

**ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
STREAM CONDITIONS OF CHESTER COUNTY BIOLOGICAL MONITORING NETWORK**

Water-quality and benthic macroinvertebrate samples were collected from selected streams in Chester County in the fall of 2003 as part of the Stream Conditions of Chester County Biological Monitoring Network. The biological monitoring program was initiated in 1969 with the goals of evaluating stream quality and long-term changes in stream quality of selected streams in Chester County. Benthic macroinvertebrates are macroscopic animals that inhabit the bottoms of aquatic habitats. Freshwater forms include aquatic insects, clams, crustaceans, snails, and worms. Samples are collected annually from similar habitats of the selected streams. By sampling in similar habitats with similar physical conditions it can be assumed that water quality is the determining factor controlling community structure. Benthic macroinvertebrate sampling was conducted following a single habitat approach. A cobble-riffle habitat was used because macroinvertebrate diversity and abundance is usually highest there. Samples were collected using a Hess sampler with a mesh size of 500 mm. Three samples were collected from areas of various velocities from within the riffle. Samples were composited and the entire sample was sorted and identified. Identifications were made to the lowest practical level (family or genus) by a U.S. Geological Survey biologist.

TABLE 3.--Stream conditions of Chester County biological monitoring network station list.

STATION NUMBER	STATION NAME	LATITUDE	LONGITUDE	DRAINAGE AREA (mi ²)
01472080	PIGEON CREEK NEAR SLONAKER, PA	40°12'03"	75°37'10"	12.0
^a 01472157	FRENCH CREEK NEAR PHOENIXVILLE, PA	40°09'05"	75°36'06"	59.1
01472190	PICKERING CREEK NEAR PHOENIXVILLE, PA	40°06'33"	75°31'42"	31.4
^a 01473169	VALLEY CREEK AT PA TURNPIKE BRIDGE NEAR VALLEY FORGE, PA	40°04'45"	75°27'40"	20.8
^a 01475850	CRUM CREEK NEAR NEWTOWN SQUARE, PA	39°58'35"	75°26'13"	15.8
01476450	RIDLEY CREEK AT PA ROUTE 3 NEAR WILLISTOWN, PA	39°58'01"	75°28'58"	13.9
01476835	EAST BRANCH CHESTER CREEK AT WESTTOWN, PA	39°56'26"	75°32'30"	10.4
01478120	EAST BRANCH WHITE CLAY CREEK AT AVONDALE, PA	39°49'42"	75°46'52"	11.3
01478230	MIDDLE BRANCH WHITE CLAY CREEK NEAR AVONDALE, PA	39°45'02"	75°46'19"	25.5
01479700	WEST BRANCH RED CLAY CR NR KENNETT SQUARE, PA	39°48'39"	75°42'18"	16.9
01479800	EAST BRANCH RED CLAY CREEK NEAR FIVE POINTS, PA	39°49'10"	75°41'29"	10.2
^a 01480300	WEST BRANCH BRANDYWINE CR NR HONEY BROOK, PA	40°04'22"	75°55'40"	18.7
^a 01480617	WEST BRANCH BRANDYWINE CREEK AT MODENA, PA	39°57'42"	75°48'06"	55.0
01480629	BUCK RUN AT DOE RUN, PA	39°55'46"	75°49'24"	22.6
01480640	WEST BRANCH BRANDYWINE CREEK AT WAWASET, PA	39°55'34"	75°39'47"	134
01480648	EAST BRANCH BRANDYWINE CREEK NEAR CUPOLA, PA	40°05'41"	75°51'14"	5.98
014806512	EAST BRANCH BRANDYWINE CR AT LEWIS MILLS, PA	40°06'20"	75°49'35"	8.18
01480653	EAST BRANCH BRANDYWINE CR AT GLENMOORE, PA	40°05'48"	75°46'44"	16.5
01480658	INDIAN RUN AT GLENMOORE, PA	40°04'32"	75°46'55"	4.27
01480660	EAST BRANCH BRANDYWINE CREEK AT LYNDELL, PA	40°03'34"	75°44'39"	27.1
^a 01480675	MARSH CREEK NEAR GLENMOORE, PA	40°05'52"	75°44'31"	8.57
^a 01480700	EB BRANDYWINE CREEK NEAR DOWNINGTOWN, PA	40°02'05"	75°42'32"	60.6
01480800	EB BRANDYWINE CREEK AT DOWNINGTOWN, PA	40°00'20"	75°42'20"	81.6
^a 01480870	EAST BRANCH BRANDYWINE CR BL DOWNINGTOWN, PA	39°58'07"	75°40'25"	89.9
01480950	EAST BRANCH BRANDYWINE CREEK AT WAWASET, PA	39°55'35"	75°38'54"	123
01494953	BIG ELK CREEK AT MAPLE GROVE, PA	39°45'44"	75°55'16"	26.6

^a Other data for this station can be found in the continuous station records section of this report.

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
 STREAM CONDITIONS OF CHESTER COUNTY BIOLOGICAL MONITORING NETWORK--Continued

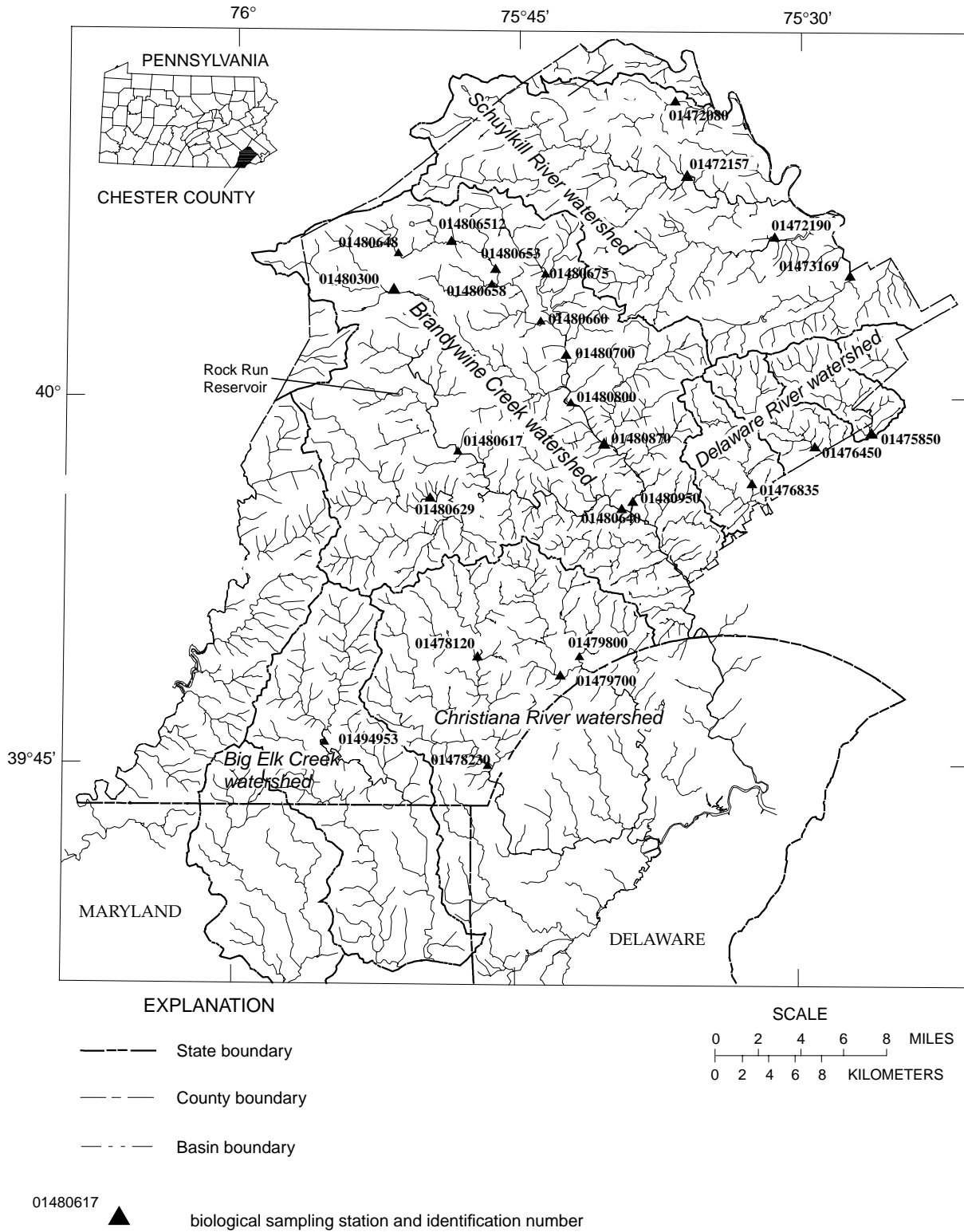


Figure 14.--Biological sampling locations and major drainage basin divides in Chester County.

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
STREAM CONDITIONS OF CHESTER COUNTY BIOLOGICAL MONITORING NETWORK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
 MISCELLANEOUS STATION ANALYSES

Date	Time	Agency col- lecting sample, code (00027)	Agency ana- lyzing sample, code (00028)	Instan- taneous dis- charge, cfs (00061)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conduc- tance, wat unf lab, µS/cm 25 degC (90095)	Specif. conduc- tance, wat unf lab, µS/cm 25 degC (00095)	Temper- ature, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Potas- sium, water, fltrd, mg/L (00935)
		01472080 Pigeon Creek near Slonaker, PA (LAT 40 12 03N LONG 075 37 10W)											
OCT 2003 07...	0900	1028	80020	18	12.4	6.6	7.3	152	156	9.6	12.6	4.68	1.63
		01472190 Pickering Creek near Phoenixville, PA (LAT 40 06 33N LONG 075 31 42W)											
OCT 2003 21...	0830	1028	80020	41	10.9	7.5	7.7	238	238	11.2	23.9	7.84	2.56
		01476450 Ridley Creek at Rt 3 near Willistown, PA (LAT 39 58 01N LONG 075 28 58W)											
OCT 2003 06...	1000	1028	80020	18	11.0	6.9	7.7	296	306	10.7	20.7	11.5	2.48
		01476835 East Branch Chester Creek at Westtown, PA (LAT 39 56 26N LONG 075 32 30W)											
OCT 2003 20...	1320	1028	80020	11	12.9	7.6	7.6	352	353	12.4	30.1	14.1	3.61
		01478120 East Branch White Clay Creek at Avondale, PA (LAT 39 49 42N LONG 075 46 52W)											
OCT 2003 14...	1330	1028	80020	15	14.5	8.5	8.3	343	348	13.8	37.8	16.1	3.51
		01478230 Middle Branch White Clay Creek near Avondale, PA (LAT 39 45 02N LONG 075 46 19W)											
OCT 2003 14...	1200	1028	80020	18	12.5	8.2	8.0	216	219	13.2	18.4	7.79	3.47
		01479700 West Branch Red Clay Creek near Kennett Square, PA (LAT 39 48 39N LONG 075 42 18W)											
OCT 2003 08...	1130	1028	80020	28	11.9	7.9	7.8	384	404	12.7	37.7	14.5	5.62
		01479800 East Branch Red Clay Creek near Five Points, PA (LAT 39 49 10N LONG 075 41 29W)											
OCT 2003 08...	0930	1028	80020	13	11.0	7.5	7.7	371	385	12.1	37.2	14.0	4.16
		01480629 Buck Run at Doe Run, PA (LAT 39 55 46N LONG 075 49 24W)											
OCT 2003 20...	1100	1028	80020	35	13.6	7.7	7.6	228	226	10.4	21.8	8.60	2.77
		01480640 West Branch Brandywine Creek at Wawaset, PA (LAT 39 55 34N LONG 075 39 47W)											
NOV 2003 10...	1200	1028	80020	304	12.7	7.6	7.6	226	222	6.3	20.8	7.97	2.84
		01480648 East Branch Brandywine Creek near Cupola, PA (LAT 40 05 41N LONG 075 51 14W)											
NOV 2003 17...	1230	1028	80020	7.3	12.5	7.7	7.5	201	214	9.9	20.2	6.78	3.39
		01480653 East Branch Brandywine Creek at Glenmoore, PA (LAT 40 05 48N LONG 075 46 44W)											
OCT 2003 22...	1000	1028	80020	19	10.6	7.4	7.7	200	223	12.2	20.6	6.70	2.74
		014806512 East Branch Brandywine Creek at Lewis Mills, PA (LAT 40 06 20N LONG 075 49 35W)											
NOV 2003 17...	1130	1028	80020	10	12.9	8.1	7.7	206	216	9.3	21.1	6.60	2.87

**ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
STREAM CONDITIONS OF CHESTER COUNTY BIOLOGICAL MONITORING NETWORK--Continued**

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
MISCELLANEOUS STATION ANALYSES

Date	Sodium, water, fltrd, mg/L (00930)	ANC, wat unfr, titr., field, mg/L as CaCO3 (00419)	Chloride, water, fltrd, mg/L (00940)	Silica, water, fltrd, mg/L (00955)	Sulfate, water, fltrd, mg/L (00945)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Aluminum, water, fltrd, µg/L (01106)	Arsenic water, fltrd, µg/L (01000)	Boron, water, fltrd, µg/L (01020)	Cadmium water, fltrd, µg/L (01025)
	01472080 Pigeon Creek near Slonaker, PA (LAT 40 12 03N LONG 075 37 10W)												
OCT 2003 07...	7.99	29	11.4	15.5	13.8	<.04	2.53	E.005	.03	--	--	22	--
	01472190 Pickering Creek near Phoenixville, PA (LAT 40 06 33N LONG 075 31 42W)												
OCT 2003 21...	12.1	67	27.6	18.7	16.0	<.04	1.65	<.008	<.02	--	--	26	--
	01476450 Ridley Creek at Rt 3 near Willistown, PA (LAT 39 58 01N LONG 075 28 58W)												
OCT 2003 06...	17.9	62	37.9	14.7	16.4	<.04	3.56	E.005	.11	--	--	39	--
	01476835 East Branch Chester Creek at Westtown, PA (LAT 39 56 26N LONG 075 32 30W)												
OCT 2003 20...	19.8	86	57.2	14.0	18.4	<.04	2.54	.018	.12	--	--	37	--
	01478120 East Branch White Clay Creek at Avondale, PA (LAT 39 49 42N LONG 075 46 52W)												
OCT 2003 14...	9.05	104	22.3	12.8	26.9	<.04	4.71	.021	E.01	--	--	20	--
	01478230 Middle Branch White Clay Creek near Avondale, PA (LAT 39 45 02N LONG 075 46 19W)												
OCT 2003 14...	10.1	46	20.1	12.0	16.5	<.04	4.30	E.004	.03	--	--	34	--
	01479700 West Branch Red Clay Creek near Kennett Square, PA (LAT 39 48 39N LONG 075 42 18W)												
OCT 2003 08...	13.4	80	32.5	14.4	39.1	<.04	5.79	.009	.11	19	<2	43	<.2
	01479800 East Branch Red Clay Creek near Five Points, PA (LAT 39 49 10N LONG 075 41 29W)												
OCT 2003 08...	13.2	82	37.2	16.0	32.2	<.04	3.62	.009	E.01	10	<2	25	<.2
	01480629 Buck Run at Doe Run, PA (LAT 39 55 46N LONG 075 49 24W)												
OCT 2003 20...	9.24	47	19.8	9.4	15.4	E.02	5.13	E.007	<.02	--	--	23	--
	01480640 West Branch Brandywine Creek at Wawaset, PA (LAT 39 55 34N LONG 075 39 47W)												
NOV 2003 10...	9.98	56	18.4	11.8	18.3	<.04	3.80	.011	E.01	--	--	34	--
	01480648 East Branch Brandywine Creek near Cupola, PA (LAT 40 05 41N LONG 075 51 14W)												
NOV 2003 17...	7.37	49	13.9	11.7	14.4	E.03	3.66	.033	<.02	14	<2	23	<.2
	01480653 East Branch Brandywine Creek at Glenmoore, PA (LAT 40 05 48N LONG 075 46 44W)												
OCT 2003 22...	9.19	49	15.4	17.1	13.2	<.04	3.35	E.005	<.02	18	<2	31	<.2
	014806512 East Branch Brandywine Creek at Lewis Mills, PA (LAT 40 06 20N LONG 075 49 35W)												
NOV 2003 17...	8.19	57	14.6	13.7	14.7	<.04	3.58	.018	<.02	--	--	22	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
STREAM CONDITIONS OF CHESTER COUNTY BIOLOGICAL MONITORING NETWORK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
 MISCELLANEOUS STATION ANALYSES

Date	Chrom- ium, water, fltrd, µg/L (01030)	Copper, water, fltrd, µg/L (01040)	Iron, water, fltrd, µg/L (01046)	Lead, water, fltrd, µg/L (01049)	Mangan- ese, water, fltrd, µg/L (01056)	Mercury water, fltrd, µg/L (71890)	Molyb- denum, water, fltrd, µg/L (01060)	Nickel, water, fltrd, µg/L (01065)	Zinc, water, fltrd, µg/L (01090)
01472080 Pigeon Creek near Slonaker, PA (LAT 40 12 03N LONG 075 37 10W)									
OCT 2003 07...	--	--	50	--	--	--	--	--	--
01472190 Pickering Creek near Phoenixville, PA (LAT 40 06 33N LONG 075 31 42W)									
OCT 2003 21...	--	--	166	--	--	--	--	--	--
01476450 Ridley Creek at Rt 3 near Willistown, PA (LAT 39 58 01N LONG 075 28 58W)									
OCT 2003 06...	--	--	51	--	--	--	--	--	--
01476835 East Branch Chester Creek at Westtown, PA (LAT 39 56 26N LONG 075 32 30W)									
OCT 2003 20...	--	--	54	--	--	--	--	--	--
01478120 East Branch White Clay Creek at Avondale, PA (LAT 39 49 42N LONG 075 46 52W)									
OCT 2003 14...	--	--	25	--	--	--	--	--	--
01478230 Middle Branch White Clay Creek near Avondale, PA (LAT 39 45 02N LONG 075 46 19W)									
OCT 2003 14...	--	--	18	--	--	--	--	--	--
01479700 West Branch Red Clay Creek near Kennett Square, PA (LAT 39 48 39N LONG 075 42 18W)									
OCT 2003 08...	<.8	2.7	39	<1	22.7	<.02	<1.8	E1.3	6
01479800 East Branch Red Clay Creek near Five Points, PA (LAT 39 49 10N LONG 075 41 29W)									
OCT 2003 08...	E.4	1.9	13	<1	16.9	<.02	<1.8	E1.8	<3
01480629 Buck Run at Doe Run, PA (LAT 39 55 46N LONG 075 49 24W)									
OCT 2003 20...	--	--	71	--	--	--	--	--	--
01480640 West Branch Brandywine Creek at Wawaset, PA (LAT 39 55 34N LONG 075 39 47W)									
NOV 2003 10...	--	--	99	--	--	--	--	--	--
01480648 East Branch Brandywine Creek near Cupola, PA (LAT 40 05 41N LONG 075 51 14W)									
NOV 2003 17...	<.8	1.5	66	<1	27.9	<.02	<1.8	E1.1	E2
01480653 East Branch Brandywine Creek at Glenmoore, PA (LAT 40 05 48N LONG 075 46 44W)									
OCT 2003 22...	<.8	<1.2	49	<1	12.6	<.02	<1.8	<2.0	E2
014806512 East Branch Brandywine Creek at Lewis Mills, PA (LAT 40 06 20N LONG 075 49 35W)									
NOV 2003 17...	--	--	63	--	--	--	--	--	--

**ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
STREAM CONDITIONS OF CHESTER COUNTY BIOLOGICAL MONITORING NETWORK--Continued**

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
MISCELLANEOUS STATION ANALYSES

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unfltrd lab, µS/cm 25 degC (90095)	Specif. conductance, wat unfltrd lab, µS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	
			01480658	Indian Run at Glenmoore, PA (LAT 40 04 32N LONG 075 46 55W)										
NOV 2003	0900	1028	80020	8.9	12.1	7.5	7.9	165	178	8.6	17.7	4.54	1.23	
			01480660	East Branch Brandywine Creek at Lyndell, PA (LAT 40 03 34N LONG 075 44 39W)										
DEC 2003	0830	1028	80020	57	13.1	7.4	7.5	177	179	5.7	16.0	5.04	1.99	
			01480800	East Branch Brandywine Creek at Downingtown, PA (LAT 40 00 20N LONG 075 42 20W)										
DEC 2003	1100	1028	80020	195	12.6	7.5	7.5	215	219	7.4	19.9	7.09	2.41	
			01480950	East Branch Brandywine Creek at Wawaset, PA (LAT 39 55 35N LONG 075 38 54W)										
NOV 2003	0830	1028	80020	305	11.8	7.6	7.5	270	264	6.7	24.7	8.95	2.69	
			01494953	Big Elk Creek at Maple Grove, PA (LAT 39 45 44N LONG 075 55 16W)										
OCT 2003	1000	1028	80020	26	11.4	7.8	7.3	190	191	13.3	13.8	7.18	2.88	
Date		Sodium, water, fltrd, mg/L (00930)	ANC, wat unfltrd, incrm. titr., field, mg/L as CaCO3 (00419)	Chloride, water, fltrd, mg/L (00940)	Silica, water, fltrd, mg/L (00955)	Sulfate, water, fltrd, mg/L (00945)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + Nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Aluminum, water, fltrd, µg/L (01106)	Arsenic water, fltrd, µg/L (01000)	Boron, water, fltrd, µg/L (01020)	Cadmium, water, fltrd, µg/L (01025)
			01480658	Indian Run at Glenmoore, PA (LAT 40 04 32N LONG 075 46 55W)										
NOV 2003	8.18	55	12.7	22.3	9.2	<.04	2.25	<.008	<.02	--	--	21	--	
			01480660	East Branch Brandywine Creek at Lyndell, PA (LAT 40 03 34N LONG 075 44 39W)										
DEC 2003	7.16	47	13.3	15.8	13.4	<.04	2.77	E.005	E.01	31	<2	20	<.2	
			01480800	East Branch Brandywine Creek at Downingtown, PA (LAT 40 00 20N LONG 075 42 20W)										
DEC 2003	10.4	50	21.1	12.6	15.5	E.03	2.25	E.007	<.02	17	<2	24	<.2	
			01480950	East Branch Brandywine Creek at Wawaset, PA (LAT 39 55 35N LONG 075 38 54W)										
NOV 2003	14.3	61	27.5	12.5	17.4	<.04	2.63	E.007	.07	--	--	58	--	
			01494953	Big Elk Creek at Maple Grove, PA (LAT 39 45 44N LONG 075 55 16W)										
OCT 2003	9.67	35	20.0	8.0	9.4	<.04	5.42	.009	<.02	--	--	20	--	

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
STREAM CONDITIONS OF CHESTER COUNTY BIOLOGICAL MONITORING NETWORK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
 MISCELLANEOUS STATION ANALYSES

Date	Chrom- ium, water, fltrd, µg/L (01030)	Copper, water, fltrd, µg/L (01040)	Iron, water, fltrd, µg/L (01046)	Lead, water, fltrd, µg/L (01049)	Mangan- ese, water, fltrd, µg/L (01056)	Mercury water, fltrd, µg/L (71890)	Molyb- denum, water, fltrd, µg/L (01060)	Nickel, water, fltrd, µg/L (01065)	Zinc, water, fltrd, µg/L (01090)
01480658 Indian Run at Glenmoore, PA (LAT 40 04 32N LONG 075 46 55W)									
NOV 2003 17...	--	--	46	--	--	--	--	--	--
01480660 East Branch Brandywine Creek at Lyndell, PA (LAT 40 03 34N LONG 075 44 39W)									
DEC 2003 01...	<.8	<1.2	152	<1	10.5	<.02	<1.8	E1.1	3
01480800 East Branch Brandywine Creek at Downingtown, PA (LAT 40 00 20N LONG 075 42 20W)									
DEC 2003 01...	<.8	<1.2	109	<1	37.1	<.02	<1.8	<2.0	<3
01480950 East Branch Brandywine Creek at Wawaset, PA (LAT 39 55 35N LONG 075 38 54W)									
NOV 2003 10...	--	--	60	--	--	--	--	--	--
01494953 Big Elk Creek at Maple Grove, PA (LAT 39 45 44N LONG 075 55 16W)									
OCT 2003 14...	--	--	31	--	--	--	--	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
STREAM CONDITIONS OF CHESTER COUNTY BIOLOGICAL MONITORING NETWORK--Continued

BIOLOGICAL DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
 BENTHIC MACROINVERTEBRATES--Continued

01479700	01479800	01480629	01480640	01480648	01480653	Station number
10/08/03	10/08/03	10/20/03	11/10/03	11/17/03	10/22/03	Date
Count	Count	Count	Count	Count	Count	Benthic macroinvertebrate
						Platyhelminthes
						Turbellaria (FLATWORMS)
						Tricladida
8	30	147	16	9	12	Planariidae
--	--	1	--	--	1	Nematoda (NEMATODES)
						Nemertea (PROBOSCIS WORMS)
						Enopla
						Hoplonemertea
						Tetrastemmatidae
--	9	15	13	4	17	<i>Prostoma</i>
						Mollusca
						Gastropoda (SNAILS)
						Basommatophora
						Ancyliidae
--	12	2	1	--	4	<i>Ferrissia</i>
						Physidae
--	--	--	--	--	1	<i>Physa</i>
--	--	2	--	--	--	Planorbidae
--	--	--	--	--	--	<i>Menetus dilatatus</i>
						Bivalvia (CLAMS)
						Veneroida
						Corbiculidae
--	--	--	29	--	--	<i>Corbicula fluminea</i>
--	--	--	--	2	2	Sphaeriidae
1	--	--	--	--	--	<i>Pisidium</i>
1	2	82	--	--	--	<i>Sphaerium</i>
						Annelida
						Oligochaeta (AQUATIC EARTHWORMS)
						Lumbriculida
--	2	3	3	--	3	Lumbriculidae
						Tubificida
3	--	--	--	1	--	Naididae
--	--	--	--	--	--	Tubificidae
						Arthropoda
						Acariformes
7	23	53	8	35	40	Hydrachnidia (WATER MITES)
						Crustacea
--	1	3	--	--	--	Copepoda
						Amphipoda (SCUDS)
						Crangonyctidae
--	--	--	3	4	--	<i>Crangonyx</i>
--	13	2	--	--	--	<i>Stygonectes</i>
						Gammaridae
--	44	--	--	--	--	<i>Gammarus</i>

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
STREAM CONDITIONS OF CHESTER COUNTY BIOLOGICAL MONITORING NETWORK--Continued

BIOLOGICAL DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
 BENTHIC MACROINVERTEBRATES--Continued

Station number	01472080	01472190	01476450	01476835	01478120	01478230
Date	10/07/03	10/21/03	10/06/03	10/20/03	10/14/03	10/14/03
Benthic macroinvertebrate	Count	Count	Count	Count	Count	Count
Arthropoda						
Isopoda (AQUATIC SOWBUGS)						
Asellidae						
<i>Caecidotea</i>	--	--	--	--	2	--
Decapoda						
Cambaridae (CRAYFISH)	--	--	--	--	--	--
Insecta						
Ephemeroptera (MAYFLIES)						
Baetidae						
<i>Acentrella</i>	1	23	--	12	20	151
<i>Baetis</i>	7	3	74	23	1	5
Caenidae						
<i>Caenis</i>	--	1	--	--	4	--
Ephemeridae						
<i>Ephemera</i>	--	--	--	--	1	--
Ephemerellidae						
<i>Ephemerella</i>	--	--	--	--	--	--
<i>Eurylophella</i>	--	--	2	--	--	--
<i>Serratella</i>	2	96	25	6	28	3
Heptageniidae						
<i>Epeorus</i>	--	--	--	--	--	--
<i>Stenonema</i>	22	31	18	1	14	10
Isonychiidae						
<i>Isonychia</i>	--	26	28	--	1	6
Leptohiphidae						
<i>Tricorythodes</i>	--	--	--	1	--	--
Leptophlebiidae						
<i>Paraleptophelbia</i>	--	--	--	--	--	--
Odonata (DRAGONFLIES AND DAMSELFLIES)						
Aeshnidae						
<i>Boyeria</i>	--	--	--	--	--	--
Coenagrionidae						
<i>Argia</i>	--	--	2	--	--	--
Gomphidae						
	1	--	--	2	--	--
Plecoptera (STONEFLIES)						
Capniidae						
	5	4	--	--	--	--
Leuctridae						
	--	--	--	--	--	--
Perlidae						
<i>Acroneuria</i>	7	11	--	--	--	--
<i>Agnatina</i>	--	1	--	--	--	--
<i>Paragnetina</i>	1	--	--	--	--	--
Taeniopterygidae						
<i>Strophopteryx</i>	--	--	--	--	--	--
<i>Taeniopteryx</i>	--	108	--	5	2	70

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
STREAM CONDITIONS OF CHESTER COUNTY BIOLOGICAL MONITORING NETWORK--Continued

BIOLOGICAL DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
 BENTHIC MACROINVERTEBRATES--Continued

01479700	01479800	01480629	01480640	01480648	01480653	Station number
10/08/03	10/08/03	10/20/03	11/10/03	11/17/03	10/22/03	Date
Count	Count	Count	Count	Count	Count	Benthic macroinvertebrate
						Arthropoda
						Isopoda (AQUATIC SOWBUGS)
						Asellidae
44	7	1	--	7	--	Caecidotea
						Decapoda
--	--	--	--	--	1	Cambaridae (CRAYFISH)
						Insecta
						Ephemeroptera (MAYFLIES)
						Baetidae
--	1	47	4	--	25	Acentrella
1	1	12	1	5	4	Baetis
						Caenidae
--	1	--	5	--	8	Caenis
						Ephemeridae
--	--	--	--	--	--	Ephemera
						Ephemerellidae
--	--	--	--	4	--	Ephemerella
--	--	--	--	1	3	Eurylophella
2	3	888	8	32	105	Serratella
						Heptageniidae
--	--	21	--	--	--	Epeorus
2	42	86	58	36	261	Stenonema
						Isonychiidae
--	--	91	7	--	74	Isonychia
						Leptohiphidae
--	--	--	1	--	--	Tricorythodes
--	--	1	--	--	--	Leptophlebiidae
--	--	--	--	4	--	Paraleptophelbia
						Odonata (DRAGONFLIES AND DAMSELFLIES)
						Aeshnidae
--	1	--	--	--	--	Boyeria
						Coenagrionidae
--	--	--	2	--	--	Argia
2	2	2	--	1	31	Gomphidae
						Plecoptera (STONEFLIES)
1	--	--	--	6	--	Capniidae
--	--	--	--	--	1	Leuctridae
						Perlidae
--	1	--	--	5	26	Acroneuria
--	--	--	--	--	--	Agnatina
--	--	--	--	--	5	Paragnetina
						Taeniopterygidae
--	--	--	2	--	--	Strophopteryx
--	--	10	17	7	28	Taeniopteryx

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
STREAM CONDITIONS OF CHESTER COUNTY BIOLOGICAL MONITORING NETWORK--Continued

BIOLOGICAL DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
 BENTHIC MACROINVERTEBRATES--Continued

01479700	01479800	01480629	01480640	01480648	01480653	Station number
10/08/03	10/08/03	10/20/03	11/10/03	11/17/03	10/22/03	Date
Count	Count	Count	Count	Count	Count	Benthic macroinvertebrate
						Megaloptera
						Corydalidae (FISHFLIES AND DOBSON FLIES)
--	--	5	--	1	10	<i>Corydalus</i>
--	2	--	--	--	9	<i>Nigronia</i>
						Sialidae (ALDERFLIES)
--	--	--	--	--	1	<i>Sialis</i>
						Trichoptera (CADDISFLIES)
						Apataniidae
--	--	--	--	1	1	<i>Apatania</i>
						Brachycentridae
2	--	--	--	4	2	<i>Micrasema</i>
						Glossosomatidae
--	1	--	--	1	5	<i>Glossosoma</i>
						Hydropsychidae
49	82	84	166	59	165	<i>Cheumatopsyche</i>
--	--	2	2	--	--	<i>Diplectrona</i>
73	328	338	442	90	151	<i>Hydropsyche</i>
--	--	--	--	--	4	<i>Potamyia</i>
						Hydroptilidae
--	--	--	--	1	--	<i>Hydroptila</i>
1	4	63	12	--	3	<i>Leucotrichia</i>
						Lepidostomatidae
--	--	--	3	--	--	<i>Lepidostoma</i>
						Leptoceridae
--	--	--	1	1	1	<i>Oecetis</i>
						Philopotamidae
--	151	303	25	29	127	<i>Chimarra</i>
5	--	--	--	--	--	<i>Dolophilodes</i>
--	--	2	--	--	--	<i>Wormaldia</i>
						Polycentropodidae
--	--	--	1	--	1	<i>Neureclipsis</i>
--	--	--	--	--	4	<i>Polycentropus</i>
						Psychomyiidae
--	--	--	5	--	--	<i>Psychomyia</i>
						Rhyacophilidae
--	--	--	--	--	6	<i>Rhyacophila</i>
						Uenoidae
--	--	--	4	3	--	<i>Neophylax</i>
						Lepidoptera
						Pyralididae (MOTHS)
--	--	--	--	1	--	<i>Petrophila</i>

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
STREAM CONDITIONS OF CHESTER COUNTY BIOLOGICAL MONITORING NETWORK--Continued

BIOLOGICAL DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
 BENTHIC MACROINVERTEBRATES--Continued

Station number	01472080	01472190	01476450	01476835	01478120	01478230
Date	10/07/03	10/21/03	10/06/03	10/20/03	10/14/03	10/14/03
Benthic macroinvertebrate	Count	Count	Count	Count	Count	Count
Coleoptera (BEETLES)						
Dryopidae						
<i>Helichus</i>	--	--	--	--	--	--
Dytiscidae						
<i>Helophorus</i>	--	--	--	1	--	--
Elmidae (RIFFLE BEETLES)						
<i>Ancyronyx</i>	--	--	--	--	--	--
<i>Dubiraphia</i>	--	--	--	3	--	--
<i>Macronychus</i>	--	--	--	5	--	--
<i>Microcyllloepus</i>	--	--	--	--	--	--
<i>Optioservus</i>	85	77	294	430	107	36
<i>Oulimnius</i>	36	33	49	14	25	31
<i>Promoresia</i>	7	--	--	--	--	--
<i>Stenelmis</i>	198	33	340	685	133	2
Hydrophilidae						
<i>Berosus</i>	--	--	1	--	--	--
Psephenidae (WATER PENNIES)						
<i>Ectopria</i>	2	--	--	--	--	--
<i>Psephenus</i>	17	8	91	55	25	--
Ptilodactylidae						
<i>Anchytarsus</i>	--	--	2	--	--	--
Diptera (TRUE FLIES)						
Athericidae						
<i>Atherix</i>	--	--	--	--	1	--
Ceratopogonidae						
<i>Ceratopogon</i>	--	1	--	1	2	--
Chironomidae (MIDGES)						
<i>Chironomus</i>	87	310	117	638	485	545
Empididae (DANCE FLIES)						
<i>Hemerodromia</i>	1	7	7	18	45	10
Simuliidae (BLACK FLIES)						
<i>Simulium</i>	106	24	61	101	33	65
Tipulidae (CRANE FLIES)						
<i>Antocha</i>	3	15	11	44	9	4
<i>Dicranota</i>	--	--	7	--	--	--
<i>Hexatoma</i>	14	--	--	--	--	--
<i>Tipula</i>	1	2	--	--	--	--
Total organisms	919	1411	3430	2676	1291	1325
Total number of taxa	35	36	34	32	31	29

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
STREAM CONDITIONS OF CHESTER COUNTY BIOLOGICAL MONITORING NETWORK--Continued

BIOLOGICAL DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
 BENTHIC MACROINVERTEBRATES--Continued

01479700	01479800	01480629	01480640	01480648	01480653	Station number
10/08/03	10/08/03	10/20/03	11/10/03	11/17/03	10/22/03	Date
Count	Count	Count	Count	Count	Count	Benthic macroinvertebrate
						Coleoptera (BEETLES)
						Dryopidae
--	2	--	--	1	1	<i>Helichus</i>
						Dytiscidae
--	--	--	--	--	--	<i>Helophorus</i>
						Elmidae (RIFPLE BEETLES)
--	1	--	2	--	--	<i>Ancyronyx</i>
--	3	1	--	2	2	<i>Dubiraphia</i>
--	2	--	--	16	--	<i>Macronychus</i>
--	--	2	--	5	--	<i>Microcyллоepus</i>
15	181	236	89	216	149	<i>Optioservus</i>
4	38	61	6	11	37	<i>Oulimnius</i>
--	--	--	--	--	--	<i>Promoresia</i>
14	410	191	19	425	163	<i>Stenelmis</i>
						Hydrophilidae
--	--	--	1	--	--	<i>Berosus</i>
						Psephenidae (WATER PENNIES)
--	--	--	--	--	--	<i>Ectopria</i>
4	52	45	8	75	24	<i>Psephenus</i>
						Ptilodactylidae
--	1	--	--	1	1	<i>Anchytarsus</i>
						Diptera (TRUE FLIES)
						Athericidae
--	--	--	--	--	--	<i>Atherix</i>
--	--	1	--	5	--	Ceratopogonidae
22	76	603	196	178	155	Chironomidae (MIDGES)
						Empididae (DANCE FLIES)
2	11	15	27	5	63	<i>Hemerodromia</i>
						Simuliidae (BLACK FLIES)
24	59	190	35	142	46	<i>Simulium</i>
						Tipulidae (CRANE FLIES)
1	18	14	107	63	31	<i>Antocha</i>
--	--	--	--	--	--	<i>Dicranota</i>
--	1	--	--	10	--	<i>Hexatoma</i>
--	1	--	--	3	1	<i>Tipula</i>
288	1619	3625	1329	1512	1815	Total organisms
24	39	38	37	44	48	Total number of taxa

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
STREAM CONDITIONS OF CHESTER COUNTY BIOLOGICAL MONITORING NETWORK--Continued

BIOLOGICAL DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
 BENTHIC MACROINVERTEBRATES--Continued

Station number	014806548	01480658	01480660	01480800	01480950	01494953
Date	11/17/03	11/17/03	12/01/03	12/01/03	11/10/03	10/14/03
Benthic macroinvertebrate	Count	Count	Count	Count	Count	Count
Platyhelminthes						
Turbellaria (FLATWORMS)						
Tricladida						
Planariidae	1	18	8	1	--	--
Nematoda (NEMATODES)	--	2	1	1	8	--
Nemertea (PROBOSCIS WORMS)						
Enopla						
Hoploneurata						
Tetrastemmatidae						
Prostoma	26	28	6	--	2	62
Mollusca						
Gastropoda (SNAILS)						
Basommatophora						
Ancyliidae						
Ferrissia	3	5	7	--	--	--
Bivalvia (CLAMS)						
Veneroida						
Corbiculidae						
Corbicula fluminea	--	--	--	--	2	--
Sphaeriidae	--	4	--	--	--	--
Pisidium	--	--	3	--	9	--
Sphaerium	--	--	--	--	2	--
Annelida						
Oligochaeta (AQUATIC EARTHWORMS)						
Lumbriculida						
Lumbriculidae	7	49	9	10	9	--
Tubificida						
Naididae	--	--	1	3	1	2
Tubificidae	--	9	--	--	--	--
Arthropoda						
Acariformes						
Hydrachnidia (WATER MITES)	15	18	8	35	23	3
Crustacea						
Copepoda	1	--	--	--	--	--
Amphipoda (SCUDS)						
Crangonyctidae						
Stygonectes	--	--	1	--	--	--
Gammaridae						
Gammarus	--	--	--	--	9	--
Decapoda						
Cambaridae (CRAYFISH)	1	--	--	--	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
STREAM CONDITIONS OF CHESTER COUNTY BIOLOGICAL MONITORING NETWORK--Continued

BIOLOGICAL DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
 BENTHIC MACROINVERTEBRATES--Continued

Station number	014806548	01480658	01480660	01480800	01480950	01494953
Date	11/17/03	11/17/03	12/01/03	12/01/03	11/10/03	10/14/03
Benthic macroinvertebrate	Count	Count	Count	Count	Count	Count
Insecta						
Ephemeroptera (MAYFLIES)						
Baetidae						
<i>Baetis</i>	--	--	1	--	2	1
<i>Acentrella</i>	--	1	--	--	--	117
Caenidae						
<i>Caenis</i>	--	--	--	1	2	1
Ephemerellidae						
<i>Ephemerella</i>	--	--	2	--	--	--
<i>Serratella</i>	3	18	8	--	7	4
Heptageniidae						
<i>Epeorus</i>	--	--	3	--	--	--
<i>Stenacron</i>	2	--	--	--	--	--
<i>Stenonema</i>	70	11	14	1	11	2
Isonychiidae						
<i>Isonychia</i>	--	--	1	--	--	13
Leptohyphidae						
<i>Tricorythodes</i>	--	--	1	--	1	--
Leptophlebiidae						
	--	3	--	--	--	--
Odonata (DRAGONFLIES AND DAMSELFLIES)						
Gomphidae						
	1	4	3	--	1	--
Plecoptera (STONEFLIES)						
Capniidae						
<i>Allocapnia</i>	59	123	13	--	--	--
Chloroperlidae						
<i>Utaperla</i>	--	117	1	--	--	--
Nemouridae						
	--	--	2	--	--	--
Perlidae						
<i>Acroneuria</i>	6	8	8	--	1	--
<i>Paragnetina</i>	--	--	1	--	--	--
Taeniopterygidae						
<i>Strophopteryx</i>	29	27	170	--	--	--
<i>Taeniopteryx</i>	75	78	25	1	1	1
Megaloptera						
Corydalidae (FISHFLIES AND DOBSONFLIES)						
<i>Corydalus</i>	--	--	3	--	1	--
<i>Nigronia</i>	--	--	3	--	--	1
Sialidae (ALDERFLIES)						
<i>Sialis</i>	6	--	--	--	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
STREAM CONDITIONS OF CHESTER COUNTY BIOLOGICAL MONITORING NETWORK--Continued

BIOLOGICAL DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
 BENTHIC MACROINVERTEBRATES--Continued

Station number	014806548	01480658	01480660	01480800	01480950	01494953
Date	11/17/03	11/17/03	12/01/03	12/01/03	11/10/03	10/14/03
Benthic macroinvertebrate	Count	Count	Count	Count	Count	Count
Trichoptera (CADDISFLIES)						
Apataniidae						
<i>Apatania</i>	--	6	6	--	--	--
Brachycentridae						
<i>Micrasema</i>	--	--	2	2	2	--
Glossosomatidae						
<i>Glossosoma</i>	1	11	39	1	--	--
<i>Protoptila</i>	--	--	--	--	10	--
Hydropsychidae						
<i>Cheumatopsyche</i>	209	51	114	6	145	13
<i>Diplectrona</i>	--	18	--	--	--	--
<i>Hydropsyche</i>	53	51	267	37	288	24
Hydroptilidae						
<i>Hydroptila</i>	--	1	--	2	1	--
<i>Leucotrichia</i>	--	--	--	5	3	5
Leptoceridae						
<i>Oecetis</i>	--	--	1	--	--	--
Limnephilidae						
<i>Hydatophylax</i>	--	2	--	--	--	--
Philopotamidae						
<i>Chimarra</i>	11	10	3	--	56	6
<i>Dolophilodes</i>	--	10	2	--	--	--
Polycentropodidae						
<i>Neureclipsis</i>	--	--	--	--	1	--
<i>Polycentropus</i>	10	6	9	1	--	--
Psychomyiidae						
<i>Psychomyia</i>	--	--	--	5	--	--
Rhyacophilidae						
<i>Rhyacophila</i>	--	11	1	--	--	--
Uenoidae						
<i>Neophylax</i>	1	2	17	--	--	--
Lepidoptera						
Pyralididae(MOTHS)						
<i>Petrophila</i>	--	1	--	--	2	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
STREAM CONDITIONS OF CHESTER COUNTY BIOLOGICAL MONITORING NETWORK--Continued

BIOLOGICAL DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
 BENTHIC MACROINVERTEBRATES--Continued

Station number	014806548	01480658	01480660	01480800	01480950	01494953
Date	11/17/03	11/17/03	12/01/03	12/01/03	11/10/03	10/14/03
Benthic macroinvertebrate	Count	Count	Count	Count	Count	Count
Coleoptera (BEETLES)						
Elmidae (RIFFLE BEETLES)						
<i>Ancyronyx</i>	--	--	--	--	3	--
<i>Dubiraphia</i>	--	--	--	--	4	--
<i>Macronychus</i>	3	--	--	--	--	--
<i>Optioservus</i>	14	23	56	177	226	5
<i>Oulimnius</i>	6	20	14	5	10	5
<i>Promoresia</i>	--	--	5	4	--	--
<i>Stenelmis</i>	42	1	10	6	912	4
Hydrophilidae						
<i>Berosus</i>	--	--	--	1	2	--
Psephenidae (WATER PENNIES)						
<i>Psephenus</i>	18	18	31	4	62	2
Ptilodactylidae						
<i>Anchytarsus</i>	--	2	--	--	--	--
Diptera (TRUE FLIES)						
Ceratopogonidae						
<i>Ceratopogonidae</i>	--	1	--	--	--	--
Chironomidae (MIDGES)						
<i>Chironomidae</i>	177	118	150	293	263	327
Empididae (DANCE FLIES)						
<i>Chelifera</i>	4	--	--	--	--	2
<i>Hemerodromia</i>	10	1	7	14	27	9
Simuliidae (BLACK FLIES)						
<i>Prosimilium</i>	--	16	4	--	--	--
<i>Simulium</i>	11	2	--	1	77	74
Tipulidae (CRANE FLIES)						
<i>Antocha</i>	15	3	11	33	58	1
<i>Dicranota</i>	--	5	--	--	--	--
<i>Hexatoma</i>	--	1	--	--	--	--
<i>Tipula</i>	--	2	--	--	--	--
<hr/>						
Total organisms	890	916	1052	650	2244	684
Total number of taxa	32	45	46	26	38	24