--	1	--	--	--	--
..PSEPHENUS	--	--	--	--	--	--
DIPTERA						
..CHIRONOMIDAE	26	--	--	--	--	--
..CONCHAPELOPIA	--	11	5	--	--	27
..CRICOTOPIUS	--	49	--	--	2	--
..EUKLIPPERIELLA	--	--	--	--	--	--
..MICROPSECTRA	--	--	17	--	--	--
..NANOCLADIUS	--	--	--	--	--	16
..ORTHOCLADIUS	--	--	17	--	9	32
..PENTANEURA	--	--	--	--	--	--
..POLYPEDILUM	--	3	--	--	--	--
..RHEOTANTARSUS	--	72	--	--	--	274
..THIENEMANNIELLA	--	8	2	--	--	--
..EMPIDIDAE	--	--	--	--	--	--
..HEMEROPTOMIA	--	1	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--
..SIMULIIDAE	--	--	--	--	--	1
..SIMULIUM	--	4	--	--	--	8
..TIPULIDAE	--	--	--	--	--	--
..ANTOCHA	7	29	14	--	2	40
EPHEMEROPTERA						
..BAETIDAE						
..BAETIS	5	--	1	--	4	--
..PSEUDOCLOEON	--	--	--	--	--	--
..CAENIDAE						
..CAENIS	--	--	--	--	--	5
..EPHEMERELLIDAE						
..EPHEMERELLA	14	88	26	--	3	48
..HEPTAGENIIDAE						
..STENONEMA	13	12	34	--	4	52
..SIPHONURIDAE						
..ISONYCHIA	1	4	28	--	--	4
LEPIDOPTERA						
..PYRALIIDAE						
..PARARGYACTIS	10	--	14	--	--	4
..MEGALOPTHIA						
..CORYDALIDAE						
..CHAULIOIDES	1	--	--	--	--	--
..CORYDALUS	--	4	4	--	1	4
..NYGROMIA	--	--	--	--	--	4
..ODONATA						
..GOMPHIDAE						
..PLECOPTERA						
..PERLIDAE						
..ACRONURIA	--	--	--	--	1	--
..NEOPERLA	--	--	--	--	--	--
..PARAGNETINA	3	--	2	--	2	8
..TALNIPTERYGIDAE						
..TALNIPTERYX	--	2	35	--	3	8
TRICHOPTERA						
..BRACHYCENTRIDAE						
..MICRASEMA	4	8	--	--	--	5
..GLOSSOSOMATIDAE						
..GLOSSOMA	1	4	2	--	1	16
..HYDROPSYCHIDAE						
..CHEUMATOPSYCHE	48	352	480	19	28	512
..HYDROPSYCHE	92	201	172	21	52	12
..MACRONEMA	5	12	1	--	--	--
..SYMPHITOPSYCHE	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	29	9	233
..HYDROPTILIDAE						
..HYDROPTILA	--	--	--	--	--	4
..LEUCOTRICHIA	--	1	5	--	--	58
..OCHROTRICHIA	--	--	--	--	--	--
..LIMNAPHILIDAE						
..COERA	--	14	14	--	--	--
..MOLANNIDAE						
..MOLANNA	--	--	--	--	--	--
..PHILOPOTAMIDAE						
..CHIMARRA	18	37	13	--	3	16
..DOLOPHIODES	1	--	--	--	--	--
..POLYCENTROPODIDAE						
..POLYCENTROPUS	--	2	--	--	--	--
..PSYCHOMYIIDAE						
..PSYCHOMYIA	--	1	5	--	--	8
..RHYACOPHILIDAE						
..RHYACOPHILA	--	2	--	--	--	--
MOLLUSCA (MOLLUSCS)						
..BIVALVIA						
..NUCULOIDEA						
..SPHAERIIDAE						
..UNKNOWN GENUS	--	--	--	--	--	4
GASTROPODA						
..BASOMMATOPHORA						
..ANCYLIDAE						
..FERRISSIA	--	--	--	--	--	12
PLATYHELMINTHES (PLATWORMS)						
..TURBELLARIA						
..TRICLADIDA						
..PLANARIIDAE	2	--	--	--	--	--
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	7	--	--	--	12

Table 3.--Benthic invertebrate data--Continued
[double dash indicates organism not present in sample]

Q1472154 FRENCH CREEK NEAR PUGTOWN, PA.						
DATE TIME	MAY 20, 70 0000	OCT 5, 70 0000	MAY 10, 71 0000	OCT 4, 71 0000	OCT 30, 72 0000	OCT 4, 73 0000
TOTAL COUNT	116	58	92	34	643	225
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA						
..OLIGOCHAETA						
..PROSOPORA						
..LUMBRICULIDAE						
..UNKNOWN GENUS	--	--	--	--	--	--
..UNKNOWN ORDER						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	--	--
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..ARANEIDA						
..PISAUDIDAE						
..DOLOMEDES	--	--	--	--	--	--
..HYDARCTA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	--	--
INSECTA						
..COLEOPTERA						
..ELMIDAE						
..OPTIOSERVUS	--	--	--	--	4	3
..OULIMNIUS	--	--	--	--	1	4
..STENELMIS	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--
..PSEPHENUS	--	--	6	--	--	1
..DIPTERA						
..ATHERICIDAE=RHAGIONIDAE						
..ATHERIX	--	--	--	--	--	--
..CHIRONOMIDAE	43	3	14	--	81	4
..CARDIOPHAGUS	--	--	--	--	--	--
..CHICOPHUS	--	--	--	--	--	--
..EUKIEFFERIELLA	--	--	--	--	--	--
..ORTHOCENTRUS	--	--	--	--	--	--
..POLYPTILUM	--	--	--	--	--	--
..RHOTANTYRUS	--	--	--	--	--	--
..THIENEMANNIELLA	--	--	--	--	5	--
..EMPIDIDAE						
..SINULIIDAE						
..SIMULIUM	1	--	12	16	1	1
..TICULIDAE	3	--	6	--	8	--
..EPHEMEROPTERA						
..BACILLIDAE						
..BAETIS	9	1	--	3	2	2
..PSEUDOCLOEON	--	--	--	--	--	--
..EPHEMERELLIDAE						
..EPHEMERELLA	15	--	11	2	47	--
..SERRATELLA	--	--	--	--	--	--
..HEPTAGENIIDAE						
..TEODUS	--	4	7	--	10	8
..STENONEMA	7	--	--	--	65	--
..SIPHONURIDAE						
..AMELETUS	--	1	--	--	23	3
..ISONYCHIA	--	--	--	--	--	--
..LEPIDOPTERA						
..PYRALIDIDAE						
..PARARGACTIS	--	--	--	--	--	--
..MEGALOPTERA						
..CORYDALIDAE						
..CORYDALUS	--	--	--	--	1	1
..C. CORANTUS	--	--	--	--	--	--
..NEUROPTERA						
..SISYRIDAE						
..CLIMACIDAE						
..AREOLARIS	--	--	--	--	--	--
..PLECOPTERA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	--	--
..PERLIDAE						
..NEOPHAGANOPHORA	--	--	--	--	--	--
..ACROSTIDA	--	9	--	--	4	--
..PARACETIDAE	3	--	--	--	3	4
..PERLODIDAE						
..UNKNOWN GENUS	--	--	--	--	--	--
..TAENIOPTERYX	--	--	--	--	--	--
..TRICHOPTERA						
..BRYCHINTRIDAE						
..MICRASEMA	--	--	--	--	1	--
..UNKNOWN GENUS	--	--	--	--	--	--
..GLOSSOMATIDAE						
..GLOSSOMATIS	--	--	--	--	27	1
..HYDROPSYCHIDAE						
..CHIMATOPSYCHE	--	8	12	2	69	33
..HYDROPSYCHE	35	12	24	7	229	150
..MACRONEMA	--	--	--	--	--	--
..SYMPHYTOPSYCHE	--	--	--	--	--	--
..HYDROPTILIDAE						
..HYDROPTILA	--	--	--	--	--	--
..LEUCOTRICHIA	--	--	--	--	1	--
..OCHROTRICHIA	--	--	--	--	--	--
..LEPIDOSTOMATIDAE						
..LEPIDOSTOMA	--	--	--	--	1	--
..LEPTOCERIDAE						
..MYSTACIDAE	--	--	--	--	1	--
..DECETIS	--	--	--	--	1	--
..LIMNETHIDAE						
..APATANIA	--	--	--	--	--	--
..GOERA	--	--	--	--	1	--
..MOLLANIDAE						
..MOLANNA	--	--	--	--	--	1
..PHILOPOTAMIDAE						
..CHIMARRA	--	--	--	--	52	9
..POLYCENTROPIDAE						
..NEURECLIPSIS	--	--	--	--	4	--
..NECTIDOPHYLLA	--	--	--	--	2	--
..POLYCENTROPUS	--	--	--	--	--	--
..PSYCHOMYIDAE						
..PSYCHOMYIA	--	20	--	5	--	--
MOLLUSCA (MOLLUSCS)						
..GASTROPODA						
..BASOMMATOPHORA						
..ANCYLIDAE						
..FERRISSIA	--	--	--	--	--	--
..PLANORBIDAE						
..GYRAULUS	--	--	--	--	--	--
PLATYHELMINTHES (FLATWORMS)						
..TURBELLARIA						
..TRICLADIDA						
..PLANARIIDAE	--	--	--	--	--	--
..UNKNOWN FAMILY	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--

01472154 FRENCH CREEK NEAR PUGHTOWN, PA.						
DATE	OCT 35 74	OCT 27 76	OCT 21 77	NOV 1 78	NOV 9 79	NOV 6 80
TIME	0000	1400	1500	1000	1000	1030
TOTAL COUNT	189	362	747	78	96	613
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA						
..OLIGOCHAETA						
..PROSOPORA						
..LUMBRICULIDAE						
..UNKNOWN GENUS	--	--	--	--	3	--
..UNKNOWN ORDER						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	1	--	--	--	--
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..ARANEIDA						
..PISAUROIDAE	--	--	--	--	2	--
..DOLOMEDES						
..HYDRACARINA	--	--	--	--	2	--
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	2	1	--	4	2
..INSECTA						
..COLEOPTERA						
..CURCULIONIDAE						
..OPTIOSERVUS	--	2	1	--	--	--
..OULIMNIUS	--	--	--	--	1	--
..STENELMIS	--	--	--	2	--	--
..UNKNOWN GENUS	--	--	--	--	--	2
..PSEPHENIDAE	--	--	--	--	--	--
..PSEPHENUS	--	--	1	--	--	--
..DIPTERA						
..ATHERICIDAE-RHAGIONIDAE						
..ATHERIX	1	--	--	--	--	--
..CHIRONOMIDAE	39	--	--	--	--	--
..CARDIOPIDUS	--	--	--	--	--	--
..CRICOTOPUS	--	8	10	1	27	2
..EUXTYPHERIELLA	--	10	15	--	--	12
..ORTHOCADIDUS	--	4	--	--	15	14
..POLYEDILUM	--	--	--	--	--	--
..RHEDANTYTARSUS	--	23	18	--	1	24
..THIEYEMANNIELLA	--	3	--	--	--	--
..EMPIDAE	--	--	--	--	--	--
..SIMULIIDAE	--	2	10	2	--	2
..SIMULIUM	--	--	--	--	--	--
..TIPULIDAE	--	4	3	--	--	2
..ANTOCHA	3	--	--	--	--	--
..EPHEMEROPTERA						
..BAETIDAE						
..BAETIS	2	--	--	2	--	--
..PSEUDOCLOEON	--	1	1	--	--	--
..EPHEMERELLIDAE						
..EPHEMERELLA	10	22	47	--	4	--
..SERRATELLA	--	--	--	--	--	54
..HEPTAGENIIDAE	--	--	--	--	--	--
..EPICORIS	--	--	--	--	--	--
..STEMONEMA	26	14	66	6	7	80
..SIPHONURIDAE						
..AMELETUS	--	--	--	--	--	--
..ISONYCHIA	--	3	34	12	2	54
..LEPIDOPTERA						
..PYRALIDAE						
..PARARGYACTIS	--	1	1	--	--	--
..MEGALOPTERA						
..CORIDALIDAE						
..CORIDALUS	--	1	--	1	--	--
..C.CORNUTUS	--	--	1	--	--	--
..NEUROPTERA						
..SISYRIDAE						
..CLINACIA						
..C.AREOLARIS	--	--	1	--	--	--
..PLECOPTERA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	1	--	--
..PERLIDAE						
..NEO-PHASGANOPHORA	2	--	--	--	--	--
..ACRONETUS	--	3	3	--	1	4
..PARAGNETINA	--	1	1	1	--	5
..PERLODIDAE						
..UNKNOWN GENUS	--	--	--	--	--	12
..TAENIOPTERYGIDAE	--	--	--	--	--	--
..TAENIOPTERYX	--	1	--	--	2	6
..TRICHOPTERA						
..BRACHYCENTRIDAE						
..BRACHYCENTRUS	5	3	18	--	--	14
..UNKNOWN GENUS	--	--	--	--	--	20
..GLOSSOSOMATIDAE						
..GLOSSOSOMA	1	1	1	--	1	1
..HYDROPSYCHIDAE	21	102	180	--	--	172
..HYDROPSYCHE	55	85	146	41	--	--
..MACRONEMA	--	2	--	--	19	72
..HYDROPTILIDAE				8	--	--
..HYDROPTILA	--	--	--	--	--	8
..LEUCOTRICHIA	--	--	14	--	1	--
..OCHROTRICHIA	1	--	--	--	--	--
..LEPIDOSTOMATIDAE						
..LEPIDOSTOMA	--	--	--	--	--	--
..LEPIDOSTOMUS	--	--	--	--	--	--
..MYSTACIDES	--	--	--	--	--	--
..OBCETIS	--	--	--	--	--	--
..LIMNAPHILIDAE						
..APATANIA	--	1	3	--	--	4
..COERA	--	--	--	--	--	--
..MOLANIDAE						
..MOLANNA	--	--	--	--	--	--
..PHILOPOTAMIDAE						
..CEMARIA	16	45	151	1	4	16
..POLYCENTROPODIDAE						
..NEURECLIPSIS	--	--	1	--	--	--
..NYCTOPHYLAK	--	5	--	--	--	4
..POLYCENTROPUS	1	1	--	--	--	10
..PSYCHOMYIIDAE						
..PSYCHOMYIA	--	1	2	--	1	8
MOLLUSCA (MOLLUSCS)						
..GASTROPODA						
..BASOMATOPHORA						
..ANCILIDAE						
..FERRISSIA	--	3	15	1	--	4
..PLANORBIDAE						
..CYRADIUS	2	--	--	--	--	2
PLATHELMINTHES (FLATWORMS)						
..TUBELLIDAE						
..TRICLADIDA						
..PLANARIIDAE	4	--	--	--	--	--
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	3	--	--	--	4

Table 3.--Benthic-invertebrate data--Continued
(double dash indicates organism not present in sample)

01472157 FRENCH CREEK NEAR PHOENIXVILLE, PA.

DATE TIME	MAY 21, 70 0000	OCT 5, 70 0000	MAY 10, 71 0000	OCT 4, 71 0000	OCT 30, 72 0000
TOTAL COUNT	54	58	45	24	324
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT
ARTHROPODA (ARTHROPODS;					
..ARACHNIDA					
...HYDRACARINA					
...UNKNOWN FAMILY					
...UNKNOWN GENUS	--	--	--	--	--
..INSECTA					
...COLEOPTERA					
...ELMIDAE					
...OPTIOSERYUS					
...STENELMIS					
...PSEPHENIDAE					
...PSEPHENUS				1	--
..DIPTERA					
...ATHERICIDAE=RHAGIONIDAE					
...CHIRONOMIDAE	5	--	21	--	21
...CONCHAPELOPIA	--	--	--	--	--
...CORYNOEURA	--	--	--	--	--
...CHICOTOPUS	--	--	--	--	--
...EUKIEFFERIELLA	--	--	--	--	--
...ORTHOCLADIUS	--	--	--	--	--
...POLYPEDILUM	--	--	--	--	--
...RHOTANTARSUS	--	--	--	--	--
...THIENEMANNIELLA	--	--	--	--	--
...EMPIDIDAE	--	--	--	--	4
...HEMERODROMIA	--	--	--	--	--
...UNKNOWN GENUS	--	--	--	--	--
..SIMULIIDAE					
...SIMULIUM	23	--	1	--	--
..TIPULIDAE					
...ANTOCHA	--	--	2	--	2
..EPHEMEROPTERA					
...BAETIDAE					
...BAETIS	--	4	3	--	--
...PSEUDOCLOEON	--	--	--	--	--
...EPIHEBELLIDAE	--	3	10	3	39
...EPIHEBELLA	--	--	--	--	--
...HEPTAGENIIDAE	--	--	--	--	--
...EPEORUS	--	--	--	--	15
...STIPHONEMA	8	7	--	8	54
...STIPHONIIDAE	--	--	--	--	--
...ISONYCHIA	--	--	--	--	5
..LEPIDOPTERA					
...PYRALIDIDAE	--	--	--	--	--
...PARARGYACTIS	--	--	--	--	--
..NEUROPTERA					
...SISYRIDAE	--	--	--	--	--
..CLIMACIA					
...CLIMACIA	--	--	--	--	1
..ODONATA					
...COENAGRIONIDAE	--	--	--	--	--
...AMPHIAGRION	--	--	--	--	--
...UNKNOWN GENUS	--	--	--	--	--
..PLECOPTERA					
...PERLIDAE					
...ACRONETURIA	--	--	--	--	8
...PARAGNETINA	--	--	--	--	3
..TRICHOPTERA					
...BRACHYCENTRIDAE	--	--	--	--	1
...MICRASEMA	--	--	--	--	--
...GLOSSOSOMATIDAE	--	--	--	--	64
...GLOSSOSOMA	--	--	--	--	--
...HELICOPSYCHIDAE	--	--	--	--	1
...HELICOPSYCHE	--	--	--	--	--
...HYDROPSYCHIDAE	--	--	--	--	--
...CHEUMATOPSYCHE	8	11	4	1	51
...HYDROPSYCHE	12	13	4	10	49
...MACROHEMA	--	--	--	--	--
...SYMPHYTOPSYCHE	--	--	--	--	--
...HYDROPTILIDAE	--	--	--	--	--
...HYDROPTILA	--	--	--	--	--
...LEUCOTRICHIA	--	--	--	--	--
...OCHROPSYCHE	--	--	--	--	--
..LEPIDOSTOMATIDAE					
...LEPIDOSTOMA	--	--	--	--	1
..LEPTOCERIDAE					
...MYSTACIDES	--	--	--	--	--
...LIMNephilidae	--	--	--	--	1
...APATANIA	--	--	--	--	--
...GOERA	--	--	--	--	--
...UNKNOWN GENUS	--	--	--	--	--
..MOLANIDAE					
...MOLANNA	--	1	--	--	--
...PHILOPOTAMIDAE	--	--	--	--	--
...CHIMARRA	--	--	--	--	5
..POLYCENTROPIDIDAE					
...NEURECLIPSIS	--	--	--	--	1
...NYCTIOPHYLAX	--	--	--	--	--
...PSYCHOMYIDAE	--	--	--	--	--
...PSYCHOMYIA	--	17	--	1	--
MOLLUSCA (MOLLUSCS;					
..BIVALVIA					
...NUCULOIDEA					
...SPHAERIUM	--	--	--	--	--
..GASTROPODA					
...BASOMMATOPHORA					
...ANCYLIDAE	--	--	--	--	--
...FERRISSIA	--	--	--	--	--
...PHYSIDAE	--	--	--	--	--
...PHYSA	--	--	--	--	--
...PLANORBIDAE	--	--	--	--	--
...GYRAULUS	--	--	--	--	--
..MESOGASTROPODA					
...HYDROBIIDAE	--	--	--	--	--
...AMNICOLA	--	--	--	--	--
PLATYHELMINTHES (FLATWORMS;					
..TURBELLARIA					
...TRICLADIDA	--	--	--	--	--
...PLANARIIDAE	--	--	--	--	--
...UNKNOWN FAMILY	--	--	--	--	--
...UNKNOWN GENUS	--	--	--	--	--

01472157 FRENCH CREEK NEAR PHOENIXVILLE, PA.				
DATE TIME	OCT 4 73 0000	OCT 25 74 0000	NOV 4 75 1330	OCT 27 76 1445
TOTAL COUNT	96	85	232	277
ORGANISM	COUNT	COUNT	COUNT	COUNT
ARTHROPODA (ARTHROPODS)				
..ARACHNIDA				
..HYDRACARINA				
..UNKNOWN FAMILY				
..UNKNOWN GENUS	--	--	--	1
INSECTA				
..COLEOPTERA				
..ELMIDAE				
..OPTIOSERVUS	1	1	11	--
..STENELMIS	--	--	--	--
..PSEPHENIDAE				
..PSEPHENUS	--	--	--	1
DIPTERA				
..ATHELYCIDAE=RHAGIONIDAE				
..ATHELYX	--	--	--	--
..CHIRONOMIDAE	1	--	--	--
..CONCHAELOPIA	--	--	--	--
..CORIONOEURA	--	--	--	1
..CRICOTOPUS	--	--	--	28
..EUKIEFFERIELLA	--	--	--	20
..ORTHOCLEADUS	--	--	22	28
..POLYPEDILUM	--	--	--	13
..RHEOTANYTARSUS	--	--	5	1
..THIENEMANNIELLA	--	--	--	--
..EMPIDIDAE	--	--	--	--
..HEMERODROMIA	--	--	--	--
..UNKNOWN GENUS	--	--	--	--
..SIMULIIDAE	--	--	--	--
..SIMULIUM	--	--	3	--
..TIPULIDAE	--	1	5	3
..AMPHIROPTERA	--	--	--	--
..EPHEMEROPTERA	--	--	--	--
..BAETIDAE				
..BAETIS	3	--	--	--
..PSEUDOCLOEON	--	--	--	--
..EPHEMERELLIDAE				
..EPHEMERELLA	--	2	11	9
..HEPTAGENIIDAE				
..EPEORUS	--	--	--	--
..STENONEMA	2	2	8	5
..SIPHONURIDAE				
..ISONYCHIA	3	--	--	6
LEPIDOPTERA				
..PYRALIDAE				
..PARARGYACTIS	--	--	2	1
NEUROPTERA				
..SISYRIDAE				
..CLIMACIA	--	--	--	--
ODONATA				
..COENAGRIONIDAE				
..AMPHIAGRION	--	--	--	2
..UNKNOWN GENUS	--	--	--	--
PLECOPTERA				
..PERIDAE				
..ACRONEURIA	2	--	3	--
..PARAGNETINA	--	--	2	--
TRICHOPTERA				
..BRACHYCENTRIDAE				
..MICRASENA	--	2	7	12
..GLOSSOSOMATIDAE				
..GLOSSOSOMA	3	2	14	5
..HELICOPSYCHIDAE				
..HELICOPSYCHE	34	--	--	--
..HYDROPSYCHIDAE				
..CHEUMATOPSYCHE	44	24	31	24
..HYDROPSYCHE	--	18	87	112
..MACRONEMA	--	2	2	1
..SYMPHILTOPSYCHE	--	--	--	--
..HYDROPTILIDAE				
..HYDROPTILA	--	--	--	--
..LEUCOPSYCHIA	--	--	1	3
..OCHROTRICHA	--	--	--	1
..LEPIDOSTOMATIDAE				
..LEPIDOSTOMA	--	--	4	--
..LEPTOCENIDAE				
..MYSTACIDES	--	--	--	--
..LIMNETHILIDAE	--	--	--	--
..APATANIA	--	--	--	--
..GOERA	--	--	3	--
..UNKNOWN GENUS	--	--	--	1
..MOLANNIDAE				
..MOLANNA	1	--	--	--
..PHILOPOTAMIDAE				
..CHIMARRA	2	6	4	--
..POLYCENTROPODIDAE				
..NEURECLIPSIS	--	--	--	--
..NYCTIOPHYLAX	--	--	1	--
..PSYCHOMYIA	--	--	5	6
MOLLUSCA (MOLLUSCS)				
..BIVULVA				
..NUCULOIDEA				
..SPHAERIIDAE				
..SPHAERIUM	--	1	--	--
GASTROPODA				
..BASOMATOPHORA				
..ANCYLIDAE				
..FERRISSIA	--	19	1	14
..PHYSIDAE				
..PHYSA	--	--	--	1
..PLANORBIDAE				
..GYRAULUS	--	--	--	--
..MESOGASTROPODA				
..HYDROBIIDAE				
..AMNICOLA	--	1	--	1
PLATYHELMINTHES (FLATWORMS)				
..TURBELLARIA				
..TRICLADIDA				
..PLANARIIDAE	--	4	--	--
..UNKNOWN FAMILY				
..UNKNOWN GENUS	--	--	--	5

Table 3.--Benthic-invertebrate data--Continued
[double dash indicates organism not present in sample]

	01472157 FRENCH CREEK NEAR PHOENIXVILLE, PA.			
DATE TIME	OCT 21 77 1800	OCT 31 78 1030	NOV 9 78 1030	NOV 5 80 0900
TOTAL COUNT	645	54	174	829
ORGANISM	COUNT	COUNT	COUNT	COUNT
ARTHROPODA (ARTHROPODS)				
..ARACHNIDA				
...HYDRACARINA				
...UNKNOWN FAMILY				
...UNKNOWN GENUS	2	--	--	12
..INSECTA				
...COLEOPTERA				
...ELMIDAE				
...OPTIOSEVUS	5	--	--	4
...STENELMIS	4	--	8	--
...PSEPHENIDAE				
...PSEPHENUS	1	--	2	--
...DIPTERA				
...ATHERICIDAE=RHAGIONIDAE				
...ATHERIX	--	--	--	1
...CHIRONOMIDAE	--	--	--	--
...CONCHAPELOPIA	--	--	1	--
...CORYNONEURA	--	--	4	--
...CRICOTOPUS	--	--	--	--
...EUKLOPTELLA	24	--	--	4
...ORTHOCLADIUS	53	--	9	48
...POLYPEDILUM	--	--	--	1
...RHEOTANTARSUS	16	--	--	24
...THIEMANNIELLA	2	--	--	4
...EMPIDIDAE	--	--	--	--
...HEMERODROMIA	3	--	--	4
...UNKNOWN GENUS	--	--	--	4
...SIMULIIDAE	--	--	--	12
...SIMULIUM	--	--	--	--
...TIPULIDAE				
...ANTOCHA	12	--	2	8
..EPHEMEROPTERA				
...BASTIIDAE	--	--	1	4
...PSEUDOCLOEON	--	--	--	4
...EPHEMERELLIDAE				
...EPHEMERELLA	18	--	--	36
...HEPTAGENIIDAE	--	--	--	--
...EPEORUS	--	--	--	56
...STENONEMA	80	--	--	--
...SIPHONURIDAE				
...ISONYCHIA	41	--	--	8
..LEPIDOPTERA				
...PYRALIDIDAE				
...PARARGYACTIS	9	1	--	--
..NEUROPTERA				
...SISYRIDAE	1	--	--	--
..OLIMACIA				
..ODONATA				
...COENAGRIONIDAE				
...AMPHIAGRION	--	--	--	--
...UNKNOWN GENUS	4	--	--	--
..PSECOPTERA				
...PERLIDAE				
...ACRONEURIA	1	--	--	4
...PARACRONEURIA	4	--	--	--
..TRICHOPTERA				
...BRACHYCENTRIDAE				
...MICRASENA	10	--	--	28
...GLOSSOSOMATIDAE				
...GLOSSOSOMA	12	1	--	160
...HELICOPSYCHIDAE				
...HELICOPSYCHE	--	--	--	--
...HYDROPSYCHIDAE				
...CHEUMATOPSYCHE	124	16	11	36
...HYDROPSYCHE	152	16	101	4
...MACRONEMA	5	1	--	--
...SYMPHYTOPSYCHE	--	19	31	4
...HYDROPTILIDAE				
...HYDROPTILA	1	--	--	8
...LEUCOPTEROMIA	2	--	--	16
...OCHROTRICHIA	--	--	--	--
..LEPIDOSTOMATIDAE				
...LEPIDOSTOMA	--	--	--	--
..LEPTOCERIDAE				
...LEPTOCERUS	1	--	--	--
..HYSTEROGASTROPODA				
...LIMNEPHILIDAE	--	--	--	8
...APATANIA	--	--	--	--
...GOERA	1	--	--	--
...UNKNOWN GENUS	--	--	--	--
..MOLANNIDAE				
...MOLANNA	--	--	--	--
...PHILOPOTAMIDAE				
...OLIMARRA	14	--	3	72
..POLYCENTROPIDIDAE				
...NEURECLIPSIS	12	--	--	--
...NYCTIOPHYLLA	--	--	--	--
..PSYCHOMYIDAE				
...PSYCHOMYIA	5	--	--	4
MOLLUSCA (MOLLUSCS)				
..BIVALVIA				
...NUCULOIDEA				
...SPHAERIIDAE				
...SPHAERIUM	--	--	--	--
..GASTROPODA				
...BASOMMATOPHORA				
...ARCTIIDAE				
...FERRISSIA	18	--	1	20
...PHYSIDAE	--	--	--	4
...PHYSA	--	--	--	--
...PLANORBIDAE				
...CYRAULUS	1	--	--	4
..MESOGASTROPODA				
...HYDROBIIDAE				
...AMNICOLA	5	--	--	--
PLATYHELMINTHES (FLATWORMS)				
..TURBELLARIA				
...TRICLADIDAE				
...PLANARIIDAE	--	--	--	--
...UNKNOWN FAMILY	--	--	--	24
...UNKNOWN GENUS	--	--	--	--

Table 3.--Benthic-invertebrate data--Continued
[double dash indicates organism not present in sample]

DATE TIME	01472170 PICKERING CREEK NEAR EAGLE, PA.					
	MAY 4, 70 0000	SEP 28, 70 0000	MAY 3, 71 0000	SEP 27, 71 0000	OCT 3, 72 0000	OCT 2, 73 0000
TOTAL COUNT	60	161	76	37	743	173
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA						
..OLIGOCHAETA						
..UNKNOWN ORDER						
...UNKNOWN FAMILY						
...UNKNOWN GENUS	--	--	--	--	--	--
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
...HYDRACARINA						
...UNKNOWN FAMILY						
...UNKNOWN GENUS	--	--	--	--	--	--
..INSECTA						
...COLEOPTERA						
....ELMIDAE						
....MICROCYLLOEPUS	--	--	--	--	--	--
....PTILOSERYUS	--	--	--	--	6	--
....OULINIUS	--	--	--	--	--	--
....STENELMIS	--	--	--	--	--	--
....PSEPHENIDAE	--	--	--	--	--	--
....PSEPHENUS	--	--	--	--	--	--
...DIPTERA						
....CERATOPOGONIDAE=HELEIDAE						
....UNKNOWN GENUS	--	--	--	--	--	--
....CHIRONOMIDAE	--	--	29	--	33	--
....CONCHAPELOPIA	--	--	--	--	--	--
....CORYNONEURA	--	--	--	--	--	--
....CRICOTOPUS	--	--	--	--	--	--
....DIAMESSA	--	--	--	--	--	--
....EUKIETSA	--	--	--	--	--	--
....MICROPSICTRA	--	--	--	--	--	--
....MICROTENDIPES	--	--	--	--	--	--
....ORTHOCLADIUS	--	--	--	--	--	--
....PARAMETRIOGNEMUS	--	--	--	--	--	--
....POLYPEDILUM	--	--	--	--	--	--
....RHOTANTARSUS	--	--	--	--	--	--
....SMITIA	--	--	--	--	--	--
....THIENEMANNIA	--	--	--	--	--	--
....THIENEMANNIELLA	--	--	--	--	--	--
....EMPIDIDAE	--	--	--	--	5	--
....HEMERODROMIA	--	--	--	--	--	--
....SIMULIIDAE						
....SIMULIUM	--	10	3	13	27	--
....TIPULIDAE						
....ANTOCIA	--	--	2	--	4	--
....HEXATOMA	--	--	--	--	--	--
....TIPULA	--	--	--	--	--	--
..EPHEMEROPTERA						
....BAETIDAE						
....BAETIS	3	38	2	--	35	4
....CENTROPTILUM	1	--	--	--	--	--
....PSEUDOCLOEON	--	--	--	--	--	--
....CAENIDAE	--	--	--	--	--	--
....EPHEMERELLIDAE						
....EPHEMERELLA	17	--	12	5	7	--
....HEPTAGENIIDAE						
....STENONEMA	--	--	3	8	18	9
....LEPTOPHLEBIDAE						
....PARALEPTOPHLEBIA	--	--	1	--	--	--
....SIPHONURIDAE						
....ISONYCHIA	--	--	--	--	4	3
..LEPIDOPTERA						
....PYRALIDAE						
....PARAAGYACTIS	--	--	--	--	--	--
..MEGALOPTERA						
....CORYDALIDAE	--	--	--	--	--	--
....NIGRONIA	--	--	--	--	--	--
..PLECOPTERA						
....CHLOROPERLIDAE						
....UNKNOWN GENUS	--	--	--	--	--	--
....TAENIOPTERYGIDAE						
....TAENIOPTERYX	--	--	--	--	--	--
..TRICHOPTERA						
....GLOSSOSOMATIDAE						
....GLOSSOSOMA	--	--	3	--	3	--
....HYDROPSYCHIDAE						
....CHEUMATOPSYCHE	--	26	5	--	33	6
....HYDROPSYCHE	38	45	16	11	554	147
....SYMPHITOPSYCHE	--	--	--	--	--	--
....HYDROPTILIDAE						
....HYDROPTILA	--	--	--	--	--	--
....LEUCOTRICHIA	--	--	--	--	7	--
....OCHROTRICHIA	--	--	--	--	--	--
....PHILOPOTAMIDAE						
....CHIMARRA	1	--	--	--	7	4
....POLYCENTROPODIDAE						
....CYRNELLUS	--	--	--	--	--	--
....POLYCENTROPUS	--	--	--	--	--	--
....PSYCHOMYIDAE	--	42	--	--	--	--
....PSYCHOMYIA	--	--	--	--	--	--
MOLLUSCA (MOLLUSCS)						
..GASTROPODA						
...BASOMMATOPHORA						
....ANCYLIDAE						
....FERRISSIA	--	--	--	--	--	--

01472170 PICKERING CREEK NEAR EAGLE, PA.					
DATE TIME	OCT 21 78 0845	OCT 19 77 0930	OCT 30 78 1400	NOV 1 79 1415	OCT 30 80 1250
TOTAL COUNT	820	1121	113	94	242
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA					
..OLIGOCHAETA					
...UNKNOWN ORDER					
...UNKNOWN FAMILY					
...UNKNOWN GENUS	3	1	--	--	--
ARTHROPODA (ARTHROPODS)					
..ARACHNIDA					
...HYDRACARINA					
...UNKNOWN FAMILY					
...UNKNOWN GENUS	20	1	--	--	4
..INSECTA					
...COLEOPTERA					
...ELMIDAE					
...MICROCYLLOEPUS	1	--	--	--	--
...OPTIOSERVUS	44	89	2	3	28
...OULINIUS	2	3	1	--	--
...STENELMIS					
...PSEPHENIDAE					
...PSEPHENUS	1	1	--	--	2
..DIPTERA					
...CERATOPOGONIDAE=HELEIDAE					
...UNKNOWN GENUS	1	--	--	--	--
...CHIRONOMIDAE					
...CONCHAPELOPIA	18	10	1	--	4
...CORYNONEURA					
...CRICOTOPUS	37	68	--	--	16
...DIANESA	--	--	1	--	--
...EUKETOPRIELLA		4	2	--	--
...MICROPSSECTRA	12	--	--	--	--
...MICROTENDIPES			1	--	12
...ORTHOCLADIUS	16	3	5	12	4
...PARAMETRIOCNEMUS	--	--	--	--	2
...POLYPEDILUM	16	18	--	--	--
...RHECTANTYTARSUS	--	12	3	2	--
...SMITTIA	2	--	--	--	--
...THIENEMANNIA	--	2	--	--	--
...THIENEMANNIELLA	6	--	--	--	4
..EMPTIDAE					
...HEMERODROMIA	6	2	--	--	2
..SIMULIIDAE					
...SIMULIUM	12	27	--	--	--
..TIPULIDAE					
...TIPULIDAE	8	16	--	5	14
..ANTOCIA					
...HEXATOMA	--	1	--	--	2
...TIPULA					
..EPHEMEROPTERA					
...BAETIDAE					
...BAETIS	--	--	--	--	--
...CENTROPTILUM	--	--	--	--	--
...PSEUDOCLOEON	1	2	1	--	--
..CAENIDAE					
...CAENIS	1	--	--	--	--
...EPHEMERELLIDAE					
...EPHEMERELLA	20	2	5	1	--
...HEPTAGENIIDAE					
...STENOEMA	46	11	2	7	12
..LEPTOPHLEBIIDAE					
...PARALEPTOPHLEBIA	--	--	1	--	--
..SIPHONURIDAE					
...ISONYCHIA	1	4	1	--	2
..LEPIDOPTERA					
...PYRALIDIDAE					
...PARARGYACTIS	--	--	--	--	2
..MEGALOPTERA					
...CORYDALIDAE					
...NIGRONIA	--	2	--	--	--
..PLECOPTERA					
...CHLOROPERLIDAE					
...UNKNOWN GENUS	--	1	--	--	--
..TAeniopterygidae					
...TAENIOPTERYGIDAE	5	19	3	5	--
..TRICHOPTERA					
...GLOSSOSOMATIDAE					
...GLOSSOSOMA	--	--	--	1	--
..HYDROPSYCHIDAE					
...CHEUMATOPSYCHE	80	224	28	11	6
...HYDROPSYCHE	403	486	26	14	88
...SYMPHITOPSYCHE	--	--	24	32	--
..HYDROPTILIDAE					
...HYDROPTILA	--	--	--	--	2
...LEUCOTRICHIA	20	12	--	--	24
...OCHROTRICHIA	16	--	--	--	--
..PHILOPOTAMIDAE					
...CHIWARRA	14	--	4	1	8
...POLYCENTROPIDIDAE	--	124	--	--	--
...CYRNELLUS	--	--	--	--	2
...POLYCENTROPUS	--	--	--	--	--
...PSYCHOMYIIDAE	1	--	--	--	--
...PSYCHOMYIA					
MOLLUSCA (MOLLUSCS)					
..GASTROPODA					
...BACONNATOPHORA					
...ANCYLIDAE					
...PERRISSIA	--	--	1	--	--

Table 3.--Benthic invertebrate data--Continued
[double dash indicates organism not present in sample]

DATE TIME	U1472174 PICKERING CREEK NEAR CHESTER SPRINGS, PA.					
	MAY 5, 70 0000	SEP 28, 70 0000	MAY 3, 71 0000	SEP 27, 71 0000	OCT 3, 72 0000	OCT 2, 73 0000
TOTAL COUNT	28	84	98	29	413	629
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA						
..OLIGOCHAETA						
..UNKNOWN ORDER						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	--	--
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDRACARINA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	--	--
..CHUSTACA						
..AMPHIPODA						
..ISOPODA						1
..ASELLIDAE						
..ASELLUS						
..INSECTA						
..COLEOPTERA						
..ELMIDAE						
..DUBIRAPHIA						
..MACROHYCIDS						
..OPTIOSERVUS					10	10
..OULIMNUS						
..STENELMIS					1	1
..PSEPHENIDAE						
..PSEPHENUS					1	
..UNKNOWN FAMILY						
..UNKNOWN GENUS						
..DIPTERA						
..ATHERICIDAE=RHAGIONIDAE						
..ATHERIX						
..CHIRONOMIDAE	4		15		11	2
..ABLAGESMYIA						
..CONHAPELOPIA						
..CORYNONEURA						
..CHICOTOPUS						
..EUKIPEPERELLA						
..MICHOTENDIPES						
..DINOTROGIDUS						
..SARANECROCEMUS						
..PSECTROCLADUS						
..RHETOTANYTARSUS						
..CHIRONOMANNIELLA						
..EMPIDIDAE					2	
..HEMERODROMIA						
..MUSCIDAE						
..LIMNOPHORA						1
..SIMULIIDAE		1		8	9	5
..SIMULIUM						
..TIPULIDAE			1		5	
..ANTOPHA			5			1
..DICRANOTA						
..HEMATOMA						
..TIPULA						1
..UNKNOWN GENUS						
..EPHEMEROPTERA						
..BAETIDAE						
..BAETIS		9	9		20	
..EPHEMERELLIDAE						
..HEPTAGENIIDAE	9		37	5	15	2
..STENOGRAMMA		14	3	7	15	4
..LEPTOPHELEIIDAE						
..PARALEPTOPHELEIA						
..SIPHONURIDAE						
..ISONYCHIA					7	2
..TETACARIDAE						
..LEPIDOPTERA						2
..MEGALOPTERA						
..CORVALIDAE						
..NIGRONIA						
..SIALIDAE						
..SIALIS						
..ODONATA						
..AESNIDAE						1
..AESNA						
..COENAGRIONIDAE						
..ARCHIA		1				
..GOMPHIDAE						1
..GOMPHUS						
..LANTHUS					1	
..UNKNOWN GENUS						
..PLECOPTERA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS						
..CAPNIDAE						
..ALACAPNIA						
..PERLIDAE						
..ACRONEURIA						1
..PSEPHENIDAE						
..TAENIOPTERYGIDAE						
..TAENIOPTERYX						
..STROPHOPTERYX						
..TRICHOPTERA						
..GLOSSOSOMATIDAE					7	2
..GLOSSOSOMA						
..HELICOPSYCHIDAE						534
..HYDROPSYCHIDAE						
..CHEUMATOPSYCHNE	1	13	16		45	40
..HYDROPSYCHNE	14	55	14	9	239	
..POTAMIA						
..HYDROPTILIDAE						
..LEUCOTRICHIA						3
..OCHROTRICHIA						
..LIMNOSIPHIDAE						
..COERA						
..PHILOPOTAMIDAE						
..CHYMARRA					25	12
..DOLOPHILODES					1	
..BOHMALDIA						
..POLYCENTROPIDIDAE						
..POLYCENTROPUS						
..PSYCHOTRIDAE						
..PSYCHOMYIA		9				
..RHYACOPHILIDAE						
..RHYACOPHILA						
MOLLUSCA (MOLLUSCS)						
..GASTROPODA						
..BASOMMATOPHORA						
..ANCYLIDAE						
..FERRISSIA						
..LYMNAEIDAE						
..LYMNAEA						
PLATHELMINTHES (PLATFOWNS)						
..TURBELLARIA						
..TRICLADIDA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	--	--

	01472174 PICKERING CREEK NEAR CHESTER SPRINGS, PA.					
DATE TIME	OCT 23 74	OCT 21 78	OCT 19 77	OCT 30 78	NOV 1 79	OCT 30 80
TOTAL COUNT	0000	1000	1030	1330	1530	1030
173	531	180	88	83	132	
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA						
..OLIGOCHAETA						
..UNKNOWN ORDER						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	2	--	--	--	--
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDRACARINA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	5	3	--	--	--
..CRUSTACEA						
..AMPHIPODA	--	--	--	--	--	--
..ISOPODA						
..ASELLIDAE	--	4	--	--	--	--
..ASELUS	--	--	--	--	--	--
INSECTA						
..COLEOPTERA						
..ELMIDAE						
..GOLDFINGERIA	--	1	--	--	--	--
..MIMICIDAE	--	1	--	--	--	--
..OPTIDAE	14	61	--	--	8	--
..OLIMNIDAE	--	--	1	--	--	--
..PSEPHIDAE	--	12	23	1	--	--
..PSEPHENIDAE	--	--	--	--	--	--
..PSEPHENUS	2	1	5	--	2	--
..UNKNOWN FAMILY	--	--	--	--	--	--
..UNKNOWN GENUS	--	1	--	--	--	--
..DIPTERA						
..ATHERICIDAE=RHAGIONIDAE						
..ATHERIDAE	--	--	--	--	2	--
..CHIRONOMIDAE	--	--	--	--	--	--
..ABAREMYIA	--	--	1	--	--	--
..CONCHAELOPIA	--	1	--	--	2	--
..CRITOTHEURA	--	5	--	--	--	--
..CRITOTHEURA	--	--	2	--	--	23
..SULZBERGERELLA	--	15	--	--	--	--
..ORTHOTENDRIDES	--	12	4	--	--	17
..ORTHOTENDRIDES	--	--	--	3	2	--
..PARAMETRICOCNEMUS	--	--	--	--	1	--
..PSEPHOCOCNEMUS	--	--	--	--	--	--
..BREDETANYTARSUS	--	16	3	--	1	1
..THIENEMANNIELLA	--	10	--	--	--	--
..EMPIDIDAE						
..HEMEROPTERIDAE	1	1	--	--	--	--
..MUSCIDAE						
..LIMNOPHORA	--	--	--	--	--	--
..SIMULIDAE						
..SIMULIUM	1	--	--	--	1	--
..TIPULIDAE						
..ANTICIA	2	20	1	2	1	37
..DICRANOTA	--	1	--	--	1	--
..HECATOMA	--	--	--	1	--	--
..UNKNOWN GENUS	--	--	--	--	1	--
EPHEMEROPTERA						
..BAETIDAE						
..BAETIDAE	1	--	4	1	--	--
..EPHEMERELLIDAE	5	78	--	--	4	--
..EPHEMERELLA	--	--	--	--	--	--
..HEPTAGENIIDAE						
..STENOGRAMMA	2	36	34	1	11	17
..LEPTOPHLEBIIDAE	--	1	--	--	--	--
..PARALEPTOPHLEBIA	--	--	--	--	--	--
..STIPHONURIDAE	--	--	--	--	--	--
..SONYCHIDAE	--	2	--	--	1	--
..TRICORYTHIDAE	--	1	--	--	--	--
..TRICORYTHIDAE	--	--	--	--	--	--
MEGALOPTERA						
..COLEOPTERA						
..COLEOPTERA	--	1	--	--	--	--
..SIALIDAE	--	--	--	--	1	--
..SIALIDAE	--	--	--	--	--	--
..ODONATA						
..AESCHNIDAE	--	--	--	--	--	--
..AESCHNA	--	--	--	--	--	--
..COENAGRIONIDAE	--	--	--	--	--	--
..GOMPHIDAE	--	--	--	--	--	--
..GOMPHUS	--	--	1	--	--	--
..GOMPHUS	--	--	--	--	--	--
..UNKNOWN GENUS	--	1	--	--	--	--
PLECOPTERA						
..UNKNOWN FAMILY	--	1	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--
..CAPNIDAE						
..ALLOCAPNIA	--	--	--	--	1	--
..PERLIDAE	--	--	--	--	--	--
..ACRONURIA	--	--	1	--	--	1
..ACRONURIA	--	--	--	--	--	--
..TAENIOPTERYGIDAE	--	--	--	--	--	--
..TAENIOPTERYGIDAE	--	11	27	--	3	--
..TAENIOPTERYGIDAE	--	--	--	--	--	--
..GLOSSOPHAGIDAE						
..GLOSSOPHAGIDAE	3	21	2	--	1	--
..HYDROPSYCHIDAE	104	--	--	--	--	--
..HYDROPSYCHIDAE	--	13	16	4	10	--
..HYDROPSYCHIDAE	28	145	61	52	12	27
..HYDROPSYCHIDAE	--	--	15	16	9	--
..HYDROPSYCHIDAE	--	--	--	--	--	--
..HYDROPSYCHIDAE	--	1	--	--	--	--
..HYDROPSYCHIDAE	--	--	--	--	--	--
..HYDROPSYCHIDAE	--	--	--	--	--	--
..HYDROPSYCHIDAE	11	20	--	3	14	--
..HYDROPSYCHIDAE	--	--	--	1	--	--
..HYDROPSYCHIDAE	--	1	--	--	--	--
..HYDROPSYCHIDAE	--	--	--	--	--	--
..HYDROPSYCHIDAE	--	5	--	--	--	--
..HYDROPSYCHIDAE	--	1	--	--	--	--
MOLLUSCA (MOLLUSCS)						
..GASTROPODA						
..GASTROPODA						
..ANCYLIDAE	1	1	3	--	--	7
..FERRISSIA	--	--	--	--	--	2
..LIMNAEIDAE	--	--	--	--	--	--
..LIMNAEIDAE	--	--	--	--	--	--
PLATYHELMINTHES (FLATWORMS)						
..TUBELLARIA						
..TRICLADIDA						
..UNKNOWN FAMILY	--	5	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--

Table 3.--Benthic invertebrate data--Continued

[double dash indicates organism not present in sample]

014721854 PICKERING CREEK AT MERLIN, PA

DATE TIME	MAY 5, 70 0000	SEP 28, 70 0000	MAY 3, 71 0000	SEP 27, 71 0000	OCT 3, 72 0000	OCT 2, 73 0000
TOTAL COUNT	85	79	46	71	119	560
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDRACARINA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	--	--
..CRUSTACEA						
..ISOPODA						
..ASPIDAE						
..LIRCEUS	--	--	--	--	--	--
INSECTA						
..COLEOPTERA						
..ELMIDAE						
..DUBIRAPHIA	--	--	--	--	--	--
..OPTIOSERVUS	--	--	--	--	0	21
..OULIMNIUS	--	--	--	--	2	--
..PROMORESTIA	--	--	--	--	--	--
..STENBLAIS	--	--	--	--	1	27
..PSEPHENIDAE	--	--	--	--	--	--
..PSEPHENUS	--	--	--	--	1	5
..DIPTERA						
..ATHERICIDAE=RHAGIONIDAE						
..ATHERIX	--	--	--	--	--	3
..CHIRONOMIDAE	2	3	--	--	6	2
..BRILLIA	--	--	--	--	--	--
..CONCHOCLOPIA	--	--	--	--	--	--
..CRICOTOPUS	--	--	--	--	--	--
..EUKIEFFERIELLA	--	--	--	--	--	--
..MICROPSPECTRA	--	--	--	--	--	--
..ORHOCCLADUS	--	--	--	--	--	--
..PARASTICTOCNEMUS	--	--	--	--	--	--
..POLYPEDILUM	--	--	--	--	--	--
..RHEOTANYTARSUS	--	--	--	--	--	--
..SMITIA	--	--	--	--	--	--
..TANYTARSUS	--	--	--	--	--	--
..THIENEMANNIELLA	--	--	--	--	--	--
..EMPIDIDAE	--	--	--	--	1	--
..HEMERODROMIA	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--
..SIMULIDAE	--	--	--	--	--	--
..SIMULIUM	1	2	--	--	7	1
..TIPULIDAE	--	--	--	--	--	--
..ANTOCHA	4	--	--	--	1	1
..DICRANOTA	--	--	--	--	--	--
..EPHEMEROPTERA						
..BAETIDAE						
..BAETIS	4	14	--	--	9	2
..PSEUDOCLOFON	--	--	--	--	--	--
..EPHEMERELLIDAE	--	--	--	--	--	--
..EPHEMERELLA	14	--	--	11	5	0
..HEPTAGENIIDAE	--	--	--	--	--	--
..EPEORUS	3	--	--	--	--	--
..SYMPHONEMA	4	2	--	9	8	2
..SYMPHONIIDAE	--	--	--	--	--	--
..ISONYCHIA	--	--	--	--	1	0
..HEMIPTERA						
..GERRIDAE	--	--	--	--	2	--
..LEPIDOPTERA	--	--	--	--	--	1
..MEGALOPTERA						
..CORYDALIDAE	--	--	--	--	--	--
..CORYDALUS	--	2	--	--	1	--
..NIGRONIA	--	--	--	--	--	--
..SIALIDAE	--	--	--	--	--	--
..SIALIS	--	--	--	--	--	--
..PLECOPTERA						
..PERLIDAE	--	--	--	--	--	--
..ACROHEURIA	--	6	2	1	2	9
..PARAGNETINA	--	--	--	--	10	--
..TAENIOPTERYGIDAE	--	--	--	--	--	--
..TAENIOPTERYX	--	--	--	--	--	--
TRICHOPTERA						
..BRACHYCENTRIDAE	1	--	--	--	--	--
..MICRASEMA	--	--	--	--	1	--
..GLOSSOSOMATIDAE	--	--	10	--	--	4
..GLOSSOSOMA	--	--	--	--	--	--
..HYDROPSYCHIDAE	--	--	--	--	--	--
..CHEIMATOPSYCHE	10	14	14	14	15	104
..HYDROPSYCHE	42	21	20	21	34	355
..MACRONEMA	--	--	--	--	1	--
..MACRONEMATOPSYCHE	--	--	--	--	--	--
..HYDROPTILIDAE	--	--	--	--	--	--
..HYDROPTILA	--	--	--	--	--	--
..LEUCOTRICHIA	--	--	--	--	--	1
..CHROTRICHIA	--	--	--	--	--	--
..LEPTOCERIDAE	--	--	--	--	1	--
..OECETIS	--	--	--	--	--	--
..LINNAPHILIDAE	--	--	--	--	--	--
..APTANIA	--	--	--	--	--	--
..GOERA	--	--	--	--	--	--
..MOLANNIDAE	--	--	--	--	--	--
..MOLANNA	--	4	--	4	--	14
..PHILOPOTAMIDAE	--	--	--	--	6	3
..CHIMARRA	--	--	--	--	--	--
..POLYCENTROPIDAE	--	--	--	--	--	--
..NYCTIOPHYLAX	--	--	--	--	1	--
..POLYCENTROPUS	--	--	--	--	--	--
..PSYCHOMYIDAE	--	11	--	11	2	--
..PSYCHOMYIA	--	--	--	--	--	--
MOLLUSCA (MOLLUSCS)						
..GASTROPODA						
..BASOMMATOPHORA						
..ANCYLIDAE	--	--	--	--	--	--
..FERRISSIA	--	--	--	--	--	--
..PHYSIDAE	--	--	--	--	--	--
..PHYSA	--	--	--	--	--	--
PLATYHELMINTHES (FLATWORMS)						
..TURBELLARIA						
..TRICLADIDAE	--	--	--	--	--	--
..PLANARIIDAE	--	--	--	--	--	--
..UNKNOWN FAMILY	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--

014721854 PICKERING CREEK AT MERLIN, PA						
DATE	OCT 23 74	OCT 22 78	OCT 19 77	OCT 30 78	NOV 5 79	OCT 30 80
TIME	0000	0815	1130	1500	1500	0900
TOTAL COUNT	128	1660	547	82	47	1334
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDRACARINA						
...UNKNOWN FAMILY						
...UNKNOWN GENUS	--	5	3	--	--	7
..CRUSTACEA						
..ISOPODA						
...ASELLIDAE						
...LIRCEUS	--	--	--	1	--	--
...LIRCEUS	--	--	--	1	--	--
..INSECTA						
..COLEOPTERA						
...ELMIDAE						
...DUBIRAPHIA	--	1	--	--	--	--
...OPTIOSERVUS	3	28	23	--	2	1
...DUCIMNIUS	--	3	--	--	1	--
...PROMORESTIA	--	--	--	--	--	2
...STENELMIS	2	3	5	--	--	--
...PSEPHENIDAE						
...PSEPHENUS	1	1	--	--	--	--
..DIPTERA						
...ATHERICIDAE=RHAGIONIDAE						
...ATHERIX	2	5	--	--	--	--
...CHIRONOMIDAE	17	--	--	--	--	--
...BRILLIA	--	--	--	--	--	1
...CONCHAPELOPIA	--	10	--	--	--	--
...CRICOTOPUS	--	5	15	--	1	8
...EUKIETEPRIELLA	--	2	4	--	--	--
...MICROPSYCHRA	--	--	1	--	--	--
...ORTHOCLEIDIUS	--	--	3	--	12	37
...PARAMETRIOCNEMUS	--	--	--	--	--	1
...POLYPEDILLUM	--	8	--	--	1	--
...RHICTANTYTARSUS	--	8	1	--	--	28
...SMITTTIA	--	2	--	--	--	--
...TANYTARSUS	--	--	--	--	2	--
...THIENEMANNIELLA	--	2	--	--	--	--
...HEMELIDAE	--	--	--	--	--	--
...HEMEROBROMIA	2	1	--	--	--	--
...UNKNOWN GENUS	--	--	--	--	--	1
...SIMULIIDAE						
...SIMULIUM	--	--	4	--	--	5
...TIPULIDAE						
...ANTOCHA	7	19	11	8	3	27
...DICRANOTA	--	--	--	--	1	--
..EPHEMEROPTERA						
...BAETIDAE						
...BAETIS	--	--	--	--	--	--
...PSEUDOCLOEON	--	--	1	--	--	1
...EPHEMERELLIDAE						
...EPHEMERELLA	--	20	2	--	3	15
...HEPTAGENIIDAE						
...EPEORUS	--	--	--	--	--	--
...STENONEMA	--	4	5	--	2	28
..SIPHONURIDAE						
...ISONYCHIA	--	2	11	4	--	30
..HEMITERA						
...GERRIDAE	--	--	--	--	--	--
..LEPIDOPTERA						
...MEGALOPTERA						
...CORIDALIDAE						
...CORYDALUS	--	3	--	--	--	1
...NIGRONIA	--	1	--	--	--	1
...SIALIDAE	--	--	--	--	--	1
..PLECOPTERA						
...PERLIDAE						
...ACRONEURIA	--	4	--	--	2	--
...PARACRONEURIA	4	3	1	--	--	1
..TAeniopterygidae						
...TAENIOPTERYX	--	3	20	--	8	28
..TRICHOPTERA						
...BRACHYCENTRIDAE						
...BRACHYCENTRUS	--	40	--	--	--	70
...MICRASEMA						
...GLOSSOSOMATIDAE						
...GLOSSOSOMA	--	6	4	--	--	6
..HYDROPSYCHIDAE						
...CHEMATOPSYCHE	22	732	273	--	--	140
...HYDROPSYCHE	58	612	143	38	--	12
...MACRONEMA	2	18	--	--	--	--
...SYMPHITOPSYCHE	--	--	--	8	4	848
..HYDROPTILA						
...LEUCOTRICHIA	--	--	2	--	--	3
...OCHROTRICHIA	--	--	--	--	1	6
...LEPTOCERIDAE						
...OBSETTIS	--	--	--	--	--	--
...LIMNEPHILIDAE						
...APATANIA	--	--	3	--	--	--
...GOERA	--	1	1	--	--	1
..MOLANNIDAE						
...MOLANNA	--	--	--	--	--	--
..PHILOPOTAMIDAE						
...CHIMARRA	3	113	6	1	--	9
..POLYCENTROPIDAE						
...NYCTIOPHILAX	--	--	--	--	--	--
...POLYCENTROPUS	--	--	--	--	--	--
..PSYCHOMYIIDAE						
...PSYCHOMYIA	--	--	2	--	2	5
MOLLUSCA (MOLLUSCS)						
..GASTROPODA						
...BASOMMATOPHORA						
...ANCLIDAE						
...FERRISSIA	2	--	3	4	2	7
...PHYSIDAE						
...PHYSA	--	--	--	--	--	2
PLATYHELMINTHES (PLATWORMS)						
..TURBELLARIA						
...TRICLADIDA						
...PLANARIIDAE	2	--	--	--	--	--
...UNKNOWN FAMILY						
...UNKNOWN GENUS	--	1	--	--	--	--

Table 3.-Benthic-invertebrate data
[double dash indicates organism not present in sample]

	014721884	PICKERING CR AT CHARLESTOWN RD BR. AT CHARLESTOWN, PA		
DATE	OCT 3 72	OCT 1 73	OCT 23 74	OCT 22 78
TIME	0000	0000	0000	0945
TOTAL COUNT	483	103	415	740
ORGANISM	COUNT	COUNT	COUNT	COUNT
ARTHROPODA (ARTHROPODS)				
..ARACHNIDA				
..HYDARACARINA				
..UNKNOWN FAMILY				
..UNKNOWN GENUS	--	--	--	3
..INSECTA				
..COLEOPTERA				
..ELMIDAE				
..DUBIRAPHIA	--	--	--	2
..OPTIOSERVUS	--	--	2	4
..OULINIUS	--	--	--	1
..STENELMYS	1	1	--	1
..PSEPHENIDAE				
..PSEPHENUS	--	--	--	--
..DIPTERA				
..CHIRONOMIDAE	55	1	35	--
..CARDIOCLADIUS	--	--	--	--
..CRICOTOPUS	--	--	--	10
..EUKIPEPSELLA	--	--	--	21
..MICROTENDIPES	--	--	--	--
..ORTHOCCLADIUS	--	--	--	9
..RHEOTANTYARSUS	--	--	--	2
..THESEMANNIELLA	--	--	--	2
..EMBIIDAE				
..HEMERODROMIA	--	--	--	2
..SIMULIIDAE				
..SIMULIUM	2	4	2	32
..TIPULIDAE				
..ANTOCHA	1	1	6	13
..EPHEMEROPTERA				
..BAETIDAE				
..BAETIS	23	2	--	--
..PSEUDOCLOEON	--	--	--	--
..EPHEMERELLIDAE				
..EPHEMERELLA	6	--	11	10
..EPHEMERELLIDAE				
..STENONEMA	9	1	1	6
..SIPHONURIDAE				
..ISONYCHIA	20	1	3	3
..MEGALOPTERA				
..CORYDALIDAE				
..CORYDALUS	2	--	1	3
..C. CORNUTUS	--	--	--	--
..NIGRONIA	--	--	--	1
..ODONATA				
..COENAGRIONIDAE				
..UNKNOWN GENUS	--	--	--	--
..PLECOPTERA				
..PERIDAE				
..ACRONEURIA	4	--	--	--
..PARAGNETINA	2	--	--	--
..TAENIOPTERYGIDAE				
..TAENIOPTERYX	--	--	--	2
..TRICHOPTERA				
..BRACHYCENTRIDAE				
..HYGRASMA	--	--	--	1
..GLOSSOSOMATIDAE				
..GLOSSOSOMA	3	--	1	--
..HYDROPSYCHIDAE				
..CURIMATORPSYCHE	101	10	63	206
..HYDROPSYCHE	248	82	204	339
..SYMPHITOPSYCHE	--	--	--	--
..HYDROPTILIDAE				
..HYDROPTILA	--	--	--	--
..LEUCOTRICHIA	3	--	1	1
..OCHROTRICHIA	--	--	--	2
..LEPTOCERIDAE				
..NECTOPSYCHE	--	--	--	--
..LIMNETHILIDAE				
..APATANIA	--	--	--	--
..PHILOPOTAMIDAE				
..CHIMARRA	3	--	24	8
..POLYCENTROPODIDAE				
..CYRNELLUS	--	--	--	--
..POLYCENTROPUS	--	--	--	--
..PSYCHOMYIIDAE				
..PSYCHOMYIA	--	--	2	1
MOLLUSCA (MOLLUSCS)				
..BIVALVIA				
..AUCULAOIDEA				
..SPHAERIIDAE				
..SPHAERIUM	--	--	--	2
..GASTROPODA				
..BASOMMATOPHORA				
..ANCYLIDAE				
..PERRISSIA	--	--	1	1
..LYMNAEIDAE	--	--	1	2
..MESOGASTROPODA				
..VIVIPARIDAE				
..AMNICOLA	--	--	--	--
PLATHELMINTHES (FLATWORMS)				
..TURBELLARIA				
..TRICLADIDA				
..PLANARIIDAE	--	--	57	--
..UNKNOWN GENUS	--	--	--	--
..UNKNOWN FAMILY	--	--	--	--
..UNKNOWN GENUS	--	--	--	51

014721884 PICKERING CR AT CHARLESTOWN RD BR. AT CHARLESTOWN, PA				
DATE TIME	OCT 19, 77 1200	OCT 30, 78 1530	OCT 29, 79 1400	OCT 29, 80 1440
TOTAL COUNT	882	251	232	2864
ORGANISM	COUNT	COUNT	COUNT	COUNT
ARTHROPODA (ARTHROPODS)				
..ARACHNIDA				
..HYDRACCA				
..UNKNOWN FAMILY				
..UNKNOWN GENUS	--	1	--	--
..INSECTA				
..COLEOPTERA				
..ELMIDAE				
..DUBIRAPHIA	1	--	--	--
..OPTIOCHIVUS	--	--	--	--
..OULIMYIUS	--	--	--	--
..STENELMIS	4	--	--	16
..PSEPHENIDAE				
..PSEPHENUS	1	--	--	--
..DIPTELA				
..CHIRONOMIDAE	--	--	--	--
..CARDIOCLADIUS	--	1	--	--
..CRICOTOPUS	34	--	--	80
..EUKLEPPERTELLA	--	4	1	96
..MICROTENDIPES	--	7	--	48
..ORTHOCLADIUS	--	2	120	384
..RHODANTARSUS	19	--	--	--
..THEMANNIELLA	--	--	--	--
..EMPIDIDAE	--	--	--	--
..HEMERODROMIA	--	--	--	16
..SIMULIIDAE	2	--	3	16
..TIPULIDAE	20	4	13	160
..ANTOCHA				
..EPHEMEROPTERA				
..BAETIDAE				
..GAETIS	1	--	--	16
..PSEUDOCLOEON	--	--	1	--
..EPHEMERELLIDAE				
..EPHEMERELLA	12	2	2	96
..HEPTAGENIIDAE				
..STENONEMA	13	4	7	64
..SIPHONURIDAE				
..ISOPHILIA	45	8	2	240
..MEGALOPTERA				
..CORYDALIDAE				
..CORYDALUS	--	--	--	16
..C. CORNUTUS	2	--	--	--
..NYCHONIA	--	--	--	--
..ODONATA				
..COENAGRIONIDAE				
..UNKNOWN GENUS	1	--	--	--
..PLECOPTERA				
..PERLIDAE				
..ACHONEURIA	--	--	1	--
..PARANETIA	1	--	2	16
..TAENIOPTERYGIDAE				
..TAENIOPTERYX	5	--	1	80
..TRICHOPTERA				
..BRACHYCENTRIDAE				
..MICRISMA	--	--	--	64
..GLOSSOSOMATIDAE				
..GLOSSOSOMA	--	3	1	16
..HYDROPSYCHIDAE				
..CHEIMATORPSYCHE	379	20	5	256
..HYDROPSYCHE	271	69	13	960
..SYMPHITOPSYCHE	--	116	50	--
..HYDROPTILIDAE				
..HYDROPTILA	3	--	1	48
..LEUCOTRICHIA	--	--	--	80
..OCHROTRICHIA	--	--	--	--
..LEPTOCERIDAE				
..NECTOPSYCHE	--	--	--	16
..LINNEPHILIDAE				
..APATANIA	14	--	--	--
..PHILOPOTAMIDAE				
..CHIMARRA				
..POLYCENTROPIDAE	--	7	4	32
..CYRNELLUS	--	--	--	16
..POLYCENTROPUS	--	1	--	32
..PSYCHOMYIIDAE				
..PSYCHOMYIA	25	--	--	--
MOLLUSCA (MOLLUSCS)				
..BIVALVIA				
..NUCULOIDEA				
..SPHAERIIDAE				
..SPHAERIUM	--	--	--	--
..GASTROPODA				
..BASOMMATOPHORA				
..ANCYLIDAE				
..FERRISSIA	5	--	2	--
..LYNAEIDAE	1	--	--	--
..LYNAEA				
..MESOGASTROPODA				
..VIVIPARIDAE				
..AMNICOLA	--	--	1	--
PLATYHELMINTHES (PLATWORMS)				
..TURBELLARIA				
..TRICELADIDAE				
..PLANARIIDAE	--	--	--	--
..UNKNOWN GENUS	--	--	2	--
..UNKNOWN FAMILY	--	--	--	--
..UNKNOWN GENUS	--	--	--	--

Table 3.--Benthic-invertebrate data--Continued
 (Blank cells indicate organisms not present in sample)

01472190 PICKERING CREEK NEAR PHOENIXVILLE, PA.

DATE TIME	MAY 5 70 0000	SEP 28 70 0000	MAY 3 71 0000	SEP 27 71 0000	OCT 3 72 0000	OCT 1 73 0000
TOTAL COUNT	38	127	63	7	241	168
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA						
...OLIGOCHEETA						
...PLESIOPORA						
...TUBIFICIDAE						
...UNKNOWN GENUS	--	--	--	--	--	--
ARTHROPODA (ARTHROPODS)						
...ARACHNIDA						
...HYDRACARINA						
...UNKNOWN FAMILY						
...UNKNOWN GENUS	--	--	--	--	--	--
CRUSTACEA						
...DECAPODA						
...ASTACIDAE						
...UNKNOWN GENUS	--	--	--	--	--	--
INSECTA						
...COLEOPTERA						
...LIMULIDAE						
...DIPLOPHIDIA						
...OPTIOSERVUS					1	--
...CICINIVUS						--
...STENELMIS						--
...PSEPHENIDAE						1
...PSEPHENUS						--
...DIPTERA						
...ABLABESMYIA	5	3	39	--	38	4
...CARDIOCLADIUS	--	--	--	--	--	--
...CONICLOPIA	--	--	--	--	--	--
...CRICODIPUS	--	--	--	--	--	--
...EUKIOPPERIELLA	--	--	--	--	--	--
...INNOCHIRONOMUS	--	--	--	--	--	--
...METRIONOMUS	--	--	--	--	--	--
...METRIONOMUS	--	--	--	--	--	--
...METRIONOMUS	--	--	--	--	--	--
...POLYDIPLODUS	--	--	--	--	--	--
...PSEPHENIDAE	--	--	--	--	--	--
...SYNTHOCLADIUS	--	--	--	--	--	--
...PHIENEMANNIELLA	--	--	--	--	2	--
...EMPIDIDAE	--	--	--	--	--	--
...EMERODROMIA	--	--	--	--	--	--
...SIMULIDAE	--	--	--	--	--	4
...TIPULIDAE	2	1	--	--	2	1
EPHEMEROPTERA						
...BAETIDAE	1	13	--	--	22	3
...PSEUDOCLOPON	--	--	--	--	1	--
...EPHEMERELLIDAE	--	1	3	--	1	--
...HEPTAGENIIDAE	--	--	--	--	--	--
...EPHEMERUS	4	10	--	3	25	9
...STENONEMA	--	--	--	--	3	1
...STENONURIDAE	--	--	--	--	--	--
...LEPIDOPTERA	--	--	--	--	--	--
...HYALINIDAE	--	--	--	--	--	--
...PARACACTIS	--	--	--	--	--	--
...ODONATA	--	--	--	--	--	--
...CONIAGRIONIDAE	--	--	--	--	--	--
...AMPIAGRION	--	1	--	--	--	--
...ARGIA	--	--	--	--	--	--
...ISCHNURA	--	--	--	--	--	--
...CAPNIDAE	--	--	--	--	--	--
...ALLOCAPNIA	--	--	--	--	--	--
...ACRONEURIA	--	4	--	--	8	--
...TAENIOPTERYGIDAE	--	--	--	--	--	--
...TRICHOPTERA	--	--	--	--	--	--
...BRACHYCENTRIDAE	--	--	--	--	--	--
...GLOSSOSOMATIDAE	--	--	--	--	7	--
...HYDROPSYCHIDAE	6	17	7	--	61	38
...CHEIMATOPSYCHE	14	37	11	4	54	80
...HYDROPSYCHE	--	--	--	--	--	--
...HYDROPSYCHE	--	--	--	--	--	--
...HYDROPSYCHE	--	--	--	--	--	--
...LEPIDOSTOMATIDAE	--	--	--	--	15	2
...LEPIDOSTOMA	--	--	--	--	--	--
...LEPTOCERIDAE	--	--	--	--	--	--
...NECTOPSYCHE	--	--	--	--	--	--
...LIMNOSIPHILIDAE	--	--	--	--	--	--
...MOLLUSCA (MOLLUSCS)						
...MOLLUSCA	--	40	--	--	--	--
...PHILOPOTAMIDAE	--	--	--	--	--	--
...CHIMARRA	1	--	3	--	1	3
...POLYCENTROPIDAE	--	--	--	--	--	--
...CYRILLIS	--	--	--	--	--	--
...NEURECLIPSIS	--	--	--	--	--	--
...MYCTIOPHYLLAE	--	--	--	--	--	--
...POLYCENTROPUS	--	--	--	--	--	--
...PSYCHOMYIA	--	--	--	--	1	--
...RHYACOPHYLLIDAE	--	--	--	--	--	--
...RHYACOPHYLLA	--	--	--	--	--	--
...UNKNOWN FAMILY	--	--	--	--	--	--
...UNKNOWN GENUS	--	--	--	--	--	--
MOLLUSCA (MOLLUSCS)						
...MOLLUSCA	--	--	--	--	--	--
...SPHAKRIDAE	--	--	--	--	--	--
...SPHAKRIDUM	--	--	--	--	--	--
GASTROPODA						
...GASTROPODA	--	--	--	--	--	--
...PHYSIDAE	--	--	--	--	--	--
...PLANORBIDAE	--	--	--	--	--	--
...CYRILLIS	--	--	--	--	--	--
...MESOGASTROPODA	--	--	--	--	--	--
...HYDROBIIDAE	--	--	--	--	--	--
...VIVIPARIDAE	--	--	--	--	--	--
...CAMPELONA	--	--	--	--	--	--
NEMATODA (NEMATODES)						
...NEMATODA	--	--	--	--	--	--
...UNKNOWN ORDER	--	--	--	--	--	--
...UNKNOWN FAMILY	--	--	--	--	--	--
...UNKNOWN GENUS	--	--	--	--	--	--
PLATYHELMINTHES (PLATWORMS)						
...PLATYHELMINTHES	--	--	--	--	--	--
...TRICLADIDAE	--	--	--	--	--	--
...UNKNOWN GENUS	--	--	--	--	--	--
...UNKNOWN FAMILY	--	--	--	--	--	--
...UNKNOWN GENUS	--	--	--	--	--	--

01472180 PICKERING CREEK NEAR PHOENIXVILLE, PA.						
DATE TIME	NOV 3 75 1400	OCT 22 76 1030	OCT 19 77 1415	OCT 30 78 1800	OCT 28 79 1515	OCT 30 80 1445
TOTAL COUNT	375	908	310	237	85	520
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA						
...OLIGOCHAETA						
...PLISIOPODA						
...TUBIFICIDAE						
...UNKNOWN GENUS	--	3	--	--	--	--
ARTHROPODA (ARTHROPODS)						
...ARACHNIDA						
...HYDRACARINA						
...UNKNOWN FAMILY						
...UNKNOWN GENUS	--	4	1	3	--	--
...CAUSALCIA						
...DECAPODA						
...ASTACIDAE						
...UNKNOWN GENUS	--	1	--	--	--	--
INSECTA						
...COLEOPTERA						
...ELMIDAE						
...DIDIRAPHIA	--	3	--	--	--	--
...CITISERVUS	--	4	--	--	--	4
...GULLMNIUS	--	5	--	1	--	--
...STENELIUS	--	5	--	1	--	--
...PSEPHENIDAE						
...PSEPHENUS	1	1	1	--	--	4
...DIPTERA						
...CHIRONOMIDAE	--	--	--	--	--	--
...CHIRONOMUS	--	--	--	--	--	--
...ANDICOLA	--	--	--	--	--	--
...CONCHAPELOPIA	10	37	--	--	--	8
...CRICOTOPUS	5	--	--	--	--	4
...EUKIEFFERIELLA	10	37	5	12	--	8
...LIMNOCHIRONOMUS	5	--	--	--	--	4
...METRICOMUS	--	--	--	--	--	--
...MICROTENDIPES	--	--	10	1	--	20
...GUTHRIELADUS	--	--	1	--	37	8
...POLYDIPLO	--	--	--	--	--	--
...RHEUTANYTARSUS	18	15	5	20	--	8
...SYNORTHOCLODIUS	1	5	--	--	--	8
...THIENEMANNIELLA	1	5	--	1	1	--
...EMELIDAE	--	1	--	4	--	--
...HEMERODROMIA	--	1	--	4	--	--
...SIMULIIDAE	1	7	--	1	1	--
...SIMULIUM	1	7	--	1	1	--
...ANTOCHA	41	40	13	8	4	40
...EPHEMEROPTERA						
...BARTIS	--	1	--	--	--	--
...PSEUDOCLOSON	2	--	--	--	--	--
...EPHEMERELLIDAE						
...EPHEMERELLA	32	27	9	6	--	40
...HEPTAGENIIDAE						
...EPEORUS	24	38	15	7	5	60
...STENONEMA	--	--	--	--	--	--
...SIPHONURIDAE	--	12	20	17	1	12
...LEPIDOPTERA						
...PYRALIIDAE	--	--	4	--	--	4
...PARARGYACTIS	--	--	--	--	--	--
...ODONATA						
...COENAGRIONIDAE	--	1	--	--	--	--
...AMPHIAGRION	--	--	--	--	--	--
...ANGIA	--	--	--	--	--	--
...LECHINURA	--	--	1	--	--	--
...PLECOPTERA						
...CAPNIDAE	--	--	--	--	1	--
...ALLOCAPNIA	--	--	--	--	--	--
...TACHOEURIA	1	1	1	--	--	--
...TAENIOPTERYGIDAE	--	6	12	1	--	--
...TRICHOPTERA						
...BRACHYCENTRIDAE	3	10	--	4	--	8
...GLOSSOSOMATIDAE	8	9	1	5	--	--
...GLOSSOSOMA	8	9	1	5	--	--
...HYDROPSYCHIDAE						
...CHEUMASOPSYCHE	103	188	178	39	5	12
...MACRONEMA	91	168	115	17	--	104
...SYMPLETOPSYCHNE	--	--	--	2	24	--
...HYDROPTILIDAE	--	--	--	74	--	--
...HYDROPTILUS	--	--	--	--	--	--
...HYDROPTILUS	--	--	--	1	--	32
...LEPIDOSTOMATIDAE	17	8	--	1	--	18
...LEPTACENTORAE	2	--	--	--	--	--
...LEPTACENTORAE	--	--	--	--	--	--
...NECTOPSYCHRE	--	--	--	--	--	4
...LINPHILIDAE						
...GOZEA	2	--	--	--	--	--
...UNKNOWN GENUS	--	--	1	--	--	--
...MOLANIDAE	--	--	--	--	--	--
...MOLANNA	--	--	--	--	--	--
...PHILOPOTAMIDAE						
...LIMNARIA	3	1	1	5	--	4
...DOLOPHILODES	--	--	--	--	1	--
...POLYCENTROPIDAE						
...CYRNELLUS	--	--	--	--	--	48
...NEUBECKIUS	--	--	--	--	--	32
...NYCTIOPHYLLAE	--	--	2	2	--	32
...PHYLOCENTROPUS	--	--	2	--	--	12
...POLYCENTROPUS	--	--	--	--	--	--
...PSYCHOMYIIDAE	2	1	--	--	--	--
...PSYCHOMYIA	--	--	--	--	--	--
...RHYACOPHILIDAE	--	--	1	--	--	--
...RHYACOPHILUS	--	--	--	--	--	--
...UNKNOWN GENUS	--	--	1	--	--	--
MOLLUSCA (MOLLUSCS)						
...BIVALVIA						
...MUSCULIDAE						
...SPHAEIIDAE						
...SPHAEIUM	--	1	--	--	--	--
...BASOMMATOPHORA						
...ANCYLIDAE						
...FERRIARIA	--	2	29	--	1	18
...PUSIDAE	--	--	--	1	--	--
...PLANORBIDAE	--	--	--	--	--	--
...MESANURIDAE	--	--	1	--	--	--
...HYDROBIIDAE	--	--	--	--	--	--
...AMNICOLA	--	1	--	--	--	--
...VIVIPARIDAE	--	--	--	--	--	--
...CAMPELONA	--	--	1	--	--	--
NEMATODA (NEMATODES)						
...UNKNOWN CLASS						
...UNKNOWN ORDER						
...UNKNOWN FAMILY						
...UNKNOWN GENUS	--	--	--	--	2	--
PLATYHELMINTHES (FLATWORMS)						
...TUBELLARIA						
...TUBELLARIA						
...PLANARIIDAE	--	--	--	--	--	4
...UNKNOWN GENUS	--	--	--	--	--	--
...UNKNOWN FAMILY	--	--	--	--	--	--
...UNKNOWN GENUS	--	8	--	--	--	--

Table 3.--Benthic-invertebrate data--Continued
[double dash indicates organism not present in sample]

01473167 LITTLE VALLEY CREEK AT HOWELLVILLE, PA.

DATE TIME	OCT 12 73 0000	NOV 11 75 0900	OCT 29 76 0900	OCT 31 77 0000
TOTAL COUNT	29	988	449	279
ORGANISM	COUNT	COUNT	COUNT	COUNT
ANNELIDA				
..OLIGOCHAETA				
..PLESIOPORA				
...NAIDIDAE	--	--	100	--
...UNKNOWN GENUS				
...TUBIFICIDAE	--	--	--	--
...UNKNOWN GENUS				
..UNKNOWN ORDER				
..UNKNOWN FAMILY				
..UNKNOWN GENUS	--	--	--	2
ARTHROPODA (ARTHROPODS)				
..ARACHNIDA				
...HYDRACARINA				
...UNKNOWN FAMILY				
...UNKNOWN GENUS	--	--	1	--
..CRUSTACEA				
...AMPHIPODA				
...GAMMARIDAE	1	20	--	4
...GAMMARUS				
...ISOPODA				
...ASELLIDAE	--	2	--	8
...ASELLUS	--	--	--	--
...LIRCEUS				
..INSECTA				
..COLEOPTERA				
...ELMIDAE	--	--	1	1
...OPTIOSERVUS	--	--	--	--
...STENELMIS				
..DIPTERA				
...CHIRONOMIDAE	--			--
...CARDIOCLADIUS	--	84	11	--
...CONCHAPELOPIA			5	2
...CRICOTOPIUS		20	55	41
...EUKIETTESIELLA		--	5	2
...LIMNOCHIRONOMUS	--	--	--	--
...NANOCLADIUS	--	--	--	--
...ORTHOCLADIUS	--	72	--	--
...PARATANTYARSUS	--	--	--	--
...BRECTANTYARSUS	--	--	--	--
...TANTYARSUS	--	--	--	--
...THIENEMANNIELLA	--	--	--	--
...UNKN DIAMESINAE	--	--	--	--
..EMPIDIDAE	--	--	--	--
...UNKNOWN GENUS	--	--	--	--
..SIMULIIDAE	--			
...SIMULIUM	--	9	3	2
..TIPULIDAE	--			
...ANTOCHA	--	163	8	4
...TIPULA	--	--	1	--
..EPHEMEROPTERA				
...BAETIDAE	--	3	38	3
...BAETIS	--	2	--	--
...PSEUDOCLOEON	--			
..EPHEMERELLIDAE	--	227	12	28
...EPHEMERELLA				
..HEMIPTERA				
...CORIXIDAE	--	--	--	--
...UNKNOWN GENUS	--	--	--	--
...VELIIDAE	--	--	--	--
...RHAGOVIELLA	--	--	--	--
..PLECOPTERA				
...TAENIOPTERYGIDAE	--	1	--	2
...TAENIOPTERYX				
..TRICHOPTERA				
...GLOSSOSOMATIDAE	--	21	36	1
...GLOSSOSOMA				
...HYDROPSYCHIDAE	--	108	31	47
...CHEUNATOPSYSCHE	--	256	138	154
...HYDROPSYSCHE	26			
...SYMPHITOPSYSCHE				
..HYDROPTILA	--	--	--	--
...HYDROPTILA	--	--	--	--
..PHILOPOTAMIDAE	--	--	--	--
...CHIMARRA	--	--	--	--
MOLLUSCA (MOLLUSCS)				
..GASTROPODA				
...BASOMMATOPHORA				
...PHYSIDAE	--	--	--	--
...PHYSA				
PLATYHELMINTHES (PLATWORMS)				
..TREBELLARIA				
...TRICLADIDA	--	--	--	--
...PLANARIIDAE				
...UNKNOWN FAMILY	--	--	--	--
...UNKNOWN GENUS	--	--	--	--

01473167 LITTLE VALLEY CREEK AT HOWELLVILLE, PA.

DATE TIME OCT 27 78 NOV 5 79 OCT 31 80
1300 1000 0910

TOTAL COUNT 408 222 1983

ORGANISM COUNT COUNT COUNT

ANNELIDA
..OLIGOCHAETA
..PLESIPODA
..NATIDAE
...UNKNOWN GENUS -- -- --
...TUBIFICIDAE
...UNKNOWN GENUS -- -- 12
..UNKNOWN ORDER
...UNKNOWN FAMILY
...UNKNOWN GENUS 1 -- --

ARTHROPODA (ARTHROPODS)

..ARACHNIDA
..HYDRACARINA
...UNKNOWN FAMILY
...UNKNOWN GENUS -- -- --
..CRUSTACEA
..AMPHIPODA
...GAMMARIDAE
...GAMMARUS 2 23 68
...ISOPODA
...ASELLIDAE
...ASELLUS -- -- --
...LIRCEUS -- 1 --
..INSECTA
..COLEOPTERA
...ELMIDAE
...OPTIOSERVUS -- 1 --
...STENELMIS -- 1 --
..DIPTERA
...CHIRONOMIDAE
...CARDIACLADIUS -- -- --
...CONCHAPELOPIA -- -- 8
...CRICOTOPIUS 39 36 --
...EUKETTERIELLA 22 1 41
...LIMNOCHIRONOMUS -- -- 2
...NANOCLADIUS -- -- 2
...ORTHOCCLADIUS 39 -- 64
...PARATANYTARSUS -- -- 7
...BREDETANYTARSUS -- -- 1
...TANYTARSUS -- -- 1
...THIENEMANNIELLA -- -- 1
...UNKN DIAMESINAE -- -- 1
..EMPIDIDAE
...UNKNOWN GENUS -- -- 4
..SIMULIIDAE
...SIMULIUM -- -- --
..TIPULIDAE
...ANTOCHA 13 5 26
...ATPULA -- -- --
..EPHEMEROPTERA
...BAETIDAE
...BAETIS 10 9 --
...PSEUDOCLOEON -- -- --
...EPHEMERELLIDAE
...EPHEMERELLA -- 6 875
..HEMIPTERA
...CORIXIDAE
...UNKNOWN GENUS -- -- 1
...VELIIDAE
...RHAGOVIELIA -- -- 1
..PLECOPTERA
...TAENIOPTERYGIDAE
...TAENIOPTERYX -- 1 --
..TRICHOPTERA
...GLOSSOSOMATIDAE
...GLOSSOSOMA 2 2 10
...HYDROPSYCHIDAE
...CHEUMATOPSYCHE 38 6 76
...HYDROPSYCHE 53 20 242
...SYMPHITOPSYCHE 181 109 724
...HYDROPTILIDAE
...HYDROPTILA -- -- 1
...PHILOPOTAMIDAE
...CHIMARRA 1 -- --

MOLLUSCA (MOLLUSCS)

..GASTROPODA
..BASOMMATOPHORA
...PHYSIDAE
...PHYSA -- -- 1

PLATYHELMINTHES (FLATWORMS)

..TURBELLARIA
..TRICLADIDA
...PLANARIIDAE -- 1 --
...UNKNOWN FAMILY -- -- --
...UNKNOWN GENUS -- -- 9

Table 3.--Benthic-invertebrate data--Continued
 [double dash indicates organism not present in sample]

01473168 VALLEY CREEK NR VALLEY FORGE, PA.

DATE TIME	OCT 12 73 0000	OCT 23 74 0000	NOV 11 75 1030	OCT 29 76 0845
TOTAL COUNT	25	153	534	848
ORGANISM	COUNT	COUNT	COUNT	COUNT
ANNELIDA				
..HIRUDINEA				
..UNKNOWN ORDER				
..UNKNOWN FAMILY				
..UNKNOWN GENUS	--	--	--	--
ARTHROPODA (ARTHROPODS)				
..CRUSTACEA				
..AMPHIPODA				
...GAMMARIDAE				
...GAMMARUS	--	3	11	23
..ISOPODA				
...ASPELIDAE				
...ASPELUS	1	3	3	--
...LIRCEUS	--	--	--	7
..INSECTA				
..COLEOPTERA				
...ELMIDAE				
...OPTIOSERVUS	--	--	--	3
...STENELMIS				
..DIPTERA				
...CHIRONOMIDAE	--	1	--	--
...ABLABESMYIA	--	--	4	--
...BRILLIA	--	--	2	28
...CARDIOCLADIUS	--	--	--	--
...CONCHAELOPIA	--	--	10	10
...CRICOPUS	--	--	--	3
...EUKIEFFERIELLA	--	--	--	--
...MICROTENDIPES	--	--	--	4
...ORTHOCCLADIUS	--	--	--	--
...POLYPELUM	--	--	--	--
...PSECTROCLADIUS	--	--	6	--
...RHEOTANYTARSUS	--	--	--	--
...SIMULIIDAE	--	--	3	--
...SIMULIUM				
...TIPULIDAE	--	3	98	12
..EPHEMEROPTERA				
...BAETIDAE				
...BAETIS	--	--	--	3
...PSEUDOCLOFON	--	--	--	--
...EPHEMERELLIDAE	--	--	6	4
...EPHEMERELLA	--	--	--	--
...HEPTAGENIIDAE	--	--	--	1
...STENONEMA	--	--	--	--
..MEGALOPTERA				
...SIALIDAE	--	1	--	--
...SIALIS				
..TRICHOPTERA				
...HYDROPSYCHIDAE				
...CHROMATOPSYCHE	--	29	113	281
...HYDROPSYCHE	24	103	274	468
...SYMPHITOPSYCHE	--	--	--	--
...HYDROPTILIDAE	--	--	2	--
...LEUCOTRYCHIA	--	--	--	--
MOLLUSCA (MOLLUSCS)				
..GASTROPODA				
...BASOMMATOPHORA				
...ANCYLIDAE				
...FERRISSIA	--	10	2	21
...LYMNAEIDAE	--	--	--	1
...LYMNAEA	--	--	--	--
...PHYSIDAE	--	--	--	1
...PHYSA	--	--	--	--
...PLANORBIDAE	--	--	--	1
...MENETUS	--	--	--	--
PLATYHELMINTHES (FLATWORMS)				
..TURBELLARIA				
...TRICLADIIDA				
...PLANARIIDAE				
...UNKNOWN GENUS	--	--	--	--
...UNKNOWN FAMILY	--	--	--	--
...UNKNOWN GENUS	--	--	--	--

	01473168 VALLEY CREEK NR VALLEY FORGE, PA.			
DATE	OCT 31 77	OCT 27 78	NOV 5 79	OCT 31 80
TIME	1500	1345	1050	1030
TOTAL COUNT	1093	388	263	1412
ORGANISM	COUNT	COUNT	COUNT	COUNT
ANNELIDA				
..HIRUDINEA				
...UNKNOWN ORDER				
...UNKNOWN FAMILY				
...UNKNOWN GENUS	--	--	2	--
ARTHROPODA (ARTHROPODS)				
..CRUSTACEA				
...AMPHIPODA				
...GAMMARIDAE				
...GAMMARUS	18	--	9	28
...ISOPODA				
...ASELLIDAE				
...ASELLUS	--	--	--	--
..INSECTA	9	8	2	140
...COLEOPTERA				
...ELMIDAE				
...OPTICSERVUS	10	8	--	8
...STENELMIS	1	--	--	--
...DIPTERA				
...CHIRONOMIDAE	--	--	--	--
...ABLABESMYIA	--	--	--	--
...BRILLIA	1	--	--	--
...CARDIOCLADIUS	--	--	--	--
...CONCHAPELOPIA	1	--	--	4
...CRICOTOPUS	21	12	1	--
...EUKIEFFERIELLA	--	44	--	80
...MICROTENDIPES	--	--	--	4
...ORTHOCLADIUS	22	8	7	92
...POLYPEDILUM	1	--	--	--
...PSECTOCALADIUS	4	--	--	--
...BREOTANYTARSUS	--	--	--	4
...SIMULIIDAE				
...SIMULIUM	3	--	--	4
...TIPULIDAE	53	--	5	56
...ANTOCHA				
..EPHEMEROPTERA				
...BAETIDAE				
...BAETIS	--	--	--	60
...PSEUDOCLOSON	1	--	--	--
...EPHEMERELLIDAE				
...EPHEMERELLA	--	--	--	4
...HEPTAGENIIDAE				
...STENONEMA	1	--	--	--
..MEGALOPTERA				
...SIALIDAE				
...SIALIS	--	--	--	--
..TRICHOPTERA				
...HYDROPSYCHIDAE				
...CHEMATOPSYCHE	160	--	56	184
...HYDROPSYCHE	672	252	116	192
...SYMPHITOPSYCHE	--	56	64	536
...HYDROPTILIDAE				
...LEUCOTRICHIA	--	--	--	--
MOLLUSCA (MOLLUSCS)				
..GASTROPODA				
...BASOMMATOPHORA				
...ARCYLIIDAE				
...FERRISSIA	25	--	--	--
...LYMNAEIDAE				
...LYMNAEA	--	--	--	--
...PHYSIDAE				
...PHYSA	--	--	--	--
...PLANORBIDAE				
...MENETUS	--	--	--	--
PLATYHELMINTHES (FLATWORMS)				
..TURBELLARIA				
...TRICLADIDA				
...PLANARIIDAE				
...UNKNOWN GENUS	--	--	1	--
...UNKNOWN FAMILY				
...UNKNOWN GENUS	--	--	--	16

Table 3.--Benthic-invertebrate data--Continued

[double dash indicates organism not present in sample]

01475300

DARBY CREEK AT WATERLOO MILLS NEAR DEVON, PA.

DATE TIME	MAY 27 70 0000	OCT 6 70 0000	MAY 11 71 0000	OCT 5 71 0000	OCT 16 72 0000	OCT 22 74 0000
TOTAL COUNT	79	46	30	8	155	239
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA						
..OLIGOCHAETA						
..PLESIOPORA						
..NAIDIDAE	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--
..TUBIFICIDAE	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDRACARINA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	--	--
CRUSTACEA						
..AMPHIPODA						
..GAMMARIDAE	--	--	--	--	--	1
..GAMMARUS	--	--	--	--	--	--
..TALITRIDAE	--	--	--	--	--	--
..HYALLELA						
INSECTA						
..COLEOPTERA						
..DIPLOPIDAE	--	--	--	--	--	--
..HELICUS						
..ELMIDAE	--	--	--	--	--	--
..DUBIRAPHIA	--	--	--	--	--	--
..OPTIUSERVUS	--	--	--	--	--	--
..OULIMNIUS	--	--	--	--	--	--
..STENIUS	--	--	--	--	--	--
..PSEPHENIDAE	--	--	--	--	--	--
..PSEPHENUS	--	--	--	--	1	--
..DIPTERA						
..CHIRONOMIDAE	7	--	18	--	18	43
..ABRAXESMYIA	--	--	--	--	--	--
..CONCHAPELOPIA	--	--	--	--	--	--
..CORYNOCURA	--	--	--	--	--	--
..CHIRONOMUS	--	--	--	--	--	--
..CHIRONOMIDAE	--	--	--	--	--	--
..HETEROTRISOCALDIUS	--	--	--	--	--	--
..LIMNOCHIRONOMUS	--	--	--	--	--	--
..MICROPSYCHRA	--	--	--	--	--	--
..MICROTENDIPES	--	--	--	--	--	--
..ORTHOCALDIUS	--	--	--	--	--	--
..POLYPEDILUM	--	--	--	--	--	--
..PSEUDODIAMESA	--	--	--	--	--	--
..RHOTANTARSUS	--	--	--	--	--	--
..THIENEMANNIELLA	--	--	--	--	--	--
..EMPIDIDAE	--	--	--	--	--	--
..HEMERODROMIA	--	--	--	--	--	1
..SIMULIIDAE	--	--	--	--	--	--
..SIMULIUM	54	--	--	--	3	5
..TIPULIDAE	--	--	--	--	--	--
..ANTOCHA	--	--	--	--	7	22
..EPHEMEROPTERA						
..BAETIDAE	5	4	--	--	2	--
..BAETIS						
..EPHEMERELLIDAE	--	--	--	--	--	--
..EPHEMERELLA	1	--	--	--	--	--
..HEPTAGENIIDAE	--	17	--	--	8	--
..STENONEMA	--	--	--	1	--	--
..SIPHONURIDAE	--	--	--	--	--	--
..AMELETUS	1	--	--	--	--	--
..ISONYCHIA	--	--	--	--	--	--
..MEGALOPTERA	--	--	--	--	--	--
..CORDALIDAE	--	--	--	--	--	--
..NIGRONIA	--	--	--	--	--	--
..ODONATA						
..COENAGRIONIDAE	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--
..PLECOPTERA						
..CAPNIIDAE	--	--	--	--	--	--
..PARACAPNIA	--	--	--	--	--	--
..PERLIDAE	--	--	--	--	--	--
..ZARONURIA	--	--	--	--	--	--
..TAENIOPTERYGIDAE	--	--	--	--	--	--
..TAENIOPTERYX	--	--	--	--	--	--
..TRICHOPTERA						
..GLOSSOSOMATIDAE	--	--	--	--	--	2
..GLOSSOSOMA	--	--	--	--	--	--
..HYDROPSYCHIDAE	--	--	7	4	70	112
..CHEUMATOPSYCHE	--	25	5	3	48	42
..HYDROPSYCHE	9	--	--	--	--	--
..SYMPHITOPSYCHE	--	--	--	--	--	--
..HYDROPTILIDAE	--	--	--	--	--	--
..HYDROPTILA	--	--	--	--	1	3
..LEUCOTRICHIA	--	--	--	--	1	1
..OCHROTRICHIA	--	--	--	--	--	--
..PHILOPOTAMIDAE	--	--	--	--	--	--
..CHIMARRA	2	--	--	--	--	7
..DOLOPHILODES	--	--	--	--	1	--
..WORMALDIA	--	--	--	--	--	--
MOLLUSCA (MOLLUSCS)						
..GASTROPODA						
..BASOMMATOPHORA						
..PHYSIDAE	--	--	--	--	--	--
..PHYSA	--	--	--	--	--	--
PLATYHELMINTHES (PLATWORMS)						
..TUBELLARIA						
..TRICLADIDA						
..PLANARIIDAE	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--
..UNKNOWN FAMILY	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--

01475300 DABBY CREEK AT WATERLOO MILLS NEAR DEVON, PA.						
DATE TIME	NOV 7, 75 1430	OCT 28, 76 0845	OCT 31, 77 1130	OCT 27, 78 1145	OCT 30, 79 1300	OCT 31, 80 1300
TOTAL COUNT	690	473	555	54	382	468
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA						
..OLIGOCHAETAE						
..PLESIOPORA						
..NAIDIIDAE						
..UNKNOWN GENUS	--	--	--	--	1	--
..TUBIFICIDAE						
..UNKNOWN GENUS	--	1	--	--	--	--
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDRACARINA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	1	--	--	--	--	--
..CRUSTACEA						
..AMPHIPODA						
..GAMMARIDAE						
..GAMMARUS	1	2	--	--	--	--
..TATULIDAE						
..HYALLELLA	--	--	--	--	--	4
..INSECTA						
..COLEOPTERA						
..DRYOPIDA						
..HELICIDUS	--	1	4	--	--	--
..ELMIDAE						
..DUBIRAPHIA	--	--	--	--	--	4
..OPTIOSERVIS	7	14	17	--	11	12
..CHLIMNUS	--	1	9	--	3	--
..STENELMIS	12	34	28	3	21	4
..PSEPHENIDAE						
..PSEPHENUS	--	1	3	1	6	--
..DIPTERA						
..CHIRONOMIDAE	--	--	--	--	--	--
..ABLABESMYIA	5	--	--	--	--	--
..CONCHAPELOPIA	--	1	--	--	--	--
..CORYNEURA						
..CHICOTOPUS	11	15	--	--	87	12
..EUKIEFFERIELLA	5	6	--	--	--	4
..HETEROTRISSOCLADIUS	11	--	--	--	--	--
..LIMNOCHIRONOMUS	--	3	--	--	--	--
..MICROSECTRA	5	--	--	--	--	--
..MICROTENDIPES	--	--	--	2	--	--
..ORTHOCLADIUS	22	--	31	--	5	28
..POLYPEDILUM	--	--	1	--	--	--
..PSEUDOKAMESA	--	--	--	--	--	--
..RHECTANYARISUS	11	9	18	--	--	32
..THIENEMANNIELLA	5	1	--	--	--	6
..EMPIDIDAE						
..HEMERODROMIA	--	--	2	--	2	--
..SIMULIIDAE						
..SIMULIUM	43	51	8	--	6	4
..TIPULIDAE						
..ANTOCHA	33	3	8	--	--	4
..EPHEMEROPTERA						
..BAETIDAE						
..BAETIS	1	--	--	--	1	--
..EPHEMERELLIDAE						
..EPHEMERELLA	5	--	5	--	--	--
..HEPTAGENIIDAE						
..STENONEMA	22	36	40	--	9	44
..SIPHONURIDAE						
..AMELETUS	--	--	--	--	--	--
..ISONYCHIA	--	--	--	--	--	4
..MEGALOPTERA				2	--	--
..CORYDALIDAE						
..NIGRONIA	--	1	--	--	--	--
..ODONATA						
..COENAGRIONIDAE						
..UNKNOWN GENUS	--	--	--	--	1	--
..PLECOPTERA						
..CAPNIIDAE						
..PARACAPNIA	--	--	--	--	5	--
..PERLIDAE						
..ACRONEURIA	--	1	1	--	--	--
..TAENIOPTERYGIDAE						
..TAENIOPTERYX	--	1	1	--	--	--
..TRICHOPTERA						
..GLOSSOSOMATIDAE						
..GLOSSOSOMA	5	11	4	--	1	24
..HYDROPSYCHIDAE						
..CHEMATOPSYCHE	317	88	132	--	122	88
..HYDROPSYCHE	149	129	184	31	99	104
..SYMPHITOPSYCHE	--	--	--	--	23	--
..HYDROPTILIDAE						
..LISOTRICHIA	--	--	1	--	--	--
..HYDROPTILA	--	--	--	--	--	--
..LEUCOTRICHIA	1	--	1	--	--	8
..OCHROTRICHIA	--	--	--	--	--	--
..PHILOPOTAMIDAE						
..PHIWARA	18	51	50	13	70	76
..DOLOPHILODES	--	--	--	--	--	--
..WORMALDIA	--	1	--	--	--	--
MOLLUSCA (MOLLUSCS)						
..GASTROPODA						
..BASOMMATOPHORA						
..PHYSIDAE						
..PHYSA	--	1	--	--	--	--
PLATYHELMINTHES (PLATWORMS)						
..TURBELLARIA						
..TRICLADIDA						
..PLANARIIDAE						
..UNKNOWN GENUS	--	--	--	--	7	4
..UNKNOWN FAMILY	--	--	--	--	--	--
..UNKNOWN GENUS	--	6	--	--	--	--

Table 3.--Benthic-invertebrate data--Continued
[double dash indicates organism not present in sample]

DATE TIME	01475830 CRUM CREEK NEAR PAOLI, PA.					
	MAY 27 70 0000	OCT 6 70 0000	MAY 11 71 0000	OCT 5 71 0000	OCT 16 72 0000	OCT 5 73 0000
TOTAL COUNT	89	128	31	28	129	132
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA						
..OLIGOCHAETA						
..UNKNOWN ORDER						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	--	--
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDRACARINA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS#2	--	--	--	--	--	--
..UNKNOWN GENUS#3	--	--	--	--	--	--
INSECTA						
..COLEOPTERA						
..ELMIDAE						1
..OPTICSERVUS	--	--	--	--	--	--
..OULIMNIS	--	--	--	--	--	1
..STENELMIS	--	--	--	--	--	--
..PSEPHENIDAE	--	--	--	--	--	1
..PSEPHENUS	--	--	--	--	--	--
DIPTERA						
..ATHERICIDAE=RHAGIONIDAE	--	--	--	--	--	--
..ATHEIX	--	--	--	--	--	--
..CHIRONOMIDAE	44	--	--	--	51	--
..CONCHAPELOPIA	--	--	--	--	--	--
..CORONOURA	--	--	--	--	--	--
..CRICOTOPIUS	--	--	--	--	--	--
..DIAMESA	--	--	--	--	--	--
..EUKIEPFERIELLA	--	--	--	--	--	--
..ORTHOCLEIDIUS	--	--	--	--	--	--
..PARACHIRONOMUS	--	--	--	--	--	--
..POLYPEDILUM	--	--	--	--	--	--
..RHOTANYTARSUS	--	--	--	--	--	--
..STEMPELLINA	--	--	--	--	--	--
..THIEMANNIELLA	--	--	--	--	5	--
EMPTIDAE						
..HEMERODROMIA	--	--	--	--	--	--
..SIMULIIDAE						
..SIMULIUM	4	3	8	10	1	--
..TIPULIDAE						
..ANTOCHA	--	--	--	--	4	1
..TIPULA	--	--	--	--	--	--
EPHEMEROPTERA						
..BAETIS						3
..BAETIS	5	9	3	--	--	--
..EPHEMERELLIDAE						--
..EPHEMERELLA	2	--	--	--	--	--
..HEPTAGENIIDAE	5	11	2	2	4	--
..STENONIA	--	--	--	--	--	--
..SIPHONURIDAE						
..AMELETUS	12	--	--	--	--	--
..ISONYCHIA	1	1	--	--	--	3
..TRICORYTHIDAE	--	--	--	--	1	--
..TRICORYTHODES	--	--	--	--	--	--
HEMIPTERA						
..VELIIDAE						1
..RHAGOVIELIA	--	--	--	--	--	--
..LEPIDOPTERA						
..UNKNOWN FAMILY	--	--	--	--	--	1
..UNKNOWN GENUS	--	--	--	--	--	--
..PYRALIDIDAE	--	--	--	--	--	--
..PARAGYACTIS	--	--	--	--	--	--
..MEGALOPTERA						
..CORYDALIDAE	--	--	--	--	--	--
..NIGRONIA	--	--	--	--	--	--
..ODONATA						
..CORONACHIONIDAE	--	--	--	--	--	--
..ARGIA	--	--	--	--	--	--
PLECOPTERA						
..PERLIDAE					4	--
..NEOPHRAGANOPHORA	--	--	--	--	--	--
..ACRONEURIA	--	--	--	--	--	--
..ACRONEURIA	4	1	--	--	--	--
..NEOPERLA	--	--	--	--	--	8
..PARAGNETINA	--	--	--	--	--	--
..TAENIOPTERYGIDAE	--	--	--	--	--	--
..TAENIOPTERYX	--	--	--	--	--	--
TRICHOPTERA						
..GLOSSOSOMATIDAE	--	--	--	--	--	--
..GLOSSOSOMA						
..HYDROPSYCHIDAE	--	--	--	--	--	--
..CHEUMATOPSYCHE	--	39	8	9	19	54
..HYDROPSYCHE	12	48	10	--	37	49
..SYMPTOPSYCHE	--	--	--	--	--	--
..HYDROPTILIDAE	--	--	--	--	1	--
..HYDROPTILA	--	--	--	--	--	--
..LEUCOTRICHIA	--	--	--	--	2	--
..OCHROTRICHIA	--	--	--	--	--	--
..MOLANIIDAE	--	--	--	--	--	--
..MOLANNA	--	--	--	--	--	--
..PHILOPOTAMIDAE	--	--	--	--	--	9
..CHIMARRA	--	--	--	--	--	--
..POLYCENTROPIDAE	--	--	--	--	--	--
..NYCTIOPHYLAX	--	--	--	--	--	--
..POLYCENTROPUS	--	--	--	--	--	--
..PSYCHOMYLIDAE	--	--	--	--	--	--
..PSYCHOMYIA	--	13	--	--	--	--
MOLLUSCA (MOLLUSCS)						
..GASTROPODA						
..BASOMMATOPHORA						
..ANCYLIDAE	--	--	--	--	--	--
..FERRISSIA	--	--	--	--	--	--
..LYMNAEIDAE	--	--	--	--	--	--
..LYMNAEA	--	--	--	--	--	--
..PHYSIDAE	--	--	--	--	--	--
..PHISA	--	--	--	--	--	--
NEMATODA (NEMATODES)						
..UNKNOWN CLASS						
..UNKNOWN ORDER						
..UNKNOWN FAMILY	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--

01475830 CRUM CREEK NEAR PAOLI, PA.

DATE TIME	OCT 28, 76 0945	OCT 31, 77 0930	OCT 27, 78 1045	OCT 30, 79 1400	OCT 31, 80 1500
TOTAL COUNT	212	221	225	22	46
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA					
..OLIGOCHAETA					
..UNKNOWN ORDER					
..UNKNOWN FAMILY					
..UNKNOWN GENUS	4	--	--	--	--
ARTHROPODA (ARTHROPODS)					
..ARACHNIDA					
..HYDRACARINA					
..UNKNOWN FAMILY					
..UNKNOWN GENUS#2	--	1	--	--	--
..UNKNOWN GENUS#3	--	3	--	--	--
INSECTA					
..COLEOPTERA					
..ELMIDAE					
..OPTIOSERVUS	6	8	--	--	1
..OULIMNIUS	1	--	--	--	--
..STENELMIS	7	2	13	--	--
..PSEPHENIDAE					
..PSEPHENUS	13	1	5	--	--
..DIPTERA					
..ATHERICIDAE=RHAGIONIDAE					
..ATHERIX	--	1	--	--	--
..CHIRONOMIDAE	--	--	--	--	--
..CONCHAPELOPIA	--	--	--	--	--
..CORYNONEURA	3	--	--	--	--
..CRICOTOPUS	1	42	--	4	2
..DIAMESA	1	--	--	--	--
..EUKIEFFERIELLA	3	--	--	--	1
..ORTHOCCLADIUS	--	--	6	3	2
..PARACHIRONOMUS	--	1	--	--	--
..POLYPEDILUM	--	1	2	--	--
..RHEOTANYTARSUS	15	14	4	1	--
..STEMPELLINA	1	--	--	--	--
..THIENEMANNIELLA	--	--	--	--	1
..EMPIDIDAE	--	--	--	--	--
..HEMERODROMIA	--	--	--	1	--
..SIMULIIDAE					
..SIMULIUM	5	--	--	1	2
..TIPULIDAE					
..ANTOCHA	2	12	--	--	1
..TIPULA	--	--	--	--	--
..EPHEMEROPTERA					
..BAETIDAE					
..BAETIS	--	--	--	1	--
..EPHEMERELLIDAE					
..EPHEMERELLA	17	17	4	--	--
..HEPTAGENIIDAE					
..STENONEMA	37	15	17	2	2
..SYMPHONURIDAE					
..AMELETUS	--	--	--	--	--
..ISONYCHIA	11	7	3	1	3
..TRICORYTHIDAE					
..TRICORYTHODES	--	--	--	--	--
HEMIPTERA					
..VELIIDAE					
..RHAGOVIELIA	--	--	--	--	--
..LEPIDOPTERA					
..UNKNOWN FAMILY					
..UNKNOWN GENUS	--	--	--	--	--
..PYRALIIDAE					
..PARAGRYCTIS	3	1	12	--	7
..MEGALOPTERA					
..CORYDALIDAE					
..NIGRONIA	--	1	--	--	--
..ODONATA					
..COENAGRIONIDAE	--	2	--	--	--
..ARGIA					
..PLECOPTERA					
..PERLIDAE					
..(NEO)PHASGANOPHORA	--	--	--	--	--
..ACHONURIA	--	1	--	--	--
..ACHONEURIA	1	--	--	--	--
..NEOPERLA	--	1	--	--	--
..PARAGNETINA	3	3	4	2	1
..TAENIOPTERYGIDAE					
..TAENIOPTERYX	--	--	--	--	3
TRICHOPTERA					
..GLOSSOSOMATIDAE					
..GLOSSOSOMA	2	1	--	--	--
..HYDROPSYCHIDAE					
..CHEUMATOPSYCHE	15	51	--	--	3
..HYDROPSYCHE	15	26	102	4	15
..SYMPTITOPSYCHE	--	--	22	--	--
..HYDROPTILIDAE					
..HYDROPTILA	--	3	--	--	1
..LEUCOTRICHIA	1	--	--	--	--
..OCHROTRICHIA	3	--	--	--	--
..MOLANNIDAE					
..MOLANNA	--	--	4	--	--
..PHILOPOTAMIDAE					
..CHIMARRA	8	3	13	2	--
..POLYCENTROPODIDAE					
..NYCTIOPHYLAX	1	--	--	--	--
..POLYCENTROPUS	1	--	--	--	--
..PSYCHOMYIIDAE					
..PSYCHOMYIA	--	--	--	--	--
MOLLUSCA (MOLLUSCS)					
..GASTROPODA					
..BASOMMATOPHORA					
..ANCYLIDAE					
..FERRISSIA	24	1	13	--	--
..LYMNAPIDAE					
..LYMNAEA	--	--	1	--	--
..PHYSIDAE					
..PHYSA	--	1	--	--	--
NEMATODA (NEMATODES)					
..UNKNOWN CLASS					
..UNKNOWN FAMILY					
..UNKNOWN GENUS	--	1	--	--	--

Table 3.--Benthic-invertebrate data--Continued
(double dash indicates organism not present in sample)

		01475840 CRUM CREEK AT WHITEHORSE, PA.					
DATE TIME		MAY 27 70 0000	OCT 6 70 0000	MAY 11 71 0000	OCT 5 71 0000	OCT 16 72 0000	OCT 5 73 0000
TOTAL COUNT		152	88	31	45	219	120
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA							
..OULICHAETA							
..UNKNOWN ORDER							
..UNKNOWN FAMILY							
..UNKNOWN GENUS	--	--	--	--	--	--	--
ARTHROPODA (ARTHROPODS)							
..ARACHNIDA							
..HYDRACARINA							
..UNKNOWN FAMILY							
..UNKNOWN GENUS	--	--	--	--	--	--	--
INSECTA							
..COLEOPTERA							
..DROPIDAE							
..HELICUS							
..ELMIDAE							
..OPTIOSERVUS							2
..OULIMNIUS							2
..STYGELIUS							
..PSEPHENIDAE							
..PSEPHENUS							1
..COLLEMBOLA							
..ENTOMOBRYIDAE							1
..DIPTERA							
..CHIRONOMIDAE	78	--	2	5	111	14	
..CARDIOLADIUS							
..CONCHAPELOPIA							
..CORYNONEURA							
..CRICOTOPUS							
..EUKIETTERIELLA							
..ORTHOCALDIUS							
..PARATANYTARSUS							
..POLYPELUM							
..PSECTROCLADIUS							
..PSEUDOTAKESIA							
..RHOTANYTARSUS							
..TANYTARSUS							
..THIENEMANNIELLA							
..UNKNOWN GENUS							
..NEOLAVRELLA							
..EMPIDIDAE						1	
..HEMERODROMIA							
..SIMULIDAE							
..SIMULIUM	4	--	--	7	--	2	
..TIPULIDAE							
..ANTOCH	2	1	--	--	8	2	
..EPHEMEROPTERA							
..BAETIDAE							
..SALIS							
..CENTROPTILUM	--	4	--	--	3	1	
..PSEUDOCLOEON	--	--	--	--	--	--	
..CAENIDAE							
..EPMERELLIDAE							
..EPMERELLA	9	--	--	--	--	0	
..HEPTACENTRIDAE							
..STENONEMA	4	6	1	1	7	10	
..SIPHONURIDAE							
..AMELETUS	10	--	--	--	--	--	
..ISONYCHIA		1	--	--	--	1	
..HEMIPTERA							
..VELLIDAE							
..RHAGELIA	--	--	--	--	--	--	
..LEPIDOPTERA							
..UNKNOWN FAMILY							
..UNKNOWN GENUS	--	--	--	--	--	--	
..PYRALIDAE							
..PARARGYACTIS							3
..MEGALOPTERA							
..SIALIS							
..SIALIS	--	--	--	--	--	--	
..ODONATA							
..COENAGRIONIDAE							
..ARGIA	--	--	--	--	--	--	
..PLECOPTERA							
..UNKNOWN FAMILY							
..UNKNOWN GENUS	--	--	--	--	--	--	
..PERLIDAE							
..ACRONETIDAE	4	1	--	--	--	--	
..NEOPTERIDAE							
..PARAGNETINA	--	--	--	--	--	--	
..TANIPTERYGIDAE							
..TANIPTERYX	--	--	--	--	--	--	
..TRICHOPTERA							
..GLOSSOSOMATIDAE							
..GLOSSOSOMA	--	--	--	--	--	--	1
..HYDROPSYCHIDAE							
..CHEUMATOPSYCHE	--	29	4	14	9	19	
..HYDROPSYCHE	40	40	18	18	79	47	
..SYMPHYTOPSYCHE							
..HYDROPTILIDAE							
..HYDROPTILA	--	--	--	--	--	--	
..LEUCOTRICHIA	--	--	--	--	3	4	
..OCHROTRICHIA	--	--	--	--	--	--	
..LIMNETHILIDAE							
..GOERA	--	--	--	--	--	--	
..PHILOPOTAMIDAE							
..CEIMARRA	--	--	--	--	--	--	9
..PSYCHOMYIIDAE							
..PSYCHOMYIA	--	4	6	2	--	--	
MOLLUSCA (MOLLUSCS)							
..BIVALVIA							
..NUCULOIDAE							
..Sphaeriidae							
..Sphaerium	--	--	--	--	--	--	
..GASTROPODA							
..BASOMMATOPHORA							
..ANCYLIDAE							
..FERRISSIA	--	--	--	--	--	--	
NEMATODA (NEMATODES)							
..UNKNOWN CLASS							
..UNKNOWN ORDER							
..UNKNOWN FAMILY							
..UNKNOWN GENUS	--	--	--	--	--	--	
PLATYHELMINTHES (PLATWORMS)							
..TURBELLARIA							
..TRICLADIDAE							
..PLANARIIDAE							
..UNKNOWN GENUS	--	--	--	--	--	--	
..UNKNOWN FAMILY							
..UNKNOWN GENUS	--	--	--	--	--	--	

01475840 CRUM CREEK AT WHITEHORSE, PA.

DATE TIME	OCT 22, 74 0600	OCT 28, 78 1030	OCT 31, 77 1030	OCT 27, 78 1000	OCT 30, 78 1430	NOV 10, 80 1215
TOTAL COUNT	87	383	835	112	131	417
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA						
..OLIGOCHAETA						
..UNKNOWN ORDER	--	--	3	--	--	--
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--				
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDARACARINA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	5	3	--	--	--
..INSECTA						
..COLEOPTERA						
..DERYPTIDAE						
..HELICUS						
..ELMIDAE		--	1	--	--	--
..OPTIOSEVUS	2	7	7	2	3	16
..OCLIDUS	--	2	--	1	--	--
..STENELMIS	3	3	3	--	4	--
..PSEPHENTIDAE						
..PSEPHENUS	1	7	2	1	2	13
..COLEMBOLA						
..ENTOMOBRYIDAE	--	--	--	--	--	--
..DIPTERA						
..CHIRONOMIDAE	28	--	--	--	--	--
..CARDIOCLADIUS	--	--	--	--	--	4
..CONCHAPELOPIA	--	3	--	--	--	--
..CORONAEURA	--	4	--	--	--	--
..CRICOTOPIUS	--	44	--	--	2	84
..EUKIEFFERIELLA	--	--	--	3	1	--
..ORTHOCCLADIUS	--	6	111	20	31	4
..PARATANTYARSUS	--	--	--	9	--	--
..POLYPEDILUM	--	--	35	2	--	--
..PSECTROCLADIUS	--	--	2	--	--	--
..PSEUDOCALAMBA	--	--	--	--	--	--
..PHEOTANTYARSUS	--	12	4	--	--	--
..TANTYARSUS	--	--	--	1	--	--
..THIENEMANNIELLA	--	--	--	--	--	--
..UNKNOWN GENUS	--	10	17	--	--	--
..NEOZAVRELIA	--	--	--	--	--	--
..EMFIDIDAE	--	--	--	4	--	--
..HEMERODROMIA	2	--	--	--	--	--
..SIMULIIDAE	--	1	1	--	--	--
..SIMULIUM	1	2	1	--	--	--
..TIPULIDAE						
..ANTOCHA	7	15	28	3	--	72
..EPHEMEROPTERA						
..BAETIDAE						
..BAETIS	1	--	--	--	--	--
..CENTROPTILUM	--	--	--	--	--	--
..PSEUDOCLOEON	--	--	1	1	--	--
..CAENIDAE						
..CAENIS	--	--	1	--	--	--
..EPHEMERELLIDAE						
..EPHEMERELLA	4	6	51	2	--	8
..HEPTAGENIIDAE						
..SPIRONEMA	8	7	33	4	13	18
..SIPHONURIDAE						
..AMBLETUS						
..ISONYCHIA	--	10	12	4	5	--
..HEMITEPTEA						
..VELIIDAE						
..RHAGOVIELIA	--	--	--	1	3	--
..LEPTOPTERA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	1	--	--	--	--	--
..PYRALIDIDAE						
..PARASTACTIS	6	19	47	--	--	24
..MEGALOPTERA						
..SIALIDAE						
..SIALIS	--	--	1	--	--	--
..ODONATA						
..COENAGRIONIDAE						
..ARCTIDAE						
..PLECOPTERA				1	--	--
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	1	--	--	--	--
..PERLIDAE						
..ACRONEURIA	--	--	--	--	--	--
..NEOPERLA	--	--	--	--	--	--
..PARAGETIDAE	1	--	2	--	--	4
..TAENIOPTERYGIDAE						
..TAENIOPTERYX	--	1	--	--	--	--
..TRICHOPTERA						
..GLOSSOSOMA						
..GLOSSOSOMIDAE	--	11	--	--	--	4
..HYDROPSYCHIDAE						
..HYDROPSYCHE	--	54	187	8	13	18
..SYMPHITOPSICHE	--	100	--	11	23	72
..HYDROPTILIDAE						
..HYDROPTILA	--	--	7	2	1	--
..LEUCOPTRICHTA	--	5	7	1	--	52
..OCHROTRICHTA	--	4	--	--	--	--
..LINNEPHILIDAE						
..GOERA	--	1	--	--	--	--
..PHILOPOTAMIDAE						
..CHIMARRA	--	19	14	6	3	16
..PSYCHOMYIIDAE						
..PSYCHOMYIA	--	--	--	--	--	--
MOLLUSCA (MOLLUSCS)						
..BIVALVIA						
..MUSCULOIDEA						
..SPHAERIIDAE						
..SPHAERIUM	--	1	--	--	--	--
..GASTROPODA						
..BASOMMATOPHORA						
..ANCYLIDAE						
..FERRISSIA	4	1	--	1	--	4
NEMATODA (NEMATODES)						
..UNKNOWN CLASS						
..UNKNOWN ORDER						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	1	--	--	--
PLATYHELMINTHES (FLATWORMS)						
..TORBELLARIA						
..TEICLADIA						
..PLANARIIDAE						
..UNKNOWN GENUS	--	--	--	--	--	4
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	2	--	1	--	--

Table 3.--Benthic invertebrate data--Continued
 (double dash indicates organism not present in sample)
 01478430 RIDLEY CREEK AT GOSHENVILLE, PA.

DATE TIME	MAY 28, 70 0000	OCT 6, 70 0000	JUN 8, 71 0000	OCT 6, 71 0000	OCT 16, 72 0000	OCT 5, 73 0000
TOTAL COUNT	128	116	33	15	158	246
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA						
..OLIGOCHAETA						
..PLESIOPORA						
..NAIDIDAE						
..UNKNOWN GENUS	--	--	--	--	--	--
..UNKNOWN ORDER						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	--	--
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDRACarina						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	--	1
..CRUSTACEA						
..CALANOIDA						
..DIAPYLOMIDAE						
..DIAPYLOMUS	--	--	--	--	--	--
..INSECTA						
..COLEOPTERA						
..ELMIDAE						
..DUBIRAPHIA	--	--	--	--	--	--
..OPTIOSERVUS	--	--	--	--	--	--
..STENELMIS	--	--	--	--	--	--
..DIPTERA						
..CHIRONOMIDAE	43	2	--	--	22	1
..BRILLIA	--	--	--	--	--	--
..CARDIOCLADIUS	--	--	--	--	--	--
..CRICOTOPUS	--	--	--	--	--	--
..EUKIEFFERIELLA	--	--	--	--	--	--
..MICROTENDIPES	--	--	--	--	--	--
..NANOCLADIUS	--	--	--	--	--	--
..ORTHOCLADIUS	--	--	--	--	--	--
..PARATANYTARSUS	--	--	--	--	--	--
..PROCLADUS	--	--	--	--	--	--
..RHOTANYTARSUS	--	--	--	--	--	--
..TANYTARSUS	--	--	--	--	--	--
..THIENEMANNIELLA	--	--	--	--	--	--
..EMPIDIDAE	--	--	--	--	--	--
..HEMERODROMIA	--	--	--	--	--	--
..SIMULIIDAE						
..SIMULIUM	18	8	10	--	8	3
..TABANIDAE	--	--	--	--	--	--
..TABANUS	--	--	--	--	--	--
..TIPULIDAE						
..TIPULA	2	--	--	--	--	2
..EPHEMEROPTERA						
..BAETIDAE						
..BAETIS	1	--	--	--	1	8
..PSEUDOCLOEON	--	--	--	--	--	--
..EPHEMERELLIDAE	--	--	--	--	--	--
..EPHEMERELLA	--	--	8	--	1	--
..HEPTAGENIIDAE	--	--	--	--	--	--
..STENONEMA	--	--	8	--	28	5
..SIPHONURIDAE	--	--	--	--	--	--
..AMLETUS	7	--	--	--	--	--
..ISONYCHIA	--	--	--	--	8	7
..HEMIPTERA						
..GERMIDAE						
..UNKNOWN GENUS	--	--	--	--	--	--
..MEGALOPTERA						
..CORIDALIDAE						
..CORIDALUS	--	--	--	--	--	1
..SIALIDAE	--	--	--	--	--	--
..SIALIS	--	--	--	--	--	--
..PLECOPTERA						
..PERLIDAE						
..NEOPHASGANOPHORA	--	--	--	--	--	--
..NEOPERLA	--	--	--	--	--	--
..TAENIOPTERYGIDAE	--	--	--	--	--	--
..TAENIOPTERYX	--	--	--	--	3	--
..TRICHOPTERA						
..GLOSSOSOMATIDAE	--	--	--	--	--	--
..GLOSSOSOMA	--	--	--	--	4	--
..HYDROPSICHIDAE	--	--	--	--	--	--
..CHEUMATOPSYCHE	13	30	5	7	7	33
..HYDROPSYCHE	44	77	4	8	64	171
..MACRONEMA	--	--	--	--	--	10
..SYMPHITOPSYCHE	--	--	--	--	--	--
..HYDROPTILIDAE	--	--	--	--	--	--
..HYDROPTILA	--	--	--	--	1	--
..EUCROTICHTIA	--	--	--	--	--	1
..OCHROTRICHTIA	--	--	--	--	--	--
..STACTOBIELLA	--	--	--	--	--	--
..LEPTOCERTIDAE	--	--	--	--	--	--
..MYSTACIDES	--	--	--	--	--	--
..MOLANNIDAE	--	--	--	--	--	--
..MOLANNA	--	1	--	--	--	--
..PHILOPOTAMIDAE	--	--	--	--	--	--
..CHIMARRA	--	--	--	--	--	--
..DOLOPHILODES	--	--	--	--	5	3
..POLYCENTROPIDAE	--	--	--	--	7	--
..POLYCENTROPUS	--	--	--	--	--	--
..PSYCHOMYIDAE	--	--	--	--	--	--
..PSYCHOMYIA	--	--	--	--	--	--
MOLLUSCA (MOLLUSCS)						
..BIVALVIA						
..NUCULOIDEA						
..SPHAERIIDEA						
..MUSCULUM	--	--	--	--	--	--
..GASTROPODA						
..BASOMMATOPHORA						
..AMNIDAE						
..PERRISSIA	--	--	--	--	--	--
..LYMNABIDAE	--	--	--	--	--	--
..LYNNAEA	--	--	--	--	--	--
..PHYSIDAE	--	--	--	--	--	--
..PHYSA	--	--	--	--	--	--
..PLANORBIDAE	--	--	--	--	--	--
..CYRAULUS	--	--	--	--	--	--
NEMATODA (NEMATODES)						
..UNKNOWN CLASS						
..UNKNOWN ORDER						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	--	--
PLATYHELMINTHES (PLATWORMS)						
..TURBELLARIA						
..TRICLADIDA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	--	--

01476430 RIDLEY CREEK AT GOSHENVILLE, PA.						
DATE	OCT 31 75	OCT 20 76	OCT 18 77	OCT 24 78	OCT 31 78	NOV 17 80
TIME	0900	1000	1530	1330	1030	1330
TOTAL COUNT	788	420	349	58	84	202
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA						
..OLIGOCHAETA						
..PLESIOPORA						
..NAIDIDAE						
...UNKNOWN GENUS	--	1	--	--	--	--
..UNKNOWN ORDER						
..UNKNOWN FAMILY						
...UNKNOWN GENUS	1	--	--	--	--	4
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
...HYDRACARINA						
...UNKNOWN FAMILY						
..UNKNOWN GENUS	--	3	--	2	--	--
..CRUSTACEA						
...CALANOIDA						
...DIAPYCNIDAE						
...DIAPYCNUS	1	--	--	--	--	--
..INSECTA						
...COLEOPTERA						
...ELMIDAE						
...DUBIRAPHIA	--	--	--	1	--	--
...OPTIOSEVUS	25	27	12	--	2	1
...STENELIS	--	--	5	--	--	--
..DIPTERA						
...CHIRONOMIDAE	--	--	--	--	--	--
...BRITIA	--	--	--	--	--	--
...CARDIOCLADIUS	36	--	--	--	--	1
...CHICOTOPUS	55	--	18	5	--	--
...EUKIPPERIELLA	--	--	--	2	--	--
...MICROTENDIPES	36	22	--	--	--	--
...NANOCLADIUS	--	--	--	2	--	--
...ORTHOCLADIDUS	73	--	--	--	8	1
...PARATANTARSUS	--	--	--	--	--	85
...PROCLADIDUS	--	--	--	--	--	4
...RHESANTARSUS	55	16	13	4	1	13
...TANTARSUS	--	--	--	--	--	--
...THIENEMANNIELLA	38	--	1	--	--	1
..EMBIOPTERA						
...HEMIDROMIA						
...SIMULIIDAE	4	--	--	--	--	--
...SIMULIUM	60	5	--	1	5	9
..TABANIDAE						
...TABANUS	--	--	1	--	--	--
..TIPULIDAE						
...ANTOCHA	28	35	20	5	4	3
..EPHEMEROPTERA						
...BAETIDAE						
...BAETIS	--	--	--	--	--	--
...PSEUDOCLOEON	--	--	--	--	--	--
...EPHEMERELLIDAE	--	--	--	--	--	--
...EPHEMERELLA	12	23	--	1	1	1
...HEPTAGENIIDAE	19	10	28	7	14	7
...STENOBA	--	--	--	--	--	--
...STIPHONURIDAE	--	--	--	--	--	--
...AMELETUS	2	4	15	1	1	--
...ISONYCHIA	--	--	--	--	--	--
..HEMITERA						
...GERRIDAE	--	--	2	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--
..MEGALOPTERA						
...CORDALIDAE	--	--	2	--	--	--
...CORDALIDUS	--	--	--	--	--	--
..SIALIDAE						
...SIALIS	--	1	--	1	--	--
..PLECOPTERA						
...PERLIDAE	--	--	--	--	--	--
...NEOPHASGANOPHORA	--	--	--	--	--	1
...NEOPHILA	--	--	3	--	--	--
..TAenioPTERYGIDAE						
...TAENIOPTERYX	13	10	--	2	3	--
..TRICHOPTERA						
...GLOSSOSOMATIDAE	5	3	--	--	--	--
...GLOSSOSOMA	--	--	--	--	--	--
...HYDROPSYCHIDAE	--	--	--	--	--	--
...CURIMATOPSYCHE	189	83	49	3	2	30
...HYDROPSYCHE	143	131	185	1	13	1
...MACRONEMA	--	--	--	--	--	--
...SYMPHITOPSYCHE	--	--	--	16	28	13
..HYDROPTILIDAE						
...HYDROPTILA	--	--	--	--	--	--
...LEUCOTRICHIA	3	--	--	--	--	1
...OCROTRICHIA	--	42	--	--	--	--
...STACTOBIELLA	2	--	--	--	--	--
..LEPTOCERIDAE						
...MYSTACIDES	1	--	4	--	--	--
..MOLANIDAE						
...MOLANNA	--	--	--	--	--	--
..PHILOPODIDAE						
...CHIMARA	17	--	4	--	1	4
..DOLOPHILODES						
...POLYCENTROPIDIDAE	--	--	--	--	--	--
...POLYCENTROPUS	--	--	--	1	--	1
..PSYCHOMYIIDAE						
...PSYCHOMYIA	--	--	--	--	--	1
MOLLUSCA (MOLLUSCS)						
..BIVALVIA						
...NUCULOIDAE						
...SPHAERIIDAE						
...MUSCULIUM	--	--	--	--	1	--
..GASTROPODA						
...BASOMMATOPHORA						
...ANCYLIDAE						
...FERRISSIA	2	--	--	--	--	11
...LYMNASTIDAE	--	--	--	--	--	--
...LYMNAEA	--	--	--	1	--	--
..PHYSIDAE						
...PHYSA	--	1	6	1	--	6
..PLANORBIDAE						
...GYRAULUS	--	--	--	2	--	--
NEMATODA (NEMATODES)						
..UNKNOWN CLASS						
..UNKNOWN ORDER						
..UNKNOWN FAMILY						
...UNKNOWN GENUS	2	--	--	--	2	--
PLATYHELMINTHES (PLATWORMS)						
..TURBELLARIA						
...TRICLADIDA						
...UNKNOWN FAMILY	--	3	--	--	--	3
...UNKNOWN GENUS	--	--	--	--	--	--

Table 3.--Benthic-invertebrate data--Continued
 [double dash indicates organism not present in sample]

		01476435 RIDLEY CR AT DUTTON MILL NR WEST CHESTER, PA.					
DATE		MAY 28, 70	OCT 6, 70	JUN 8, 71	OCT 5, 71	OCT 16, 72	OCT 5, 73
TIME		0000	0000	0000	0000	0000	0000
TOTAL COUNT		37	172	13	32	189	63
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ARTHROPODA (ARTHROPODS)							
..ARACHNIDA							
..HYDRACARINA							
..UNKNOWN FAMILY							
..UNKNOWN GENUS	--	--	--	--	--	--	--
..INSECTA							
..COLEOPTERA							
..ELMIDAE							
..OPTIOSERVUS							
..STEMELMIS						1	
..PSEPHENIDAE							
..PSEPHENUS							
..DIPTERA							
..CHIRONOMIDAE	8	--	--	--	--	53	1
..CARDIOLADIUS							
..CONCHAPELOPIA							
..CRICOTOPUS							
..DIANESA							
..EUKIEFFERIELLA							
..ORTHOCLADIUS							
..PSECTROCLADIUS							
..RHECTANTARSUS							
..TANYTARSUS							
..THIENEMANNIELLA							
..EMPIDIDAE						2	
..SIMULIDAE							
..SIMULIUM	7	--	--	--	15	3	8
..TIPULIDAE							
..ANTOCHA							1
..TIPULIDAE							
..EPHEMEROPTERA							
..BAETIDAE							
..BAETIS			3				6
..CENTROPTILUM			1				
..CAENIDAE							
..CAENIS							
..EPHEMERELLIDAE							
..EPHEMERELLA	8	--	4	2	2	--	--
..SERRATELLA							
..HEPTAGENIIDAE							
..STENONEMA	1	16	1	1	58	--	--
..SIPHONURIDAE							
..ISONYCHIA		--	--	--	19	7	--
..SIPHONURUS		1					
..LEPIDOPTERA							
..PYRALIDIDAE							
..PARARGYACTIS							
..MEGALOPTERA							
..CORDALIDAE							
..CORDALUS		1	--	--	--	--	--
..NIGRONIA							
..ODONATA							
..AGRITIDAE							
..AGRION							
..COENAGRIONIDAE							
..ARGIA		1					
..PLECOPTERA							
..PERLIDAE							
..ACROHEURIA							
..PARAGNETINA							
..TAENIOPTERYGIDAE							
..TAENIOPTERYX							
..TRICHOPTERA							
..BRACHYCENTRIDAE							
..BRACHYCENTRUS							
..GLOSSOSOMATIDAE							2
..GLOSSOSOMA							
..HYDROPSYCHIDAE							
..CHEUMATOPSYCHE		65	3	4	25	3	
..HYDROPSYCHE	13	61	5	10	15	35	
..MACRONEMA							
..POTAMYIA							
..SYMPHITOPSYCHE							
..HYDROPTILIDAE							
..HYDROPTILA							
..LEUCOTRICHIA						1	
..LIMNephilidae							
..PHILOPOTAMIDAE						5	
..CHIMARRA							
..POLYCENTROPIDIDAE							
..NEURECLIPSIS							
..POLYCENTROPUS							
..PSYCHOMYIIDAE							
..PSYCHOMYIA		23	--	--	--	--	--
MOLLUSCA (MOLLUSCS)							
..BIVALVIA							
..NUCULOIDEA							
..SPHAERIIDAE							
..SPHAERIUM							
..SCHIZODONTA							
..UNIONIDAE							
..UNKNOWN GENUS							
..GASTROPODA							
..BASOMMATOPHORA							
..ANCYLIDAE							
..FERRISSIA							
..LYMNADIDAE							
..LYNNAEA							
..PHYSIDAE							
..PHYSA							
PLATYHELMINTHES (FLATWORMS)							
..TURBELLARIA							
..TRICLADIDA							
..PLANARIIDAE							
..UNKNOWN FAMILY							
..UNKNOWN GENUS							

01476435 RIDLEY CR AT DUTTON MILL NR WEST CHESTER, PA.						
DATE	OCT 22, 74	OCT 20, 76	OCT 27, 77	OCT 24, 78	OCT 30, 79	NOV 17, 80
TIME	0000	0915	1100	1345	1530	1430
TOTAL COUNT	165	470	105	78	236	1144
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDRACARINA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	7	--	--	--	8
..INSECTA						
..COLEOPTERA						
..ELMIDAE						
..OPTIOSERVUS	--	4	--	--	3	4
..STENELMIS	--	18	2	9	9	--
..PSEPHENIDAE						
..PSEPHENUS	--	--	1	--	1	--
..DIPTERA						
..CHIRONOMIDAE	--	--	--	--	--	--
..CARDIOCLADIUS	--	--	1	--	--	--
..CONCHAPELOPIA	--	4	--	2	--	8
..CRICOTOPUS	--	9	7	--	7	--
..DIAMESA	--	--	--	--	--	52
..EUKLIPPERIELLA	--	--	--	--	--	12
..ORTHOCCLADIUS	--	--	--	--	53	188
..PSECTROCLADIUS	--	--	--	--	--	--
..RHEOTANYTARSUS	--	3	--	--	2	56
..TANYTARSUS	--	--	--	1	--	--
..THIENEMANNIELLA	--	5	--	--	--	--
..EMPIDIDAE	--	--	--	--	--	--
..SIMULIIDAE						
..SIMULIUM	1	22	2	--	4	44
..TIPULIDAE						
..ANTOCIA	--	2	--	--	3	44
..TIPULA	--	--	--	--	--	--
..EPHEMEROPTERA						
..BETULIDAE						
..BETIS	--	8	2	3	--	--
..CENTROPTILUM	--	--	--	--	--	--
..CAENIDAE						
..CAENIS	--	--	5	--	--	--
..EPHEMERELLIDAE						
..EPHEMERELLA	--	38	--	--	--	--
..SERRATELLA	--	--	--	--	--	64
..HEPTAGENIIDAE						
..STENONEMA	--	37	2	--	2	28
..SIPHONURIDAE						
..ISONYCHIA	--	14	--	--	4	4
..SIPHONURUS	--	--	--	--	--	--
..LEPIDOPTERA						
..PYRALIDIDAE						
..PARARGYACTIS	--	--	--	4	1	12
..MEGALOPTERA						
..CORYDALIDAE						
..CORYDALUS	--	3	--	3	2	8
..NIGRONIA	--	1	--	--	--	--
..ODONATA						
..AGRIIDAE						
..AGRION	--	--	1	--	--	--
..COENAGRIONIDAE						
..ARGIA	--	--	--	--	--	--
..PLECOPTERA						
..PERLIDAE						
..ACRONEURIA	--	1	--	7	4	--
..PARAGNETINA	--	--	1	--	1	--
..TAENIOPTERYGIDAE						
..TAENIOPTERYX	--	2	--	--	--	--
..TRICHOPTERA						
..BRACHYPTERIDAE						
..BRACHYCENTRUS	--	--	--	--	--	4
..GLOSSOSOMATIDAE						
..GLOSSOSOMA	--	--	--	--	--	--
..HYDROPSYCHIDAE						
..CHEUMATOPSYCHE	61	118	13	14	23	88
..HYDROPSYCHE	89	80	23	16	113	8
..MACRONEMA	7	13	3	--	--	--
..POTAMYIA	--	--	33	--	--	--
..SYMPHITOPSYCHE	--	--	--	8	--	324
..HYDROPTILIDAE						
..HYDROPTILA	--	--	--	--	--	4
..LEUCOTRICHIA	--	15	--	--	--	32
..LIMNephilidae	--	--	--	--	--	--
..PHILOPOTAMIDAE						
..CHIMARRA	3	20	1	1	3	64
..POLYCENTROPODIDAE						
..NEURECLIPSIS	--	--	1	--	--	32
..POLYCENTROPUS	--	3	--	--	--	--
..PSYCHOMYIDAE						
..PSYCHOMYIA	--	--	--	--	--	28
MOLLUSCA (MOLLUSCS)						
..BIVALVIA						
..NUCULOIDEA						
..SPHAERIIDAE						
..SPHAERIUM	--	28	2	--	--	--
..SCHIZOONOTA						
..UNKNOWNIDAE						
..UNKNOWN GENUS	--	--	--	7	--	--
..GASTROPODA						
..BASOMMATOPHORA						
..ANCYLIDAE						
..FERRISSIA	--	6	5	1	--	12
..LYMNAEIDAE						
..LYMNAEA	1	1	--	--	--	--
..PHYSIDAE	--	1	--	--	--	--
..PHYSA						
PLATYHELMINTHES (FLATWORMS)						
..TURBELLARIA						
..TRICLADIDA						
..PLANARIIDAE	1	--	--	--	--	--
..UNKNOWN FAMILY	--	4	--	--	--	16
..UNKNOWN GENUS						

Table 3.--Benthic-invertebrate data--Continued
[double dash indicates organism not present in sample]

		01476790 EAST BRANCH CHESTER CREEK AT GREEN HILL, PA.					
DATE		MAY 22 70	OCT 26 70	MAY 17 71	OCT 11 71	OCT 10 72	OCT 5 73
TIME		0000	0000	0000	0000	0000	0000
TOTAL COUNT		225	59	74	43	520	144
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA							
..OLIGOCHAETA							
..PLESIOPORA							
..TUBIFICIDAE							
..UNKNOWN GENUS	--	--	--	--	--	--	--
..UNKNOWN ORDER							
..UNKNOWN FAMILY							
..UNKNOWN GENUS	--	--	--	--	--	--	--
ARTHROPODA (ARTHROPODS)							
..ARACHNIDA							
..HYDRACARINA	--	--	--	--	--	--	--
..CRUSTACEA							
..ISOPODA							
..ASELLIDAE	--	--	--	--	--	--	--
..ASELLUS							
..INSECTA							
..COLEOPTERA							
..ELMIDAE							
..OPTIOSERVUS	--	--	--	--	--	6	0
..OULIMNIUS	--	--	--	--	--	8	2
..STENELMIS	--	--	--	--	--		
..PSEPHENIDAE	--	--	--	--	--	2	--
..ECTOPRIA							
..DIPTERA							
..ATHERICIDAE=RHAGIONIDAE							
..ATHERIX	--	--	--	--	--	--	13
..CHIRONOMIDAE	222	--	5	12	26	5	
..CONCHAPELOPIA	--	--	--	--	--	--	--
..CORYNONEURA	--	--	--	--	--	--	--
..CHICOTOPUS	--	--	--	--	--	--	--
..MICROTENDIPES	--	--	--	--	--	--	--
..ORTHOCLEIDIUS	--	--	--	--	--	--	--
..PARAMETRIOCNEMUS	--	--	--	--	--	--	--
..PARATANYTARSUS	--	--	--	--	--	--	--
..PHAENOPSECTRA	--	--	--	--	--	--	--
..POLYPTILUM	--	--	--	--	--	--	--
..RHEOTANYTARSUS	--	--	--	--	--	--	--
..THIENEMANNIELLA	--	--	--	--	--	--	--
..UNK. CHIRONOMINAE	--	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	2	--
..EMPIDIDAE	--	--	--	--	--		
..SIMULIIDAE	--	--	3	1	2	0	
..SIMULIUM	--	--					
..TIPULIDAE	--	--	1	--	89	0	
..ANTOCNA	1	--	--	--	--	1	
..TIPULA	--	--	--	--	--		
..EPHEMEROPTERA							
..BAETIDAE	--	1	1	--	10	8	
..BAETIS	--	--	--	--	4	--	--
..PSEUDOCLOSON	--	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--	--
..EPHEMERELLIDAE	--	--	--	--	--	--	--
..EPHEMERELLA	1	7	25	3	16	1	
..EURYLOPHELLA	--	--	--	--	--	--	--
..SERRATELLA	--	--	--	--	--	--	--
..HEPTAGENIIDAE							
..STENONEMA	1	15	14	7	25	14	
..SIPHONURIDAE	--	--	--	--	1	0	
..ISONYCHIA	--	--	--	--	--	--	--
..HEMIPTERA							
..MESOVELLIDAE	--	--	--	--	--	--	--
..MESOVELLA	--	--	--	--	--	--	--
..MEGALOPTERA							
..CORYDALIDAE	--	--	--	--	--	--	--
..NIGRONIA	--	--	--	--	--	--	--
..ODONATA							
..AGRIIDAE	--	--	--	--	--	--	--
..AGRION	--	--	--	--	--	--	--
..PLECOPTERA							
..PERLODIDAE	--	--	--	--	--	1	--
..TROCTERA							
..TRICHOPTERA							
..GLOSSOSOMATIDAE	--	21	8	--	17	28	
..GLOSSOSOMA	--	--	--	--	--	--	--
..HYDROPSYCHIDAE	--	--	7	3	24	6	
..CHEUMATOPSYCHE	--	15	10	15	276	63	
..HYDROPSYCHE	--	--	--	--	--	--	--
..POTAMYIA	--	--	--	--	--	--	--
..SYMPHITOPSYCHE	--	--	--	--	--	--	--
..LIMNephilidae	--	--	--	--	--	--	--
..APATANIA	--	--	--	--	--	--	--
..HYDATOPHYLAX	--	--	--	--	--	--	--
..LIMNephilus	--	--	--	--	--	--	--
..PHILOPOTAMIDAE	--	--	--	--	11	3	
..CHIMARRA	--	--	--	--	--	--	--
..DOLOPHLODES	--	--	--	--	--	--	--
..POLYCENTROPIDAE	--	--	--	--	--	--	--
..POLYCENTROPUS	--	--	--	--	--	--	--
..PSYCHOMYIIDAE	--	--	--	--	2	--	--
..PSYCHOMYIA	--	--	--	--	--	--	--
..RHYACOPHILIDAE	--	--	--	--	--	--	--
..RHYACOPHILA	--	--	--	--	--	--	--
MOLLUSCA (MOLLUSCS)							
..GASTROPODA							
..BASOMMATOPHORA							
..PHYSIDAE							
..PHYSA	--	--	--	--	--	--	--

01476790 EAST BRANCH CHESTER CREEK AT GREEN HILL, PA.						
DATE TIME	OCT 29, 74 0900	OCT 21, 78 1545	OCT 18, 77 1130	OCT 24, 78 1020	OCT 31, 79 1130	NOV 3, 80 0845
TOTAL COUNT	13	703	162	175	179	247
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA						
..OLIGOCHAETA						
..PLESIOPORA						
..TUBIFICIDAE						
..UNKNOWN GENUS	--	4	--	--	--	4
..UNKNOWN ORDER						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	2	--	1	--
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDRACARINA	1	--	--	--	--	--
..CRUSTACEA						
..ISOPODA						
....ASELLIDAE						
....ASELLUS	3	1	--	3	5	4
..INSECTA						
....COLEOPTERA						
....ELMIDAE						
....OPTIOSERVUS	--	18	--	1	6	--
....OULIMNIUS	--	5	--	--	--	4
....STENELIUS	--	--	8	--	--	--
....PSEPHENIDAE						
....ECTOPRIA	--	--	--	--	--	--
..DIPTERA						
....ATHERICIDAE=RHAGIONIDAE						
....ATHERIX	--	--	--	--	--	--
....CHIRONOMIDAE	5	--	--	--	--	--
....CONCHAPELOPIA	--	3	--	--	--	4
....CORYNONEURA	--	--	--	--	--	16
....CRICOTOPUS	--	80	4	1	--	--
....MICROTENDIPES	--	--	--	--	--	4
....ORTHOCLADIUS	--	--	--	--	--	8
....PARAMETRIOCNEMUS	--	--	--	1	--	--
....PARATANYTARSUS	--	--	--	--	--	12
....PHAENOPSECTRA	--	--	--	2	--	16
....POLYPEDILUM	--	--	--	--	--	--
....RHEOTANYTARSUS	--	75	1	2	--	16
....THIENEMANNIELLA	--	12	--	--	--	--
....UNKN CHIRONOMINAE	--	--	--	--	1	--
....UNKNOWN GENUS	--	--	1	--	--	--
....EMPIDIDAE	--	--	--	--	--	--
....SIMULIIDAE	--	2	--	1	--	--
....SIMULIUM	--	--	--	--	--	--
....TIPULIDAE	--	--	--	1	--	--
....TIPULA	4	15	9	4	10	8
..EPHEMEROPTERA		3	--	--	--	1
....BAETIDAE						
....BAETIS	--	22	1	--	--	--
....PSEUDOCLOEON	--	--	--	--	--	--
....UNKNOWN GENUS	--	--	--	2	--	--
..EPHEMERELLIDAE						
....EPHEMERELLA	--	14	--	--	--	--
....EPIHEMERELLA	--	--	--	--	--	8
....SERRATELLA	--	--	--	--	--	16
..HEPTAGENIIDAE						
....STENONEMA	--	54	23	9	2	--
..SIPHONURIDAE						
....ISONYCHIA	--	--	--	--	--	--
..HEMIPTERA						
....MESOVELIIDAE	--	--	2	--	--	--
....MESOVELIA	--	--	--	--	--	--
..MEGALOPTERA						
....CORYDALIDAE	--	--	--	--	--	--
....NIGRONIA	--	1	--	--	1	--
..ODONATA						
....AGRIIDAE	--	--	--	--	--	1
....AGRION	--	--	--	--	--	--
..PLECOPTERA						
....PERLODIDAE	--	--	--	--	--	--
....ISOPTERA						
....TRICHOPTERA						
....GLOSSOSOMATIDAE	--	33	31	28	17	56
....GLOSSOSOMA						
....HYDROPSYCHIDAE	--	15	1	11	12	4
....CHEUMATOPSYCHE	--	322	70	108	124	44
....HYDROPSYCHE	--	--	9	--	--	--
....POTAMYIA	--	--	--	--	--	4
....SYMPHITOPSYCHE	--	--	--	--	--	--
....LIMNephilidae	--	--	--	--	--	8
....APATANIA	--	--	--	--	--	1
....HYDATOPHYLAX	--	--	--	--	--	--
....LIMNephilus	--	1	--	--	--	--
..PHILOPOTAMIDAE						
....CHIMARRA	--	1	--	--	--	--
....DOLOPHILODES	--	7	--	2	--	--
....POLYCENTROPIDAE	--	--	--	--	--	--
....POLYCENTROPUS	--	1	--	--	--	--
....PSYCHOMYIIDAE	--	--	--	--	--	--
....PSYCHOMYIA	--	--	--	--	--	--
....RHACOPHILIDAE	--	--	--	--	--	--
....RHACOPHILA	--	3	--	--	--	--
MOLLUSCA (MOLLUSCS)						
..GASTROPODA						
....BASOMMATOPHORA						
....PHYSIDAE	--	1	--	--	--	8
....PHYSA						

Table 3.--Benthic-invertebrate data--Continued

[double dash indicates organism not present in sample]

01476830

EAST BRANCH CHESTER CREEK AT MILLTOWN, PA.

DATE TIME	MAY 16 70 0000	OCT 26 70 0000	MAY 17 71 0000	OCT 11 71 0000	OCT 10 72 0000	OCT 5 73 0000
TOTAL COUNT	147	83	87	24	298	234
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA						
..OLIGOCHAETA						
..PLESIOPORA						
..NAIDIDAE						
..UNKNOWN GENUS	--	--	--	--	--	--
..TUBIFICIDAE	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDRACARINA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	--	--
..INSECTA						
..COLEOPTERA						
..ELMIDAE						
..ANCYRONYX	--	--	--	--	--	--
..A. VARIATA	--	--	--	--	--	--
..DUBISAPHIA	--	--	--	--	--	--
..MACRONYCHUS	--	--	--	--	--	--
..OPTIOSERVUS	--	--	--	--	--	--
..OULIMNIUS	--	--	--	--	4	--
..STELMIUS	--	--	--	--	--	--
..HYDROPHILIDAE	--	--	--	--	--	--
..BEROSUS	--	--	--	--	--	--
..DIPTERA						
..ATHERECIDAE=RHAGIONIDAE	--	--	--	--	--	--
..ATREX	--	--	--	--	15	--
..CHIRONOMIDAE	118	--	38	2	15	--
..CARDIOCLADIUS	--	--	--	--	--	--
..CONCHAPELOPIA	--	--	--	--	--	--
..CHIRONOMUS	--	--	--	--	--	--
..ENDOCHIRONOMUS	--	--	--	--	--	--
..EUKIPEPERIELLA	--	--	--	--	--	--
..MICROTENDIPES	--	--	--	--	--	--
..ORTHOCLADIUS	--	--	--	--	--	--
..PARAMETRICNEMUS	--	--	--	--	--	--
..POLYPEDILUM	--	--	--	--	--	--
..PROCLADIUS	--	--	--	--	--	--
..PSECTROCLADIUS	--	--	--	--	--	--
..RHOZANTARSUS	--	--	--	--	--	--
..TANYTARSUS	--	--	--	--	--	--
..THIENEMANNIELLA	--	--	--	--	1	--
..EMPIDIDAE	--	--	--	--	--	--
..HEMERODROMIA	--	--	--	--	--	--
..SIMULIIDAE	--	--	--	3	7	--
..SIMULIUM	--	--	--	--	--	--
..TIPULIDAE	10	--	--	--	3	1
..ANTOCHA	--	--	--	--	--	1
..TIPULA	--	--	--	--	--	--
..EPHEMEROPTERA						
..BAETIDAE	--	--	3	--	7	--
..BAETIS	--	--	--	--	--	--
..CAENIDAE	--	--	--	--	--	--
..CAENIS	--	--	--	--	--	--
..EPHEMERELLIDAE	1	21	12	--	--	--
..EPHEMERELLA	--	--	--	--	--	--
..EPTAGENIIDAE	--	23	8	--	20	1
..STENONEMA	--	--	--	--	--	--
..HEMIPTERA						
..GERRIDAE	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--
..MEGALOPTERA						
..CORIDALIDAE	--	--	--	--	--	--
..NIGRONIA	--	--	--	--	--	--
..ODONATA						
..AGRITIDAE	--	--	--	--	--	--
..AGRION	--	--	--	--	--	--
..COENAGRIONIDAE	--	--	--	--	--	--
..AMPHIAGRION	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--
..PLECOPTERA						
..TAENIOPTERYGIDAE	--	--	--	--	--	--
..TAENIOPTERYX	--	--	--	--	--	--
..TRICHOPTERA						
..GLOSSOSOMATIDAE	--	16	4	--	--	--
..GLOSSOSOMA	--	--	--	--	--	--
..HYDROPSYCHIDAE	--	--	4	6	70	72
..CHEUMATOPSYCHE	18	23	28	13	164	158
..HYDROPSYCHE	--	--	--	--	--	--
..POZAMYIA	--	--	--	--	--	--
..SYMPHITOPSYCHE	--	--	--	--	--	--
..HYDROPTILIDAE	--	--	--	--	8	--
..HYDROPTILA	--	--	--	--	--	--
..PHILOPOTANIDAE	--	--	--	--	--	--
..CHIMARRA	--	--	--	--	--	--
MOLLUSCA (MOLLUSCS)						
..GASTROPODA						
..BASOMMATOPHORA						
..ANCYLIDAE	--	--	--	--	--	--
..FERRISSIA	--	--	--	--	--	--
..PHYSIDAE	--	--	--	--	--	--
..PHYSA	--	--	--	--	--	--
PLATYHELMINTHES (PLATWORMS)						
..TURBELLARIA						
..TRICLADIDA						
..PLANARIIDAE	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--

01476830 EAST BRANCH CHESTER CREEK AT MILLTOWN, PA.

DATE TIME	OCT 29, 74 0800	OCT 21, 76 1445	OCT 18, 77 1245	OCT 24, 78 1130	OCT 31, 79 0830	NOV 3, 80 1030
TOTAL COUNT	73	244	338	86	490	102
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA						
..OLIGOCHAETA						
..PLESIOPORA						
..NAIDIDAE						
..UNKNOWN GENUS	--	--	--	--	1	--
..TUBIFICIDAE						
..UNKNOWN GENUS	--	2	--	--	--	--
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDRACARINA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	2	--
..INSECTA						
..COLEOPTERA						
..ELMIDAE						
..ANCYRONYX	--	1	--	--	--	--
..A. VARIEGATA	--	--	--	--	2	--
..DUBIRAPHIA	--	1	1	--	1	--
..MACRONYCTHUS	--	1	--	--	--	--
..OPTIOSERTUS	--	2	--	--	4	--
..OULIMNIUS	--	1	--	--	--	--
..STENELMIS	--	1	4	--	3	4
..HYDROPHILIDAE						
..SEROSUS	--	1	--	--	--	--
..DIPTERA						
..ATHERICIDAE=RHAGIONIDAE						
..ATHERIX	--	--	8	--	--	--
..CHIRONOMIDAE	7	--	--	--	--	--
..CARDIOLADIUS	--	1	--	--	--	--
..CONCHAPELOPIA	--	--	--	--	1	--
..CRICOTOPUS	--	64	122	1	166	41
..ENDOCHIRONOMUS	--	--	4	--	--	--
..EUKIEFFERIELLA	--	--	--	--	5	--
..MICROTENDIPES	--	33	23	1	9	--
..ORTHOCLADIUS	--	--	--	3	--	--
..PARAMETRIOCNEMUS	--	--	--	--	2	--
..POLYPEDILUM	--	--	--	--	6	--
..PROCLADIUS	--	--	4	--	--	--
..PSECTROCLADIUS	--	18	--	--	--	--
..RHEOTANYTARSUS	--	7	--	--	1	--
..TANYTARSUS	--	--	26	--	--	--
..THIENEMANNIELLA	--	3	--	--	--	--
..EMPIDIDAE						
..HEMEROBROMIA	--	2	--	--	--	--
..SIMULIIDAE						
..SIMULIUM	--	2	1	--	9	7
..TIPULIDAE						
..ANTOCHA	--	4	7	--	6	--
..TIPULA	--	--	--	--	--	--
..EPHEMEROPTERA						
..BAETIDAE						
..BAETIS	--	2	--	--	1	1
..CAENIDAE						
..CAENIS	1	1	--	--	--	--
..EPHEMERELLIDAE						
..EPHEMERELLA	--	--	--	--	2	--
..HEPTAGENIIDAE						
..STENONEMA	3	3	1	6	17	8
..HEMIPTERA						
..GERRIDAE						
..UNKNOWN GENUS	--	--	1	--	--	--
..MEGALOPTERA						
..CORYDALIDAE						
..NIGRONIA	--	--	--	1	--	--
..ODONATA						
..AGRIIDAE						
..AGRION	1	--	--	--	--	--
..COENAGRIONIDAE						
..AMPHIAGRION	--	2	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	1	--
..PLECOPTERA						
..TAENIOPTERYGIDAE						
..TAENIOPTERYX	--	2	--	--	--	--
..TRICHOPTERA						
..GLOSSOSOMATIDAE						
..GLOSSOSOMA	--	--	--	--	--	--
..HYDROPSYCHIDAE						
..CHEUMATOPSYCHE	--	13	12	56	121	31
..HYDROPSYCHE	60	77	116	9	83	6
..POTAMIA	--	--	5	--	--	--
..SYMPHITOPSYCHE	--	--	--	6	43	--
..HYDROPTILIDAE						
..HYDROPTILA	--	--	--	--	1	4
..PHILOPOTAMIDAE						
..CHIMARRA	--	--	--	1	--	--
MOLLUSCA (MOLLUSCS)						
..GASTROPODA						
..BASOMMATOPHORA						
..ANCYLIDAE						
..FERRISSIA	--	--	1	2	1	--
..PHYSIDAE						
..PHISA	1	--	1	--	--	--
PLATYHELMINTHES (FLATWORMS)						
..TURBELLARIA						
..TRICLADIDA						
..PLANARIIDAE						
..UNKNOWN GENUS	--	--	1	--	2	--

Table 3.--Benthic invertebrate data--Continued

[double dash indicates organism not present in sample]

01476836

EAST BRANCH CHESTER CR AT WESTTOWN SCHOOL, PA.

DATE TIME	MAY 9, 70 0000	OCT 26, 70 0000	MAY 17, 71 0000	OCT 11, 71 0000	OCT 10, 72 0000	OCT 29, 74 0000
TOTAL COUNT	365	55	86	156	901	1333
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA						
..HIRUDINEA						
..UNKNOWN ORDER						
..UNKNOWN FAMILY						
..UNKNOWN GENUS						
..OLIGOCHAETA	--	--	--	--	--	12
..PLESIOPORA						
..TUBIFICIDAE						
..UNKNOWN GENUS	--	--	--	--	--	--
..UNKNOWN ORDER						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	--	--
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDRACARINA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	--	--
..CRUSTACEA						
..AMPHIPODA						
..TALITRIDAE						
..HYALLELLA	--	--	--	--	--	--
..H. AZTECA						
..INSECTA						
..COLEOPTERA						
..DYTISCIDAE						
..LACCOPHILUS	--	--	--	--	--	--
..ELMIDAE						
..ANCYRONYX	--	--	--	--	--	1
..DUBIRAPHIA	--	--	--	--	--	1
..OPTIOSERVUS	--	--	--	--	--	--
..STENELMIS	--	--	--	--	--	--
..PSEPHENIDAE						
..PSEPHENUS	--	--	--	--	--	--
..DIPTERA						
..CERATOPOGONIDAE=HELEIDAE	--	--	--	--	1	--
..UNKNOWN GENUS						
..CHIRONOMIDAE	208	--	22	14	25	462
..CHIRONOMUS	--	--	--	--	--	--
..CONCHAPELOPIA	--	--	--	--	--	--
..CORYNONEURA	--	--	--	--	--	--
..CRICOTOPUS	--	--	--	--	--	--
..CRYPTOCHIRONOMUS	--	--	--	--	--	--
..EUKIEFFERIELLA	--	--	--	--	--	--
..LIMNOCHIRONOMUS	--	--	--	--	--	--
..MICROPSECTRA	--	--	--	--	--	--
..MICROTENTIPES	--	--	--	--	--	--
..ORTHOCLADIUS	--	--	--	--	--	--
..PARAMETRIOCNEMUS	--	--	--	--	--	--
..PARATANTYARSUS	--	--	--	--	--	--
..POLIPEDILUM	--	--	--	--	--	--
..RHEOTANTYARSUS	--	--	--	--	--	--
..TANTYARSUS	--	--	--	--	--	--
..THIENEMANNIELLA	--	--	--	--	4	--
..EMPIDIDAE						
..HEMEROBROMIA	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--
..SIMULIIDAE						
..SIMULIUM	103	--	45	5	57	210
..TIPULIDAE						
..ANTOCHA	--	--	--	--	1	--
..EPHEMEROPTERA	44	--	--	--	--	--
..BAETIDAE						
..BAETIS	--	--	--	--	8	1
..PSEUDOCLOEON	--	--	--	--	3	--
..UNKNOWN GENUS	--	--	--	--	--	--
..CAENIDAE	--	--	--	--	--	--
..CAENIS	--	--	--	--	--	--
..EPHEMERELLIDAE	--	--	2	--	--	--
..EPHEMERELLA	--	--	--	--	--	--
..HEPTAGENIIDAE	--	--	--	--	--	--
..STENONEMA	--	--	--	7	21	2
..LEPIDOPTERA						
..PYRALIIDAE	--	--	--	--	--	--
..PARAGYCTIS	--	--	--	--	--	--
..MELALOPTERA						
..CORYDALIDAE	--	--	--	--	1	--
..NIGRONIA	--	--	--	--	--	--
..SIALIDAE	--	--	--	--	--	--
..SIALIS	--	--	--	--	--	--
..ODONATA						
..COENAGRIONIDAE	--	--	--	--	--	--
..NEHALENNIA	--	--	--	--	--	--
..TRICHOPTERA						
..HYDROPSYCHIDAE	--	--	7	111	494	370
..CHEUMATOPSYCHE	--	--	9	19	288	218
..HYDROPSYCHE	12	55	--	--	--	--
..SYMPHITOPSYCHE	--	--	--	--	--	--
..HYDROPTILAE	--	--	--	--	--	--
..HYDROPTILA	--	--	--	--	--	--
..LEUCOTRICHIA	--	--	--	--	--	--
..PHILOPOTAMIDAE	--	--	1	--	--	--
..CHIMARRA	--	--	--	--	--	--
MOLLUSCA (MOLLUSCS)						
..BIVALVIA						
..NUCULOIDEA						
..SPHAERIIDAE	--	--	--	--	--	2
..SPHAERIUM	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--
..GASTROPODA						
..BASOMMATOPHORA						
..ANCLIDAE	--	--	--	--	--	2
..FERRISSIA	--	--	--	--	--	--
..PHYSIDAE	--	--	--	--	--	1
..PHYSA	--	--	--	--	--	--
..PLANORBIDAE	--	--	--	--	--	--
..CYRAULUS	--	--	--	--	--	--
PLATYHELMINTHES (FLATWORMS)						
..TURBELLARIA						
..TRICLADIA	--	--	--	--	--	51
..PLANARIIDAE	--	--	--	--	--	--
..UNKNOWN FAMILY	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--

01476835 EAST BRANCH CHESTER CR AT WESTTOWN SCHOOL, PA.

DATE TIME	OCT 28 78 1130	OCT 18 77 1400	OCT 21 78 1515	OCT 31 79 1315	NOV 3 80 1230	NOV 3 80 1245
TOTAL COUNT	860	1094	504	49	2721	1770
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA						
..HIRUDINEA						
..UNKNOWN ORDER						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	2	--	--	--	--
..OLIGOCHAETA	--	--	--	--	--	--
..PLESIOPORA						
..TUBIFICIDAE						
..UNKNOWN GENUS	--	--	--	--	--	56
..UNKNOWN ORDER						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	2	--	--	--	8	--
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDRACARINA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	3	--	--	8	--
..CRUSTACEA						
..AMPHIPODA						
..TALITRIDAE						
..HYALIS						
..H. AZTECA	--	1	--	--	--	--
..INSECTA						
..COLEOPTERA						
..DITISCIDAE						
..LACOPHILUS	1	--	--	--	--	--
..ELMIDAE						
..ANCYRONYX	--	--	--	--	--	4
..DUSIRAPHIA	2	2	--	--	--	4
..OPTIOSERUS	2	2	--	--	4	2
..STENELMIS				1	1	24
..PSEPHENIDAE						
..PSEPHENUS	3	--	--	--	--	--
..DIPTERA						
..CERATOPOGONIDAE=HELEIDAE						
..UNKNOWN GENUS	--	--	--	--	--	8
..CHIRONOMIDAE						
..CHIRONOMUS						4
..CONCHAPELOPIA	1	4	--	--	24	20
..CORYNONEURA						
..CRICOTOPUS	34	25	48	--	8	25
..CRYPTOCHIRONOMUS	--	--	--	--	--	8
..EUKIEFFERIELLA		8	--	--	--	--
..LIMNOCHIRONOMUS					84	40
..MICROPSCTRA		52	--	--	--	--
..MICROTENDIPES		2	8	--	60	118
..ORTHOCLADIUS				11	248	152
..PARAMETRIOCNEMUS	3	--	--	--	--	4
..PARATANYTARSUS		20	--	--	28	32
..POLYPEDILUM						
..RHOTANYTARSUS	2	--	--	1	20	8
..TANYTARSUS	8	1	--	--	--	4
..THIENEMANNIELLA						12
..EMPHIDIA						
..HEMERODROMIA	1	1	18	--	--	--
..UNKNOWN GENUS	--	--	--	--	12	20
..SIMULIIDAE						
..SIMULIUM	68	78	178	--	940	384
..TIPULIDAE						
..ANTOCHA	11	4	--	4	40	16
..EPHEMEROPTERA						
..BAETIDAE						
..BAETIS	4	--	--	--	4	4
..PSEUDOCLOEON	--	--	--	--	--	--
..UNKNOWN GENUS	--	2	--	--	--	--
..CAENIDAE						
..CAENIS	--	--	--	--	8	20
..EPHEMERELLIDAE						
..EPHEMERELLA	1	--	--	--	12	--
..HEPTAGENIIDAE						
..STENONEMA	7	93	24	5	76	16
..LEPIDOPTERA						
..PYRALIDAE						
..PARAROTACTIS	--	--	--	3	--	--
..MEGALOPTERA						
..CORYDALIDAE						
..NIGRONIA	--	--	--	--	--	--
..STALIDAE						
..STALIS	--	--	--	--	--	1
..ODONATA						
..COENAGRIONIDAE						
..NEHALENNIA	--	1	--	--	--	--
..TRICHOPTERA						
..HYDROPSYCHIDAE						
..CHEUMATOPSYCHE	384	508	--	--	318	240
..HYDROPSYCHE	308	288	218	15	148	98
..SYMPHYTOPSYCHE	--	--	16	--	500	278
..HYDROPTILIDAE						
..HYDROPTILA	--	2	--	--	88	40
..LEUCOTRICHIA	--	8	--	1	32	8
..PHILOPOTAMIDAE						
..CHIMARRA	--	--	--	1	--	--
MOLLUSCA (MOLLUSCS)						
..BIVALVIA						
..NUCULOIDEA						
..SPHAERIIDAE						
..SPHAERIUM	2	--	--	3	--	--
..UNKNOWN GENUS	--	--	--	--	--	--
..GASTROPODA						
..BASOMMATOPHORA						
..ANCYLIDAE						
..FERRISSIA	2	7	--	4	--	--
..PHYSIDAE						
..PHYSA	--	--	--	--	4	--
..PLANORBIDAE						
..CYRAULUS	--	1	--	--	--	--
PLATYHELMINTHES (FLATWORMS)						
..TURBELLARIA						
..TRICLADIDA						
..PLANARIIDAE	--	--	--	--	--	--
..UNKNOWN FAMILY						
..UNKNOWN GENUS	3	--	--	--	68	112

Table 3.--Benthic-invertebrate data--Continued
[double dash indicates organism not present in sample]

01478120 EAST BRANCH WHITE CLAY CREEK AT AVONDALE, PA.

DATE TIME	OCT. 27, 70 0000	MAY 18, 71 0000	OCT. 12, 71 0000	OCT. 17, 72 0000	OCT. 8, 73 0000
TOTAL COUNT	76	140	26	202	293
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA					
..OLIGOCHAETA					
..PLESIOPORA					
..NAIDIDAE					
...UNKNOWN GENUS	--	--	--	--	--
ARTHROPODA (ARTHROPODS)					
..ARACHNIDA					
..HYDRACARINA					
...UNKNOWN FAMILY					
...UNKNOWN GENUS	--	--	--	--	--
..INSECTA					
..COLEOPTERA					
...DRYOPIDAE					
...ELMIDAE					
...ANCYRONYX					
...A. VARIEGATA					
...MACRONYCHUS					
...M. GLABRATUS					
...OPTIOSERVUS					5
...OULIMNIUS					
...STENELMIS					
..HYDROPHILIDAE					
...BEROSUS					
..PSEPHENIDAE					
..PSEPHENUS					
..DIPTERA					
...ATHERICIDAE=RHAGIONIDAE					
...ATHERIX					
...A. VARIEGATA					
..CHIRONOMIDAE		27		81	38
...CARDIOLADIUS					
...CONCHAPELOPIA					
...CRICOTOPIUS					
...EUKIEFFERIELLA					
...LINNOCHIRONOMUS					
...MICROTENDIPES					
...NANOCLADIUS					
...ORTHOCLADIUS					
...PARAMETRIOCNEMUS					
...POLYPTILUM					
...RHEOTANTARSUS					
...THIENEMANNIELLA					
..EMPIDIDAE				6	
..HEMERODROMIA					
...UNKNOWN GENUS					
..SIMULIIDAE					
...SIMULIUM		97	7	2	16
..TIPULIDAE				20	41
..ANTOCHA					
..EPHEMEROPTERA					
...BAETIDAE					
...BAETIS	4	14	3	1	6
...PSEUDOCLOEON					
...UNKNOWN GENUS	--	--	--	--	--
..EPHEMERELLIDAE					
...EPHEMERELLA	7	--	4	--	--
..HEPTAGENIIDAE					
...STENONEMA	3	--	3	5	--
..SIPHONURIDAE					
...ISONYCHIA	--	--	--	--	--
..TRICORYTHIDAE					
..TRICORYTHODES	--	--	--	--	--
..HEMIPTERA					
..VELUTIA					
..RHAGOVIELIA	--	--	--	--	1
..ODONATA					
..AESHNIDAE					
..SOXYERIA	--	--	--	1	--
..AGRYTIDAE					
..ACRION	--	--	--	--	--
..COENAGRIONIDAE					
...UNKNOWN GENUS	--	--	--	--	--
..PLECOPTERA					
..TAeniopterygidae					
..TAENIOPTERYX	--	--	--	--	--
..TRICHOPTERA					
...HYDROPSYCHIDAE					
...CHEUMATOPSYCHE			7	44	93
...HYDROPSYCHE	62	--	2	40	87
...SYMPHITOPSYCHE			--	--	--
...HYDROPTILIDAE				2	--
...HYDROPTILA	--	--	--	--	--
...LEUCOTRICHIA	--	--	--	--	3
...OCHROTRICHIA	--	--	--	--	--
..PHILOPOTAMIDAE					
..CHIMARRA	--	--	--	--	--
...UNKNOWN FAMILY	--	2	--	--	--
...UNKNOWN GENUS	--	--	--	--	--
MOLLUSCA (MOLLUSCS)					
..BIVALVIA					
...NUCHULIDAE					
...SPHAERIIDAE					
...UNKNOWN GENUS	--	--	--	--	--
GASTROPODA					
..BASOMMATOPHORA					
..ANCYLIDAE	--	--	--	--	--
..FERRISSIA	--	--	--	--	--
NEMATODA (NEMATODES)					
..UNKNOWN CLASS					
..UNKNOWN ORDER					
..UNKNOWN FAMILY					
..UNKNOWN GENUS	--	--	--	--	--
PLATYHELMINTHES (FLATWORMS)					
..TURBELLARIA					
..TRICLADIDA					
...PLANARIIDAE	--	--	--	--	3
...UNKNOWN GENUS	--	--	--	--	--
...UNKNOWN FAMILY	--	--	--	--	--
...UNKNOWN GENUS	--	--	--	--	--
..UNKNOWN ORDER					
..UNKNOWN FAMILY	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--

01478120 EAST BRANCH WHITE CLAY CREEK AT AVONDALE, PA.					
DATE	OCT 28 78	NOV 1 77	OCT 25 78	NOV 8 79	NOV 20 80
TIME	1445	1330	1230	1330	1500
TOTAL COUNT	820	935	181	855	1188
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA					
..OLIGOCHAETA					
..PLESIOPORA					
..NAIDIDAE					
....UNKNOWN GENUS	--	--	--	21	--
ARTHROPODA (ARTHROPODS)					
..ARACHNIDA					
..HYDRACARINA					
....UNKNOWN FAMILY					
....UNKNOWN GENUS	3	2	--	4	12
..INSECTA					
....COLEOPTERA					
.....DORYCTIDAE					
.....HELICUS	--	1	--	--	--
.....ELMIDAE	--	--	--	--	--
.....ANCYRONYX	--	--	--	6	4
.....A. VARIEGATA	--	--	--	--	--
.....MACRONYCHUS					
.....H. GLABRATUS	81	12	9	47	8
.....OPTIDAE	7	15	2	28	--
.....OULINUS		2	--	10	--
.....STENELMIS					
.....HYDROPHILIDAE	--	--	--	1	--
.....BEROSUS	--	--	--	2	--
.....PSEPHENIDAE	1	--	--	--	--
.....PSEPHENUS					
..DIPTERA					
....ATHERICIDAE=RHAGIONIDAE					
.....ATHERIX	--	1	--	--	--
.....A. VARIEGATA	--	--	--	1	--
....CHIRONOMIDAE	--	--	--	--	--
.....CARDIOCLADIUS	4	1	--	9	--
.....CONCHASPIDIA					
.....CHICOTOBUS	78	102	--	83	--
.....EUKIEFFERIELLA	--	--	4	3	--
.....LIMNOCHIRONOMUS	--	--	--	--	12
.....MICROTENDIPES	--	4	--	--	--
.....NANOCLADIUS	--	--	--	--	8
.....ORTHOCLEIDIUS	12	--	5	--	92
.....PARAMETRIOCNEMUS	--	--	--	--	4
.....POLYPEDILUM	--	--	1	--	--
.....RHEOTANTANUS	--	210	--	15	4
.....THIENWANNIELLA	10	1	--	--	--
.....EMPIDIDAE	--	--	--	--	--
.....HEMERODROMIA	23	18	--	4	--
.....UNKNOWN GENUS	--	--	2	--	--
..SIMULIIDAE					
.....SIMULIUM	83	41	1	13	32
..TIPULIDAE					
.....ANTOCHA	35	74	8	135	216
..EPHEMEROPTERA					
....BAETIDAE					
.....BAETIS	--	--	--	1	--
....PSEUDOCLOEON	1	3	--	8	8
....UNKNOWN GENUS	--	1	--	--	--
....EPHEMERELLIDAE	--	--	--	--	--
....EPHEMERELLA	--	--	--	--	--
....HEPTAGENIIDAE					
.....STENONEMA	3	2	4	11	28
....SIPHONURIDAE					
.....SONYCHIA	--	--	2	3	--
....TRICORYTHIDAE					
.....TRICORYTHODES	--	--	--	3	--
..HEMIPTERA					
....VELLIDAE					
.....RHAGOVIELIA	--	--	--	--	--
..ODONATA					
....AESHNIDAE					
.....BOYERII	--	--	--	--	--
....AGRIIDAE					
.....AGRION	--	1	--	--	--
....COENAGRIONIDAE					
....UNKNOWN GENUS	--	--	--	--	4
..PLECOPTERA					
....TAENIOPTERYGIDAE					
.....TAENIOPTERYX	3	5	--	7	4
..TRICHOPTERA					
....HYDROPTERIDAE					
.....CHEUMATOPSYCHE	87	144	20	47	48
.....HYDROPSYCHE	229	248	32	171	36
.....SYMPHITOPSYCHE	--	--	96	103	144
.....HYDROPTILIDAE					
.....HYDROPTIL	--	21	--	--	4
.....LEUCOTRICHIA	79	19	8	34	372
.....OCHROTRICHIA	1	--	--	--	--
.....PHILOPOTAMIDAE					
.....CHIMARRIS	--	--	--	1	--
....UNKNOWN FAMILY	--	--	--	--	--
....UNKNOWN GENUS	--	--	--	--	--
MOLLUSCA (MOLLUSCS)					
..BIVALVIA					
....NUCULOIDEA					
.....SPHAERIIDAE					
....UNKNOWN GENUS	--	--	--	--	4
..GASTROPODA					
....BASOMMATOPHORA					
.....ANCYLIDAE					
.....FERRISSIA	1	3	2	--	--
NEMATODA (NEMATODES)					
..UNKNOWN CLASS					
....UNKNOWN ORDER					
.....UNKNOWN FAMILY					
.....UNKNOWN GENUS	--	3	--	--	--
PLATYHELMINTHES (FLATWORMS)					
..TURBELLARIA					
....TRICLADIDA					
.....PLANARIIDAE	--	--	--	--	--
....UNKNOWN GENUS	--	--	--	82	--
....UNKNOWN FAMILY					
.....UNKNOWN GENUS	84	--	--	--	144
....UNKNOWN ORDER					
.....UNKNOWN FAMILY					
.....UNKNOWN GENUS	--	1	--	--	--

Table 3.--Benthic-invertebrate data--Continued
[double dash indicates organism not present in sample]

DATE TIME	01478190 EAST BRANCH WHITE CLAY CREEK AT WICKERTON, PA.					
	JUN 2 70 0000	OCT 27 70 0000	MAY 18 71 0000	OCT 12 71 0000	OCT 17 72 0000	OCT 8 73 0000
TOTAL COUNT	88	61	116	13	677	290
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA						
..OLIGOCHAETA	--	--	--	--	--	--
..UNKNOWN ORDER	--	--	--	--	--	--
..UNKNOWN FAMILY	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDRACARINA						
..UNKNOWN FAMILY	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--
..CRUSTACEA						
..ISOPODA						
..ASELLIDAE	--	--	--	--	--	--
..ASELLUS	--	--	--	--	--	--
..LIRCEUS	--	--	--	--	--	--
..INSECTA						
..COLEOPTERA						
..DRYOPTERIDAE	--	--	--	--	--	--
..HELICHUS	--	--	--	--	--	--
..ELMIDAE	--	--	--	--	--	--
..OPTIOSERYUS	--	--	--	--	1	2
..GULIMELUS	--	--	--	--	--	--
..STEMELMIS	--	--	--	--	--	1
..UNKNOWN GENUS	--	--	--	--	--	--
..DIPTERA						
..ATHERICIDAE=RHAGIONIDAE	--	--	--	--	--	--
..ATHERIX	--	--	--	--	--	--
..CHIRONOMIDAE	30	1	56	--	188	60
..ABLABESMYIA	--	--	--	--	--	--
..CARDIOCLADIUS	--	--	--	--	--	--
..CONCHAPELOPIA	--	--	--	--	--	--
..CRICOTOPUS	--	--	--	--	--	--
..DIAMESA	--	--	--	--	--	--
..EUKIEFFERIELLA	--	--	--	--	--	--
..GOELDICHIRONOMUS	--	--	--	--	--	--
..LIMNOCHIRONOMUS	--	--	--	--	--	--
..MICROPSYCHE	--	--	--	--	--	--
..MICROTENDIPES	--	--	--	--	--	--
..NANOCLADIUS	--	--	--	--	--	--
..ORTHOCLADIUS	--	--	--	--	--	--
..PARANETRICNEMUS	--	--	--	--	--	--
..PARATANYTARSUS	--	--	--	--	--	--
..RHEOTANYTARSUS	--	--	--	--	--	--
..TANYTARSUS	--	--	--	--	--	--
..THIENEMANNIELLA	--	--	--	--	--	--
..EMPIDIDAE	--	--	--	--	1	--
..HEMERODROMIA	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--
..SIMULIIDAE						
..TIPULIDAE	40	--	30	2	2	225
..TIPULIDAE	--	--	--	--	--	--
..ANTOCHA	--	--	--	--	14	--
..HELIUS	--	--	--	--	1	1
..EPHEMEROPTERA						
..BETULIDAE						
..PSEUDOCLOEON	8	4	6	--	6	--
..EPHEMERELLIDAE	--	--	--	--	11	--
..EPHEMERELLA	--	5	3	--	--	--
..HEPTAGENIIDAE	--	--	--	--	--	--
..STENONEMA	--	1	1	--	30	--
..SIPHONURIDAE	--	--	--	--	--	--
..IGONYCHIA	--	--	--	--	7	--
..MEGALOPTERA						
..CORDYDALIDAE	--	--	--	--	--	--
..CORDYDALUS	--	--	--	--	--	--
..NIGRONIA	--	--	--	--	--	--
..PLECOPTERA						
..PERLLIDAE						
..ACRONETURIA	--	1	--	--	--	--
..TRICHOPTERA						
..BRACHYCENTRIDAE	--	--	--	--	--	--
..MICRASEMA	--	--	--	--	--	--
..HYDROPSYCHIDAE	--	--	--	--	17	--
..CHEUMATOPSYCHE	--	--	7	8	136	--
..DIPLECTRONA	--	--	--	--	--	--
..HYDROPSYCHE	8	49	13	3	260	--
..SYMPHYTOPSYCHE	--	--	--	--	--	--
..HYDROPTILIDAE	--	--	--	--	--	--
..HYDROPTILA	--	--	--	--	4	--
..LEUCOTRICHIA	--	--	--	--	--	--
..PHILOPOTAMIDAE	--	--	--	--	--	--
..CHIMARRA	--	--	--	--	1	--
..DOLOPHILODES	--	--	--	--	--	--
MOLLUSCA (MOLLUSCS)						
..GASTROPODA						
..BASOMMATOPHORA						
..ANCYLIDAE						
..FERRISSIA	--	--	--	--	--	--
..PHYSIDAE	--	--	--	--	--	--
..PHYSA	--	--	--	--	--	--
PLATYHELMINTHES (PLATWORMS)						
..TURBELLARIA						
..TRICLADIDA						
..PLANARIIDAE	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--
..UNKNOWN FAMILY	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--
..UNKNOWN ORDER	--	--	--	--	--	--
..UNKNOWN FAMILY	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--

01478190

EAST BRANCH WHITE CLAY CREEK AT WICKERTON, PA.

DATE TIME	OCT 30 74 0000	NOV 09 76 0930	NOV 15 77 1500	NOV 06 79 1130	NOV 20 80 1230
--------------	-------------------	-------------------	-------------------	-------------------	-------------------

TOTAL COUNT	156	174	283	84	1378
-------------	-----	-----	-----	----	------

ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT
----------	-------	-------	-------	-------	-------

ANNELIDA					
----------	--	--	--	--	--

...OLIGOCHAETA	4	--	--	--	--
----------------	---	----	----	----	----

...UNKNOWN ORDER	--	--	--	--	--
------------------	----	----	----	----	----

...UNKNOWN FAMILY	--	--	--	--	852
-------------------	----	----	----	----	-----

...UNKNOWN GENUS	--	--	--	--	--
------------------	----	----	----	----	----

ARTHROPODA (ARTHROPODS)					
-------------------------	--	--	--	--	--

...ARACHNIDA					
--------------	--	--	--	--	--

...HYDRACARINA					
----------------	--	--	--	--	--

...UNKNOWN FAMILY	--	--	1	--	24
-------------------	----	----	---	----	----

...UNKNOWN GENUS	--	--	--	--	--
------------------	----	----	----	----	----

...COLEOPTERA					
---------------	--	--	--	--	--

...ASCELLIDAE					
---------------	--	--	--	--	--

...ASELLUS	--	--	--	--	4
------------	----	----	----	----	---

...CIRCEUS	--	--	--	1	--
------------	----	----	----	---	----

...INSECTA					
------------	--	--	--	--	--

...COLEOPTERA					
---------------	--	--	--	--	--

...DRYOPIDAE					
--------------	--	--	--	--	--

...HELICUS	--	--	--	1	--
------------	----	----	----	---	----

...ELMIDAE					
------------	--	--	--	--	--

...OPTIOSERVUS	4	1	--	3	4
----------------	---	---	----	---	---

...OULIMNIUS	--	1	--	--	--
--------------	----	---	----	----	----

...STENELMIS	--	--	--	--	--
--------------	----	----	----	----	----

...UNKNOWN GENUS	--	--	1	--	--
------------------	----	----	---	----	----

...DIPTERA					
------------	--	--	--	--	--

...ATHERICIDAE-RHAGIONIDAE					
----------------------------	--	--	--	--	--

...ATHERIX	--	--	--	--	--
------------	----	----	----	----	----

...CHIRONOMIDAE	--	--	--	--	--
-----------------	----	----	----	----	----

...ABLABESMYIA	--	--	--	1	--
----------------	----	----	----	---	----

...CARDIOCLADIUS	--	--	--	--	8
------------------	----	----	----	----	---

...CONCHAPELOPIA	--	--	--	1	--
------------------	----	----	----	---	----

...CRICOTOPUS	--	40	5	13	32
---------------	----	----	---	----	----

...DIAMESA	--	--	--	--	8
------------	----	----	----	----	---

...EUKTIPERIELLA	--	--	--	--	4
------------------	----	----	----	----	---

...GOELDICHIRONOMUS	--	--	--	--	--
---------------------	----	----	----	----	----

...LIMNOCHIRONOMUS	--	--	4	1	56
--------------------	----	----	---	---	----

...MICROPSECTRA	--	1	4	1	56
-----------------	----	---	---	---	----

...MICROTENDIPES	--	--	--	1	--
------------------	----	----	----	---	----

...NANOCLADIUS	--	--	--	--	53
----------------	----	----	----	----	----

...ORTHOCCLADIUS	--	11	--	--	4
------------------	----	----	----	----	---

...PARAMETRICNEMUS	--	--	--	--	68
--------------------	----	----	----	----	----

...PARATANTYARSUS	--	--	--	--	27
-------------------	----	----	----	----	----

...RHEOTANTYARSUS	--	17	40	28	32
-------------------	----	----	----	----	----

...TANYTARSUS	--	--	--	--	--
---------------	----	----	----	----	----

...THIENEMANNIELLA	--	3	--	2	--
--------------------	----	---	----	---	----

...EMPIDIDAE	--	--	--	--	--
--------------	----	----	----	----	----

...HEMERODROMIA	--	--	72	10	68
-----------------	----	----	----	----	----

...UNKNOWN GENUS	--	--	--	--	--
------------------	----	----	----	----	----

...SIMULIIDAE					
---------------	--	--	--	--	--

...SIMULIUM	--	18	20	2	44
-------------	----	----	----	---	----

...TIPULIDAE	--	--	--	--	--
--------------	----	----	----	----	----

...ANTOCHA	--	8	--	5	--
------------	----	---	----	---	----

...EPTEROPTERA	2	--	--	--	--
----------------	---	----	----	----	----

...BAETIDAE					
-------------	--	--	--	--	--

...BAETIS	--	--	--	1	--
-----------	----	----	----	---	----

...PSEUDOCLOSON	--	--	--	--	--
-----------------	----	----	----	----	----

...EPHEMERELLIDAE					
-------------------	--	--	--	--	--

...EPHEMERELLA	--	--	--	--	--
----------------	----	----	----	----	----

...HEPTAGENIIDAE	--	--	--	--	--
------------------	----	----	----	----	----

...STENOENEMA	--	--	--	2	--
---------------	----	----	----	---	----

...SPILONURIDAE	--	--	--	--	--
-----------------	----	----	----	----	----

...SONYCHIA	--	--	--	--	--
-------------	----	----	----	----	----

...MEGALOPTERA					
----------------	--	--	--	--	--

...CORYDALIDAE					
----------------	--	--	--	--	--

...CORYDALUS	--	--	2	--	--
--------------	----	----	---	----	----

...NIGRONIA	--	1	1	--	--
-------------	----	---	---	----	----

...PLECOPTERA					
---------------	--	--	--	--	--

...PERLIDAE					
-------------	--	--	--	--	--

...ACHONEURIA	--	--	--	--	--
---------------	----	----	----	----	----

...TRICHOPTERA					
----------------	--	--	--	--	--

...BRACHYCENTRIDAE					
--------------------	--	--	--	--	--

...MICRASEMA	--	1	--	--	--
--------------	----	---	----	----	----

...HYDROPSYCHIDAE	--	--	--	--	--
-------------------	----	----	----	----	----

...CHEIMATOPSYCHE	58	8	102	2	12
-------------------	----	---	-----	---	----

...DIPLECTERONA	--	--	--	1	--
-----------------	----	----	----	---	----

...HYDROPSYCHE	83	61	22	3	--
----------------	----	----	----	---	----

...SYMPHITOPSYCHE	--	--	--	--	4
-------------------	----	----	----	----	---

...HYDROPTILIDAE					
------------------	--	--	--	--	--

...HYDROPTILA	--	--	--	--	4
---------------	----	----	----	----	---

...LEUCOTRICHIA	--	1	1	--	--
-----------------	----	---	---	----	----

...PHILOPOTAMIDAE					
-------------------	--	--	--	--	--

...CHIMARRA	--	--	--	--	4
-------------	----	----	----	----	---

...DOLOPHILODES	--	--	--	--	--
-----------------	----	----	----	----	----

MOLLUSCA (MOLLUSCS)					
---------------------	--	--	--	--	--

...GASTROPODA					
---------------	--	--	--	--	--

...BASOMMATOPHORA					
-------------------	--	--	--	--	--

...ANCYLIDAE					
--------------	--	--	--	--	--

...FERRISSIA	--	1	2	--	12
--------------	----	---	---	----	----

...PHYSIDAE	--	--	--	--	--
-------------	----	----	----	----	----

...PHYSA	--	--	--	--	1
----------	----	----	----	----	---

PLATYHELMINTHES (PLATWORMS)					
-----------------------------	--	--	--	--	--

...TUBELLARIA					
---------------	--	--	--	--	--

...TRICLADIDA					
---------------	--	--	--	--	--

...PLANARIIDAE	5	--	--	--	--
----------------	---	----	----	----	----

...UNKNOWN GENUS	--	--	--	4	--
------------------	----	----	----	---	----

...UNKNOWN FAMILY	--	1	--	--	48
-------------------	----	---	----	----	----

...UNKNOWN ORDER	--	--	--	--	--
------------------	----	----	----	----	----

...UNKNOWN FAMILY	--	--	10	--	--
-------------------	----	----	----	----	----

...UNKNOWN GENUS	--	--	--	--	--
------------------	----	----	----	----	----

Table 3.--Benthic-invertebrate data--Continued
[double dash indicates organism not present in sample]

01478220 W BR WHITE CLAY CR NR CHESTERTVILLE, PA.						
DATE TIME	JUN 2, 70 0000	OCT 27, 70 0000	MAY 24, 71 0000	OCT 17, 72 0000	OCT 8, 73 0000	NOV 6, 75 1330
TOTAL COUNT	19	42	19	387	259	669
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA						
..OLIGOCHAETA	--	--	--	--	--	--
..PLESIPODA	--	--	--	--	--	--
..UNKNOWN ORDER	--	--	--	--	--	--
..UNKNOWN FAMILY	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDRACARINA						
..UNKNOWN FAMILY	--	--	--	--	--	1
..UNKNOWN GENUS	--	--	--	--	--	--
..INSECTA						
..COLEOPTERA						
..ELMIDAE	--	--	--	2	--	9
..STENELMIS	--	--	--	--	--	--
..DIPTERA						
..CERATOPOGONIDAE=HELSIDAE	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--
..CHIRONOMIDAE	11	--	--	65	--	7
..ABLABESMYIA	--	--	--	--	--	--
..CARDIOCLADIUS	--	--	--	--	--	58
..CONCHAELOPIA	--	--	--	--	--	--
..CRICOPUS	--	--	--	--	--	15
..EPIEPTERIELLA	--	--	--	--	--	--
..LIMNOCHIRONOMUS	--	--	--	--	--	15
..METRIOCNEMUS	--	--	--	--	--	--
..MICROTENDIPES	--	--	--	--	--	29
..ORTHOCADUS	--	--	--	--	--	--
..POLYPEDILUM	--	--	--	--	--	--
..PSEUDODIAMESA	--	--	--	--	--	--
..RHEGTANETARSUS	--	--	--	--	--	36
..TANYTARSUS	--	--	--	--	--	--
..THIENEMANNIELLA	--	--	--	--	--	7
..UNKNOWN GENUS	--	--	--	--	--	--
..EMPIDIDAE	--	--	--	4	--	9
..HEMERODROMIA	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--
..SIMULIIDAE	--	--	10	2	--	5
..SIMULIUM	--	--	--	--	--	--
..TIPULIDAE	--	--	--	10	2	20
..ANTOCHA	--	--	--	--	--	--
..EPHEMEROPTERA						
..BAETIDAE						
..BAETIS	1	2	5	1	--	--
..PSEUDOCLOEON	--	--	--	6	--	6
..EPHEMERELLIDAE						
..EPHEMERELLA	1	1	4	1	--	2
..HEPTAGENIIDAE						
..STENONEMA	--	8	--	20	4	6
..SIPHONURIDAE	--	--	--	52	17	2
..SCOTICA	--	--	--	--	--	--
..MEGALOPTERA						
..CORYDALIDAE	--	--	--	--	1	--
..CORYDALUS	--	--	--	--	--	1
..PLECOPTERA						
..UNKNOWN FAMILY	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--
..CAPNIIDAE	--	--	--	--	--	--
..UNKN GENUS	--	--	--	--	--	--
..PERLODIDAE	--	--	--	1	--	--
..ISOPTERA						
..TAENIOPTERYGIDAE	--	--	--	--	--	--
..TAENIOPTERYX	--	--	--	--	--	--
..TRICHOPTERA						
..GLOSSOSOMATIDAE	--	--	--	1	--	--
..GLOSSOSOMA	--	--	--	--	--	--
..HYDROPSYCHIDAE	--	--	--	55	64	168
..CHEUMATOPSYCHE	--	--	--	145	168	251
..HYDROPSYCHE	6	31	--	--	--	--
..MACRONEMA	--	--	--	--	--	--
..PARAPSYCHE	--	--	--	--	--	--
..SYMPHITOPSYCHE	--	--	--	--	--	--
..HYDROPTILIDAE	--	--	--	--	--	--
..HYDROPTILA	--	--	--	--	--	--
..LEDCOTRICHIA	--	--	--	--	3	2
..PHILOPOTAMIDAE	--	--	--	--	--	--
..CHIMARRA	--	--	--	2	--	--
..DOLOPHILODES	--	--	--	--	--	--
MOLLUSCA (MOLLUSCS)						
..GASTROPODA						
..BASOMMATOPHORA						
..ANCLIDAE	--	--	--	--	--	--
..FERRISSIA	--	--	--	--	--	--
..LYMNAEIDAE	--	--	--	--	--	--
..LYMNAEA	--	--	--	--	--	--
..PHYSIDAE	--	--	--	--	--	--
..PHYSA	--	--	--	--	--	--
PLATYHELMINTHES (FLATWORMS)						
..TURBELLARIA						
..TRICLADIDA						
..PLANARIIDAE						
..UNKNOWN GENUS	--	--	--	--	--	--
..UNKNOWN FAMILY	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--

01478220 W-BR-WHITE-CLAY-CR-NR-CHESTERVILLE, PA.

DATE TIME	NOV 1, 78 1030	NOV 1, 77 1530	OCT 26, 78 0845	NOV 6, 79 1030	NOV 20, 80 1345
TOTAL COUNT	391	823	205	80	908
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA					
..OLIGOCHAETA	--	--	--	--	8
..PLESIOPODA	--	--	--	--	--
..UNKNOWN ORDER	--	--	--	--	--
..UNKNOWN FAMILY	--	--	--	--	--
..UNKNOWN GENUS	2	--	--	--	--
ARTHROPODA (ARTHROPODS)					
..ARACHNIDA					
..HYDRACARINA					
..UNKNOWN FAMILY					
..UNKNOWN GENUS	1	--	--	--	36
..INSECTA					
..COLEOPTERA					
..ELMIDAE					
..OPTIOSERVUS	16	9	--	1	8
..STENELMIS	1	--	--	--	--
..DIPTERA					
..CERATOPOGONIDAE=HELEIDAE					
..UNKNOWN GENUS	--	1	--	--	--
..CHIRONOMIDAE	--	--	--	--	--
..ABLABESMYIA	--	--	--	--	--
..CARDIOLADIUS	--	--	--	--	--
..CONCHAPELOPIA	3	--	--	--	--
..CRICOTOPUS	39	23	--	8	--
..EUKIEFFERIELLA	2	--	--	1	--
..LIMNOCHIRONOMUS	--	--	--	--	4
..METRICHEMUS	--	--	--	--	--
..MICROTENDIPES	4	--	--	--	--
..ORTHOCCLADIUS	14	--	--	1	32
..POLYPEDILUM	12	--	--	--	--
..PSEUDOPANES	--	--	--	--	--
..RHEOTANYTARSUS	--	95	--	--	140
..TANYTARSUS	50	--	--	--	--
..THIENEMANNIELLA	1	2	--	--	--
..UNKNOWN GENUS	--	--	36	--	--
..EMPIDIDAE	--	--	--	--	--
..HEMERODROMIA	1	8	--	--	--
..UNKNOWN GENUS	--	--	--	--	28
..SIMULIIDAE	5	2	1	8	8
..TIPULIDAE	15	34	6	15	56
..ANTOCHA					
..EPHEMEROPTERA					
..BAETIDAE	--	--	--	--	--
..PSEUDOCLOEON	1	13	--	--	4
..EPHEMERELLIDAE	--	--	--	--	--
..EPHEMERELLA	1	2	1	--	--
..HEPTAGENIIDAE	2	42	--	--	--
..STENONEMA	--	--	--	--	--
..SIDHLONURIDAE					
..ISONYCHIA	3	--	4	--	--
..MEGALOPTERA					
..CORHAGIDAE	--	2	--	--	--
..CORYDALUS	--	--	--	--	--
..PLECOPTERA					
..UNKNOWN FAMILY					
..UNKNOWN GENUS	2	--	--	--	--
..CAPNIDAE	--	1	--	--	--
..UNKN GENUS	--	--	--	--	--
..PERLODIDAE	--	--	--	--	--
..ISOPERLA	--	--	--	--	--
..TAENIOPTERYGIDAE	--	--	--	--	--
..TAENIOPTERYX	--	--	--	1	--
..TRICHOPTERA					
..GLOSSOSOMATIDAE					
..GLOSSOSOMA	1	--	--	--	--
..HYDROPSYCHIDAE					
..CHEUMATOPSYCHE	27	188	46	12	200
..HYDROPSYCHE	176	380	94	8	16
..MACRONEMA	--	--	9	--	--
..PARAPSYCHE	--	--	2	--	--
..SYMPHYTOPSYCHE	--	--	--	22	268
..HYDROPTILIDAE	--	--	--	--	--
..HYDROPTILA	--	--	6	--	--
..LEUCOTRICHIA	--	16	--	--	92
..PHILOPTAMIDAE	--	--	--	--	--
..CHIMARRA	--	4	--	--	--
..DOLOPHILODES	1	--	--	--	--
MOLLUSCA (MOLLUSCS)					
..GASTROPODA					
..BASOMMATOPHORA					
..ANCYLIDAE					
..FERRESSIA	1	4	--	1	--
..LYMNAEIDAE	--	--	--	--	4
..LYMNAEA	--	--	--	--	--
..PHYSIDAE	1	--	--	--	--
..PHYSA					
PLATYHELMINTHES (PLATWORMS)					
..TURBELLARIA					
..TRICLADIDA					
..PLANARIIDAE					
..UNKNOWN GENUS	--	--	--	2	--
..UNKNOWN FAMILY	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	4

Table 3.--Benthic-invertebrate data--Continued

[double dash indicates organism not present in sample]

01479680 WEST BRANCH RED CLAY CR AT KENNETT SQUARE, PA

DATE TIME	JUN 2 70 0000	OCT 27 70 0000	MAY 18 71 0000	OCT 12 71 0000	OCT 17 72 0000	OCT 8 73 0000
TOTAL COUNT	81	182	185	30	177	108
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA						
..OLIGOCHAETA	--	--	--	--	--	1
..PLESIOPORA						
..NAIDIDAE						
...UNKNOWN GENUS	--	--	--	--	--	--
..UNKNOWN ORDER						
...UNKNOWN FAMILY						
...UNKNOWN GENUS	--	--	--	--	--	--
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDRACARINA						
...UNKNOWN FAMILY						
...UNKNOWN GENUS	--	--	--	--	--	--
..CRUSTACEA						
..AMPHIPODA						
...GAMMARIDAE	--	--	--	--	--	--
...CANARUS						
..ISOPODA						
...ASELLIDAE	--	--	--	--	--	--
..INSECTA						
..COLEOPTERA						
..ELMIDAE						
...OPTIOSERVUS	--	--	--	--	--	--
..DIPTERA						
...CHIRONOMIDAE	41	--	88	--	18	7
...CHAETOCLOTIUS	--	--	--	--	--	--
...CHIRONOMUS	--	--	--	--	--	--
...CRICOTOPUS	--	--	--	--	--	--
...EUKIEFFERIELLA	--	--	--	--	--	--
...GOELDICHIRONOMUS	--	--	--	--	--	--
...LYMNOCHIRONOMUS	--	--	--	--	--	--
...ORTHOCLODIUS	--	--	--	--	--	--
...POLYPEDILUM	--	--	--	--	--	--
...PSEUDOCLODIUS	--	--	--	--	--	--
...RECHTANYTARSUS	--	--	--	--	--	--
...THIENEMANNIELLA	--	--	--	--	--	--
..EMPIDIDAE	--	--	--	--	3	--
...HEMEROBROMIA	--	--	--	--	--	--
..SIMULIDAE						
...TIPULIDAE	26	182	117	9	145	3
..ANTOCHA	--	--	--	--	--	1
..EPHEMEROPTERA						
...BAETIDAE						
...BAETIS	8	--	--	--	--	--
...PSEUDOCLOEON	--	--	--	--	--	--
..EPHEMERELLIDAE	--	--	--	--	--	--
...EPHEMERELLA	--	--	--	--	--	--
...HEPTAGENITIDAE	--	--	--	--	--	--
..STENONEMA	--	--	--	1	--	--
..TRICHOPTERA						
...HYDROPSYCHIDAE	--	--	--	2	9	78
...CHEIMATOPSYCHE	--	--	--	18	2	18
...HYDROPSYCHE	6	--	--	--	--	--
...MACRONEMA	--	--	--	--	--	--
...SYMPHITOPSYCHE	--	--	--	--	--	--
...HYDROPTILIDAE	--	--	--	--	--	--
...OCHROTRICHA	--	--	--	--	--	--
MOLLUSCA (MOLLUSCS)						
..GASTROPODA						
...BASOMMATOPHORA						
...ANCYLIDAE						
...FERRISSIA	--	--	--	--	--	--
...LYMNAEIDAE	--	--	--	--	--	--
...LYMNAEA	--	--	--	--	--	--
...PHYSIDAE	--	--	--	--	--	--
...PHYSA	--	--	--	--	--	--
...PLANORBIDAE	--	--	--	--	--	--
...MENETUS	--	--	--	--	--	--
PLATYHELMINTHES (FLATWORMS)						
..TURBELLARIA						
...TRICLADIDA						
...PLANARIIDAE						
...UNKNOWN GENUS	--	--	--	--	--	--

01479680 WEST BRANCH RED CLAY CR AT KENNETT SQUARE, PA						
DATE	NOV 6, 75	OCT 29, 76	NOV 1, 77	OCT 25, 78	NOV 6, 79	NOV 17, 80
TIME	1030	1245	1000	1145	0800	0945
TOTAL COUNT	60	172	70	20	29	566
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA						
..OLIGOCHAETA	--	--	--	--	--	--
..PLESIOPORA						
..NAIDIDAE	--	12	--	--	1	--
..UNKNOWN GENUS						
..UNKNOWN ORDER	--		--	--		--
..UNKNOWN FAMILY						
..UNKNOWN GENUS	2	--	--	--	--	--
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDRACARINA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	1	--	--	--	--
..CRUSTACEA						
..AMPHIPODA						
..GAMMARIDAE						
..GAMMARUS	--	--	1	--	--	--
..ISOPODA						
..ASELLIDAE	--	--	--	--	1	--
..ASELLUS						
..INSECTA						
..COLEOPTERA						
..ELMIDAE						
..OPTIGSERVUS	--	1	--	--	--	--
..DIPTERA						
..CHIRONOMIDAE	--	--	--	--	--	--
..CHAETOCADIUS	1	1	--	--	--	--
..CHIRONOMUS						
..CRICOTOPUS	18	18	6	--	13	64
..EUKIEFFERIELLA	--	5	--	--	--	--
..GOELDIICHIRONOMUS	--	--	1	--	--	--
..LIMNOCHIRONOMUS	--	2	--	2	--	8
..ORTHOCADIUS						
..POLYPELIDUM	5	--	--	--	--	--
..PSEUDOCADIUS	5	--	--	--	--	--
..RHOTANTARSUS	1	--	--	--	--	--
..THEINEMANNIELLA	1	--	--	--	--	--
..EMPIDIDAE	--	--	--	--	--	--
..HEMERODROMIA	--	--	--	--	1	--
..SIMULIIDAE						
..SIMULIUM	4	106	3	1	8	424
..PIPIIDAE						
..ANTOCHA	1	--	--	--	--	--
..EPHEMEROPTERA						
..BAETIDAE						
..BAETIS	--	--	--	--	--	--
..PSEUDOCLOEON	--	1	--	--	--	--
..EPHEMERELLIDAE						
..EPHEMERELLA	1	--	--	--	--	--
..HEPTAGENIIDAE	--	--	--	--	--	--
..HEPTAGENIA						
..TRICHOPTERA						
..HYDROPSYCHIDAE						
..CHEUMATOPSYCHE	5	3	--	--	--	--
..HYDROPSYCHE	--	--	--	--	--	--
..MACRONEMA	--	2	--	--	--	--
..SYMPHITOPSYCHE	--	--	--	--	1	--
..HYDROPTILIDAE						
..OCHROTRICHIA	--	1	--	--	--	--
MOLLUSCA (MOLLUSCS)						
..GASTROPODA						
..BASOMMATOPHORA						
..ANCILLIDAE						
..FERRISSA						
..LYMNAEIDAE			53	10	2	--
..LYMNAEA	--	--	--	1	--	--
..PHYSIDAE						
..PHYSA	--	1	6	--	--	--
..PLANORBIDAE						
..MENETUS	--	1	--	--	--	--
PLATYHELMINTHES (PLATWORMS)						
..TUBELLARIA						
..TRICLADIDA						
..PLANARIIDAE						
..UNKNOWN GENUS	--	--	--	--	2	60

Table 3.--Benthic-invertebrate data--Continued
 (double dash indicates organism not present in sample)

DATE TIME	01470800 EAST BRANCH RED CLAY CREEK NEAR FIVE POINT, PA.				
	JUN 2 70 0000	OCT 27 70 0000	MAY 18 71 0000	OCT 12 71 0000	OCT 17 72 0000
TOTAL COUNT	196	61	210	7	181
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA					
..OLIGOCHAETA					
..PLESIOPORA					
..NAIDIDAE					
...UNKNOWN GENUS	--	--	--	--	--
..UNKNOWN ORDER					
..UNKNOWN FAMILY					
...UNKNOWN GENUS	--	--	--	--	--
ARTHROPODA (ARTHROPODS)					
..ARACHNIDA					
...HYDRACARINA					
...UNKNOWN FAMILY					
...UNKNOWN GENUS	--	--	--	--	--
..INSECTA					
...COLEOPTERA					
...ELMIDAE					
...OPTIOSERVUS	--	--	--	--	--
...DIPTERA					
...CHIRONOMIDAE	7	--	72	--	10
...CARDIACLADIUS	--	--	--	--	--
...CRICOTOPUS	--	--	--	--	--
...ORTHOCCLADIUS	--	--	--	--	--
...RHEOTANTYARSUS	--	--	--	--	--
...EMPIDIDAE	--	--	--	--	--
...HEMERODROMIA	--	--	--	--	--
...SIMULIIDAE	158	--	118	1	--
...SIMULIUM					
...TIPULIDAE	--	--	1	--	9
...ANTOCHA					
..EPHEMEROPTERA					
...BAETIDAE					
...BAETIS	9	--	--	--	--
...UNKNOWN GENUS	--	--	--	--	--
...SPHEMERELLIDAE					
...EPHEMERELLA	4	3	6	--	--
...HEPTAGENIIDAE	--	--	--	--	--
...STENONEMA	--	--	--	--	--
...SIPHONURIDAE					
...AMELETUS	1	--	--	--	--
...ISONYCHIA	--	--	--	--	--
..HYMENOPTERA					
...MEGALOPTERA					
...CORYDALIDAE	--	--	--	--	--
...NIGRONIA	--	--	--	--	--
..ODONATA					
...AESCHNIDAE	--	--	--	--	--
...BOYERIA	--	--	--	--	--
...COENAGRIONIDAE	2	--	--	--	--
...ARGIA					
..TRICHOPTERA					
...HYDROPSYCHIDAE	--	--	6	5	74
...CHEUMATOPSYCHE	--	--	7	1	85
...HYDROPSYCHE	15	58			
...HYDROPTERIDAE	--	--	--	--	3
...LEUCOTRICHIA					
MOLLUSCA (MOLLUSCS)					
..GASTROPODA					
...BASOMMATOPHORA					
...ANCYLIDAE					
...FERRISSIA	--	--	--	--	--
...PHYSIDAE	--	--	--	--	--
...PHYSA					
NEMATODA (NEMATODES)					
..UNKNOWN CLASS					
..UNKNOWN ORDER					
...UNKNOWN FAMILY					
....UNKNOWN GENUS	--	--	--	--	--

01479800 EAST BRANCH RED CLAY CREEK NEAR FIVE POINT, PA.

DATE TIME	OCT 8, 73 0000	OCT 29, 78 1330	NOV 1, 77 1130	NOV 6, 79 0900	NOV 17, 80 1100
--------------	-------------------	--------------------	-------------------	-------------------	--------------------

TOTAL COUNT	473	828	1483	239	488
-------------	-----	-----	------	-----	-----

ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT
----------	-------	-------	-------	-------	-------

ANNELIDA					
..OLIGOCHAETA					
..PLESIOPORA					
..NAIDIDAE					
...UNKNOWN GENUS	--	--	--	1	--
...UNKNOWN ORDER					
...UNKNOWN FAMILY					
...UNKNOWN GENUS	--	--	1	--	--

ARTHROPODA (ARTHROPODS)					
ARACHNIDA					
..HYDRACARINA					
...UNKNOWN FAMILY					
...UNKNOWN GENUS	4	5	3	--	4

INSECTA					
..COLEOPTERA					
...ELMIDAE					

...OPTIOSERVUS	1	3	3	--	--
..DIPTERA					
...CHIRONOMIDAE	8	--	--	--	--
...CARDIOCLADIUS	--	2	--	--	--
...CRICOTOPUS	--	11	125	181	8
...ORTHOCCLADIUS	--	--	--	--	4
...RHOTANTARSUS	--	3	23	2	--
...EMPIDIDAE					
...HEMERODROMIA	--	2	5	--	--
...SIMULIIDAE					
...SIMULIA	2	348	1044	49	444
...TIPULIDAE					
...ANTOCHA	8	8	1	--	--

..EPHEMEROPTERA					
...BATTIDAE					
...BATTIS	3	--	--	--	--
...UNKNOWN GENUS	--	--	1	--	--
..EPHEMERELLIDAE					
...EPHEMERELLA	--	--	--	--	--
..HEPTAGENIIDAE					
...HEPTAGENIA	1	--	--	--	--
..SIPHONURIDAE					
...AMELETUS	--	--	--	--	--
...ISONYCHIA	1	--	--	--	--
..HYMENOPTERA	1	--	--	--	--
..MEGALOPTERA					
...CORYDALIDAE					
...NIGRONIA	--	1	4	--	--
..ODONATA					
...AESCHNIDAE					
...BOYERIA	--	1	--	--	--
...COENAGRIONIDAE					
...ARGIA	--	--	--	--	--

..TRICHOPTERA					
...HYDROPSYCHIDAE					
...CHEUMATOPSYCHE	289	188	1	--	--
...HYDROPSYCHE	178	240	--	--	--
...HYDROPTILIDAE					
...LEUCOTRICHIA	1	2	--	--	--

MOLLUSCA (MOLLUSCS)					
GASTROPODA					
..BASOMMATOPHORA					
...ANCYLIDAE					
...FERRISSIA	--	12	250	8	--
...PHYSIDAE					
...PHYSA	--	--	1	--	8

NEMATODA (NEMATODES)					
..UNKNOWN CLASS					
...UNKNOWN ORDER					
...UNKNOWN FAMILY					
...UNKNOWN GENUS	--	--	1	--	--

Table 3.--Benthic-invertebrate data--Continued
[double dash indicates organism not present in sample]

	01480434 WEST BRANCH BRANDYWINE CR AT ROCK RUN, PA					
DATE	NOV 11 70	MAY 25 71	OCT 19 71	OCT 2 72	OCT 10 73	OCT 28 74
TIME	0000	0000	0000	0000	0000	0000
TOTAL COUNT	86	57	20	128	117	113
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDRACARINA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	1	--
..INSECTA						
..COLEOPTERA						
..ELMIDAE						
..OPTIOSERVUS	--	--	--	--	--	--
..STENELMIS	--	--	--	--	--	--
..DIPTERA						
..CHIRONOMIDAE	1	--	--	4	5	2
..CARDIOLADIUS	--	--	--	--	--	--
..CONCHAELOPSY	--	--	--	--	--	--
..CORYNONEURA	--	--	--	--	--	--
..CRICOTOPUS	--	--	--	--	--	--
..OTAWESA	--	--	--	--	--	--
..EUKLEPERIELLA	--	--	--	--	--	--
..MICROTENDIPES	--	--	--	--	--	--
..ORTHOCADIUS	--	--	--	--	--	--
..PARAMETRIOCNEMUS	--	--	--	--	--	--
..PSEUDOTAWESA	--	--	--	--	--	--
..RHEOCARYTARSUS	--	--	--	--	--	--
..SYNORTHOCADIUS	--	--	--	--	--	--
..THIENEMANNIELLA	--	--	--	--	--	--
..EMPTIIDAE	--	--	--	--	--	--
..HEMERODROMIA	--	--	--	--	--	--
..SIMULIIDAE	--	--	--	1	--	--
..SIMULIUM	--	--	--	--	--	--
..TIPULIDAE	--	--	--	--	--	--
..ANTOCHA	--	--	--	--	4	1
..UNKNOWN GENUS	--	--	--	--	1	--
..EPHEMEROPTERA						
..BAETIIDAE						
..BAETIS	2	10	--	27	1	--
..PSEUDOCLOFON	--	--	--	--	--	--
..EPHEMERELLIDAE						
..EPHEMERELLA	--	11	--	1	--	--
..HEPTAGENIIDAE						
..STENONEMA	28	6	--	5	--	--
..UNKNOWN GENUS	--	--	--	--	--	--
..LEPTOPHLEBIIDAE	--	--	--	--	--	--
..PARALEPTOPHLEBIA	--	--	--	--	--	--
..SIPHONURIDAE						
..ISONYCHIA	--	--	--	10	3	--
..LEPIDOPTERA	--	--	--	--	2	--
..MEGALOPTERA						
..CORYDALIDAE	--	--	--	--	--	--
..CORYDALUS	--	--	--	--	--	--
..PLECOPTERA						
..LEUCTRIDAE	--	--	--	--	--	--
..LEUCTRA	--	--	--	--	--	--
..PERLIDAE						
..ACRONEURIA	3	4	--	--	2	--
..PARAGNETINA	--	--	--	1	--	1
..TAENIOPTERYGIDAE	--	--	--	--	--	--
..TAENIOPTERYX	--	--	--	--	--	--
..TRICHOPTERA						
..BRACHYCENTRIDAE	--	--	--	--	--	--
..MICRASEMA	--	--	--	--	--	--
..GLOSSOSOMATIDAE	--	--	--	1	2	--
..GLOSSOSOMA	--	--	--	--	--	--
..HYDROPSYCHIDAE						
..CHEUMATOPSYCHE	7	5	7	14	30	21
..HYDROPSYCHE	24	21	13	47	48	73
..SYMPHITOPSYCHE	--	--	--	--	--	--
..HYDROPTILIDAE	--	--	--	6	1	--
..LEUCOTRICHIA	--	--	--	--	--	--
..MOLANNIDAE	1	--	--	--	--	--
..MOLANNA						
..PHILOPOTAMIDAE						
..CHIMARRA	--	--	--	9	11	14
..DOLOPHLOPES	--	--	--	1	--	--
..POLYCENTROPIDIDAE						
..CYRNELLUS	--	--	--	--	--	--
..NEURECLIPSIS	--	--	--	1	--	--
..NYCTIOPHYLAX	--	--	--	--	--	--
..POLYCENTROPUS	--	--	--	--	2	--
..PSYCHOMYIDAE						
..PSYCHOMYIA	--	--	--	--	--	--
MOLLUSCA (MOLLUSCS)						
..GASTROPODA						
..BASOMMATOPHORA						
..ANCYLIDAE					5	--
..FERRISSIA	--	--	--	--	--	--
..MESOGASTROPODA	--	--	--	--	1	--
..VIVIPARIDAE						
PLATYHELMINTHES (FLATWORMS)						
..TURBELLARIA						
..TRICLADIDA						
..PLANARIIDAE	--	--	--	--	--	1

01480434 WEST BRANCH BRANDYWINE CR AT ROCK RUN, PA						
DATE TIME	OCT 30 75 0815	OCT 19 78 1015	NOV 2 77 1530	NOV 2 78 1630	NOV 2 79 1245	NOV 15 80 1015
TOTAL COUNT	40	266	221	85	77	468
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDRACARINA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	1	--	--	--	4
..INSECTA						
..COLEOPTERA						
..ELMIDAE						
..OPTIOSERVUS	1	10	--	--	--	4
..STENELMIS	--	3	1	--	--	--
..DIPTERA						
..CINOMIDAE	--	--	--	--	--	--
..CARDIOCLADIUS	1	--	--	--	--	--
..CONCHAPELOPIA	--	2	--	--	--	--
..CORYNONEURA	--	1	--	--	--	--
..CRICOTOPUS	4	19	27	--	19	52
..DIAMESA	--	--	--	--	--	4
..EUKIEFFERIELLA	--	3	--	--	10	4
..MICROTENDIPES	--	--	--	--	--	4
..ORTHOCCLADIUS	3	--	--	1	23	28
..PARAMETRICCNEMUS	--	--	--	--	--	4
..PSEUDOTANESA	--	--	2	--	--	--
..RHEOTANYTARSUS	3	21	11	2	3	60
..SYNORTHOCCLADIUS	--	--	--	--	--	4
..CHLENEMANNIELLA	--	3	--	--	--	4
..EMPTIIDAE						
..HEMERODROMIA	--	1	--	--	--	--
..SIMULIIDAE						
..SIMULIUM	--	2	1	2	1	4
..TIPULIDAE						
..ANTOCHE	--	4	16	--	--	8
..UNKNOWN GENUS	--	--	--	--	--	--
..EPHEMEROPTERA						
..BAETIDAE						
..BAETIS	--	2	--	--	--	--
..PSEUDOCLOEON	3	--	11	--	--	--
..EPHEMERELLIDAE						
..EPHEMERELLA	--	5	2	1	--	4
..HEPTAGENIIDAE						
..STENONEMA	2	20	12	8	--	16
..UNKNOWN GENUS	--	--	--	--	1	--
..LEPTOPHLEBIIDAE						
..PARALEPTOPHLEBIA	--	1	--	--	--	--
..SIPHONURIDAE						
..ISONYCHIA	1	25	10	8	1	28
..LEPIDOPTERA	--	--	--	--	--	--
..MEGALOPTERA						
..CORDALLIDAE						
..CORSTALUS	--	--	1	--	1	--
..PLECOPTERA						
..LEUCTRIDAE						
..LEUCIRA	--	--	--	--	--	4
..PERLIDAE						
..ACRONEURIA	1	2	--	--	--	--
..PARAGNETINA	--	--	--	--	--	4
..TAENIOPTERYGIDAE						
..TAENIOPTERYX	--	4	16	--	2	28
..TRICHOPTERA						
..BRACHYCENTRIDAE						
..MICRASEMA	--	--	--	--	--	4
..GLOSSOSOMATIDAE						
..GLOSSOSOMA	--	--	--	5	--	--
..HYDROPSYCHIDAE						
..CHEUMATOPSYSCHE	5	35	31	--	4	60
..HYDROPSYSCHE	16	71	72	48	11	80
..SYMPHYTOPSYSCHE	--	--	--	8	--	--
..HYDROPTILIDAE						
..LEUCOTRICHIA	--	6	1	1	--	24
..MOLANNIDAE						
..MOLANNA	--	--	--	--	--	--
..PHILOPOTAMIDAE						
..CHIMARRA	--	3	--	1	--	12
..DOLOPHILODES	--	--	--	--	--	--
..POLYCENTROPIDIDAE						
..CYRNELLUS	--	--	--	--	--	12
..NEURECLIPSIS	--	--	--	--	--	--
..NYCTIOPHYLAX	--	1	--	--	--	4
..POLYCENTROPUS	--	--	--	--	--	--
..PSYCHOMYIIDAE						
..PSYCHOMYIA	--	4	1	--	--	--
MOLLUSCA (MOLLUSCS)						
..GASTROPODA						
..BASOMMATOPHORA						
..ANCYLIDAE						
..FERRISSIA	--	15	8	--	1	4
..MESOGASTROPODA						
..VIVIPARIDAE	--	--	--	--	--	--
PLATYHELMINTHES (PLATWORMS)						
..TURBELLARIA						
..TRICLADIDA						
..PLANARIIDAE	--	--	--	--	--	--

Table 3.--Benthic-invertebrate data--Continued
[double dash indicates organism not present in sample]

01480829 BUCK RUN AT DOB RUN, Pa.

DATE TIME	OCT 10, 73 0000	OCT 29, 74 0000	NOV 11, 75 1430	OCT 28, 76 1345
TOTAL COUNT	348	54	790	218
ORGANISM	COUNT	COUNT	COUNT	COUNT
ANNELIDA				
..OLIGOCHAETA				
..UNKNOWN ORDER				
..UNKNOWN FAMILY				
..UNKNOWN GENUS	--	--	1	--
ARTHROPODA (ARTHROPODS)				
..ARACHNIDA				
..HYDRACARINA				
..UNKNOWN FAMILY				
..UNKNOWN GENUS#2	--	--	--	--
..UNKNOWN GENUS#3	--	--	--	--
..INSECTA				
..COLEOPTERA				
..ELMIDAE				
..DUBIRAPHIA	--	--	1	--
..OPTIOSERVUS	--	--	2	1
..STENELMIS			--	--
..DIPTERA				
..CHIRONOMIDAE	--	8	--	--
..ABLABESMYIA	--	--	10	--
..CARDIOCLADIUS	--	--	39	2
..COBYNONEURA	--	--	--	--
..CHIRONOMUS	--	--	--	18
..EUBYTERPERIELLA	--	--	--	4
..GLYPTOTENDIPES	--	--	--	--
..ORTHOCLADIUS	--	--	87	9
..PSEUDOCLEIDUS	--	--	--	--
..RHEOTANTARSUS	--	--	194	--
..THISENMANNIELLA	--	--	--	--
..UNKN ORTHOCLADIINAE #1	--	--	--	--
..UNKNOWN GENUS	--	--	--	--
..EMPHIDIDAE				
..HEMEROPTEROMIA	--	4	8	1
..SIMULIIDAE				
..SIMULIUM	4	--	19	183
..TIPULIDAE				
..ANTOCIA	--	--	4	--
..EPHEMEROPTERA				
..BAETIDAE				
..BAETIS	--	--	1	2
..PSEUDOCLOSON	--	--	--	--
..EPHEMERELLIDAE				
..EPHEMERELLA	--	--	3	--
..HEPTAGENIIDAE				
..STENONEMA	--	--	7	--
..SIPHONURIDAE				
..ISONYCHIA	1	--	2	--
..MEGALOPTERA				
..CORYDALIDAE				
..CORYDALUS	--	--	--	--
..TRICHOPTERA				
..HYDROPSYCHIDAE				
..CHEUMATOPSYCHE	49	11	100	12
..HYDROPSYCHE	278	30	294	5
..SYMPHITOPSYCHE	--	--	--	--
..HYDROPTILIDAE				
..LEUCOTRICHIA	12	--	13	--
MOLLUSCA (MOLLUSCS)				
..GASTROPODA				
..BASOMATOPHORA				
..ANCYLIDAE				
..PERRISSIA	--	--	--	1
..PHYSIDAE	1	--	4	--
..PHYSA				
NEMATODA (NEMATODES)				
..UNKNOWN CLASS				
..UNKNOWN ORDER				
..UNKNOWN FAMILY				
..UNKNOWN GENUS	--	--	1	--
PLATYHELMINTHES (PLATWORMS)				
..TURBELLARIA				
..TRICLADIDA				
..PLANARIIDAE	1	1	--	--
..UNKNOWN GENUS	--	--	--	--
..UNKNOWN FAMILY				
..UNKNOWN GENUS	--	--	--	1
..UNKNOWN ORDER				
..UNKNOWN FAMILY				
..UNKNOWN GENUS	--	--	--	--

01480629 BUCK RUN AT DOE RUN, PA.				
DATE	NOV 2, 77	OCT 25, 78	NOV 7, 79	NOV 13, 80
TIME	1430	1830	1000	1030
TOTAL COUNT	795	12	5	420
ORGANISM	COUNT	COUNT	COUNT	COUNT
ANNELIDA				
..OLIGOCHAETA				
...UNKNOWN ORDER				
...UNKNOWN FAMILY				
...UNKNOWN GENUS	--	--	--	--
ARTHROPODA (ARTHROPODS)				
..ARACHNIDA				
...HYDRACARINA				
...UNKNOWN FAMILY				
...UNKNOWN GENUS#2	5	--	--	--
...UNKNOWN GENUS#3	7	--	--	--
..INSECTA				
...COLEOPTERA				
...ELMIDAE				
...DUBIRAPHIA	--	--	--	--
...OPTIOSERVUS	4	--	--	4
...STENELMIS	2	--	--	--
...DIPTERA				
...CHIRONOMIDAE	--	--	--	--
...ABLABESMYIA	--	--	--	--
...CARDIOCLADIUS	--	--	--	--
...CORYNONEURA	--	--	--	--
...CRICOTOPUS	53	--	--	--
...EUKIEFFERELLA	--	--	--	--
...GLYPOTENDIPES	4	--	--	--
...ORTHOCLADIUS	3	--	--	--
...PSEUDOCLODON	3	--	--	--
...PSEUDOCLODON	90	--	--	--
...RHOTANYTARSUS	1	--	1	--
...THIENEMANNIELLA	1	--	--	--
...UNKN ORTHOCLADIINAE #1	1	1	--	--
...UNKNOWN GENUS	1	--	--	--
...EMPIDIDAE				
...HEMERODROMIA	17	--	--	--
...SIMULIIDAE				
...SIMULIUM	19	--	--	24
...TIPULIDAE				
...ANTOCHA	--	--	--	20
...EPHEMEROPTERA				
...BAETIDAE				
...BAETIS	--	--	--	--
...PSEUDOCLODON	--	1	--	--
...EPHEMERELLIDAE				
...EPHEMERELLA	3	--	--	--
...HEPTAGENIIDAE				
...STENONEMA	4	--	--	60
...SIPHONURIDAE				
...ISONYCHIA	1	--	--	4
...MEGALOPTERA				
...CORYDALIDAE				
...CORYDALUS	1	--	--	--
...TRICHOPTERA				
...HYDROPSYCHIDAE				
...CHEUMATOPSYCHE	524	9	1	84
...HYDROPSYCHE	4	--	1	200
...SYMPHYTOPSYCHE	--	--	1	--
...HYDROPTILIDAE				
...LEUCOTRICHIA	4	--	--	28
MOLLUSCA (MOLLUSCS)				
..GASTROPODA				
...BASOMMATOPHORA				
...ANCYLIDAE				
...PERRISSIA	38	--	--	4
...PHYSIDAE				
...PHYSA	--	--	1	--
NEMATODA (NEMATODES)				
..UNKNOWN CLASS				
...UNKNOWN ORDER				
...UNKNOWN FAMILY				
...UNKNOWN GENUS	3	--	--	--
PLATYHELMINTHES (PLATWORMS)				
..TURBELLARIA				
...TRICLADIDAE				
...PLANARIIDAE	--	--	--	--
...UNKNOWN GENUS	--	--	--	12
...UNKNOWN FAMILY	--	--	--	--
...UNKNOWN GENUS	--	--	--	--
...UNKNOWN ORDER	--	--	--	--
...UNKNOWN FAMILY	--	--	--	--
...UNKNOWN GENUS	--	1	--	--

Table 3.--Benthic-invertebrate data--Continued
[double dash indicates organism not present in sample]

	01480832		DOE RUN AT SPRINGDELL, PA.	
DATE	OCT 10 73	OCT 29 74	NOV 11 75	OCT 28 76
TIME	0000	0000	1330	1415
TOTAL COUNT	15	147	575	838
ORGANISM	COUNT	COUNT	COUNT	COUNT
ANNELIDA				
..OLIGOCHAETA				
..UNKNOWN ORDER				
..UNKNOWN FAMILY				
..UNKNOWN GENUS	--	--	--	1
ARTHOPODA (ARTHOPODS)				
..ARACHNIDA				
..HYDRACARINA				
..UNKNOWN FAMILY				
..UNKNOWN GENUS	--	--	1	3
..INSECTA				
..COLEOPTERA				
..ELMIDAE				
..OPTIOSERVUS	1	--	1	4
..PSEPHENIDAE	--	--	--	1
..PSEPHENUS				
..DIPTERA				
..CHIRONOMIDAE	9	3	--	--
..ABLABESMYIA	--	--	7	--
..BAILLIA	--	--	106	--
..CARDIOCLADIUS	--	--	--	23
..CONCHAPELOPIA	--	--	--	2
..CRICOTOPUS	--	--	42	18
..DIAMESA	--	--	21	--
..EUKIETEPERIELLA	--	--	50	4
..ORTHOCLADIUS	--	--	14	--
..POLYPEDILUM	--	--	--	--
..RHEOTANYTARSUS	--	--	--	--
..THIENEMANNIELLA	--	--	--	--
..EMBIIDAE				
..HEMERODROMIA	--	--	1	1
..SIMULIIDAE	--	--	12	11
..SIMULIUM				
..TIPULIDAE				
..ANTICHA	1	--	40	5
..HEMATONA	--	--	--	--
..EPHEMEROPTERA				
..BAETIDAE				
..BAETIS	--	1	1	--
..PSEUDOCLOEON	--	--	18	8
..EPHEMERELLIDAE	--	--	21	66
..EPHEMERELLA				
..HEPTAGENIIDAE	1	1	20	41
..STENONEMA				
..STIPHONURIDAE	--	2	2	48
..ISONYCHIA				
..LEPIDOPTERA				
..PYRALIDIDAE				
..PARARGYACTIS	--	--	--	--
..MEGALOPTERA				
..CORYDALIDAE	--	--	--	1
..CORYDALUS				
..PLECOPTERA				
..UNKNOWN FAMILY	--	--	--	1
..UNKNOWN GENUS	--	--	--	1
..TAENIOPTERYGIDAE	--	--	1	2
..TAENIOPTERYX				
..TRICHOPTERA				
..GLOSSOSOMATIDAE	--	--	5	3
..GLOSSOSOMA				
..HYDROPSYCHIDAE	1	32	91	59
..CREMATOPSYCHE	1	106	105	506
..HYDROPSYCHE	--	--	--	--
..SYMPHITOPSYCHE				
..HYDROPTILIDAE	--	--	--	--
..HYDROPTILA	--	--	4	5
..LEUCOTRICHIA	--	--	--	--
..PHILOPOTAMIDAE	--	--	1	3
..CHIMARRA	--	--	4	1
..DOLOPHILODES				
..POLYCENTROPIDIDAE	--	--	--	--
..CYRNELLUS				
MOLLUSCA (MOLLUSCS)				
..GASTROPODA				
..BASOMMATOPHORA				
..ANCYLIDAE	--	2	--	18
..FERRISSIA				
PLATYHELMINTHES (FLATWORMS)				
..TURBELLARIA				
..TRICLADIDA	1	--	--	--
..PLANARIIDAE	--	--	--	--
..UNKNOWN GENUS	--	--	--	--

01480832

DOE RUN AT SPRINGDELL, PA.

DATE TIME	NOV 2 77 1330	OCT 28 78 1545	NOV 7 79 1045	NOV 13 80 0900
TOTAL COUNT	885	42	150	828
ORGANISM	COUNT	COUNT	COUNT	COUNT
ANNELIDA				
..OLIGOCHAETA				
..UNKNOWN ORDER				
..UNKNOWN FAMILY				
..UNKNOWN GENUS	--	--	--	--
ARTHROPODA (ARTHROPODS)				
..ARACHNIDA				
..HYDRACARINA				
..UNKNOWN FAMILY				
..UNKNOWN GENUS	5	--	--	--
..INSECTA				
..COLEOPTERA				
..ELMIDAE				
..OPTIOSERVUS	4	--	7	--
..PSEPHENIDAE				
..PSEPHENUS	--	--	--	--
..DIPTERA				
..CHIRONOMIDAE	--	--	--	--
..ABLABESMYIA	--	--	--	--
..BRILLIA	--	--	--	--
..CARDIOCLADIUS	14	--	--	--
..CONCHAELOPIA	1	--	--	--
..CRICOTOPUS	31	1	9	16
..DIAMESA	--	--	--	--
..BUTTEPHERIELLA	11	--	--	--
..ORTHOC	1	--	--	--
..POLYPEDILUM	3	2	11	8
..RHEOTANYTARSUS	10	--	--	44
..PHIENEMANNIELLA	--	--	--	--
..EMPIDIDAE				
..HEMERODROMIA	--	--	1	--
..SIMULIIDAE				
..SIMULIUM	6	2	1	12
..TIPULIDAE				
..ANOCIA	36	--	7	80
..HEXATOMA	--	1	--	--
..EPHEMEROPTERA				
..BAETIDAE				
..BAETIS	--	--	--	24
..PSEUDOCLOEON	4	--	1	--
..EPHEMERELLIDAE				
..EPHEMERELLA	48	--	--	--
..HEPTAGENIIDAE				
..STENOPIA	21	6	8	32
..SIPHONURIDAE				
..ISONYCHIA	40	7	5	52
..LEPIDOPTERA				
..PYRALIDIDAE				
..PARARGYACTIS	1	--	--	--
..MEGALOPTERA				
..CORYDALIDAE				
..CORYDALUS	--	--	--	--
..PLECOPTERA				
..UNKNOWN FAMILY				
..UNKNOWN GENUS	--	--	--	--
..TASNIPTERYGIDAE				
..TASNIPTERYX	--	--	--	--
..TRICHOPTERA				
..GLOSSOSOMATIDAE				
..GLOSSOSOMA	--	--	2	--
..HYDROPSYCHIDAE				
..CHEUMATOPSYCHE	80	--	21	20
..HYDROPSYCHE	244	2	9	240
..SYMPHITOPSYCHE	--	21	58	--
..HYDROPTILIDAE				
..HYDROPTILA	--	--	--	--
..LEUCOTRICHIA	57	--	2	8
..PHILOPOTAMIDAE				
..CHIMARRA	39	--	3	4
..DOLOPHILODES	--	--	--	--
..POLYCENTROPIDIDAE				
..CYANELLUS	--	--	--	4
MOLLUSCA (MOLLUSCS)				
..GASTROPODA				
..BASOMMATOPHORA				
..ANCYLIDAE				
..FERRISSIA	10	--	--	4
PLATYHELMINTHES (FLATWORMS)				
..TURBELLARIA				
..TRICLADIDA				
..PLANARIIDAE				
..UNKNOWN GENUS	--	--	4	28

Table 3.--Penthic-invertebrate data--Continued
(double dash indicates organism not present in sample)

01480840 WEST BRANCH BRANDYWINE CREEK AT WAWASET, PA.					
DATE	NOV 11 70	MAY 25 71	OCT 19 71	OCT 2 72	OCT 30 75
TIME	0000	0000	0000	0000	1020
TOTAL COUNT	58	5	26	507	277
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT
ARTHROPODA (ARTHROPODS)					
..ARACHNIDA					
..HYDRACARINA					
..UNKNOWN FAMILY					
..UNKNOWN GENUS	--	--	--	--	--
..INSECTA					
..COLEOPTERA					
..ELMIDAE					
..OPTIOSERVUS	--	--	--	--	--
..STENELMIS	--	--	--	--	--
..COLLEMBOLA					
..SMYNTHERIDAE					
..SMYNTHERIDES	--	--	--	--	--
..DIPTERA					
..CHIRONOMIDAE	--	1	--	39	--
..CRICOTOPUS	--	--	--	--	4
..LIMNOCHIRONOMUS	--	--	--	--	--
..ORTHOCLADIUS	--	--	--	--	8
..PARAMETRICNEMUS	--	--	--	--	--
..POLYPEDILUM	--	--	--	--	--
..RHEOTANTARSUS	--	--	--	--	--
..EMPIDIDAE	--	--	--	1	--
..HEMERODROMIA	--	--	--	--	--
..SIMULIIDAE	--	--	--	18	2
..SIMULIUM	--	--	--	--	--
..TIPULIDAE	--	--	--	1	7
..ANTOCHAE	--	--	--	--	--
..EPHEMEROPTERA					
..BAETIDAE	--	--	--	1	--
..BAETIS	--	--	--	3	1
..PSUDOCLOEON	--	--	--	--	--
..EPHEMERELLIDAE	--	1	--	--	--
..EPHEMERELLA	--	--	--	--	--
..HEPTAGENIIDAE	--	--	--	3	3
..STENONEMA	--	1	--	--	--
..SIPHONURIDAE	--	--	--	2	--
..ISONYCHIA	--	--	--	--	--
..HYMENOPTERA	--	--	--	1	--
..HYMENIDAE	--	--	--	--	--
..LEPIDOPTERA	--	--	--	--	--
..PYRALIDIDAE	--	--	--	--	--
..PARARGYACTIS	--	--	--	--	1
..MEGALOPTERA	--	--	--	--	--
..CORYDALIDAE	--	--	--	--	--
..CORYDALUS	--	--	--	--	--
..ODONATA	--	--	--	--	--
..AGRIIDAE	--	--	--	--	--
..AGRION	--	--	--	--	--
..COENAGRIONIDAE	--	--	--	--	--
..ARGIA	--	--	--	--	--
..PLECOPTERA					
..TAenioPTERYGIDAE	--	--	--	--	3
..TAenioPTERYX	--	--	--	--	--
..TRICHOPTERA					
..HYDROPSYCHIDAE	--	--	--	--	--
..CHEUMATOPSYCHE	--	--	--	--	82
..HYDROPSYCHE	58	2	14	133	176
..POTAMYIA	--	--	--	--	--
..SYMPHITOPSYCHE	--	--	--	--	--
..HYDROPTILIDAE	--	--	--	--	--
..HYDROPTILA	--	--	--	--	--
..LEUCOTRICHIA	--	--	--	--	2
..POLYCENTROPIDIDAE	--	--	--	--	--
..NEURECLIPSIS	--	--	--	--	--
MOLLUSCA (MOLLUSCS)					
..GASTROPODA					
..BASOMMATOPHORA					
..ANCYLIDAE					
..FERRISSIA	--	--	--	--	10
PLATYHELMINTHES (PLATWORMS)					
..TURBELLARIA					
..TRICHLADIDA					
..UNKNOWN FAMILY					
..UNKNOWN GENUS	--	--	--	--	--

G1480640 WEST BRANCH BRANDYWINE CREEK AT WAWASET, PA.					
DATE TIME	OCT 19 76 1130	OCT 27 77 1430	NOV 3 78 1200	NOV 2 79 1400	NOV 12 80 1400
TOTAL COUNT	196	52	195	52	464
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT
ARTHROPODA (ARTHROPODS)					
..ARACHNIDA					
..HYDRACARINA					
..UNKNOWN FAMILY					
..UNKNOWN GENUS	1	--	--	--	--
..INSECTA					
..COLEOPTERA					
..ELMIDAE					
..OPTIOSERVUS	1	--	--	--	--
..STENELMIS	--	--	--	--	4
..COLLEMBOLA					
..SMYNTHERIDAE					
..SMYNTHERIDES	--	1	--	--	--
..DIPTERA					
..CHIRONOMIDAE		--	--	--	--
..CRICOTOPUS	2	3	--	2	4
..LIMNOCHIRONOMUS	--	--	--	--	4
..ORTHOCNEMIUS	--	--	6	38	--
..PARASITOCNEMUS	--	--	1	--	--
..POLYPEDILUM					
..RHSOTANYTARSUS	4	1	1	1	--
..EMPIDIDAE	--	--	2	--	16
..HEMERODROMIA	--	1	--	--	--
..SIMULIDAE					
..SIMULIUS	--	--	--	--	8
..TIPULIDAE					
..ANTOCHA	--	--	2	--	12
..EPHEMEROPTERA					
..BAETIDAE					
..BAETIS	--	--	--	1	--
..PSEUDOCLOSON	--	--	--	--	--
..EPHEMERELLIDAE					
..EPHEMERELLA	--	--	--	--	--
..HEPTAGENIIDAE					
..STENONEMA	2	8	--	--	24
..SIPHONURIDAE					
..ISONYCHIA	--	--	1	--	4
..HYMENOPTERA					
..MYMARIDAE	--	--	--	--	--
..LEPIDOPTERA					
..PYRALIDIDAE					
..PARARGYACTIS					
..MEGALOPTERA	13	--	2	--	32
..CORYDALIDAE					
..CORYDALUS	--	--	--	--	4
..ODONATA					
..AGRITIDAE					
..AGRION	--	2	--	--	--
..COENAGRIONIDAE					
..ARCTIA	--	2	--	--	--
..PLECOPTERA					
..TAENIOPTERYGIDAE					
..TAENIOPTERYX	1	--	--	--	--
..TRICHOPTERA					
..HYDROPSYCHIDAE	60	--	--	--	--
..CHEMATOPSYCHE					
..HYDROPSYCHE	104	30	63	5	40
..POTAMYIA		2	8	5	240
..SYMPHYTOPSYCHE	--	--	110	4	--
..HYDROPTILIDAE					
..HYDROPTILIA	--	--	--	--	4
..LEUCOTRICHIA	--	--	--	--	56
..POLYCENTROPODIDAE					
..NEURECLIPSIS	--	1	--	--	--
MOLLUSCA (MOLLUSCS)					
..GASTROPODA					
..BASOMMATOPHORA					
..ANCYLIDAE	7	--	2	--	12
..PERRISSIA					
PLATYHELMINTHES (FLATWORMS)					
..TURBELLARIA					
..TRICLADIDA					
..UNKNOWN FAMILY					
..UNKNOWN GENUS	1	--	--	--	--

Table 3.--Benthic-invertebrate data--Continued
[double dash indicates organism not present in sample]

	01480647	5 BR BRANDYWINE CR NR STRUBLE DAM, PA.		
DATE	OCT 11 73	OCT 29 75	OCT 19 76	OCT 25 77
TIME	0000	1545	0830	1030
TOTAL COUNT	191	228	295	12
ORGANISM	COUNT	COUNT	COUNT	COUNT
ANNELIDA				
..OLIGOCHAETA				
..PLATYDORA				
..NAIDIDAE				
...STYLARIA	--	--	1	--
...UNKNOWN GENUS	--	--	--	--
..UNKNOWN ORDER				
...UNKNOWN FAMILY				
...UNKNOWN GENUS	--	--	2	1
ARTHROPODA (ARTHROPODS)				
..ARACHNIDA				
..HYDRACARINA				
...UNKNOWN FAMILY				
...UNKNOWN GENUS	--	3	--	--
..CRUSTACEA				
...CYCLOPOIDA				
...CYCLOPIDAE	--	1	--	--
...CYCLOPS				
..INSECTA				
...COLEOPTERA				
...ELMIDAE				
...DUBIRAPHIA	--	--	1	--
...MICROCYLLOEPUS	--	--	--	1
...OPTIOSERVUS	--	--	--	--
...STENELMIS	1	--	--	--
..DIPTERA				
...CHIRONOMIDAE	5	--	--	--
...CARDIOCLADIUS	--	--	1	--
...CONCHAPELOPIA	--	--	--	--
...CONCHUS	--	--	--	--
...CRICOTOPUS	--	--	16	--
...EUKIEFFERIELLA	--	--	--	--
...KIEFFERULUS	--	--	--	1
...LIMNOCHIRONOMUS	--	--	--	--
...ORTHOCCLADIUS	--	--	--	--
...PARATANTARSUS	--	--	--	--
...POLYPEDILUM	--	--	--	--
...RHEOTANTARSUS	--	--	3	--
...TANTARSUS	--	--	--	--
...TENSERANNIELLA	--	--	--	--
..MUSCIDA				
...LIMNOPHORA	1	--	--	--
...SIMULIDAE				
...SIMULI	2	182	174	--
...TIPULIDAE				
...ANTOCHA	--	--	1	--
...TIPULA	1	--	--	--
..EPHEMEROPTERA				
..BASTIDA				
...BASTIS	--	--	--	--
...UNKNOWN GENUS	--	--	1	--
...HEPTAGENIIDAE	--	--	--	--
...SPINEMA	--	1	6	--
..MEGALOPTERA				
...SIALIDAE	--	--	--	--
...SIALIS	--	--	--	--
..PLECOPTERA				
...TAENIOPTERYGIDAE				
...TAENIOPTERYX	--	1	1	--
..TRICHOPTERA				
...HYDROPSYCHIDAE				
...CHEMATOPSYCHE	42	7	17	4
...HYDROPSYCHE	126	13	28	4
...SYMPHITOPSYCHE	--	--	--	--
...UNKNOWN GENUS	--	--	--	--
...HYDROPTILIDAE	--	--	--	--
...HYDROPTIS	--	--	--	--
...LEUCOTRICHIA	--	--	--	--
...LIMNETHILIDAE	--	--	--	--
..APATANIA				
...POLYCENTROPIDIDAE	--	--	--	--
...NEURECLIPSIS	--	--	--	1
...PSYCHOMYIIDAE	--	--	--	--
...PSYCHOMYIA	--	--	--	--
CNIDARIA (CNIDARIANS)				
..HYDROZOA				
...HYDROIDA				
...HYDRIDAE				
...HYDRA	--	--	1	--
MOLLUSCA (MOLLUSCS)				
..BIVALVIA				
...NUCULOIDEA				
...SPHAERIODEA				
...UNKNOWN GENUS	--	--	--	--
..GASTROPODA				
...BASOMMATOPHORA				
...ACTYDIA	--	--	1	--
...PHYSIDAE	--	--	1	--
...PHYSA	--	--	--	--
...PLANORBIDAE	--	--	--	--
...CYRAULUS	--	--	--	--
PLATHELMINTHES (PLATWORMS)				
..TURBELLARIA				
...TRICLADIA				
...PLANARIIDAE	13	--	--	--
...UNKNOWN GENUS	--	20	40	--
...UNKNOWN FAMILY	--	--	--	--
...UNKNOWN GENUS	--	--	--	--

01480847 E BR BRANDYWINE CR-NR STRUBLE DAM, PA.

DATE NOV 2, 78 NOV 8, 79 NOV 7, 80
TIME 1330 0830 1000

TOTAL COUNT 25 130 188

ORGANISM COUNT COUNT COUNT

ANNELIDA
..OLIGOCHAETA
..PLESIOPORA
..NAIDIDAE
..STYLARIA
..UNKNOWN GENUS
..UNKNOWN ORDER
..UNKNOWN FAMILY
..UNKNOWN GENUS

ARTHROPODA (ARTHROPODS)

..ARACHNIDA
..HYDARAGINA
..UNKNOWN FAMILY
..UNKNOWN GENUS

..CRUSTACEA
..CYCLOPODA
..CYCLOPIDAE
..CYCLOPS

..INSECTA
..COLEOPTERA
..ELMIDAE
..DUSIRAPHIA

..MICROCYLLOEPUS
..OPTIOSERVUS
..STENELMIS
..DIPTERA

..CHIRONOMIDAE
..CARDIOCLADIUS
..CONCHAFELDPIA
..COETONEURA

..CRICOTOPUS
..EUKIEFFERIELLA
..KIEFFERULUS
..LIMNOCHIRONOMUS

..ORTHOCCLADIUS
..PARATANTYARSUS
..POLYPEDILUM
..RHEOTANTYARSUS

..TANTYARSUS
..TRIENEMANNIELLA
..MUSCIDAE
..LIMNOPHORA

..SIMULIIDAE
..SIMULIUM
..TIPULIDAE
..ANTOCHA

..TIPULA
..EPHEMEROPTERA
..BAETIIDAE
..BAETIS

..UNKNOWN GENUS
..HEPTAGENIIDAE
..STENONEMA
..MEGALOPTERA

..SIALIDAE
..SIALIS
..PLECOPTERA
..TAENIOPTERYGIDAE

..TAENIOPTERYX
..TRICHOPTERA
..HYDROPSYCHIDAE
..CHEUMATOPSYCHE

..HYDROPSYCHE
..SYMPHITOPSYCHE
..UNKNOWN GENUS
..HYDROPTILIDAE

..HYDROPTILA
..LEUCOTRICHIA
..LIMNAPHILIDAE
..APATANIA

..POLYCENTROPODIDAE
..NEURECLIPSIS
..PSYCHOMYIIDAE
..PSYCHOMYIA

CNIDARIA (CNIDARIANS)

..HYDROZOA
..HYDROIDA
..HYDRIDAE
..HYDRA

MOLLUSCA (MOLLUSCS)

..BIVALVIA
..NUCULOIDAE
..SPHAERIIDAE
..UNKNOWN GENUS

..GASTROPODA
..BASOMMATOPHORA
..ANCYLIDAE
..FERRISSIA

..PHYSIDAE
..PLANORBIDAE
..GYRAULUS
..PLATHELMINTHES (FLATWORMS)

..TURBELLARIA
..TRICLADIDA
..PLANARIIDAE
..UNKNOWN GENUS

..UNKNOWN FAMILY
..UNKNOWN GENUS

Table 3.--Benthic-invertebrate data--Continued

	DATE TIME	01480848 OCT 11, 73 0000	EAST BRANCH BRANDYWINE CREEK NEAR CUPOLA, PA. OCT 25, 74 0000	OCT 30, 75 0830	OCT 19, 76 0920
TOTAL COUNT		218	188	749	518
ORGANISM	COUNT	COUNT	COUNT	COUNT	
ANNELIDA					
..OLIGCHAETA					
..UNKNOWN ORDER					
..UNKNOWN FAMILY					
..UNKNOWN GENUS	--	--	--		3
ARTHROPODA (ARTHROPODS)					
..ARACHNIDA					
..HYDRACARINA					
..UNKNOWN FAMILY					
..UNKNOWN GENUS	--	--	13		4
..CRUSTACEA					
..ISOPODA					
..ASELLIDAE	--	--	2		--
..ASELLUS					
INSECTA					
..COLEOPTERA					
..ELIIDAE	--	--	3		1
..DIBIAPNIA					
..OPTIOSERVUS	8	1	19		20
..OULIMNIUS	--	--	5		6
..SPENSELMIS		8			
..DIPTERA					
..ATHERICIDAE=RHAGIONIDAE					
..ATHEIXIS	--	--	1		--
..CRIBONOMIDAE		12			--
..ABLABESMTIA	7		11		--
..CONCHAPSLOPIA	--	--			130
..CORTINERIA	--	--			10
..CRICOTOPUS	--	--			12
..DIAMESA	--	--			12
..DIPOCLADIUS	--	--	8		12
..EUKIEFFERIELLA	--	--	12		--
..MICROPTENDIPES	--	--	8		12
..ORTHOCADIDUS	--	--			12
..PARAMETRIOCHNEMUS	--	--	5		3
..POLYPEDILUS	--	--			12
..REOCHRICOTOPUS	--	--			12
..RHOTANTARSUS	--	--	17		19
..THIEVENMANNIELLA	--	--	5		3
..EMPIDIDAE					
..HEMERODROMIA	--	1	4		--
..SIMULIIDAE					
..SIMULIUM	10	2	308		82
..TIPIULIDAE					
..ANTOCHA	1	3	19		11
..EPHEMEROPTERA					
..BAETIIDAE					
..BAETIS	1	1	1		2
..EPHEMERELLIDAE			7		7
..EPHEMERELLA	--	4			--
..HEPTAGENIIDAE					
..STENONEMA	14	10	38		51
..LEPTOPHLEBIIDAE	--	--			--
..LEPTOPHLEBIA	--	--	2		3
..PARALEPTOPHLEBIA	--	--			--
..SICHLONIDAE					
..SICHLONIA	2	--	--		1
MEGALOPTERA					
..CORIDALIDAE					
..CORIDALUS	--	--	--		--
..CORIDALUS	2	--	1		--
..NITCRONIA	--	--	--		--
PLECOPTERA					
..CAPNITIDAE					
..ALLOCAPNIA	--	--	--		--
..PERLIDAE					
..NEOPTERISGANOPHORA	--	1	5		--
..PARANETINA	7	2			--
..TARNIOPTERYGIDAE	--	--			--
..TARNIOPTERYX	--	--	9		4
TRICHOPTERA					
..BRACHYCENTRIDAE					
..BRACHYCENTRUS	--	--	1		--
..MICRASEMA	--	--			--
..GLOSSOSOMATIDAE	--	3	6		3
..HYDROPSYCHIDAE	--				--
..CHEUMATOPSYCHE	31	5	34		14
..CHEUMATOPSYCHE	75	82	143		81
..SYMPHITOPSYCHE	--	--	--		--
..HYDROPTILIDAE	--	--	--		--
..HYDROPTILA	--	--	--		--
..LUCIDICHRIA	2	1	15		4
..STACTOBIELLA	--	--	5		--
..LIMNephilidae					
..APATANIA	--	--	--		1
..GOERA	--	--	--		--
..NEOPHYLAX	--	--	--		--
..MOLANIDAE					
..MOLANA	--	--	--		--
..PHILOPOTAMIDAE					
..CHIMARRA	54	59	12		142
..POLYCENTROPIDAE	--	--			--
..POLYCENTROPUS	--	--	7		--
..PSYCHOMYIIDAE	--	--	6		--
..PSYCHOMYIA	--	--			--</

01480648 EAST BRANCH BRANDYWINE CREEK NEAR CUPOLA, PA.				
DATE TIME	OCT 25 77 0830	NOV 2 78 1245	NOV 7 79 1600	NOV 7 80 1115
TOTAL COUNT	583	318	166	624
ORGANISM	COUNT	COUNT	COUNT	COUNT
ANNELIDA				
..OLIGOCHAETA				
..UNKNOWN ORDER				
..UNKNOWN FAMILY				
..UNKNOWN GENUS	--	--	--	--
ARTHROPODA (ARTHROPODS)				
..ARACHNIDA				
..HYDRACARINA				
..UNKNOWN FAMILY				
..UNKNOWN GENUS	3	--	--	--
..CRUSTACEA				
..ISOPODA				
..ASPIDIDAE				
..ABEILLUS	--	--	--	--
INSECTA				
..COLEOPTERA				
..ELMIDAE				
..DUBIRAPHIA				
..OPTIOSERVUS	36	4	3	24
..OULIMNIDUS				
..STENELMIS	3	2	5	--
..DIPTERA				
..ATHERICIDAE=RHAGIONIDAE				
..ATHERIX	--	--	--	--
..CHIRONOMIDAE	--	--	--	--
..ABABESVIA	--	--	--	--
..CONCHAELOPTA	9	2	--	12
..CORYNOPEURA	1	--	--	--
..CRICOTOPUS	6	17	--	20
..DIAMESA	--	9	--	--
..DIPLOCLADIUS	--	--	1	--
..SUKIEFFERIELLA	3	1	2	16
..MICROBIDIES	2	--	--	4
..ORTHOCADIUS	--	13	2	--
..PARAMETRICHEMUS	--	--	--	8
..POLYDILUM	--	--	--	--
..RHEOCRICOTOPUS	--	2	--	--
..RHOTANYTARSUS	23	--	3	28
..RHEMANNIELLA	1	--	--	--
EMPTIIDAE				
..HENERODROMIA	1	--	--	8
..SIMULIDAE				
..TIPULIDAE	17	104	2	--
..ANTOCHA				
..EPHEMEROPTERA	17	--	8	12
..BAETIDAE				
..BAETIS	3	--	1	--
..EPHEMERELLIDAE				
..EPHEMERELLA	43	--	7	16
..HEPTAGENIIDAE				
..STENONEMA	30	4	4	24
..LEPTOPHEBIA				
..LEPTOPHEBIA	--	1	--	--
..PARALEPTOPHEBIA	--	--	--	--
..SIPHONIIDAE				
..ISONYCHIA	1	--	--	--
MEGALOPTERA				
..MEGALOPTERIDAE				
..CHAULIOIDES	--	--	--	8
..CORYDALUS	--	1	--	--
..NICRONIA	--	--	1	--
PLECOPTERA				
..CAPNIDAE				
..PERLOCAPNIA	--	--	1	--
..NEOIPHASGANOPHORA	--	--	1	--
..PARAGNETINA	--	2	--	8
..TAENIOPTERYGIDAE				
..TAENIOPTERYX	8	--	8	--
TRICHOPTERA				
..BRACHYCENTRIDAE				
..BRACHYCENTRUS		8	--	4
..MICRASEMA	--	--	--	--
..GLOSSOSOMATIDAE				
..GLOSSOSOMA	7	--	3	12
..HYDROPSYCHIDAE				
..CHEUMATOPSYCHE	47	48	12	180
..HYDROPSYCHE	238	84	93	132
..SYMPHITOPSYCHE	--	--	4	--
..HYDROPTILIDAE				
..HYDROPTILA	1	--	--	8
..LEUCOTRICHA	2	--	--	52
..STACTOBIELLA	--	--	--	--
..LINNEPHILIDAE				
..APATANIA	--	--	--	--
..GOPHA	--	--	1	--
..NEOPHYLAX	5	--	--	--
..MOLANIIDAE				
..MOLANNA	--	8	--	--
..PHILOPOTAMIDAE				
..POLYCENTROPIDAE	74	28	2	56
..POLYCENTROPUS	--	--	--	--
..PSYCHOMIIDAE				
..PSYCHOMIA	--	--	--	--
..RHYACOPHILIDAE				
..RHYACOPHILA	--	--	--	--
MOLLUSCA (MOLLUSCS)				
..BIVALVIA				
..NUCULOIDAE				
..SPHAERIIDAE				
..SPHAERIUM	--	--	--	--
GASTROPODA				
..BASOMMATOPHORA				
..ANCYLIDAE				
..FERRISSIA	1	--	--	--
NEMATODA (NEMATODES)				
..UNKNOWN CLASS				
..UNKNOWN ORDER				
..UNKNOWN FAMILY				
..UNKNOWN GENUS	--	--	1	--
PLATHELMINTHES (PLATWORMS)				
..TURBELLARIA				
..TRICLADIDA				
..PLANARIIDAE	--	--	--	--
..UNKNOWN GENUS	--	--	1	12
..UNKNOWN FAMILY	--	--	--	--
..UNKNOWN GENUS	--	--	--	--

Table 3.--Benthic-invertebrate data--Continued
 (double dash indicates organism not present in sample)

	01480653 EAST BR BRANDYWINE CR AT GLENMOORE, PA.			
DATE TIME	OCT 11, 73 0000	OCT 25, 74 0000	OCT 20, 76 1430	OCT 25, 77 1130
TOTAL COUNT	134	113	424	120
ORGANISM	COUNT	COUNT	COUNT	COUNT
ANNELIDA				
..OLIGOCHAETA				
..UNKNOWN ORDER				
..UNKNOWN FAMILY				
..UNKNOWN GENUS	--	--	4	--
ARTHROPODA (ARTHROPODS)				
..ARACHNIDA				
..HYDRACARINA				
..UNKNOWN FAMILY				
..UNKNOWN GENUS	--	4	12	--
..INSECTA				
..COLEOPTERA				
..ELMIDAE				
..OPTIOSERVYUS	--	--	--	1
..OLIMNIUS	--	--	1	--
..STENELMIS		1	1	--
..DIPTERA				
..ATHERICIDAE=RHAGIONIDAE				
..ATHERIX	--	1	--	--
..CHIRONOMIDAE	1	3	--	--
..CONCHAELOPIA	--	--	3	1
..CRICOTOPUS	--	--	16	1
..EUKISFERIELLA	--	--	6	--
..LIMNOCHIRONOMUS	--	--	--	--
..NANOCLADIUS	--	--	--	--
..NILOTANYPUS	--	--	--	--
..ORTHOCLADIUS	--	--	--	1
..PSECTROCLADIUS	--	--	--	2
..RHICTANTARSUS	--	--	57	4
..RHICTANTARSUS	--	--	--	--
..THYENEMANNIELLA	--	--	4	--
..EMPIDIDAE				
..HEMERODROMIA	--	--	3	--
..SIMULIIDAE				
..SIMULIUM	1	4	2	--
..TIPULIDAE				
..ANTOCHA	--	11	34	1
..GONOMYIA	--	--	--	--
..TIPULA	1	--	--	--
..EPHEMEROPTERA				
..BAETIDAE				
..BAETIS	--	1	--	--
..PSEUDOCLOEON	--	--	3	--
..EPHEMERELLIDAE	--	--	--	--
..EPHEMERELLA	--	1	2	--
..HEPTAGENIIDAE				
..STENONEMA	3	2	31	7
..LEPIDOPTERA				
..PYRALIDIDAE				
..PARARGYACTIS	--	--	3	1
..MEGALOPTERA				
..CORALIDAE				
..CHAULIODES	--	1	--	--
..CORYDALUS	1	--	--	--
..NIGRONIA	--	--	--	--
..SIALIDAE				
..SIALIS	--	--	--	1
..ODONATA				
..AESHNIDAE				
..AESHNA	2	--	--	--
..PELECOPTERA				
..PERLIDAE				
..ACRONSURIA	1	--	--	--
..PARAGNETINA	17	3	--	--
..TAENIOPTERYGIDAE				
..TAENIOPTERYX	--	--	22	6
..TRICHOPTERA				
..BRACHYCENTRIDAE				
..BRACHYCENTRUS	--	1	--	--
..MACRASEMA			6	7
..GLOSSOSOMATIDAE				
..GLOSSOSOMA	--	1	5	1
..HYDROPSYCHIDAE	23	12	86	48
..CHEUMATOPSYCHE	37	83	107	28
..HYDROPSYCHE	--	1	--	--
..MACRONEMA	--	--	--	--
..SYMPHITOPSYCHE	--	--	--	--
..HYDROPTILIDAE	--	--	--	--
..HYDROPTILA	--	--	4	--
..OCHROTRICHIA	--	--	--	--
..LIMNephilidae				
..APATANIA	--	--	--	2
..PHILOPOTAMIDAE				
..CRIMARRA	16	--	4	1
..POLYCENTROPIDIDAE				
..CYRANELLUS	--	--	--	--
..NYCTIOPHYLAX	--	--	1	1
..POLYCENTROPUS	--	1	3	5
..PSYCHOMYIIDAE				
..PSYCHOMYIA	--	--	4	--
MOLLUSCA (MOLLUSCS)				
GASTROPODA				
..BASOMMATOPHORA				
..ANCYLIDAE				
..FERRISSIA	--	--	19	3
..PHYSIDAE				
..PHYSA	--	--	--	--
NEMATODA (NEMATODES)				
..UNKNOWN CLASS				
..UNKNOWN ORDER				
..UNKNOWN FAMILY				
..UNKNOWN GENUS	--	--	1	--
PLATYHELMINTHES (FLATWORMS)				
..TURBELLARIA				
..TRICLADIDA				
..TRICLADIDAE	1	--	--	--
..UNKNOWN GENUS	--	--	--	--

Table 3.--Benthic invertebrate data--Continued
[double dash indicates organism not present in sample]

	01480858 INDIAN RUN NEAR SPRINGTON, PA.					
DATE TIME	OCT 25 74 0000	NOV 10 75 1330	OCT 20 78 1515	OCT 25 77 1230	NOV 8 79 1045	NOV 7 80 1315
TOTAL COUNT	188	448	135	42	185	822
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA						
..OLIGOCHAETA						
..PROSOPORA						
..LIMNOSINIDAE						
..UNKNOWN GENUS	--	--	--	--	1	--
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDRACARINA						
..UNKNOWN FAMILY	--	1	--	--	1	--
..UNKNOWN GENUS	--	--	--	--	--	--
..CRUSTACEA						
..CYCLOPOIDA						
..CYCLOPOIDAE	--	1	--	--	--	--
..CYCLOPS	--	--	--	--	--	--
INSECTA						
..COLEOPTERA						
..ELMIDAE						
..OPTIOSERVUS	3	4	--	--	3	10
..OULIMNUS	--	--	--	--	2	--
..STREBIIDAE	--	--	--	--	--	--
..PSEPHENIDAE	--	--	1	--	--	1
..SCOTOPHIA	--	--	2	2	--	7
..PSEPHENUS	--	--	--	--	--	--
..DIPTERA						
..ATHERICIDAE=RHAGIONIDAE						
..ATHERIX	--	--	--	--	1	--
..A. VARTIGATA	--	--	--	--	--	--
..CERATOPOGONIDAE=HELEIDAE						
..UNKNOWN GENUS	--	1	--	--	--	--
..CHIRONOMIDAE	8	--	2	1	--	--
..CARDIOLADIUS	--	--	2	1	--	9
..CONCHAPELOPIA	--	--	13	--	4	--
..CRICOTOPIUS	--	7	--	--	--	--
..DIANESA	--	--	--	--	--	--
..EUKIPPETRIELLA	--	--	--	1	1	1
..METRACONEMUS	--	12	--	--	--	--
..MICROTENDIPES	--	2	--	--	--	28
..NANOCLADIUS	--	--	--	--	--	--
..ORTHOCCLADIUS	--	38	8	--	29	24
..PARAMETRICONEMUS	--	--	--	--	1	--
..POLYPSIDAE	--	--	--	--	--	--
..PSECTROCLADIUS	--	12	10	--	7	28
..PSECTANTHARSUS	--	7	--	--	--	12
..THIENEMANNIELLA	--	--	--	--	--	--
..SIMULIIDAE	2	12	12	--	2	--
..SIMULIUM	--	--	--	--	--	--
..TIPULIDAE	3	9	7	1	5	22
..ANTOCERA						
..EPHEMEROPTERA						
..BAETIDAE						
..BAETIS	2	1	--	1	--	2
..PSEUDOCLOSON	--	3	--	--	--	--
..CAENIDAE	--	--	--	--	--	--
..CAENIS	--	--	--	--	--	2
..EPHEMERELLIDAE	3	145	1	--	7	137
..EPHEMERELLA	--	--	--	--	--	--
..EPHEMERIDAE	--	--	--	--	--	2
..EPHEMERA	--	--	--	--	--	--
..HEPTAGENIIDAE	--	--	--	--	4	--
..EPHORUS	--	--	--	--	--	--
..STENONEMA	12	42	3	4	4	60
..SIPHONURIDAE	--	2	1	--	1	--
..SIPHONURA						
..PLECOPTERA						
..CAPNIIDAE						
..PARACAPNIA	--	--	--	--	27	--
..UNKN GENUS	--	--	--	--	--	2
..PSRLIDAE						
..ACRONSURIA	--	--	--	--	5	--
..ACRONURIA	2	--	--	--	--	--
..PARACNETTIA	1	--	--	1	1	--
..UNKNOWN GENUS	--	3	--	--	--	--
..PERLODIDAE						
..UNKNOWN GENUS	--	--	--	--	--	3
..TAENIOPTERYGIDAE	--	--	--	--	8	--
..TAENIOPTERYX	--	--	--	--	--	--
..TRICHOPTERA						
..BRACHYCENTRIDAE	--	2	--	--	6	5
..BRACHYCENTRUS	--	--	--	--	--	--
..GLOSSOSOMATIDAE						
..GLOSSOSOMA	18	11	3	1	14	8
..HYDROPSYCHIDAE						
..HYDROPSYCHE	44	74	28	5	10	45
..HYDROPSYCHE	43	28	8	4	2	--
..POTANILIA	--	--	--	3	18	10
..HYDROPTIDAE						
..HYDROPTILA	1	1	--	--	--	4
..EUCOTRICIA	--	--	--	--	--	--
..EPTOCERIDAE	--	--	--	--	--	--
..MYSTACIDES	--	--	--	--	--	5
..LIMNephilidae						
..LIMNephilidae	--	2	2	4	5	90
..LIMNephilidae	1	1	1	1	1	13
..LIMNephilidae	--	--	--	--	--	--
..NEOPHYLAT	--	1	--	--	--	--
..PHILOPOTAMIDAE						
..PHILOPOTAMUS	3	8	--	2	2	--
..DOLOPHILODES	--	10	--	--	5	--
..POLYCENTROPIDAE						
..NEURECLIPSIS	--	--	--	1	--	--
..NYCTIOPHYLAX	1	5	1	--	--	7
..PHYLOCENTROPUS	--	--	--	--	--	--
..POLYCENTROPUS	1	1	--	--	1	--
..PSYCHOMYIDAE						
..PSYCHOMYIA	7	2	11	--	--	48
..HYACOPHILIDAE						
..HYACOPHILA	4	1	2	--	5	--
MOLLUSCA (MOLLUSCS)						
..BIVALVIA						
..NUCULOIDEA						
..SPHAERIIDAE	--	--	--	--	--	2
..UNKNOWN GENUS	--	--	--	--	--	--
..GASTROPODA						
..BASOMMATOPHONA						
..ACTEOLIA						
..FERRISITA	9	3	24	10	1	28
..PHYSIDAE	--	--	--	--	--	1
..PHYSA	--	--	--	--	--	--
PLATHELMINTHES (FLATWORMS)						
..TURBELLARIA						
..TRICLADIA						
..UNKNOWN FAMILY	--	--	1	--	--	2
..UNKNOWN GENUS	--	--	--	--	--	--

Table 3.--Benthic-invertebrate data--Continued
[double dash indicates organism not present in sample]

DATE TIME	01480700 EAST BR BRANDYWINE CR NR DOWNINGTOWN, PA.					
	NOV 11, 70 0000	MAY 25, 71 0000	OCT 19, 71 0000	OCT 2, 72 0000	OCT 10, 73 0000	OCT 29, 74 0000
TOTAL COUNT	86	38	38	127	201	147
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA						
..HIRUDINEA						
..UNKNOWN ORDER						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	--	--
..OLIGOCHAETA						
..UNKNOWN ORDER						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	--	--
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDRACARINA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	--	1
..INSECTA						
..COLEOPTERA						
..ELMIDAE					2	1
..OPTIOSERVUS	--	--	--	--	--	--
..CULMINIUS	--	--	--	--	--	--
..STENELAIUS	--	--	--	--	--	--
..PSEPHENIDAE	--	--	--	--	--	--
..PSEPHENUS	--	--	--	--	--	--
..DIPTERA						
..CHIRONOMIDAE	--	--	--	37	4	12
..CARDIOLADIUS	--	--	--	--	--	--
..CORYNONEURA	--	--	--	--	--	--
..CRICOTOPUS	--	--	--	--	--	--
..EUKIEFFERIELLA	--	--	--	--	--	--
..MICROENDIPS	--	--	--	--	--	--
..ORTHOCLADUS	--	--	--	--	--	--
..RHOTANYTARSUS	--	--	--	--	--	--
..THIENEMANNIELLA	--	--	--	1	--	--
..EMPIDIDAE	--	--	--	--	--	--
..HEMERODROMIA						
..SIMULIIDAE						
..SIMULIUM	1	1	--	--	2	--
..TIPULIDAE	--	--	--	--	8	1
..ANTOCHA						
..EPHEMEROPTERA						
..BAETIDAE						
..BAETIS	--	8	--	5	6	1
..PSEUDOCLOEON	--	--	--	1	--	--
..EPHEMERELLIDAE	--	--	--	--	--	--
..EPHEMERELLA	1	7	--	--	--	--
..HEPTAGENIIDAE	--	--	--	--	--	--
..STENONEMA	--	2	2	1	9	5
..SIPHONURIDAE	--	--	--	6	1	4
..SONCHIA						
..LEPIDOPTERA						
..PYRALIIDAE	--	--	--	--	--	--
..PARARGYACTIS						
..MEGALOPTERA						
..CORYDALIDAE						
..CORYDALUS	1	--	--	--	--	--
..C. CORNUTUS	--	--	--	--	--	--
..NEUROPTERA						
..SISYRIDAE	--	--	--	--	--	--
..SISYRA						
..PLECOPTERA						
..PERLIDAE						
..ACRONEURIA	1	--	1	1	1	--
..PARANETINA	--	--	--	--	--	--
..TAENIOPTERYGIDAE	--	--	--	--	--	--
..TAENIOPTERYX	--	--	--	--	--	--
..TRICHOPTERA						
..BRACHYCENTRIDAE	--	--	--	--	--	--
..MICRASSEA	--	--	--	--	--	--
..HYDROPSYCHIDAE	--	--	--	--	--	--
..CHEUMATOPSYCHE	28	15	4	18	70	14
..HYDROPSYCHE	48	2	2	51	94	100
..MACRONEMA	--	--	--	1	2	1
..SYMPHITOPSYCHE	--	--	--	--	--	--
..HYDROPTILIDAE	--	--	--	--	--	--
..HYDROPTILA	--	--	--	3	--	--
..LEUCOTRICHIA	--	--	--	--	--	--
..LEPTOCERIDAE	--	--	--	--	--	--
..MYSTACIDES	--	--	--	--	--	--
..LIMNephilidae	--	--	--	--	--	--
..APATANIA	--	--	--	--	--	--
..PHILOPOTAMIDAE	--	--	--	2	3	1
..CHIMARRA	--	--	--	--	--	--
..POLYCENTROPODIDAE	--	--	--	1	--	--
..NEURECLIPSIS	--	--	--	--	--	--
..NICTIOPHYLAX	--	--	--	--	--	2
..POLYCENTROPUS	--	--	--	--	--	--
..PSYCHOMYIIDAE	5	--	--	1	--	3
..PSYCHOMYIA						
MOLLUSCA (MOLUSCS)						
..GASTROPODA						
..BASOMMATOPHORA						
..ANCYLIDAE	--	--	--	--	--	1
..FERRISSIA						

[illegible]

01480700 EAST BR BRANDYWINE CR NR DOWNINGTOWN, PA.						
DATE	OCT 28 75	OCT 18 76	OCT 25 77	OCT 30 78	NOV 2 79	NOV 14 80
TIME	1340	1830	1400	1130	0830	0845
TOTAL COUNT	357	885	325	388	55	3840
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA						
HYDRIDNEA						
..UNKNOWN ORDER						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	1	--	--	--	--
OLIGOCHAETA						
..UNKNOWN ORDER						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	1	--	--	--	--
ARTHROPODA (ARTHROPODS)						
ARACHNIDA						
..HYDRACARINA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	4	4	3	--	--	64
INSECTA						
COLEOPTERA						
..ELMIDAE						
..OPTIOSERVUS	9	9	2	8	--	--
..OULMNIUS	--	3	--	--	--	--
..STENELMIS	--	1	1	--	--	32
..PSEPHENIDAE						
..PSEPHENUS	1	--	1	4	1	--
DIPTERA						
..CHIRONOMIDAE	--	--	--	--	--	--
..CARDIOCLADIUS	8	--	--	2	--	32
..CORYNONEURA	--	--	1	--	--	--
..CRICOTOPUS	--	--	--	--	--	--
..EUBASPRIELLA	3	43	19	--	17	64
..MICROTENDIPES	--	15	--	--	--	32
..ORTHOCCLADIUS	5	--	--	4	--	--
..RHOTANYTARSUS	13	53	5	12	1	1440
..THIENEMANNIELLA	--	--	--	--	--	32
EMPTIDAE						
..HEMERODROMIA	2	2	--	--	--	--
SIMULIIDAE						
..SIMULIUM	--	2	--	34	--	--
TIPULIDAE						
..ANTOCHA	3	8	8	--	--	32
EPHEMEROPTERA						
..BAETIDAE						
..BAETIS	--	--	--	--	--	--
..PSEUDOCLOEON	1	2	3	--	1	--
..EPHEMERELLIDAE						
..EPHEMERELLA	38	14	3	12	--	96
..HEPTAGENIIDAE						
..STENONEMA	2	29	23	4	2	128
..SIPHONIIDAE						
..SONYCHIA	--	--	--	--	--	96
LEPIDOPTERA						
..PYRALIIDAE						
..PARARGYACTIS	2	18	20	--	--	--
MEGALOPTERA						
..CORYDALIDAE						
..CORYDALUS	2	5	2	--	--	--
..C. CORNUTUS	--	--	--	--	1	--
NEUROPTERA						
..SISYRIDAE						
..SISYRA	--	3	--	--	--	--
PLECOPTERA						
..PSALIDAE						
..ACRONEURIA	1	--	1	--	--	--
..PARAGNETINA	8	2	--	--	1	128
..TAENIOPTERYGIDAE						
..TAENIOPTERYX	1	6	18	--	--	192
TRICHOPTERA						
..BRACHYCENTRIDAE						
..MICRASEMA	--	--	1	--	--	224
..HYDROPSYCHIDAE						
..CHEUMATOPSYCHE	127	177	48	--	2	192
..HYDROPSYCHS	102	254	130	132	3	960
..MACRONEMA	9	10	5	--	--	--
..SYMPHITOPSYCHE	--	--	--	188	28	--
HYDROPTILIDAE						
..HYDROPTILA	--	--	--	--	--	32
..LEUCOTRICHIA	1	1	3	--	--	--
..LEPTOCERIDAE						
..MYSTACIDES	--	1	1	--	--	--
..LINNEPHILIDAE	--	1	2	--	--	--
..APATANIA						
..PHILOPOTAMIDAE	--	--	--	--	--	--
..CHIMARRA	--	4	--	--	--	--
..POLYCENTROPIDAE						
..NEURECLIPSIS	--	--	--	--	--	--
..NYCTIOPHYLAX	--	--	2	--	--	--
..POLYCENTROPUS	--	1	12	--	--	64
..PSYCHOMYIIDAE						
..PSYCHOMYIA	13	11	8	--	1	--
..GLOSSOSOMATIDAE						
..GLOSSOSOMA	4	3	--	--	--	--
MOLLUSCA (MOLLUSCS)						
GASTROPODA						
..BASOMMATOPHORA						
..ANCYLIDAE						
..FERRISSIA	2	1	5	--	--	--

Table 3.--Benthic-invertebrate data--Continued
[double dash indicates organism not present in sample]

01480803 VALLEY CR AT MULLSTEINS MEADOWS NR DOWNTOWN, PA.

DATE TIME	OCT 12 73 0600	OCT 28 74 0600	NOV 10 75 0800	OCT 21 76 1230	OCT 28 77 0830
TOTAL COUNT	770	948	997	630	433
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT
ARTHROPODA (ARTHROPODS)					
..ARACHNIDA					
...HYDARCARINA					
...UNKNOWN FAMILY					
...UNKNOWN GENUS	--	--	--	--	--
..CRUSTACEA					
...AMPHIPODA					
...GAMMARIDAE					
...GAMMARUS	--	--	--	2	--
..INSECTA					
...COLEOPTERA					
...DIPYLOIDAE					
...HELIIDAE	--	--	--	--	--
...ELMIDAE					
...OPTIOSEVUS	8	3	32	8	--
...STENELMIS	5	19	48	1	17
...PSEPHENIDAE					
...PSEPHENUS	--	--	--	--	1
..DIPTERA					
...CEATOPOGONIDAE=HELEIDAE					
...UNKNOWN GENUS					
...CHIRONOMIDAE	18	15	--	--	--
...ABLABESMYIA	--	--	--	--	--
...CARDIOTUS	--	--	52	--	4
...CONCHAELOPIA	--	--	--	4	--
...CORYNONEURA	--	--	--	--	--
...CHICOTOPUS	--	--	--	4	19
...EUTEPERISZELLA	--	--	--	31	--
...MICROTENDIPES	--	--	--	--	--
...ORTHOCLADIUS	--	--	18	--	--
...POLYPEDILUM	--	--	--	11	--
...RHEOTANTHUS	--	--	3	28	--
...TANTHUS	--	--	--	2	1
...THIENEMANNIELLA	--	--	--	6	--
...UNKNOWN GENUS	--	--	--	--	1
...EMPIDIDAE					
...HEMERODROMIA	--	--	4	--	--
..SIMULIIDAE					
...SIMULIUM	19	22	26	16	3
...TIPULIDAE					
...ANTOCHA	1	8	47	2	10
...TIPULA	--	--	--	1	--
..EPHEMEROPTERA					
...BAETIDAE					
...BAETIS	9	8	--	8	1
...CAENIDAE					
...CAENIS	--	--	--	--	6
...EPHEMERELLIDAE					
...EPHEMERELLA	8	5	185	23	--
...SERRATELLA	--	--	--	--	--
...HEPTAGENIIDAE					
...STENOEMA	25	19	10	68	13
...SIPHONURIDAE					
...ISONYCHIA	3	4	--	--	--
...TRICORYTHIDAE					
...TRICORYTHODES	1	--	--	1	--
..MEGALOPTERA					
...CORYDALIDAE					
...CORYDALUS	1	1	7	--	3
...NIGRONIA	1	--	--	--	--
..ODONATA					
...COENAGRIONIDAE					
...UNKNOWN GENUS	--	--	--	--	--
..PLECOPTERA					
...UNKNOWN FAMILY					
...UNKNOWN GENUS	--	--	--	2	--
...CAPNIIDAE					
...ALLOCAPNIA	--	--	--	--	--
...PERLIDAE					
... (NEOPHAGANOPHORA	--	1	--	5	--
...PARAGNETINA	--	--	3	--	--
..TRICHOPTERA					
...GLOSSOSOMATIDAE	1	--	7	--	--
...GLOSSOSOMA					
...HYDROPSYCHIDAE					
...CHEUMATOPSYCHE	182	294	170	81	81
...HYDROPSYCHE	487	547	395	274	228
...POTAMIA	--	--	--	--	24
...SYMPHYTOPSYCHE	--	--	--	--	--
...HYDROPTILIDAE					
...LEUCOTRICHIA	--	--	3	1	1
...LIMNETHILIDAE					
...APATANIA	--	--	--	--	--
...PHILOPOTAMIDAE					
...CHIMARRA	1	--	4	25	11
...FORMALDIA	--	--	--	3	--
...POLYCENTROPIDIDAE					
...NEURECLIPSIS	--	--	--	--	7
...NEUROPHYLIS	--	--	1	--	--
...PSYCHOMYIIDAE					
...PSYCHOMYIA	--	--	1	--	--
...RHYACOPHILIDAE					
...RHYACOPHILA	--	1	--	--	--
..MOLLUSCA (MOLLUSCS)					
..BIVALVIA					
...NUCULOIDAE					
...SPHAERIUM	--	--	--	--	1
..GASTROPODA					
...BASOMMATOPHORA					
...ANCYLIDAE					
...PERRISSIA	--	--	1	1	3
...PHYSIDAE	--	1	--	--	--
...PHYSA					
..PLATYHELMINTHES (FLATWORMS)					
..TURBELLARIA					
..TRICLADIDA					
...PLANARIIDAE	--	5	--	--	--
...UNKNOWN FAMILY					
...UNKNOWN GENUS	--	--	--	1	--

01480903 VALLEY CR AT MULLSTEINS MEADOWS NR DOWNINGTOWN, PA.

DATE	NOV 2 78	NOV 2 79	NOV 19 80	NOV 19 80
TIME	1515	1045	1300	1315

TOTAL COUNT	308	381	1598	954
-------------	-----	-----	------	-----

ORGANISM	COUNT	COUNT	COUNT	COUNT
----------	-------	-------	-------	-------

ARTHROPODA (ARTHROPODS)

ARACHNIDA
 ..HYDRACARINA
 ..UNKNOWN FAMILY
 ..UNKNOWN GENUS
 CRUSTACEA
 ..AMPHILOPODA
 ..CAMMARIDAE
 ..CAMMARUS
 INSECTA
 ..COLEOPTERA
 ..DIPYPTIDAE
 ..HELIIDAE
 ..ELMIDAE
 ..OPTIOSERVUS
 ..STENELMIS
 ..SEPHENIDAE
 ..SEPHENUS

DIPTERA

..CERATOPOGONIDAE=HELEIDAE
 ..UNKNOWN GENUS
 ..CHIRONOMIDAE
 ..ABLABESMIDAE
 ..CARDIOCLADIUS
 ..CONCHAPELOPIA
 ..CORYDORUS
 ..CORYDORUS
 ..EUKIEFFERIELLA
 ..MICROTENDIPES
 ..ORTHOCALDIUS
 ..POLYPEDILUM
 ..RHEOTANYTARSUS
 ..TANYTARSUS
 ..PHIENEMANNIELLA
 ..UNKNOWN GENUS

EMPTIDAE

HEMEROPTERA

SIMULIIDAE

SIMULIUM

TIPULIDAE

ANTOCHA

TIPULA

EPHEMEROPTERA

BAETIDAE

BAETIS

CAENIDAE

CAENIS

EPHEMERELLIDAE

EPHEMERELLA

SERRATIDAE

HEPTAGENIIDAE

STENONEMA

SYMPHYLOPHIDAE

ISONYCHIDAE

TRICORYTHIDAE

TRICORYTHODES

MEGALOPTERA

CORIDIDAE

CORYDALUS

NIGRONIA

ODONATA

COENAGRIONIDAE

UNKNOWN GENUS

PLECOPTERA

UNKNOWN FAMILY

UNKNOWN GENUS

CAPNIDAE

ALLOCAPNIA

PERLIDAE

NEO PHASGANOPHORA

PARAGNETINA

TRICHOPTERA

GLOSSOSOMATIDAE

GLOSSOSOMA

HYDROPSYCHIDAE

CHEMATOPSYCHE

HYDROPSYCHE

POTAMYIA

SYMPHYTOPSYCHE

HYDROPTILIDAE

LEUCOTRICHIA

LIMNOSPHILIDAE

APATANIA

PHILOPOTAMIDAE

CRIMARRA

WORMALDIA

POLYCENTROPODIDAE

NEURECLIPSIS

NYCTIOPHYLAX

PSYCHOMYIIDAE

PSYCHOMYIA

RHYACOPHILIDAE

RHYACOPHILA

MOLLUSCA (MOLLUSCS)

BIVALVIA

NUCULOIDEA

Sphaerium

GASTROPODA

BASOMMATOPHORA

ANCYLIDAE

FERRISSIA

PHYSIDAE

PHYSA

PLATYHELMINTHES (PLATWORMS)

TURBELLARIA

TRICLADIDA

PLANARIIDAE

UNKNOWN FAMILY

UNKNOWN GENUS

Table 3.--Benthic-invertebrate data--Continued
[double dash indicates organism not present in sample]

	01481030 BRANDYWINE CREEK NEAR CHADDS FORD, PA				
DATE	MAY 25, 71	OCT. 2, 72	OCT. 10, 73	OCT. 30, 74	OCT. 30, 75
TIME	0000	0000	0000	0000	1130
TOTAL COUNT	41	133	853	249	717
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT
ARTHROPODA (ARTHROPODS)					
..ARACHNIDA					
..HYDARACINA					
..UNKNOWN FAMILY					8
..UNKNOWN GENUS	--	--	--	--	
..CRUSTACEA					
..AMPHIPODA					
..GAMMARIDAE					1
..GAMMARUS	--	--	--	--	
..INSECTA					
..COLEOPTERA					
..ELMIDAE				1	--
..SUBIRAPHIA	--	--	--	--	1
..OPTIOGERSVUS	--	--	--	--	
..DIPTERA					
..ATHERICIDAE-RHAGIONIDAE					
..ATHERIX	--	--	--	--	--
..CHIRONOMIDAE	--	12	--	5	--
..CARDIOCLADIUS	--	--	--	--	--
..CONCHAELOPIA	--	--	--	--	--
..CRICHOPIUS	--	--	--	--	3
..LIMNOCHIRONOMUS	--	--	--	--	--
..ORTHOCLADIUS	--	--	--	--	--
..PARAMETRICNEMUS	--	--	--	--	1
..PLECOPTERACOLUTHUS	--	--	--	--	--
..POLYEDLUM	--	--	--	--	--
..PSECTROCLADIUS	--	--	--	--	9
..RHOTANTYTARSUS	--	--	--	--	--
..SIMULIDAE	11	3	--	--	1
..SIMULIUM					
..TIPULIDAE	--	--	--	--	1
..ANTOCHA	--	--	--	--	
..EPHEMEROPTERA					
..BAETIDAE	--	1	3	1	1
..BAGIS	--	--	--	--	--
..CAENIDAE	--	--	--	--	--
..CAENIS	--	--	--	--	--
..EPHEMERELLIDAE	7	--	--	--	4
..EPHEMERUS					
..HEPTAGENIIDAE	8	7	11	1	87
..STENONEMA	--	--	--	--	--
..SIPHONURIDAE	--	--	--	--	--
..ISONYCHIA	--	--	2	--	--
..SIPHONURUS	--	--	--	--	--
..LEPIDOPTERA					
..PYRALIDAE	--	8	4	--	5
..PARAGYACTIS	--	--	--	--	--
..MEGALOPTERA					
..CORYDALIDAE	--	--	--	--	--
..NIGRONIA	--	--	--	--	--
..SIALIDAE	--	--	--	--	--
..SIALIS	--	--	--	--	--
..ODONATA					
..COENOTRIONIDAE	--	--	--	--	--
..ARGIA	--	--	--	--	--
..PLECOPTERA					
..PERLIDAE	--	--	--	--	--
..PARALETETINA	--	--	--	--	--
..TAENIOPTERYGIDAE	--	--	--	--	--
..TAENIOPTERYX	--	--	--	--	--
..TRICHOPTERA					
..BRACHYCENTRIDAE	--	--	--	--	--
..BRACHYCENTRUS	--	--	--	--	--
..GLOSSOSOMATIDAE	--	--	--	--	--
..GLOSSOSOMA	--	--	--	--	--
..HYDROPSYCHIDAE	--	27	405	142	382
..CHEMATOPSYCHE	15	78	208	55	221
..HYDROPSYCHE	--	--	--	--	--
..POTAMYIA	--	--	--	--	--
..SYMPHITOPSYCHE	--	--	--	--	--
..HYDROPTILLIDAE	--	1	2	1	2
..LEUCOTRICHIA	--	--	--	1	--
..LEPTOCERIDAE	--	--	--	--	--
..OECETIS	--	--	--	--	--
..PHILOPOTAMIDAE	--	--	--	--	--
..CHIMARRA	--	--	--	--	--
..POLYCENTROPIDAE	--	--	--	--	--
..CYRNELLUS	--	--	2	--	6
..POLYCENTROPUS	--	--	--	--	--
..RHYACOPHILIDAE	--	--	--	--	--
..RHYACOPHILA	--	--	--	--	--
MOLLUSCA (MOLLUSCS)					
..BIVALVIA					
..NUCULOIDAE	--	--	--	--	--
..CORBICULIDAE	--	--	13	--	--
..CORBICULA	--	--	--	7	1
..SPHAERIIDAE	--	--	--	--	--
..SPHAERIUM	--	--	--	--	--
..GASTROPODA					
..BASOMMATOPHORA					
..ANCYLIDAE	--	--	4	--	5
..FERRISSIA	--	--	--	--	--
..PHYSIDAE	--	--	1	--	--
..PHISA	--	--	--	--	--
PLATYHELMINTHES (PLATWORMS)					
..TURBELLARIA					
..TRICLADIA	--	--	--	32	--
..PLANARIIDAE	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--
..UNKNOWN FAMILY	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--

01481030 BRANDYWINE CREEK NEAR CHADDS FORD, PA					
DATE TIME	OCT 19, 78 1345	OCT 27, 77 1330	NOV 3, 78 1430	NOV 5, 79 1330	NOV 12, 80 1545
TOTAL COUNT	480	103	183	132	549
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT
ARTHROPODA (ARTHROPODS)					
..ARACHNIDA					
..HYDRACARINA					
..UNKNOWN FAMILY					
..UNKNOWN GENUS	--	1	--	--	--
..CRUSTACEA					
..AMPHIPODA					
..GAMMARIDAE					
..GAMMARUS	--	--	--	--	--
..INSECTA					
..COLEOPTERA					
..ELMIDAE					
..DUBIRAPHIA	--	--	--	--	--
..OPTIOSERVUS	--	--	2	1	8
..DIPTERA					
..ATHERICIDAE-RHAGIONIDAE					
..ATHERIX	--	--	--	1	--
..CHIRONOMIDAE	--	--	--	--	--
..CARDOCLADIUS	--	1	4	--	3
..CONCHAELOPIA	--	--	--	--	--
..CRICOTOPUS	24	10	--	3	88
..LIMNOCHIRONOMUS	--	--	--	--	24
..ORTHOCCLADIUS	--	--	2	8	--
..PARAMETRICONEMUS	--	--	--	1	--
..PLECOPTERACOLUTRUS	--	--	--	--	--
..POLYPEDILUM	--	--	--	1	12
..PSSCTROCLADIUS	4	--	--	--	--
..RHODANTARSUS	18	1	--	7	32
..SIMULIDAE					
..SIMULIUM	3	--	1	7	--
..TIPULIDAE					
..ANTOCHA	--	1	--	--	4
..EPHEMEROPTERA					
..BAETIDAE					
..BAETIS	--	1	--	2	--
..CAENIDAE					
..CAENIS	--	1	--	--	--
..EPHEMERELLIDAE					
..EPHEMERELLA	--	--	--	10	--
..HEPTAGENIIDAE					
..STENONEMA	20	7	8	10	56
..SIPHONURIDAE					
..ISONYCHIA	--	--	1	1	--
..SIPHONURUS	--	1	--	--	--
..LEPIDOPTERA					
..PYRALIDIDAE					
..PARARGACTIS	8	3	1	--	32
..MEGALOPTERA					
..CORYDALIDAE					
..NIGRONIA	--	--	--	2	--
..SIALIDAE	--	1	--	--	--
..SIALIS					
..ODONATA					
..COENAGRIONIDAE					
..ARGIA	--	1	--	--	--
..PLECOPTERA					
..PERLLIDAE					
..PARAGNETINA	--	--	--	4	--
..TAENIOPTERYGIDAE					
..TAENIOPTERYX	--	--	--	22	--
..TRICHOPTERA					
..BRACHYCENTRIDAE					
..BRACHYCENTRUS	--	--	--	2	--
..GLOSSOSOMATIDAE					
..GLOSSOSOMA	--	--	--	1	--
..HYDROPSYCHIDAE					
..CHEUMATOPSYCHE	227	44	83	3	18
..HYDROPSYCHE	124	17	81	7	180
..POTAMITA	--	6	--	--	--
..SYMPHITOPSYCHE	--	--	--	29	--
..HYDROPTILIDAE					
..LEUCOTRICHIA	8	4	--	--	38
..LEPTOCERIDAE					
..OECETIS	--	--	--	--	--
..PHILOPOTAMIDAE					
..CHIMARRA	--	--	--	9	--
..POLYCENTROPODIDAE					
..CYRNELLUS	--	--	--	--	4
..POLYCENTROPUS	7	--	--	--	--
..RHYACOPHILIDAE					
..RHYACOPHILA	--	--	--	1	--
MOLLUSCA (MOLLUSCS)					
..BIVALVIA					
..NUCULOIDEA					
..CORRIGULIDAE	--	--	2	--	--
..CORRIGULA	--	--	--	--	--
..SPHARRIUM	15	--	--	--	--
..GASTROPODA					
..BASOMMATOPHORA					
..ANCYLIDAE					
..FERRISSA	4	3	--	--	--
..PHYSIDAE					
..PHYSA	1	--	--	--	--
PLATYHELMINTHES (PLATWORMS)					
..TREBELLARIA					
..TRICLADIDA					
..PLANARIIDAE	--	--	--	--	--
..UNKNOWN GENUS					
..UNKNOWN FAMILY					68
..UNKNOWN GENUS	1	--	--	--	--

Table 3.--Benthic-invertebrate data--Continued
[double dash indicates organism not present in sample]

01-09-0000 E BR BIG ELK CREEK AT ELKVIEB, PA						
DATE	JUN 3, 70	NOV 3, 70	MAY 24, 71	OCT 18, 71	OCT 23, 72	OCT 9, 73
TIME	0000	0000	0000	0000	0000	0000
TOTAL COUNT	184	89	80	6	325	43
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA						
...OLIGOCHAETA						
...PLESIPODA						
...NAIDIDAE						
...UNKNOWN GENUS	--	--	--	--	--	--
...UNKNOWN ORDER						
...UNKNOWN FAMILY						
...UNKNOWN GENUS	--	--	--	--	--	--
ARTHROPODA (ARTHROPODS)						
ARACHNIDA						
...HYDRACARINA						
...UNKNOWN FAMILY						
...UNKNOWN GENUS	--	--	--	--	--	--
INSECTA						
...COLEOPTERA						
...DIPLOPODA						
...HEMICHUS						
...ELMIDAE						
...OPTIOSERVUS					1	--
...OULIMNIUS					--	--
...STENELMIS					--	--
...HYDROPHILIDAE					--	--
...BEROSUS					--	--
...PSEPHENIDAE					--	--
...PSEPHENUS					--	--
...DIPTERA					174	1
...CHIRONOMIDAE	88	69	--	--	--	--
...CARDIOLADIUS					--	--
...CONCHASPODIA					--	--
...CRICOTOPUS					--	--
...DIAMESA					--	--
...EUKISTPERRIELLA					--	--
...MICROTENDIPES					--	--
...ORTHOCADIUS					--	--
...PARAMETRICNEMUS					--	--
...PARATANTYARSUS					--	--
...POLYDILUM					--	--
...PSECTROCLADIUS					--	--
...RHEOTANTYARSUS					--	--
...THIENEMANNIELLA					--	--
...EMPIDAE					4	--
...HEMERODROMIA					--	--
...UNKNOWN GENUS					--	--
...SIMULIIDAE					1	--
...SIMULIUM	15	--	54	--	--	--
...TIPULIDAE					15	4
...ANTOCHA					--	--
...EPHEMEROPTERA					--	--
...BAETIIDAE	17	--	--	--	1	--
...PSEUDOCLOEON	--	--	--	--	1	--
...EPHEMERELLIDAE					--	--
...EPHEMERELLA	--	--	8	--	--	--
...EURYLOPHELLA					--	--
...SERRATELLA					--	--
...HEPTAGENIIDAE					--	--
...EPEORUS	1	--	--	2	22	6
...STENONEMA					--	--
...SIPHONURIDAE					--	--
...AMELETUS	1	--	--	--	3	1
...ISONYCHIA					--	--
TRICHOPTERA						
...GLOSSOSOMATIDAE					--	--
...GLOSSOSOMA					--	--
...HYDROPSYCHIDAE					--	--
...CHEUMATOPSYCHE					13	12
...HYDROPSYCHE	62	--	20	22	84	18
...SYMPHYTOPSYCHE					--	--
HYDROPTILIDAE						
...HYDROPTILA					4	--
...LEUCOTRICHIA					--	--
...OCHROTRICHIA					--	--
...PHILOPOTANIDAE					--	--
...CHIMARRA					1	--
...DOLOPHILODES					--	--
...POLYCENTROPODIDAE					1	--
...POLYCENTROPUS	--	--	--	--	--	--
MOLLUSCA (MOLLUSCS)						
GASTROPODA						
...BASOMMATOPHORA						
...ANCYLIDAE						
...PERRISSIA					--	--
...PHYSIDAE					--	--
...PHYSA	--	--	--	--	--	--
PLATYHELMINTHES (FLATWORMS)						
TURBELLARIA						
...TRICLADIDA						
...PLANARIIDAE						
...UNKNOWN GENUS	--	--	--	--	--	--
...UNKNOWN FAMILY						
...UNKNOWN GENUS	--	--	--	--	--	--

01494900 E BR BIG ELK CREEK AT ELKVIEW, PA					
DATE TIME	NOV 1 78 1230	NOV 2 77 1200	OCT 25 78 1500	NOV 8 79 1500	NOV 20 80 0830
TOTAL COUNT	199	1005	179	37	972
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA					
..OLIGOCHAETA					
..PLESIOPORA					
..NAIDIDAE					
..UNKNOWN GENUS	--	--	9	--	--
..UNKNOWN ORDER					
..UNKNOWN FAMILY					
..UNKNOWN GENUS	--	1	--	--	--
ARTHROPODA (ARTHROPODS)					
..ARACHNIDA					
..HYDRACINA					
..UNKNOWN FAMILY					
..UNKNOWN GENUS	2	20	8	--	--
INSECTA					
..COLEOPTERA					
..DRYOPIDAE					
..HELICUS	1	--	--	--	--
..ELMIDAE					
..OCTIOSERVUS	7	8	--	2	32
..OULINUS	2	--	1	--	--
..STENELMIS	1	13	--	--	--
..HYDROPHILIDAE					
..BERCUSUS	--	--	--	1	--
..PSEPHRIDAE					
..PSEPHENUS	3	3	1	--	4
DIPTERA					
..CHIRONOMIDAE	--	--	--	--	--
..CARDIOCLADIUS	--	--	1	--	--
..CONCHAPELOPIA	5	5	3	--	56
..CRICOTOPUS	23	22	19	--	8
..DIAMESA	--	--	--	--	12
..EUKIEFFERIELLA	--	18	--	--	4
..MICROSECTRA	1	--	1	--	--
..MICROTENDITES	--	5	--	7	--
..ORTHOCLADIUS	--	--	--	2	68
..PARAMETRIOCNEMUS	--	--	--	--	4
..PARATANTYASSUS	--	23	1	--	4
..POLYPEDILUM	--	--	--	--	--
..PSECTROCLADIUS	2	--	--	--	--
..RHEOTANTYASSUS	44	131	25	--	188
..THIENEMANNIELLA	4	1	--	1	--
..EMPTIIDAE	--	--	--	--	--
..HEMERODROMIA	1	5	--	--	--
..UNKNOWN GENUS	--	5	--	--	4
..SIMULIIDAE					
..SIMULIUM	3	5	--	--	8
..TIPULIDAE					
..ANTOCHA	4	5	4	7	108
EPHEMEROPTERA					
..BAETIDAE					
..PSEUDOCLOSON	--	--	--	--	--
..EPHEMERELLIDAE	1	--	--	--	--
..EPHEMERELLA	1	14	2	--	--
..SERYLOPHELLA	--	--	--	--	4
..SERRATELLA	--	--	--	--	20
HEPTAGENIIDAE					
..SPEORUS	--	--	--	--	--
..STENONEMA	2	13	--	1	52
..SIPHONURIDAE					
..AMELETUS	--	--	--	--	--
..ISONYCHIA	--	11	2	--	--
TRICHOPTERA					
..GLOSSOSOMATIDAE					
..GLOSSOSOMA					
..HYDROPSYCHIDAE	--	--	--	--	4
..CHEUMATOPSYCHE	24	288	28	3	108
..HYDROPSYCHE	23	240	22	7	24
..SYMPTITOPSYCHE	--	--	35	--	72
..HYDROPTILIDAE					
..HYDROPTILA	--	8	3	--	20
..LEUCOTRICHIA	--	1	--	--	44
..OCHROTRICHIA	1	--	--	--	--
..PHILOXYTAMIDAE					
..CHIMARIA	4	141	2	1	88
..DOLOPHILODES	--	--	--	--	--
..POLYCENTROPIDIDAE					
..POLYCENTROPUS	--	--	--	--	--
MOLLUSCA (MOLLUSCS)					
GASTROPODA					
..BASOMMATOPHORA					
..ANCYLIDAE					
..FERRISSA	40	8	8	2	12
..PHYSIDAE					
..PHYSA	--	--	1	--	--
PLATYHELMINTHES (FLATWORMS)					
TURBELLARIA					
..TRICLADIDA					
..PLANARIIDAE					
..UNKNOWN GENUS	--	--	1	--	--
..UNKNOWN FAMILY					
..UNKNOWN GENUS	--	--	--	--	24

Table 3.--Benthic-invertebrate data--Continued
[double dash indicates organism not present in sample]

01484850 W BR BIG ELK CREEK NEAR OXFORD, PA

DATE TIME	NOV 3 70 0000	MAY 24 71 0000	OCT 18 71 0000	OCT 23 72 0000	OCT 8 73 0000
TOTAL COUNT	104	41	15	921	441
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA					
..OLIGOCHEATA					
..PLESIOPORA					
..TUBIFICIDAE					
..UNKNOWN GENUS	--	--	--	--	--
..UNKNOWN ORDER					
..UNKNOWN FAMILY					
..UNKNOWN GENUS	--	--	--	--	--
ARTHROPODA (ARTHROPODS)					
..ARACHNIDA					
..HYDRACARINA					
..UNKNOWN FAMILY					
..UNKNOWN GENUS	--	--	--	--	--
..INSECTA					
..COLEOPTERA					
..DYTISCIDAE					
..HYGROTUS	--	--	--	--	--
..ELMIDAE					
..OPTIOSERVUS	--	--	--	--	--
..OULIMNIUS	--	--	--	--	--
..STENELMIS	--	--	--	1	--
..DIPTERA					
..CRIRONOMIDAE				122	9
..CARDIOCLADIUS	30	15	--	--	--
..CONCHAPELOPIA	--	--	--	--	--
..CRICOTOPUS	--	--	--	--	--
..DIAMESA	--	--	--	--	--
..EUKTEPERIELLA	--	--	--	--	--
..MICROTENDIPES	--	--	--	--	--
..ORTHOCCLADIUS	--	--	--	--	--
..PARAMETRICNEMUS	--	--	--	--	--
..POLYPEDILUM	--	--	--	--	--
..PSEUDOCCLADIUS	--	--	--	--	--
..RHEOTANYTARSUS	--	--	--	--	--
..TANYTARSUS	--	--	--	--	--
..THIENEMANNIELLA	--	--	--	--	--
..EMBIIDAE					
..HEMERODROMIA	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--
..SIMULIIDAE					
..SIMULIUM	--	--	--	--	--
..TIPULIDAE					
..ANTOCHA	--	--	--	46	12
..DICRANOTA	--	--	--	1	--
..HELIUS	--	--	--	--	--
..EPHEMEROPTERA					
..BAETIDAE					
..BAETIS	--	--	--	5	2
..PSEUDOCLOEON	--	--	--	3	--
..CAENIDAE					
..EPHEMERELLIDAE					
..EPHEMERELLA	27	3	1	1	--
..SERRATELLA	--	--	--	--	--
..HEPTAGENIIDAE					
..STENOMA	13	5	2	58	5
..SIPHONURIDAE					
..ISONYCHIA	--	--	--	39	1
..MEGALOPTERA					
..CORDALIDAE					
..CORDALUS	--	--	--	1	1
..C.CORNUCUS	--	--	--	--	--
..ODONATA					
..COENAGRIONIDAE	--	--	--	1	--
..ARGIA					
..PLECOPTERA					
..PERLOIDAE					
..UNKNOWN GENUS	--	--	--	--	--
..TAENIOPTERYGIDAE	--	--	--	--	--
..TAENIOPTERYX	--	--	--	--	--
..TRICHOPTERA					
..GLOSSOSOMATIDAE					
..GLOSSOSOMA					
..HYDROPSYCHIDAE					
..CHEUMATOPSYCHE	--	--	5	104	71
..HYDROPSYCHE	34	18	7	517	320
..MACRONEMA	--	--	--	14	12
..SYMPHYTOPSYCHE	--	--	--	--	--
..HYDROPTILIDAE					
..HYDROPTILA	--	--	--	3	--
..LEUCOTRICHIA	--	--	--	4	7
..OCHROTRICHIA	--	--	--	--	--
..LIMNETHILIDAE					
..APATANIA	--	--	--	--	--
..PHILOPOTAMIDAE					
..CHIMARRA	--	--	--	--	--
..POLYCENTROPIDAE					
..NEURECTIPSIS	--	--	--	--	--
..POLYCENTROPUS	--	--	--	--	1
..RHACOPHILIDAE					
..RHACOPHILA	--	--	--	1	--
MOLLUSCA (MOLLUSCS)					
..GASTROPODA					
..BASOMMATOPHORA					
..ANCYLIDAE					
..FERRISSIA	--	--	--	--	--
PLATYHELMINTHES (FLATWORMS)					
..TURBELLARIA					
..TRICLADIDA					
..UNKNOWN FAMILY					
..UNKNOWN GENUS	--	--	--	--	--

01494950

W BR BIG SLK CREEK NEAR OXFORD, PA

DATE	NOV 1 78	NOV 2 77	OCT 25 78	NOV 20 80	NOV 20 80
TIME	1110	1230	1415	1000	1015
TOTAL COUNT	258	758	188	1304	2908
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA					
..OLIGOCHAETA					
..PLESIOPORA					
..TUBIFICIDAE					
..UNKNOWN GENUS	3	--	--	--	--
..UNKNOWN ORDER					
..UNKNOWN FAMILY					
..UNKNOWN GENUS	--	--	--	20	18
ARTHROPODA (ARTHROPODS)					
..ARACHNIDA					
..HYDRACARINA					
..UNKNOWN FAMILY					
..UNKNOWN GENUS	--	8	--	8	--
..INSECTA					
..COLEOPTERA					
..DYTISCIDAE					
..HYGROTUS	1	--	--	--	--
..ELMIDAE					
..ORTIOS GRVUS	5	24	1	4	8
..OULIMNITUS	--	8	1	--	12
..STENELMIS	--	--	--	--	--
..DIPTERA					
..CHIRONOMIDAE	--	--	--	--	--
..CARDIOCLADIUS	--	--	1	--	--
..CONCHAPELOPIA	5	15	1	4	--
..CRICOTOPUS	18	--	7	44	144
..DIAMESA	--	--	--	4	--
..EUKTEPPERISIELLA	8	--	2	12	8
..MICROTENDIPES	--	31	--	84	120
..ORTHOCLADIUS	--	--	2	8	32
..PARAMETRIOCNEMUS	--	2	--	4	8
..POLYPEDILUM	--	--	--	--	48
..PSEUDOCALDIUS	--	42	7	438	712
..RHEOTANTYARSUS	15	--	--	--	4
..TANTYARSUS	--	--	--	8	8
..THIENEMANNIELLA	5	--	--	--	--
..EMPIDIDAE	--	--	--	--	--
..HEMEROBROMIA	1	4	2	--	12
..UNKNOWN GENUS	--	--	--	--	--
..SIMULIIDAE	--	--	--	--	--
..SIMULIUM	8	8	--	--	--
..TIPULIDAE	--	--	--	--	--
..ANTOCIA	10	48	9	168	96
..DICHANOTA	--	--	--	--	12
..HELIUS	--	--	--	--	--
..EPHEMEROPTERA					
..BAETIDAE					
..BAETIS	1	--	--	--	--
..PSEUDOCLOSON	--	1	1	--	--
..CAENIDAE	--	--	--	--	--
..CAENIS	1	--	--	--	--
..EPHEMERELLIDAE	--	--	--	--	--
..EPHEMERELLA	2	18	--	--	--
..SERRATELLA	--	--	--	78	340
..HEPTAGENIIDAE	--	--	--	--	--
..STENOMA	11	40	2	12	28
..SIPHONUBIDAE	--	4	--	--	--
..ISONYCHIA	--	--	--	--	--
..MEGALOPTERA					
..CORIDALIDAE					
..CORYDALUS	1	3	--	--	--
..C. CORNUTUS	--	--	1	--	--
..ODONATA					
..COENAGRIONIDAE	--	--	--	--	--
..ARCTIA	1	--	--	--	--
..PLECOPTERA					
..PERLOPIDAE					
..UNKNOWN GENUS	--	--	--	--	4
..TAENIOPTERYGIDAE	--	--	--	--	--
..TAENIOPTERYX	--	--	--	--	4
..TRICHOPTERA					
..GLOSSOSOMATIDAE					
..GLOSSOSOMA	--	1	--	--	--
..HYDROPSYCHIDAE	32	104	38	148	980
..CHEUMATOPSYCHE	122	312	32	40	20
..HYDROPSYCHE	1	3	--	--	4
..MACRONEMA	--	--	78	138	204
..SYMPHITOPSYCHE	--	--	--	--	--
..HYDROPTILIDAE	--	--	--	--	--
..HYDROPTILA	--	--	--	--	--
..LEUCOTRICHIA	5	42	1	24	38
..OCHROTRICHIA	2	--	--	72	--
..LIMNEPHILIDAE	--	--	--	--	--
..APATANIA	--	--	--	--	4
..PHILOPOTAMIDAE	--	--	--	--	--
..CHIMARRA	1	39	--	4	4
..POLYCENTROPIDIDAE	--	--	--	--	--
..NEURECLIPSIS	--	--	--	--	20
..POLYCENTROPUS	--	--	--	4	--
..RHYACOPHILIDAE	--	--	--	--	--
..RHYACOPHILA	--	--	--	--	--
MOLLUSCA (MOLUSCS)					
..GASTROPODA					
..BASOMMATOPHORA					
..ANCLIDAE					
..PERRISSIA	--	--	2	4	--
PLATHYELMINTHES (PLATWORMS)					
..TURBELLARIA					
..TRICLADIDAE					
..UNKNOWN FAMILY					
..UNKNOWN GENUS	1	--	--	--	18

Table 3.--Benthic-invertebrate data--Continued
 [double dash indicates organism not present in sample]
 01578340 EAST BRANCH OCTORARO CREEK AT CHRISTIANA, PA.

DATE TIME	JUN 8, 70 0000	NOV 3, 70 0000	MAY 24, 71 0000	OCT 18, 71 0000	OCT 23, 72 0000
TOTAL COUNT	48	78	49	63	705
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT
ARTHROPODA (ARTHROPODS)					
..ARACHNIDA					
...HYDRACARINA					
...UNKNOWN FAMILY					
...UNKNOWN GENUS	--	--	--	--	--
..CRUSTACEA					
...ISOPODA					
...ASELLIDAE					
...ASELLUS	--	--	--	--	--
..INSECTA					
...COLEOPTERA					
...ELMIDAE					
...MICROCYLLOEPUS	--	--	--	--	--
...OPTIOSERVUS	--	--	--	--	--
...STENELMIS	--	--	--	--	2
...PSEPHENIDAE					
...PSEPHENUS	--	--	--	--	--
..DIPTERA					
...CHIRONOMIDAE	8	8	18	--	122
...BRILLIA	--	--	--	--	--
...CONCHAELOPIA	--	--	--	--	--
...CRICOTOPUS	--	--	--	--	--
...EUKIEFFERIELLA	--	--	--	--	--
...LIMNOCHIRONOMUS	--	--	--	--	--
...MICROTENDIPES	--	--	--	--	--
...ORTHOCLADIUS	--	--	--	--	--
...PARACHIRONOMUS	--	--	--	--	--
...PARAMETHIOCNEMUS	--	--	--	--	--
...POLYPEDILUM	--	--	--	--	--
...PSEUDODIANESA	--	--	--	--	--
...RHEOTANYTARSUS	--	--	--	--	--
...THIENEMANNIELLA	--	--	--	--	1
...EMPIDIIDAE	--	--	--	--	--
...HEMERODROMIA	--	--	--	--	--
..SIMULIDAE					
...SIMULIUM	4	--	13	--	--
..TIPULIDAE					
...ANTOCHA	--	--	--	--	17
..EPHEMEROPTERA					
...BAETIDAE					
...BAETIS	8	--	3	--	1
...PSEUDOCLOFON	--	--	--	--	--
...EPHEMERELLIDAE	--	32	7	1	--
...EPHEMERELLA	--	--	--	--	--
...HEPTAGENIIDAE	--	13	--	33	28
...STENONEMA	--	--	--	--	--
...SIPHONURIDAE	--	--	--	--	1
...ISONYCHIA	--	--	--	--	--
..ODONATA					
...COENAGRIONIDAE	--	--	--	--	--
...ARGIA	--	--	--	--	--
..PLECOPTERA					
...TAENIOPTERYGIDAE	--	--	--	--	--
...TAENIOPTERYX	--	--	--	--	--
..TRICHOPTERA					
...GLOSSOSOMATIDAE	--	--	--	--	1
...GLOSSOSOMA	--	--	--	--	--
..HYDROPSYCHIDAE					
...CHEUMATOPSYCHE	--	--	--	13	193
...HYDROPSYCHE	28	22	8	15	278
...SYMPHITOPSYCHE	--	--	--	--	--
..HYDROPTILIDAE					
...HYDROPTILIS	--	--	--	--	1
...LEUCOTRICHIA	--	--	--	--	3
...PHILOPOTAMIDAE	--	--	--	--	--
...CHIMARRA	--	--	--	--	58
...RHYNACOPHILIDAE	--	--	--	--	--
...RHYNACOPHILA	--	--	--	1	--
MOLLUSCA (MOLLUSCS)					
..GASTROPODA					
...BASOMMATOPHORA					
...ANCYLIDAE	--	--	--	--	--
...FERRISSIA	--	--	--	--	--
PLATYHELMINTHES (PLATWORMS)					
..TUBELLARIA					
...TRICLADIDA	--	--	--	--	--
...PLANARIIDAE	--	--	--	--	--

01578340 EAST BRANCH OCTOBERO CREEK AT CHRISTIANA, PA.

DATE TIME	OCT 9, 73 0900	OCT 30, 74 0900	NOV 2, 77 0830	NOV 7, 79 1230	NOV 3, 80 1530
--------------	-------------------	--------------------	-------------------	-------------------	-------------------

TOTAL COUNT	386	172	1126	141	478
-------------	-----	-----	------	-----	-----

ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT
----------	-------	-------	-------	-------	-------

ARTHROPODA (ARTHROPODS)

..ARACHNIDA

..HYDRACARINA

..UNKNOWN FAMILY

..UNKNOWN GENUS

..CRUSTACEA

..ISOPODA

..ASELLIDAE

..ASELLUS

..INSECTA

..COLEOPTERA

..ELMIDAE

..MICROCYLLOEPUS

..OPTIOSERVUS

..STENELVUS

..PSEPHENIDAE

..PSEPHENUS

..DIPTERA

..CHIRONOMIDAE

..BRILLIA

..CONCHAELOPIA

..CRICOTOPUS

..BURLETTIELLA

..LINNOCHIRONOMUS

..MICROTENDIPES

..ORTHOCLADIUS

..PARACHIRONOMUS

..PARAMETRICHEMUS

..POLYPEDILUM

..PSEUDODIAMESA

..RHEOTANTHUS

..RHEOTANTHUS

..EMPIDIDAE

..HEMEROPTERIDAE

..SIMULIIDAE

..SIMULIUM

..TIPULIDAE

..TANTOCHAE

..EPHEMEROPTERA

..BAETIDAE

..BAETIS

..PSEUDOCLOEON

..EPHEMERELLIDAE

..EPHEMERELLA

..HEPTAGENIIDAE

..STENONEMA

..SIPHONURIDAE

..ISONYCHIA

..ODONATA

..COENAGRIONIDAE

..ARGIA

..PLECOPTERA

..TAENIOPTERYGIDAE

..TAENIOPTERYX

..TRICHOPTERA

..GLOSSOSOMATIDAE

..GLOSSOSOMA

..HYDROPSYCHIDAE

..CHEMATOPSYCHE

..HYDROPSYCHE

..SYMPHITOPSYCHE

..HYDROPTILIDAE

..HYDROPTILA

..LEUCOTRICHIA

..PHILOPOTAMIDAE

..CHINARRA

..RHYACOPHILIDAE

..RHYACOPHILA

..MOLLUSCA (MOLLUSCS)

..GASTROPODA

..BASOMMATOPHORA

..ANCYLIDAE

..PERRISSIA

..PLATYHELMINTHES (FLATWORMS)

..TURBELLARIA

..TRICLADIDA

..PLANARIIDAE

Table 3.--Benthic-invertebrate data--Continued
[double dash indicates organism not present in sample]

DATE TIME	01578343 VALLEY CREEK NEAR ATGLEN, PA.				
	NOV 3, 70 0000	MAY 24, 71 0000	OCT 18, 71 0000	OCT 23, 72 0000	OCT 9, 73 0000
TOTAL COUNT	77	50	5	334	138
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT
ARTHROPODA (ARTHROPODS)					
..CRUSTACEA					
..ISOPODA					
...ASELLIDAE	--	--	--	--	--
...ASELLUS					
INSECTA					
..COLEOPTERA					
..DRYOPIDAE				1	--
..HELICUS	--	--	--		
..ELMIDAE					
...OPTIOSERVUS	--	--	--	--	--
...STENELMIS	--	--	--	2	--
..PSEPHENIDAE					
..PSEPHENUS	--	--	--	--	--
..COLLEMBOLA					
..UNKNOWN FAMILY					
..UNKNOWN GENUS	--	--	--	--	--
DIPTERA					
..CRITONOMIDAE	18	11	--	24	1
..CONCHAELOPIA	--	--	--	--	--
..CRICOTOPUS	--	--	--	--	--
..EUKIETTERIELLA	--	--	--	--	--
..MICROTENDIPES	--	--	--	--	--
..NANOCLADIUS	--	--	--	--	--
..ORTHOCLEIDIUS	--	--	--	--	--
..POLYPSIDILUM	--	--	--	--	--
..RHEOTANTYARSUS	--	--	--	--	--
..THIENEMANNIELLA	--	--	--	1	--
..EMPIDIDAE	--	--	--	--	--
..HEMERODROMIA	--	--	--	--	--
..SIMULIIDAE					
..SIMULIUM	--	15	--	7	5
..TENDIIDAE					
..ANTOCHA	--	--	--	1	--
..HEXATOMA	--	--	--	1	--
EPHEMEROPTERA					
..BAETIDAE					
..BAETIS	10	8	--	8	1
..PSEUDOCLOSON	--	--	--	2	--
..EPHEMERELLIDAE					
..EPHEMERELLA	27	9	--	--	--
..HEPTAGENIIDAE					
..STENONEMA	8	--	3	38	1
..SIPHONURIDAE					
..ISONYCHIA	--	--	--	30	28
MEGALOPTERA					
..CORYOALIDAE	--	--	--	--	--
..CORYALUS					
TRICHOPTERA					
..GLOSSOSOMATIDAE	--	--	--	4	--
..GLOSSOSOMA					
..HYDROPSYCHIDAE	--	--	--		
..PSUMATOPSYCHE	--	--	--	78	24
..HYDROPSYCHE	18	7	2	137	78
..SYMPHITOPSYCHE	--	--	--	--	--
..HYDROPTILIDAE					
..LEUCOTRICHIA	--	--	--	--	--
..PHILOPOTAMIDAE	--	--	--	--	--
..CHIMARRA	--	--	--	--	--
..POLYCENTROPODIDAE	--	--	--	--	--
..CYRNEIUS	--	--	--	--	--
..POLYCENTROPUS	--	--	--	--	--
..PSYCHOMYIIDAE	--	--	--	--	--
..PSYCHOMYIA	--	--	--	--	--
MOLLUSCA (MOLLUSCS)					
..GASTROPODA					
..BASOMMATOPHORA					
..ANCYLIDAE	--	--	--	--	--
..FERRISSIA					

01578343

VALLEY CREEK NEAR ATGLEN, PA.

DATE TIME	OCT 30 74 0000	NOV 2 77 0900	NOV 7 79 1400	NOV 13 80 1415
TOTAL COUNT	130	768	13	1288
ORGANISM	COUNT	COUNT	COUNT	COUNT
ARTHROPODA (ARTHROPODS)				
..CRUSTACEA				
..ISOPODA				
...ASELLIDAE				
...ASELLUS	1	--	--	--
..INSECTA				
...COLEOPTERA				
...DRYOPTERIDAE				
...HELICUS	--	--	--	--
...ELMIDAE				
...OPTIOSERVUS	--	8	--	--
..STENELMIS	2	23	--	--
...PSEPHENIDAE				
...PSEPHENUS	--	--	1	--
..COMBENBOLA				
...UNKNOWN FAMILY				
...UNKNOWN GENUS	--	--	--	8
..DIPTERA				
...CHIRONOMIDAE	16	--	--	--
...CONCHAPELOPIA	--	15	--	--
...CRICOTOPIUS	--	41	--	192
...EOKIEFFERIELLA	--	--	--	8
...MICROTENDIPES	--	1	--	--
...NANOCLADIUS	--	17	--	8
...ORTHOCCLADIUS	--	7	--	40
...POLYPSIDIUM	--	--	--	--
...RHEOTANTYAEUS	--	32	--	32
...THIENEMANNIELLA	--	5	--	--
...EMPIDIDAE	--	--	--	--
...MEGODROMIA	--	2	--	--
..SIMULIDAE				
...SIMULIDUM	2	19	--	88
..TIPULIDAE				
...ANTOCHA	2	45	2	32
..HEXATOMA				
..EPHEMEROPTERA				
...BAETIDAE				
...BAETIS	--	--	--	--
...PSEUDOCLOEON	--	9	--	--
...EPHEMERELLIDAE	--	5	--	--
...EPHEMERELLA	--	--	--	--
...HEPTAGENIIDAE	--	--	--	--
...VIENONEMA	--	29	--	24
...SIPHONURIDAE	--	6	--	8
..ISONYCHIA				
..MEGALOPTERA				
...CORYDALIDAE	--	--	--	8
...CORYDALUS	--	--	--	--
..TRICHOPTERA				
...GLOSSOSOMATIDAE	--	7	--	--
...GLOSSOSOMA	--	--	--	--
..HYDROPSYCHIDAE				
...CHESMATOPSYCHE	12	234	1	80
...HYDROPSYCHE	95	150	7	568
...SYMPHITOPSYCHE	--	--	--	--
...HYDROPTILIDAE	--	9	--	160
...LEUCOTRICHIA	--	--	--	--
..PHILOPOTAMIDAE				
...CHIMARRA	--	29	--	8
...POLYCENTROPIDAE	--	--	--	--
...CYRNELLUS	--	2	--	8
...POLYCENTROPUS	--	--	--	--
...PSYCHOMYIDAE	--	53	1	--
...PSYCHOMYIA	--	--	--	--
MOLLUSCA (MOLLUSCS)				
..GASTROPODA				
...SASOMMATOPHORA				
...ANCYLIDAE	--	22	--	--
...FERRISSIA	--	--	--	--

Table 3.--Benthic-invertebrate data--Continued
[double dash indicates organism not present in sample]

01578345 EAST BRANCH OCTORARO CREEK AT STEELVILLE, PA.

DATE TIME	JUN 8 70 0000	NOV 3 70 0000	MAY 24 71 0000	OCT 18 71 0000	OCT 23 72 0000	OCT 9 73 0000
TOTAL COUNT	27	102	66	43	868	138
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA						
..OLIGOCHAETA						
..PLESIPODIA						
..TUBIFICIDAE						
..UNKNOWN GENUS	--	--	--	--	--	--
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDRACARINA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	--	--
CRUSTACEA						
..ISOPODA						
..ASPELIDAE						
..ASPELIDAE	--	--	--	--	--	--
INSECTA						
..COLEOPTERA						
..ELMIDAE						
..STENELMIS	--	--	--	--	--	--
..PSEPHENIDAE	--	--	--	--	--	--
..PSEPHENUS	--	--	--	--	--	--
..DIPTERA						
..CHIRONOMIDAE	2	--	--	--	587	1
..CARDIOLADIUS	--	--	--	--	--	--
..CONCHAELOPIA	--	--	--	--	--	--
..CORYNONEURA	--	--	--	--	--	--
..CRICOTOPUS	--	--	--	--	--	--
..EUKYFFERIELLA	--	--	--	--	--	--
..MICROTENDIPES	--	--	--	--	--	--
..PARAMETOCNEMUS	--	--	--	--	--	--
..POLYPTILUM	--	--	--	--	--	--
..RHEOTANTARSUS	--	--	--	--	--	--
..THIENEMANNIELLA	--	--	--	--	6	--
EMBIIDAE						
..SIMULIIDAE						
..SIMULIUM	--	--	18	--	9	--
..TIPULIDAE						
..ANTOCHA	--	--	--	--	7	--
..EPHEMEROPTERA			11	--	--	--
..BAETIDAE						
..BAETIS	2	10	--	--	1	--
..PSEUDOCLOEON	--	--	--	--	1	--
..EPHEMERELLIDAE						
..EPHEMERELLA	--	52	--	3	2	--
..HEPTAGENIIDAE						
..HEPTAGENIA	2	6	21	12	114	8
..STENONEMA	4	--	--	--	--	--
..SIPHONURIDAE	--	--	--	--	19	28
..ISONYCHIA	--	--	--	--	--	--
..MEGALOPTERA						
..CORYDALIDAE					1	--
..CORYDALLUS	--	--	--	--	--	1
..NIGRONIA	--	--	--	--	--	--
..SIALIDAE						
..SIALIS	--	--	--	--	--	--
PLECOPTERA						
..CAPNIIDAE						
..ALLOCAPNIA	--	--	--	--	--	--
..PERLODIDAE						
..UNKNOWN GENUS	--	--	--	--	--	--
..TARNOPTERYGIDAE						
..TARNOPTERYX	--	--	--	--	--	--
TRICHOPTERA						
..BRACHYCENTRIDAE						
..MICRASOMA	--	--	--	--	1	--
..HYDROPSYCHIDAE						
..CREMATOPSYCHE	--	--	--	16	45	21
..DIPLECTRONA	--	--	--	--	63	79
..HYDROPSYCHE	17	23	16	12	--	--
..SYMPHITOPSYCHE	--	--	--	--	--	--
..HYDROPTILIDAE						
..HYDROPTILA	--	--	--	--	2	--
..LEUCOTRICHIA	--	--	--	--	--	--
..PHILOPOTAMIDAE						
..CHIMARRA	--	--	--	--	--	--
..PSYCHOMYIIDAE						
..PSYCHOMYIA	--	11	--	--	--	--
..RHYACOPHILIDAE						
..RHYACOPHILA	--	--	--	--	--	--
MOLLUSCA (MOLLUSCS)						
..GASTROPODA						
..BASOMMATOPHORA						
..ANCLIDAE	--	--	--	--	--	--
..FERRISSIA						
PLATYHELMINTHES (FLATWORMS)						
..TURBELLARIA						
..TRICLADIDA						
..PLANARIIDAE						
..UNKNOWN GENUS	--	--	--	--	--	--

01578345 EAST BRANCH OCTORARO CREEK AT STEELVILLE, PA.

DATE OCT 30 74 NOV 1 78 NOV 2 77 NOV 7 78 NOV 13 80

TIME 0000 1345 1030 1430 1300

TOTAL COUNT 140 182 1174 79 1048

ORGANISM COUNT COUNT COUNT COUNT COUNT

ANNELIDA					
..OLIGOCHAETA					
..PLESIOPORA					
..TUBIFICIDAE					
..UNKNOWN GENUS	--	1	--	--	--
ARTHROPODA (ARTHROPODS)					
..ARACHNIDA					
..HYDRACARINA					
..UNKNOWN FAMILY					
..UNKNOWN GENUS	--	--	10	--	--
..CRUSTACEA					
..ISOPODA					
..ASELLIDAE					
..ASELLUS	1	2	--	--	--
..INSECTA					
..COLEOPTERA					
..ELMIDAE					
..STENELMIS	--	1	5	--	--
..PSEPHENIDAE					
..PSEPHENUS	1	--	1	--	--
..DIPTERA					
..CHIRONOMIDAE	6	--	--	--	--
..CARDIOLIDIUS	--	--	--	--	40
..CONCHAPELOPIA	--	--	42	--	24
..CORYNOSURA	--	2	--	--	--
..CRICOTOPUS	--	11	94	--	128
..EUKIPEPTELLA	--	15	43	--	--
..MICROTENTHES	--	15	7	--	56
..PARAMETRIOCNEMUS	--	--	--	1	18
..POLYPSIDILUM	--	10	201	1	8
..RHEOTANYTARSUS	--	21	243	1	40
..THIEMANNIELLA	--	8	9	--	8
..EMPIDIDAE					
..SIMULIIDAE					
..SIMULIUM	--	5	--	--	--
..TIPULIDAE					
..ANTOCHA	1	8	16	--	72
..EPHEMEROPTERA	--	--	--	--	--
..BAETIDAE					
..BAETIS	2	1	--	--	8
..PSEUDOCLOSON	--	--	--	--	--
..EPHEMERELLIDAE					
..EPHEMERELLA	2	14	65	1	40
..HEPTAGENIIDAE					
..HEPTAGENIA	--	--	--	--	--
..STENONEMA	8	19	82	15	80
..SIPHONURIDAE					
..ISONYCHIA	13	--	6	--	--
..MEGALOPTERA					
..CORYDALIDAE					
..CORYDALUS	--	--	1	--	--
..NICRONIA	--	--	1	1	--
..SIALIDAE					
..SIALIS	--	--	1	--	--
..PLECOPTERA					
..CAPNIIDAE					
..ALLOCAPNIA	--	--	--	1	--
..PERLODIDAE					
..UNKNOWN GENUS	--	--	3	--	--
..TAENIOPTERYGIDAE					
..TAENIOPTERYX	--	1	3	--	--
..TRICHOPTERA					
..BRACHYCENTRIDAE					
..NICAENIA	--	--	--	--	--
..HYDROPSYCHIDAE					
..CHEUMATOPSYCHE	44	6	20	11	80
..DIPLECTRONA	--	--	--	2	--
..HYDROPSYCHE	55	34	208	36	240
..SYMPHITOPSYCHE	--	--	--	--	--
..HYDROPTILIDAE					
..HYDROPTILA	--	--	--	--	8
..LEUCOTRICHIA	--	--	--	--	64
..PHILOPOTAMIDAE					
..CYTHARRA	6	18	109	3	128
..PSYCHOMYIIDAE					
..PSYCHOMYIA	--	--	--	--	--
..RHYNACOPHILA	1	--	--	--	--
MOLLUSCA (MOLLUSCS)					
..GASTROPODA					
..BASOMMATOPHORA					
..ANCYLIDAE					
..PERRISSIA	--	--	4	--	--
PLATYHELMINTHES (PLATWORMS)					
..TURBELLARIA					
..TRICLADIDA					
..PLANARIIDAE					
..UNKNOWN GENUS	--	--	--	--	8

Table 4.--Brillouin's diversity index, maximum diversity, minimum diversity,
and relative evenness
[A dash indicates no data]

Year	Total number of organisms	Total number of taxa	Brillouin's diversity index (H)	Maximum diversity (H _{max})	Minimum diversity (H _{min})	Evenness (E)
Site 1 (station 01472170) Pickering Creek near Eagle						
1970	161	5	2.10	2.27	0.18	0.92
1971	37	4	1.71	1.88	.42	.89
1972	743	14	1.58	3.74	.17	.40
1973	173	6	.87	2.62	.21	.27
1974	-	-	-	-	-	-
1975	-	-	-	-	-	-
1976	820	23	2.60	4.52	.26	.55
1977	1121	22	2.49	4.49	.19	.54
1979	94	11	2.56	3.37	.69	.70
1980	242	16	2.76	3.84	.49	.68
Site 2 (station 01472174) Pickering Creek near Chester Springs						
1970	84	7	2.07	2.60	.45	.75
1971	29	4	1.72	1.85	.50	.90
1972	413	17	2.29	4.01	.34	.53
1973	629	20	1.01	4.28	.28	.18
1974	173	13	1.89	3.58	.51	.45
1975	-	-	-	-	-	-
1976	531	35	3.34	4.97	.58	.63
1977	190	17	3.07	3.89	.63	.75
1979	83	19	3.19	3.94	1.35	.71
1980	132	7	2.13	2.85	.32	.72
Site 3 (station 014721854) Pickering Creek at Merlin						
1970	79	10	2.60	3.36	.71	.71
1971	71	7	2.30	2.62	.52	.85
1972	119	24	3.26	4.57	1.31	.60
1973	560	21	1.87	4.38	.33	.38
1974	128	14	2.37	3.57	.70	.58
1975	-	-	-	-	-	-
1976	1660	27	2.09	4.74	.17	.42
1977	547	23	2.27	4.53	.36	.46
1979	47	13	2.62	3.48	1.37	.59
1980	1334	28	2.14	4.80	.21	.42

Table 4.--Brillouin's diversity index, maximum diversity, minimum diversity,
and relative evenness--Continued
[A dash indicates no data]

Year	Total number of organisms	Total number of taxa	Brillouin's diversity index (H)	Maximum diversity (H _{max})	Minimum diversity (H _{min})	Evenness (E)
Site 4 (station 014721844) Pickering Creek at Charlestown Road at Charlestown						
1970	-	-	-	-	-	-
1971	-	-	-	-	-	-
1972	483	16	2.16	3.92	0.28	0.52
1973	103	9	1.07	3.08	.52	.21
1974	415	17	2.27	4.03	.33	.52
1975	-	-	-	-	-	-
1976	740	26	2.34	4.66	.32	.47
1977	862	22	2.29	4.39	.24	.49
1979	232	19	2.22	4.08	.61	.47
1980	2864	22	3.13	4.43	.08	.70
Site 5 (station 01472190) Pickering Creek near Phoenixville						
1970	127	10	2.34	3.31	.49	.65
1971	7	2	.73	1.02	.40	.54
1972	241	17	2.82	3.93	.52	.68
1973	156	11	1.76	3.31	.46	.46
1974	-	-	-	-	-	-
1975	375	17	2.80	3.95	.36	.68
1976	906	29	2.41	4.78	.30	.47
1977	316	23	2.78	4.51	.57	.56
1979	85	12	2.10	3.28	.82	.52
1980	520	20	3.56	4.19	.33	.84
Site 6 (station 01472109) Stony Run near Spring City						
1970	124	2	.79	.97	.06	.81
1971	30	2	.79	.91	.16	.85
1972	508	12	1.58	3.54	.19	.41
1973	391	6	.85	2.55	.11	.31
1974	177	8	1.72	2.89	.29	.55
1975	-	-	-	-	-	-
1976	285	23	2.97	4.40	.63	.62
1977	34	8	1.74	2.68	1.02	.43
1979	132	11	2.20	3.24	.53	.62
1980	272	15	2.05	3.77	.41	.49

Table 4.--Brillouin's diversity index, maximum diversity, minimum diversity,
and relative evenness--continued
[A dash indicates no data]

Year	Total number of organisms	Total number of taxa	Brillouin's diversity index (H)	Maximum diversity (H _{max})	Minimum diversity (H _{min})	Evenness (E)
Site 7 (station 01472110) Stony Run at Spring City						
1970	93	6	1.50	2.55	0.35	0.52
1971	47	3	.80	1.63	.24	.41
1972	109	11	2.44	3.50	.62	.63
1973	13	2	.48	1.04	.28	.26
1974	146	19	3.59	4.18	.88	.82
1975	-	-	-	-	-	-
1976	495	21	3.17	4.36	.36	.70
1977	200	24	3.17	4.39	.87	.65
1979	124	11	2.05	3.31	.56	.54
1980	850	29	3.54	4.79	.32	.72
Site 8 (station 01472054) Pigeon Creek near Bucktown						
1970	94	6	2.23	2.59	.35	.84
1971	26	4	1.65	1.94	.54	.79
1972	288	15	2.39	3.79	.40	.59
1973	486	20	2.32	4.24	.35	.51
1974	-	-	-	-	-	-
1975	-	-	-	-	-	-
1976	554	21	2.97	4.33	.33	.66
1977	125	12	1.83	3.47	1.61	.43
1979	117	14	2.67	3.64	.75	.66
1980	440	9	1.83	3.20	.16	.55
Site 9 (station 01472065) Pigeon Creek at Porters Mill						
1970	132	7	2.41	2.85	.32	.83
1971	37	4	1.51	1.88	.42	.75
1972	125	9	2.16	3.22	.44	.62
1973	361	15	1.99	3.78	.33	.48
1974	131	11	1.65	3.51	.53	.38
1975	-	-	-	-	-	-
1976	579	21	2.51	4.37	.32	.54
1977	42	7	2.11	2.46	.76	.79
1979	290	21	2.63	4.40	.56	.54
1980	254	11	2.75	3.34	.31	.80

Table 4.--Brillouin's diversity index, maximum diversity, minimum diversity,
and relative evenness--Continued
[A dash indicates no data]

Year	Total number of organisms	Total number of taxa	Brillouin's diversity index (H)	Maximum diversity (H _{max})	Minimum diversity (H _{min})	Evenness (E)
Site 10 (station 01472080) Pigeon Creek near Parker Ford						
1970	104	8	2.45	2.80	0.45	0.85
1971	24	4	1.50	1.71	.57	.81
1972	548	15	1.88	3.89	.23	.45
1973	-	-	-	-	-	-
1974	-	-	-	-	-	-
1975	767	19	2.90	4.21	.22	.67
1976	880	26	2.62	4.72	.28	.53
1977	344	27	2.87	4.74	.63	.55
1979	32	10	2.15	2.87	1.35	.53
1980	620	19	3.19	4.24	.27	.74
Site 11 (station 01472129) French Creek near Knauertown						
1970	-	-	-	-	-	-
1971	-	-	-	-	-	-
1972	64	11	2.68	3.44	.92	.70
1973	343	16	1.75	3.94	.37	.39
1974	166	18	2.85	3.96	.75	.65
1975	-	-	-	-	-	-
1976	136	15	2.70	3.64	.72	.68
1977	491	27	2.97	4.62	.47	.60
1979	151	18	3.12	4.00	.81	.72
1980	1088	21	2.90	4.41	.19	.64
Site 12 (station 01472140) South Branch French Creek at Coventryville						
1970	118	7	2.32	2.86	.35	.79
1971	36	7	2.17	2.49	.84	.81
1972	1053	19	2.69	4.22	.17	.62
1973	288	20	2.00	4.22	.54	.40
1974	271	20	3.06	4.26	.56	.68
1975	-	-	-	-	-	-
1976	972	28	2.88	4.81	.28	.57
1977	942	22	2.61	4.48	.22	.56
1979	137	16	2.71	3.90	.77	.62
1980	1499	27	2.94	4.74	.18	.61

Table 4.--Brillouin's diversity index, maximum diversity, minimum diversity,
and relative evenness--Continued
[A dash indicates no data]

Year	Total number of organisms	Total number of taxa	Brillouin's diversity index (H)	Maximum diversity (H _{max})	Minimum diversity (H _{min})	Evenness (E)
Site 13 (station 01472138) French Creek near Coventryville						
1970	58	8	2.30	2.79	0.70	0.77
1971	23	5	1.80	2.24	.77	.70
1972	272	23	2.89	4.53	.65	.58
1973	101	14	2.21	3.56	.85	.50
1974	31	8	2.30	2.97	1.08	.64
1975	-	-	-	-	-	-
1976	160	18	3.12	4.19	.77	.69
1977	380	22	3.27	4.34	.47	.72
1979	163	29	3.80	4.71	1.24	.74
1980	694	21	3.31	4.29	.27	.76
Site 14 (station 01472154) French Creek near Pughtown						
1970	58	8	2.23	2.79	.70	.73
1971	34	6	1.88	2.54	.74	.63
1972	643	27	3.00	4.77	.38	.60
1973	225	15	1.73	3.71	.48	.39
1974	189	16	2.79	4.01	.60	.64
1975	-	-	-	-	-	-
1976	362	27	2.91	4.65	.61	.57
1977	747	27	3.04	4.74	.33	.61
1979	96	16	2.44	3.61	1.01	.55
1980	615	26	3.37	4.68	.38	.70
Site 15 (station 01472157) French Creek near Phoenixville						
1970	56	7	2.20	2.53	.62	.83
1971	24	6	1.64	2.15	.93	.58
1972	324	19	3.05	4.08	.46	.72
1973	96	11	1.86	3.44	.68	.43
1974	85	14	2.58	3.46	.96	.65
1975	232	21	3.02	4.15	.67	.67
1976	277	22	2.70	4.40	.61	.55
1977	645	31	3.34	4.96	.43	.64
1979	174	10	1.86	3.25	.38	.51
1980	629	27	3.60	4.67	.38	.75

Table 4.--Brillouin's diversity index, maximum diversity, minimum diversity,
and relative evenness--Continued
[A dash indicates no data]

Year	Total number of organisms	Total number of taxa	Brillouin's diversity index (H)	Maximum diversity (H _{max})	Minimum diversity (H _{min})	Evenness (E)
Site 17 (station 01475300) Darby Creek at Waterloo Mills near Devon						
1970	46	3	1.20	1.54	0.24	0.74
1971	8	3	1.02	1.54	.73	.36
1972	155	10	1.98	3.27	.42	.55
1973	-	-	-	-	-	-
1974	239	11	2.11	3.47	.33	.57
1975	690	15	2.36	3.83	.19	.60
1976	473	21	2.99	4.35	.37	.66
1977	555	18	2.75	4.19	.28	.63
1979	362	18	2.87	4.04	.40	.68
1980	468	15	2.90	3.83	.26	.74
Site 18 (station 01475830) Crum Creek near Paoli						
1970	125	8	2.08	2.99	.39	.65
1971	28	4	1.59	1.74	.51	.87
1972	129	11	2.18	3.45	.54	.56
1973	132	12	1.97	3.34	.58	.50
1974	-	-	-	-	-	-
1975	-	-	-	-	-	-
1976	212	23	3.55	4.31	.79	.78
1977	221	25	3.08	4.64	.84	.59
1979	22	9	2.14	2.77	1.53	.49
1980	46	13	2.61	3.44	1.39	.59
Site 19 (station 01475840) Crum Creek at Whitehorse						
1970	88	9	1.87	3.18	.58	.50
1971	45	6	1.90	2.50	.60	.68
1972	219	8	1.64	2.95	.25	.51
1973	120	17	2.66	3.76	.91	.61
1974	67	14	2.55	3.73	1.15	.54
1975	-	-	-	-	-	-
1976	363	25	3.16	4.57	.56	.65
1977	835	27	2.85	4.79	.30	.57
1979	131	12	2.72	3.63	.59	.70
1980	417	16	3.16	3.88	.31	.80

Table 4.--Brillouin's diversity index, maximum diversity, minimum diversity,
and relative evenness--Continued
[A dash indicates no data]

Year	Total number of organisms	Total number of taxa	Brillouin's diversity index (H)	Maximum diversity (H _{max})	Minimum diversity (H _{min})	Evenness (E)
Site 20 (station 01476430) Ridley Creek at Goshenville						
1970	116	5	1.20	2.25	0.24	0.48
1971	15	2	.84	1.04	.26	.74
1972	158	14	2.56	3.66	.60	.64
1973	246	13	1.59	3.75	.39	.36
1974	-	-	-	-	-	-
1975	788	20	2.64	4.28	.23	.59
1976	420	17	2.92	4.09	.33	.69
1977	349	15	2.52	3.82	.34	.63
1979	84	14	2.71	3.42	.97	.71
1980	202	18	2.39	3.99	.64	.52
Site 21 (station 01476435) Ridley Creek at Dutton Mill near West Chester						
1970	172	9	1.94	3.04	.34	.59
1971	32	5	1.56	2.19	.62	.60
1972	189	12	2.49	3.59	.44	.65
1973	63	8	1.85	3.04	.66	.50
1974	165	8	1.43	2.99	.31	.42
1975	-	-	-	-	-	-
1976	470	25	3.50	4.65	.45	.72
1977	105	17	2.78	3.78	1.01	.64
1979	236	15	2.15	3.90	.47	.49
1980	1144	21	3.12	4.37	.18	.70
Site 22 (station 01476790) East Branch Chester Creek at Green Hill						
1970	59	5	1.83	2.37	.40	.73
1971	43	7	2.04	2.53	.74	.73
1972	520	17	2.36	4.07	.28	.55
1973	144	11	2.34	3.28	.49	.66
1974	13	4	1.42	1.71	.83	.67
1975	-	-	-	-	-	-
1976	703	21	2.41	4.36	.27	.52
1977	162	12	2.34	3.52	.50	.61
1979	179	10	1.57	3.37	.37	.40
1980	247	16	2.77	3.92	.48	.67

Table 4.--Brillouin's diversity index, maximum diversity, minimum diversity,
and relative evenness--Continued
[A dash indicates no data]

Year	Total number of organisms	Total number of taxa	Brillouin's diversity index (H)	Maximum diversity (H _{max})	Minimum diversity (H _{min})	Evenness (E)
Site 23 (station 01476830) East Branch Chester Creek at Milltown						
1970	83	4	1.87	2.04	0.23	0.90
1971	24	4	1.39	1.71	.57	.72
1972	299	10	1.93	3.36	.25	.54
1973	234	5	.97	2.35	.13	.38
1974	73	6	.88	2.44	.42	.23
1975	-	-	-	-	-	-
1976	244	19	1.90	4.26	.58	.36
1977	338	14	1.69	3.70	.32	.40
1979	490	19	2.38	4.26	.33	.52
1980	102	8	2.10	3.01	.45	.64
Site 24 (station 01476835) East Branch Chester Creek at Westtown School						
1970	55	1	0	0	0	0
1971	156	5	1.32	2.26	.19	.54
1972	901	11	1.64	3.48	.11	.45
1973	-	-	-	-	-	-
1974	1333	13	2.18	3.69	.09	.58
1975	-	-	-	-	-	-
1976	860	18	1.90	4.18	.19	.43
1977	1094	21	2.16	4.33	.18	.48
1979	49	10	2.41	3.32	1.01	.61
1980	2721	19	2.75	4.23	.08	.64
Site 26 (station 01479800) East Branch Red Clay Creek near Five Point						
1970	61	2	.25	1.03	.10	.16
1971	7	3	.77	1.33	.77	0
1972	181	5	1.52	2.27	.17	.64
1973	473	12	1.34	3.55	.21	.34
1974	-	-	-	-	-	-
1975	-	-	-	-	-	-
1976	826	12	1.90	3.60	.13	.51
1977	1463	13	1.23	3.70	.09	.32
1979	239	4	.90	2.02	.10	.41
1980	468	4	.35	1.97	.06	.15

Table 4.--Brillouin's diversity index, maximum diversity, minimum diversity,
and relative evenness--Continued
[A dash indicates no data]

Year	Total number of organisms	Total number of taxa	Brillouin's diversity index (H)	Maximum diversity (H _{max})	Minimum diversity (H _{min})	Evenness (E)
Site 27 (station 01479780) West Branch Red Clay Creek at Kennett Square						
1970	182	1	0	0	0	0
1971	30	4	1.19	1.95	0.49	0.48
1972	177	5	.90	2.30	.17	.35
1973	108	6	1.19	2.44	.31	.41
1974	-	-	-	-	-	-
1975	60	9	1.91	3.11	.78	.48
1976	172	12	1.75	3.48	.47	.43
1977	70	5	1.10	2.15	.35	.41
1979	29	8	1.83	2.83	1.13	.41
1980	556	3	1.01	1.58	.03	.63
Site 28 (station 01478120) East Branch White Clay Creek near Avondale						
1970	76	4	.87	1.88	.25	.38
1971	26	6	2.04	2.34	.88	.79
1972	202	10	2.18	3.22	.34	.64
1973	293	10	2.34	3.26	.25	.70
1974	-	-	-	-	-	-
1975	-	-	-	-	-	-
1976	820	18	3.05	4.16	.20	.72
1977	935	23	2.65	4.52	.23	.56
1979	855	27	3.45	4.75	.30	.71
1980	1188	17	2.91	4.11	.14	.70
Site 29 (station 01478190) Middle Branch White Clay Creek near Wickerton						
1970	61	6	.95	2.42	.48	.24
1971	13	3	1.05	1.44	.56	.55
1972	677	15	2.25	3.84	.19	.56
1973	290	6	.85	2.56	.14	.29
1974	156	6	1.44	2.48	.23	.54
1975	-	-	-	-	-	-
1976	174	12	1.97	3.52	.47	.49
1977	283	12	2.32	3.56	.32	.62
1979	84	13	2.03	3.53	.90	.43
1980	1376	14	1.77	3.78	.10	.45

Table 4.--Brillouin's diversity index, maximum diversity, minimum diversity,
and relative evenness--Continued
[A dash indicates no data]

Year	Total number of organisms	Total number of taxa	Brillouin's diversity index (H)	Maximum diversity (H _{max})	Minimum diversity (H _{min})	Evenness (E)
Site 30 (station 01478220) West Branch White Clay Creek near Chesterville						
1970	42	4	0.97	1.97	0.38	0.37
1971	-	-	-	-	-	-
1972	367	15	2.44	3.86	.32	.60
1973	259	7	1.36	2.72	.19	.46
1974	-	-	-	-	-	-
1975	669	14	2.09	3.82	.18	.52
1976	391	19	2.04	4.21	.39	.43
1977	823	17	2.30	4.06	.19	.55
1979	80	10	2.53	3.02	.70	.79
1980	908	14	2.72	3.83	.14	.70
Site 31 (station 01494900) East Branch Big Elk Creek at Elkview						
1970	69	1	0	0	0	0
1971	6	3	1.08	1.08	.82	1.0
1972	325	14	1.92	3.71	.33	.47
1973	43	6	1.76	2.36	.62	.65
1974	-	-	-	-	-	-
1975	-	-	-	-	-	-
1976	199	19	3.77	4.14	.68	.89
1977	1005	20	2.60	4.27	.19	.59
1979	37	9	2.21	2.76	1.09	.67
1980	972	18	3.12	4.10	.17	.75
Site 32 (station 01494950) West Branch Big Elk Creek near Oxford						
1970	104	4	1.83	1.90	.19	.96
1971	15	4	1.34	1.99	.76	.47
1972	921	17	2.11	4.04	.17	.50
1973	441	11	1.36	3.38	.20	.37
1974	-	-	-	-	-	-
1975	-	-	-	-	-	-
1976	256	20	2.42	4.33	.59	.49
1977	758	22	2.87	4.42	.26	.63
1979	-	-	-	-	-	-
1980	1304	15	2.59	3.93	.11	.65

Table 4.--Brillouin's diversity index, maximum diversity, minimum diversity,
and relative evenness--Continued
[A dash indicates no data]

Year	Total number of organisms	Total number of taxa	Brillouin's diversity index (H)	Maximum diversity (H _{max})	Minimum diversity (H _{min})	Evenness (E)
Site 33 (station 01588340) East Branch Octoraro Creek at Christiana						
1970	76	4	1.72	1.88	0.25	0.91
1971	63	5	1.50	2.31	.38	.58
1972	705	13	2.17	3.66	.16	.57
1973	385	12	1.72	3.49	.24	.45
1974	172	11	2.34	3.44	.43	.63
1975	-	-	-	-	-	-
1976	-	-	-	-	-	-
1977	1125	23	2.17	4.55	.20	.45
1979	141	7	1.74	2.70	.30	.60
1980	476	11	2.67	3.41	.19	.77
Site 34 (station 01578343) Valley Creek at Atglen						
1970	77	5	2.01	2.27	.32	.87
1971	5	2	.66	.98	.46	.39
1972	334	14	2.37	3.84	.33	.58
1973	136	7	1.59	2.76	.31	.52
1974	130	7	1.25	2.79	.32	.38
1975	-	-	-	-	-	-
1976	-	-	-	-	-	-
1977	768	19	3.04	4.21	.22	.71
1979	13	6	1.48	2.04	1.33	.22
1980	1288	12	2.33	3.57	.09	.64
Site 35 (station 01578345) East Branch Octoraro Creek at Steelville						
1970	102	5	1.78	2.28	.26	.75
1971	43	4	1.65	2.05	.38	.76
1972	858	14	1.60	3.77	.15	.40
1973	138	6	1.59	2.46	.26	.60
1974	140	12	2.20	3.56	.56	.55
1975	-	-	-	-	-	-
1976	182	13	2.52	3.50	.49	.67
1977	1174	17	2.12	4.03	.14	.51
1979	79	10	2.14	3.36	.71	.54
1980	1048	11	2.76	3.44	.10	.80

Table 4.--Brillouin's diversity index, maximum diversity, minimum diversity,
and relative evenness--Continued
[A dash indicates no data]

Year	Total number of organisms	Total number of taxa	Brillouin's diversity index (H)	Maximum diversity (H _{max})	Minimum diversity (H _{min})	Evenness (E)
Site 36 (station 01480700) East Branch Brandywine Creek near Downingtown						
1970	86	7	1.39	2.69	0.45	0.42
1971	38	5	1.03	2.29	.55	.28
1972	127	14	2.22	3.55	.71	.53
1973	201	13	1.93	3.63	.45	.46
1974	147	14	1.67	3.72	.63	.34
1975	357	21	2.61	4.21	.47	.57
1976	685	29	2.66	4.83	.38	.51
1977	325	24	2.97	4.52	.59	.61
1979	55	10	1.80	3.16	.93	.39
1980	3840	14	2.64	3.80	.04	.69
Site 37 (station 01480430) West Branch Brandywine Creek at Rock Run						
1970	66	7	1.75	2.71	.54	.55
1971	20	2	.81	.87	.22	.90
1972	128	14	2.56	3.57	.70	.65
1973	117	16	2.48	3.79	.87	.55
1974	113	7	1.40	2.68	.36	.45
1975	40	7	1.89	2.77	.78	.56
1976	266	20	2.96	4.19	.57	.66
1977	221	15	2.79	3.90	.49	.67
1979	77	9	1.33	3.09	.64	.28
1980	468	19	3.01	4.23	.34	.68
Site 38 (station 01480640) West Branch Brandywine Creek at Wawaset						
1970	58	2	.18	.94	.10	.10
1971	26	2	.83	.90	.18	.91
1972	507	11	1.55	3.39	.18	.43
1973	-	-	-	-	-	-
1974	-	-	-	-	-	-
1975	277	11	1.60	3.37	.29	.42
1976	196	10	1.71	3.30	.35	.46
1977	52	10	1.83	3.01	.97	.42
1979	52	4	.85	1.84	.33	.35
1980	464	13	2.40	3.70	.23	.63

Table 4.--Brillouin's diversity index, maximum diversity, minimum diversity,
[A dash indicates no data]

Year	Total number of organisms	Total number of taxa	Brillouin's diversity index (H)	Maximum diversity (H _{max})	Minimum diversity (H _{min})	Evenness (E)
Site 40 (station 01481030) Brandywine Creek near Chadds Ford						
1970	-	-	-	-	-	-
1971	-	-	-	-	-	-
1972	133	8	1.77	2.99	.37	.53
1973	653	11	1.34	3.43	.14	.36
1974	246	10	1.66	3.31	.29	.46
1975	717	16	1.74	4.02	.20	.40
1976	460	13	2.08	3.66	.23	.54
1977	103	15	2.48	3.91	.90	.53
1979	132	18	3.13	3.96	.90	.73
1980	549	10	2.53	3.35	.15	.74
Site 42 (station 01480655) East Branch Brandywine Creek at Glenmoore						
1973	134	14	2.29	3.73	.68	.53
1974	113	17	2.20	3.99	.95	.41
1975	-	-	-	-	-	-
1976	424	24	3.16	4.56	.47	.66
1977	120	16	2.55	3.80	.85	.56
1979	305	14	2.71	3.82	.35	.68
1980	444	18	2.49	4.16	.34	.56
Site 43 (station 01480647) East Branch Brandywine Creek near Struble Dam						
1973	191	8	1.38	3.04	.28	.40
1974	-	-	-	-	-	-
1975	228	8	1.07	2.98	.24	.30
1976	295	15	1.95	3.89	.39	.44
1977	12	6	1.64	1.90	1.38	.50
1979	130	10	1.80	3.11	.48	.50
1980	188	19	2.75	4.27	.72	.57

Table 4.--Brillouin's diversity index, maximum diversity, minimum diversity,
and relative evenness--Continued
[A dash indicates no data]

Year	Total number of organisms	Total number of taxa	Brillouin's diversity index (H)	Maximum diversity (H _{max})	Minimum diversity (H _{min})	Evenness (E)
Site 44 (station 01480903) Valley Creek at Mullsteins Meadows near Downingtown						
1973	770	16	1.65	3.94	0.19	0.39
1974	949	16	1.66	3.97	.16	.39
1975	997	18	2.64	4.14	.17	.62
1976	630	20	2.50	4.29	.28	.55
1977	433	18	2.33	4.04	.34	.54
1979	381	14	3.21	3.72	.29	.85
1980	1596	12	2.91	3.55	.07	.82
Site 45 (station 01480632) Doe Run at Springdell						
1973	15	7	1.45	2.22	1.45	0
1974	147	7	1.12	2.67	.29	.35
1975	575	18	2.48	4.21	.27	.56
1976	836	22	2.19	4.36	.24	.47
1977	665	16	3.0	3.99	.21	.74
1979	150	15	2.71	3.64	.67	.69
1980	628	14	2.86	3.83	.19	.73
Site 46 (station 01480629) Buck Run at Doe Run						
1973	346	8	.97	2.95	.17	.29
1974	54	5	1.56	2.37	.42	.58
1975	790	16	1.94	3.97	.18	.46
1976	218	9	1.20	3.09	.28	.33
1977	795	18	1.70	4.11	.21	.38
1979	5	5	1.38	1.38	1.38	1.00
1980	420	10	2.30	3.24	.19	.69

Table 4.--Brillouin's diversity index, maximum diversity, minimum diversity,
and relative evenness--Continued
[A dash indicates no data]

Year	Total number of organisms	Total number of taxa	Brillouin's diversity index (H)	Maximum diversity (H _{max})	Minimum diversity (H _{min})	Evenness (E)
Site 47 (station 01480656) Indian Run near Springton						
1973	-	-	-	-	-	-
1974	188	21	2.89	4.43	0.80	0.58
1975	446	28	3.02	4.84	.53	.58
1976	135	18	2.97	4.03	.88	.66
1977	42	15	2.90	3.69	1.71	.60
1979	185	28	3.57	4.68	1.08	.69
1980	622	28	3.44	4.70	.40	.71
Site 48 (station 01480648) East Branch Brandywine Creek near Cupola						
1973	218	14	2.59	3.76	.46	.65
1974	188	17	2.58	3.86	.64	.60
1975	749	28	2.89	4.81	.34	.57
1976	518	23	3.15	4.48	.38	.67
1977	583	21	2.88	4.40	.31	.63
1979	166	21	2.47	4.41	.88	.45
1980	624	16	3.10	3.91	.22	.78
Site 49 (station 01473167) Little Valley Creek at Howellville						
1973	29	2	.17	1.04	.17	0
1974	0	0	0	0	0	0
1975	988	12	2.54	3.56	.11	.70
1976	449	12	2.59	3.55	.22	.71
1977	279	13	2.18	3.65	.35	.56
1979	222	14	2.25	3.84	.45	.54
1980	1983	15	2.26	3.88	.08	.57
Site 50 (station 01473168) Valley Creek near Valley Forge						
1973	25	2	0.19	1.04	0.19	0
1974	153	8	1.42	2.88	.33	.43
1975	534	10	1.89	3.30	.15	.55
1976	849	14	1.73	3.81	.15	.43
1977	1003	13	1.65	3.66	.12	.43
1979	263	9	1.98	3.10	.24	.61
1980	1412	12	2.64	3.59	.08	.73

Table 5.--Median, mean, standard deviation, and standard error values of Brillouin's diversity index by site

Site number	Station number	Number of samples	Median	Mean	Standard deviation	Standard error
1	01472170	8	2.3	2.1	0.65	0.23
2	01472174	9	2.1	2.3	.77	.26
3	014721854	9	2.3	2.4	.40	.13
4	014721884	7	2.3	2.2	.60	.23
5	01472190	9	2.4	2.4	.80	.27
6	01472109	9	1.7	1.6	.74	.25
7	01472110	9	2.1	2.3	1.17	.39
8	01472054	8	2.0	2.2	.45	.16
9	01472065	9	2.2	2.2	.43	.14
10	01472080	8	2.5	2.4	.57	.20
11	01472129	7	2.8	2.7	.45	.17
12	01472140	9	2.7	2.6	.36	.12
13	01472138	9	2.3	2.8	.66	.22
14	01472154	9	2.8	2.6	.56	.19
15	01472157	10	2.6	2.6	.68	.21
17	01475300	9	2.4	2.2	.74	.25
18	01475830	8	2.2	2.4	.64	.23
19	01475840	9	2.7	2.5	.57	.19
20	01476430	9	2.5	2.2	.75	.25
21	01476435	9	2.2	2.3	.71	.24
22	01476790	9	2.3	2.1	.44	.15
23	01476830	9	1.9	1.7	.51	.17
24	01476835	8	2.0	1.8	.85	.30
26	01479800	8	1.1	1.0	.57	.20
27	01479680	9	1.2	1.2	.59	.20
28	01478120	8	2.5	2.4	.79	.28
29	01478190	9	1.7	1.6	.57	.19
30	01478220	8	2.2	2.1	.60	.21
31	01494900	8	2.1	2.1	1.18	.42
32	01494950	7	2.1	2.1	.60	.23
33	01578340	8	2.0	2.0	.40	.14
34	01578343	8	1.8	1.8	.75	.26
35	41578345	9	2.1	2.0	.42	.14
36	01480700	10	2.1	2.1	.63	.20
37	01480434	10	2.2	2.1	.77	.24
38	01480640	8	1.6	1.4	.70	.25
40	01481030	8	1.9	2.1	.59	.21
42	01480653	6	2.5	2.6	.34	.14
43	01480647	6	1.7	1.8	.57	.23
44	01480903	7	2.5	2.4	.59	.22
45	01480632	7	2.5	2.3	.72	.27
46	01480629	7	1.4	1.6	.45	.17
47	01480656	6	3.0	3.1	.30	.12
48	01480648	7	2.9	2.8	.27	.10
49	01473167	7	2.3	1.7	1.13	.43
50	01473168	7	1.7	1.6	.75	.28

Table 6.--Alphabetic checklist of taxa reported in the benthic-invertebrate sampling project, Chester County, Pennsylvania

[Name appearing in parenthesis is the currently accepted correct taxonomic name]

Ablabesmyia sp.
 Acarina
Acroneuria sp.
Aeschna sp.
Agriion (Calopteryx) sp.
Alisotrichia sp. (early instar Leucotrichia pictipes)
Allocapnia sp.
Allonarcys sp.
Ameletus sp.
Amnicola sp.
Amphiagriion sp.
Amphinemura sp.
 Amphipoda
Anchytarsus bicolor
Ancyronyx variegata
 Anisoptera
 Annelida
Antocha sp.
Apatania sp.
 Araneida
Argia sp.
Arzama (Bellura) sp.
Asellus sp.
 Astacidae
Atherix sp.

Baetis sp.
Berosus sp.
Boyeria sp.
Brachycentrus sp.
Brillia sp.

Caenis sp.
Calopteryx sp.
Campeloma sp.
 Capniidae
Cardiocladius sp.
Cataclysta (Parargyractis or Petrophila) sp.
Centroptilum sp.
 Ceratopogonidae
Chaetocladius sp.
Chaoborus sp.
Chauliodes sp.
Cheumatopsyche sp.
Chimarra sp.

Table 6.--Alphabetic checklist of taxa reported in the benthic-invertebrate sampling project, Chester County, Pennsylvania--Continued

[Name appearing in parenthesis is the currently accepted correct taxonomic name]

Chironomidae
Chironomus sp.
Chloroperlidae
Climacia sp.
 Coelenterata
 Coenagriidae (Coenagrionidae)
 Coenagrionidae
 Coleoptera
 Collembola
Conchapelopia sp.
 Copepoda
Corydalis cornutus
Corynoneura sp.
Cricotopus sp.
Cryptochironomus sp.
Cyclops sp.
 Cyclorrhapha (Suborder Diptera)
Cyrnellus fraternus

Decapoda
Diamesa sp.
Diaptomus sp.
Dicranota sp.
Dicrotendipes (Limnochironomus) sp.
Diplectrona modesta
Diplocladius sp.
 Diptera
Dolomedes sp.
Dolophiloides sp.
Dubiraphia sp.

Ectopria nervosa
 Empididae
Enallagma sp.
Endochironomus sp.
 Entomobryidae
Epeorus sp.
Ephemerella sp.
 Ephemeroptera
Eukiefferiella sp.
Eurylophella sp.

Ferrissia sp.

Table 6.--Alphabetic checklist of taxa reported in the benthic-invertebrate sampling project, Chester County, Pennsylvania--Continued

[Name appearing in parenthesis is the currently accepted correct taxonomic name]

Gammarus sp.
 Gastropoda
Geranomyia sp.
Glossosoma sp.
Glyptotendipes sp.
Goeldichironomus sp.
Goera sp.
Gomphus sp.
Gonomyia sp.
Gyraulus sp.

Helichus sp.
Helicopsyche borealis
Helius sp.
Hemerodromia sp.
 Hemiptera
Heptagenia sp.
Heterotrissocladius sp.
Hexatoma sp.
 Hirudinea
Hyalolella azteca
Hydatophylax sp.
Hydra sp.
 Hydracarina (Acarina)
Hydrobius sp.
Hydropsyche sp.
Hydroptila sp.
Hygrotus sp.
 Hymenoptera

Ischnura sp.
Isonychia sp.
 Isopoda

Kiefferulus sp.

Laccophilus sp.
 Lepidoptera
Lepidostoma sp.
Leptophlebia sp.
Leucotrichia pictipes
Leuctra sp.
 Limnephilidae
Limnius (Oulimnius) sp.

Table 6.--Alphabetic checklist of taxa reported in the benthic-invertebrate sampling project, Chester County, Pennsylvania--Continued

[Name appearing in parenthesis is the currently accepted correct taxonomic name]

Limnochironomus sp.

Lirceus sp.

Lumbriculus sp.

Lymnaea sp.

Lype diversa

Macronema sp.

Macronychus glabratus

Megaloptera

Menetus sp.

Mesovelia sp.

Metriocnemus sp.

Micrasema sp.

Microcylloepus sp.

Micropsectra sp.

Microtendipes sp.

Molanna sp.

Muscidae

Musculium sp.

Mymaridae

Mystacides sp.

Naididae

Nanocladius sp.

Nectopsyche sp.

Nehalennia sp.

Neoperla sp.

Neophylax sp.

Neozavrelia sp.

Neureclipsis sp.

Neuroptera

Nigronia sp.

Nilotanypus sp.

Nilothauma sp.

Nyctiophylax sp.

Nymphula sp.

Ochrotrichia sp.

Odonata

Oecetis sp.

Oligochaeta

Oligostomis ocelligera

Optioservus sp.

Table 6.--Alphabetic checklist of taxa reported in the benthic-invertebrate sampling project, Chester County, Pennsylvania--Continued

[Name appearing in parenthesis is the currently accepted correct taxonomic name]

Orthocladus sp.
 Ostracoda
Oulimnius latiusculus

Paracapnia sp.
Parachironomus sp.
Paracladopelma sp.
Paragnetina sp.
Paraleptophlebia sp.
Parametriocnemus sp.
Paragyrtactis (Petrophila) sp.
Paratanytarsus sp.
 Pelecypoda
Pelocoris sp.
Peltoperla sp.
 Perlodidae
Petrophila sp.
Phaenopsectra sp.
Phasganophora sp.
 Philopotamidae
Phylocentropus sp.
Physa sp.
 Planariidae
 Plecoptera
Plecopteracoluthus sp.
Polycentropus sp.
Polypedilum sp.
Potamyia flava
Potthastia sp.
Procladius sp.
Promoresia sp.
Psectrocladius sp.
Psephenus herricki
Pseudocloeon sp.
Pseudodiamesa sp.
Psychomyia sp.
 Psychomyiid genus A (Nyctiophylax sp.)
 Psychomyiid genus B (Nyctiophylax sp.)
 Pyralidae

Rhagovelia obesa
Rheotanytarsus sp.
Rhyacophila sp.

Table 6.--Alphabetic checklist of taxa reported in the benthic-invertebrate sampling project, Chester County, Pennsylvania--Continued

[Name appearing in parenthesis is the currently accepted correct taxonomic name]

Saldidae
Serratella sp.
Sialis sp.
Sigara sp.
Simuliidae
Simulium sp.
Siphonurus sp.
Smittia sp.
Smytherides sp.
Sortosa (Dolophilodes) sp.
Sphaerium sp.
Stactobiella sp.
Stempellina sp.
Stenacron sp.
Stenelmis sp.
Stenonema sp.
Stylaria sp.
Symphitopsyche sp.
Synorthocladus sp.

Tabanus sp.
Taeniopteryx sp.
Tanypodinae (Subfamily Chironomidae)
Tanytarsus sp.
Thienemanniella sp.
Tipula sp.
Trentonius (Dolophilides) sp.
Trichocorixa sp.
Trichoptera
Tricladida
Tricorythodes sp.
Tubificidae
Turbellaria

Viviparidae

Wormaldia sp.

Zygoptera

Table 7.--Systematic checklist of taxa reported in the benthic-invertebrate sampling project, Chester County, Pennsylvania

Hydrozoa (Hydroids)

Hydra sp.

Turbellaria (Flatworms)

Tricladida

Planariidae

Gastropoda (Snails, Limpets)

Amnicola sp.

Campeloma sp.

Ferrissia sp.

Gyraulus sp.

Helisoma sp.

Lymnaea sp.

Menetus sp.

Physa sp.

Viviparidae

Pelecypoda (Clams)

Sphaerium sp.

Musculium sp.

Annelida (Earthworms, Leeches)

Oligochaeta

Naididae

Stylaria sp.

Lumbriculidae

Lumbriculus sp.

Tubificidae

Hirudinea

Copepoda (Copepods)

Cyclops sp.

Diaptomus sp.

Ostracoda (Seed Shrimps)

Isopoda (Sow Bugs)

Asellus sp.

Lirceus sp.

Amphipoda (Scuds)

Gammarus sp.

Hyaella azteca

Decapoda (Crayfish)

Astacidae

Table 7.--Systematic checklist of taxa reported in the benthic-invertebrate sampling project, Chester County, Pennsylvania--Continued

Acarina (Water Mites)

Hydracarina

Araneida (Spiders)

Dolomedes sp.

Collembola (Springtails)

Entomobryidae

Sminthurides sp.

Ephemeroptera (Mayflies)

Ameletus sp.

Baetis sp.

Caenis sp.

Centroptilum sp.

Epeorus sp.

Ephemerella sp.

Eurylophella sp.

Heptagenia sp.

Isonychia sp.

Leptophlebia sp.

Paraleptophlebia sp.

Pseudocloeon sp.

Serratella sp.

Siphonurus sp.

Stenacron sp.

Stenonema sp.

Tricorythodes sp.

Odonata (Dragonflies, Damselflies)

Anisoptera

Aeschna sp.

Boyeria sp.

Gomphidae

Gomphus sp.

Ischnura sp.

Lanthus sp.

Zygoptera

Amphiagrion sp.

Argia sp.

Calopteryx sp.

Coenagrionidae

Enallagma sp.

Nehalennia sp.

Table 7.--Systematic checklist of taxa reported in the benthic-invertebrate sampling project, Chester County, Pennsylvania--Continued

Plecoptera (Stoneflies)

Acroneuria sp.
Allocaonia sp.
Allonarcys sp.
Amphinemura sp.
 Capniidae
 Chloroperlidae
Isoperla sp.
Leuctra sp.
Neoperla sp.
Paracania sp.
Paragnetina capitata
Peltoperla sp.
 Perlodidae
Phasganophora sp.
Taeniopteryx sp.

Hemiptera (Bugs)

Gerridae
Mesovelia sp.
Pelocoris sp.
Rhagovelia obesa
 Saldidae
Sigara sp.
Trichocorixa sp.

Megaloptera (Alderflies, Dobsonflies, and Fishflies)

Chauliodes sp.
Corydalus cornutus
Nigronia sp.
Sialis sp.

Neuroptera (Spongillaflies)

Climacia sp.

Lepidoptera (Butterflies and moths)

Bellura sp.
Nymphula sp.
Paragyraetis sp. (Petrophila sp.)
 Pyralidae

Table 7.--Systematic checklist of taxa reported in the benthic-invertebrate sampling project, Chester County, Pennsylvania--Continued

Trichoptera (Gaddisflies)

Apatania sp.
Brachycentrus sp.
Cheumatopsyche sp.
Chimarra sp.
Cyrnellus fraternus
Dolophilodes sp.
Diplectrona modesta
Glossosoma sp.
Goera sp.
Helicopsyche borealis
Hydatophylax sp.
Hydropsychidae
Hydropsyche sp.
Hydroptila sp.
Lepidostoma sp.
Leucotrichia pictipes
Limnephilidae
Lype diversa
Macronema sp.
Micrasema sp.
Molanna sp.
Mysticides sp.
Nectopsyche sp.
Neophylax sp.
Neureclipsis sp.
Nyctiophylax sp.
Ochrotrichia sp.
Oecetis sp.
Oligostomis ocelligera
Philopomatidae
Phylocentropus sp.
Polycentropus sp.
Potamyia flava
Psychomyia sp.
Rhyacophila sp.
Stactobiella sp.
Symphitopsyche sp.
Wormaldia sp.

Table 7.--Systematic checklist of taxa reported in the benthic-invertebrate sampling project, Chester County, Pennsylvania--Continued

Diptera (Flies)

Antocha sp.
Atherix sp.
 Ceratopogonidae
Chaoborus sp.
 Chironomidae
 Cyclorhapha (Suborder)
Dicranota sp.
 Empididae
Geranomyia sp.
Gonomyia sp.
Helius sp.
Hemerodromia sp.
Hexatoma sp.
Limnophora sp.
 Muscidae
 Simuliidae
Simulium sp.
Tabanus sp.
 Tipulidae
Tipula sp.

Chironomidae (Midges)

Ablabesmyia sp.
Brillia sp.
Cardiocladius sp.
Chaetocladius sp.
Chironomus sp.
Conchapelopia sp.
Corynoneura sp.
Cricotopus sp.
Cryptochironomus sp.
Diamesa sp.
Diplocladius sp.
Endochironomus sp.
Eukiefferiella sp.
Glyptotendipes sp.
Goeldichironomus sp.
Heterotrissocladius sp.
Kiefferulus sp.
Limnochironomus sp. (Dicrotendipes sp.)
Metriocnemus sp.
Micropsectra sp.
Microtendipes sp.
Nanocladius sp.

Table 7.--Systematic checklist of taxa reported in the benthic-invertebrate sampling project, Chester County, Pennsylvania--Continued

Chironomidae (Midges)--Continued

Neozavarelia sp.
Nilotanypus sp.
Nilothauma sp.
Orthocladius sp.
Parachironomus sp.
Paracladopelma sp.
Parametriocnemus sp.
Paratanytarsus sp.
Phaenopsectra sp.
Plecopteracoluthus sp.
Polypedilum sp.
Potthastia sp.
Procladius sp.
Psectrocladius sp.
Pseudodiamesa sp.
Rheotanytarsus sp.
Smitta sp.
Stempellina sp.
Synorthocladius sp.
Tanypodinae (subfamily)
Tanytarsus sp.
Thienemanniella sp.

Hymenoptera (Wasps)
Mymaridae

Coleoptera (Beetles)

Ancyronyx variegata
Anchytarsus bicolor
Berosus sp.
Dubiraphia sp.
Ectopria nervosa
Helichus sp.
Hydrobius sp.
Hygrotus sp.
Laccophilus sp.
Macronychus glabratus
Microcylloepus sp.
Optioservus sp.
Oulimnius latiusculus
Promoresia sp.
Psephenus herricki
Stenelmis sp.