

**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 2004 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. Identification 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
01472170	Pickering Creek near Eagle, PA	40°04'43"	75°39'14"	3.06
014721854	Pickering Creek at Merlin, PA	40°06'25"	75°35'34"	21.2
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 Creek near 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 Creek near Honey Brook, PA	40°04'22"	75°55'40"	18.7
01480376	South Branch Birch Run near Martins Corner, PA	40°01'49"	75°52'29"	0.64
01480389	North Branch Birch Run near Martins Corner, PA	40°01'51"	75°52'29"	1.79
01480390	Birch Run near Martins Corner, PA	40°01'50"	75°52'20"	2.49
01480396	Unnamed Tributary above Reservoir to Birch Run at Martins Corner, PA	40°02'11"	75°51'23"	0.51
^a 01480400	Birch Run near Wagontown, PA	40°01'38"	75°50'43"	4.55
01480420	West Branch Brandywine Creek near Wagontown, PA	40°01'30"	75°50'40"	30.6
01480434	West Branch Brandywine Creek at Rock Run, PA	39°59'36"	75°49'41"	37.3
^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
01480653	East Branch Brandywine Creek at Glenmoore, PA	40°05'48"	75°46'44"	16.5
^a 01480870	East Branch Brandywine Creek below Downingtown, PA	39°58'07"	75°40'25"	89.9
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

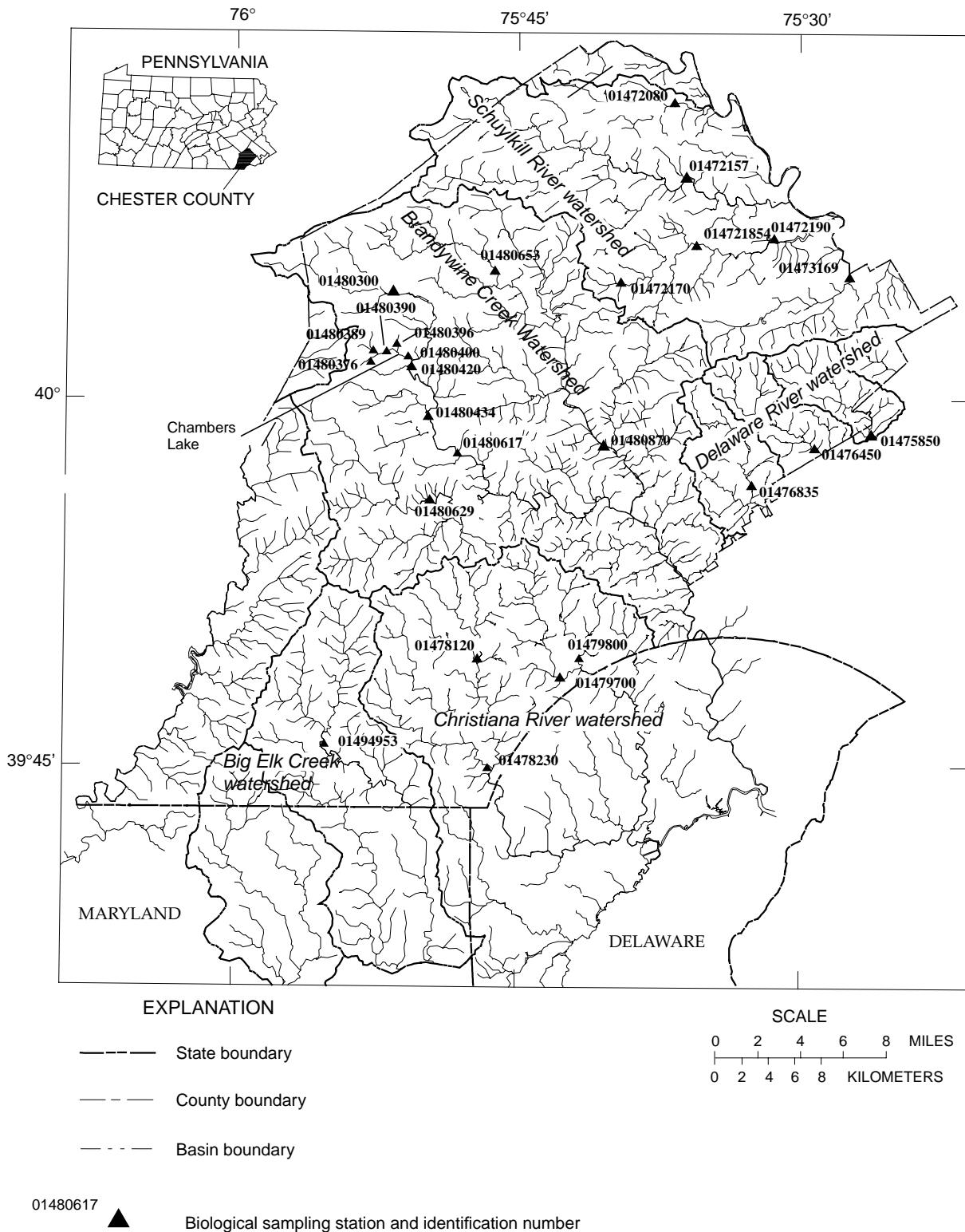


Figure 14.--Biological sampling locations and major drainage basin divides in Chester County, PA.

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
 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 2004 07...	1130	1028	80020	17	10.7	7.0	7.3	140	150	12.1	12.3	4.24	1.58
		01472170 Pickering Creek near Eagle, PA (LAT 40 04 43N LONG 075 39 14W)											
OCT 2004 18...	1200	1028	80020	4.4	12.0	7.4	7.9	211	216	9.3	21.5	6.84	2.27
		014721854 Pickering Creek at Merlin, PA (LAT 40 06 25N LONG 075 35 34W)											
OCT 2004 18...	0900	1028	80020	30	11.9	7.5	7.8	203	208	8.7	21.3	6.44	2.20
		01472190 Pickering Creek near Phoenixville, PA (LAT 40 06 33N LONG 075 31 42W)											
DEC 2004 17...	1200	1028	80020	63	15.7	7.6	6.8	218	232	3.6	20.4	6.91	1.86
		01476450 Ridley Creek at Rt 3 near Willistown, PA (LAT 39 58 01N LONG 075 28 58W)											
OCT 2004 08...	0930	1028	80020	25	10.7	7.2	7.4	256	276	13.0	19.8	10.9	2.19
		01476835 East Branch Chester Creek at Westtown, PA (LAT 39 56 26N LONG 075 32 30W)											
NOV 2004 15...	1030	1028	80020	16	12.5	7.3	7.5	333	335	6.2	27.3	12.9	3.23
		01478120 East Branch White Clay Creek at Avondale, PA (LAT 39 49 42N LONG 075 46 52W)											
NOV 2004 22...	1000	1028	80020	16	11.5	7.8	7.3	329	348	9.5	35.2	15.1	4.00
		01478230 Middle Branch White Clay Creek near Avondale, PA (LAT 39 45 02N LONG 075 46 19W)											
NOV 2004 16...	1200	1028	80020	63	13.2	7.6	7.6	202	204	6.2	17.4	7.35	3.61
		01479700 West Branch Red Clay Creek near Kennett Square, PA (LAT 39 48 39N LONG 075 42 18W)											
NOV 2004 23...	1200	1028	80020	27	12.7	8.0	7.3	372	383	10.5	36.3	14.7	5.53
		01479800 East Branch Red Clay Creek near Five Points, PA (LAT 39 49 10N LONG 075 41 29W)											
NOV 2004 23...	0900	1028	80020	14	10.8	7.6	6.7	349	365	10.0	35.5	13.9	4.01
		01480376 South Branch Birch Run near Martins Corner, PA (LAT 40 01 49N LONG 075 52 29W)											
OCT 2004 22...	1000	1028	80020	.84	9.9	6.8	7.2	276	257	11.1	26.1	13.0	3.79
		01480389 North Branch Birch Run near Martins Corner, PA (LAT 40 01 51N LONG 075 52 29W)											
OCT 2004 22...	0900	1028	80020	2.0	10.7	6.8	7.4	94	83	10.2	6.14	3.44	1.75
		01480390 Birch Run near Martins Corner, PA (LAT 40 01 50N LONG 075 52 20W)											
OCT 2004 22...	0800	1028	80020	2.8	10.6	6.9	7.2	147	135	10.5	11.7	5.99	2.19

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
 MISCELLANEOUS STATION ANALYSES

Date	Sodium, water, fltrd, mg/L (00930)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	ANC, wat unf incrm. titr., field, mg/L as CaCO3 (00419)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	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)	Alum-inum, water, fltrd, µg/L (01106)	Arsenic, water, fltrd, µg/L (01000)
	01472080 Pigeon Creek near Slonaker, PA (LAT 40 12 03N LONG 075 37 10W)												
OCT 2004 07...	7.88	27	28	11.7	<.1	15.6	13.8	<.04	2.65	<.008	.02	--	--
	01472170 Pickering Creek near Eagle, PA (LAT 40 04 43N LONG 075 39 14W)												
OCT 2004 18...	9.69	46	46	26.8	E.1	17.4	14.5	<.04	2.19	<.008	<.02	--	--
	014721854 Pickering Creek at Merlin, PA (LAT 40 06 25N LONG 075 35 34W)												
OCT 2004 18...	10.3	50	55	23.7	E.1	17.2	14.2	<.04	1.82	<.008	<.02	--	--
	01472190 Pickering Creek near Phoenixville, PA (LAT 40 06 33N LONG 075 31 42W)												
DEC 2004 17...	11.3	47	50	25.1	E.1	17.4	17.8	<.04	2.20	<.008	<.02	--	--
	01476450 Ridley Creek at Rt 3 near Willistown, PA (LAT 39 58 01N LONG 075 28 58W)												
OCT 2004 08...	15.9	48	47	36.8	<.1	14.4	16.2	<.04	3.38	E.005	.07	--	--
	01476835 East Branch Chester Creek at Westtown, PA (LAT 39 56 26N LONG 075 32 30W)												
NOV 2004 15...	18.9	60	62	52.6	E.1	13.8	19.2	<.04	2.81	.010	.08	--	--
	01478120 East Branch White Clay Creek at Avondale, PA (LAT 39 49 42N LONG 075 46 52W)												
NOV 2004 22...	8.91	98	103	21.3	E.1	13.7	28.5	E.04	5.08	.015	<.02	--	--
	01478230 Middle Branch White Clay Creek near Avondale, PA (LAT 39 45 02N LONG 075 46 19W)												
NOV 2004 16...	9.55	39	44	18.4	<.1	14.0	18.2	<.04	4.47	<.008	E.02	--	--
	01479700 West Branch Red Clay Creek near Kennett Square, PA (LAT 39 48 39N LONG 075 42 18W)												
NOV 2004 23...	14.8	77	79	34.4	E.1	13.6	38.0	<.04	6.54	.022	.15	3	<2
	01479800 East Branch Red Clay Creek near Five Points, PA (LAT 39 49 10N LONG 075 41 29W)												
NOV 2004 23...	13.3	78	79	37.7	E.1	15.7	31.5	<.04	3.69	.008	<.02	E1	<2
	01480376 South Branch Birch Run near Martins Corner, PA (LAT 40 01 49N LONG 075 52 29W)												
OCT 2004 22...	6.71	64	77	14.2	E.1	17.2	25.2	<.04	5.92	.019	.04	--	--
	01480389 North Branch Birch Run near Martins Corner, PA (LAT 40 01 51N LONG 075 52 29W)												
OCT 2004 22...	4.54	21	19	7.16	<.1	13.7	5.9	<.04	1.29	<.008	.03	--	--
	01480390 Birch Run near Martins Corner, PA (LAT 40 01 50N LONG 075 52 20W)												
OCT 2004 22...	5.13	33	51	9.04	<.1	14.8	11.2	<.04	2.72	E.007	<.02	20	<2

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
 MISCELLANEOUS STATION ANALYSES

Date	Boron, water, fltrd, µg/L (01020)	Cadmium water, fltrd, µg/L (01025)	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)
	01472080	Pigeon Creek near Slonaker, PA	(LAT 40 12 03N LONG 075 37 10W)							
OCT 2004 07...	12	--	--	--	60	--	--	--	--	--
	01472170	Pickering Creek near Eagle, PA	(LAT 40 04 43N LONG 075 39 14W)							
OCT 2004 18...	7.2	--	--	--	132	--	--	--	--	--
	014721854	Pickering Creek at Merlin, PA	(LAT 40 06 25N LONG 075 35 34W)							
OCT 2004 18...	8.8	--	--	--	115	--	--	--	--	--
	01472190	Pickering Creek near Phoenixville, PA	(LAT 40 06 33N LONG 075 31 42W)							
DEC 2004 17...	E6.2	--	--	--	66	--	--	--	--	--
	01476450	Ridley Creek at Rt 3 near Willistown, PA	(LAT 39 58 01N LONG 075 28 58W)							
OCT 2004 08...	23	--	--	--	55	--	--	--	--	--
	01476835	East Branch Chester Creek at Westtown, PA	(LAT 39 56 26N LONG 075 32 30W)							
NOV 2004 15...	17	--	--	--	131	--	--	--	--	--
	01478120	East Branch White Clay Creek at Avondale, PA	(LAT 39 49 42N LONG 075 46 52W)							
NOV 2004 22...	7.1	--	--	--	44	--	--	--	--	--
	01478230	Middle Branch White Clay Creek near Avondale, PA	(LAT 39 45 02N LONG 075 46 19W)							
NOV 2004 16...	9.4	--	--	--	31	--	--	--	--	--
	01479700	West Branch Red Clay Creek near Kennett Square, PA	(LAT 39 48 39N LONG 075 42 18W)							
NOV 2004 23...	26	<.2	<.8	2.0	27	<1	17.3	<.01	E.3	<2.0
	01479800	East Branch Red Clay Creek near Five Points, PA	(LAT 39 49 10N LONG 075 41 29W)							
NOV 2004 23...	12	<.2	<.8	1.6	21	<1	13.8	<.01	E.4	E1.7
	01480376	South Branch Birch Run near Martins Corner, PA	(LAT 40 01 49N LONG 075 52 29W)							
OCT 2004 22...	11	--	--	--	77	--	--	--	--	--
	01480389	North Branch Birch Run near Martins Corner, PA	(LAT 40 01 51N LONG 075 52 29W)							
OCT 2004 22...	8.0	--	--	--	124	--	--	--	--	--
	01480390	Birch Run near Martins Corner, PA	(LAT 40 01 50N LONG 075 52 20W)							
OCT 2004 22...	9.9	<.2	E.4	E.6	102	<1	18.9	<.01	<.4	<2.0

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
 MISCELLANEOUS STATION ANALYSES

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous charge, 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, μ S/cm 25 degC (90095)	Specif. conductance, wat unfltrd lab, μ S/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)	
01480396 Unn Trib ab Res to Birch Run at Martins Corner, PA (LAT 40 02 11N LONG 075 51 23W)														
OCT 2004	21...	1130	1028	80020	.41	10.8	7.2	7.3	160	147	10.6	14.7	6.83	1.41
01480420 West Branch Brandywine Creek near Wagontown, PA (LAT 40 01 30N LONG 075 50 40W)														
NOV 2004	02...	1000	1028	80020	34	14.5	7.7	8.0	234	231	12.2	23.4	8.45	3.56
01480434 West Branch Brandywine Creek at Rock Run, PA (LAT 39 59 36N LONG 075 49 41W)														
NOV 2004	02...	1300	1028	80020	34	15.6	8.0	7.8	241	240	13.3	23.6	8.56	3.54
01480629 Buck Run at Doe Run, PA (LAT 39 55 46N LONG 075 49 24W)														
DEC 2004	17...	0900	1028	80020	44	14.5	7.0	6.6	209	224	3.8	19.1	7.85	1.90
01480653 East Branch Brandywine Creek at Glenmoore, PA (LAT 40 05 48N LONG 075 46 44W)														
OCT 2004	12...	1400	1028	80020	15	11.8	7.6	7.6	196	211	11.6	20.7	6.47	2.25
01494953 Big Elk Creek at Maple Grove, PA (LAT 39 45 44N LONG 075 55 16W)														
DEC 2004	16...	0900	1028	80020	41	14.0	7.7	6.9	184	194	1.6	13.4	6.96	2.45
Date		Sodium, water, fltrd, mg/L (00930)	ANC, wat unfltrd, end pt, lab, mg/L as CaCO3 (90410)	ANC, wat unfltrd, incrm, titr, field, mg/L as CaCO3 (00419)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	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)	Boron, water, fltrd, μ g/L (01020)	Iron, water, fltrd, μ g/L (01046)
01480396 Unn Trib ab Res to Birch Run at Martins Corner, PA (LAT 40 02 11N LONG 075 51 23W)														
OCT 2004	21...	5.30	48	50	8.36	<.1	18.9	13.8	<.04	.80	<.008	.05	9.3	94
01480420 West Branch Brandywine Creek near Wagontown, PA (LAT 40 01 30N LONG 075 50 40W)														
NOV 2004	02...	8.67	56	53	17.3	E.1	14.5	16.3	<.04	4.04	.010	.02	11	99
01480434 West Branch Brandywine Creek at Rock Run, PA (LAT 39 59 36N LONG 075 49 41W)														
NOV 2004	02...	9.84	54	62	21.7	E.1	14.1	17.2	<.04	3.57	E.006	.02	13	60
01480629 Buck Run at Doe Run, PA (LAT 39 55 46N LONG 075 49 24W)														
DEC 2004	17...	8.65	39	41	18.5	<.1	9.1	16.3	<.04	5.94	<.008	<.02	8.5	42
01480653 East Branch Brandywine Creek at Glenmoore, PA (LAT 40 05 48N LONG 075 46 44W)														
OCT 2004	12...	8.44	46	40	15.6	E.1	18.0	15.9	<.04	3.85	E.005	E.01	8.8	58
01494953 Big Elk Creek at Maple Grove, PA (LAT 39 45 44N LONG 075 55 16W)														
DEC 2004	16...	9.69	27	34	19.7	<.1	11.5	10.7	<.04	5.82	E.004	<.02	E6.7	31

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

BIOLOGICAL DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
 BENTHIC MACROINVERTEBRATES--Continued

01478120	01478230	01479700	01479800	01480376	01480389	Station number
11/22/04	11/16/04	11/23/04	11/23/04	10/22/04	10/22/04	Date
Count	Count	Count	Count	Count	Count	Benthic macroinvertebrate
						Platyhelminthes
						Turbellaria (FLATWORMS)
						Tricladida
120	2	3	9	7	1	Planariidae
1	73	1	5	4	5	Nematoda (NEMATODES)
						Nemertea (PROBOSCIS WORMS)
						Enopla
						Hoplonemertea
						Tetrastemmatidae
2	--	10	3	16	24	<i>Prostoma</i>
						Mollusca
						Gastropoda (SNAILS)
						Basommatophora
						Ancyliidae
--	2	--	1	--	1	<i>Ferrissia</i>
						Physidae
--	--	--	--	1	--	<i>Physa</i>
						Planorbidae
--	--	--	--	--	--	<i>Gyraulus</i>
						Bivalvia (CLAMS)
						Veneroida
						Corbiculidae
--	--	--	--	--	--	<i>Corbicula fluminea</i>
--	--	--	--	--	--	Sphaeriidae
--	--	--	1	12	2	<i>Pisidium</i>
3	--	--	5	258	4	<i>Sphaerium</i>
						Annelida
						Oligochaeta (AQUATIC EARTHWORMS)
						Lumbriculida
--	7	2	--	13	10	Lumbriculidae
						Tubificida
--	1	3	4	8	4	Naididae
3	--	--	--	4	6	Tubificidae
						Arthropoda
						Acariformes
--	9	2	8	7	13	Hydrachnidia (WATER MITES)
						Crustacea
3	--	3	2	--	--	Copepoda
						Amphipoda (SCUDS)
						Crangonyctidae
2	--	--	--	--	--	<i>Crangonyx</i>
--	8	2	7	1	--	<i>Stygonectes</i>
						Gammaridae
--	--	--	15	--	--	<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 2004 TO SEPTEMBER 2005
 BENTHIC MACROINVERTEBRATES--Continued

Station number	01472080	01472170	014721854	01472190	01476450	01476835
Date	10/07/04	10/18/04	10/18/04	12/17/04	10/08/04	11/15/04
Benthic macroinvertebrate	Count	Count	Count	Count	Count	Count
Arthropoda						
Isopoda (AQUATIC SOWBUGS)						
Asellidae						
<i>Caecidotea</i>	--	--	--	--	--	--
Decapoda						
Cambaridae (CRAYFISH)	--	--	1	--	--	--
Podocopa (SEED SHRIMP)	--	--	--	--	--	--
Insecta						
Ephemeroptera (MAYFLIES)						
Baetidae						
<i>Acentrella</i>	13	11	5	--	5	--
<i>Baetis</i>	11	2	1	--	44	--
<i>Plauditus</i>	--	2	--	--	--	1
Caenidae						
<i>Caenis</i>	--	--	--	--	--	1
Ephemerellidae						
<i>Dannella</i>	69	--	--	--	--	--
<i>Ephemerella</i>	--	--	--	--	--	--
<i>Eurylophella</i>	--	2	3	3	1	--
<i>Serratella</i>	7	14	5	13	10	--
Heptageniidae						
<i>Epeorus</i>	--	--	--	--	--	--
<i>Stenonema</i>	54	95	64	12	18	135
Isonychiidae						
<i>Isonychia</i>	5	3	150	5	16	--
Leptohyphidae						
<i>Tricorythodes</i>	--	--	--	--	--	--
Leptophlebiidae						
<i>Paraleptophelbia</i>	6	--	--	--	--	--
Odonata (DRAGONFLIES AND DAMSELFLIES)						
Aeshnidae						
<i>Boyeria</i>	--	--	1	--	--	1
Coenagrionidae						
<i>Argia</i>	--	--	--	--	1	18
Gomphidae						
<i>Lanthus</i>	--	1	5	--	--	--
<i>Stylogomphus</i>	--	--	--	--	--	3
Plecoptera (STONEFLIES)						
Capniidae						
<i>Allocaenia</i>	--	3	--	--	4	--
<i>Allocaenia</i>	--	--	--	115	--	--
Chloroperlidae						
<i>Alloperla</i>	19	--	--	--	1	1
<i>Sweltsa</i>	--	--	--	--	--	--
Perlidae						
<i>Acroneuria</i>	8	1	6	--	1	--
<i>Aagnetina</i>	1	--	--	--	1	--
<i>Paragnetina</i>	--	--	1	--	--	--
Perlodidae						
<i>Isoperla</i>	--	--	--	--	--	--

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

BIOLOGICAL DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
 BENTHIC MACROINVERTEBRATES--Continued

01478120	01478230	01479700	01479800	01480376	01480389	Station number
11/22/04	11/16/04	11/23/04	11/23/04	10/22/04	10/22/04	Date
Count	Count	Count	Count	Count	Count	Benthic macroinvertebrate
						Arthropoda
						Isopoda (AQUATIC SOWBUGS)
						Asellidae
2	--	7	1	6	--	Caecidotea
						Decapoda
--	--	--	--	--	--	Cambaridae (CRAYFISH)
--	--	--	--	4	--	Podocopa (SEED SHRIMP)
						Insecta
						Ephemeroptera (MAYFLIES)
						Baetidae
5	6	2	2	--	3	Acentrella
1	1	1	--	5	17	Baetis
--	--	--	--	--	--	Plauditus
						Caenidae
--	--	--	--	--	--	Caenis
						Ephemerellidae
--	--	--	--	--	--	Dannella
--	--	4	--	--	--	Ephemerella
--	--	--	--	4	--	Eurylophella
18	2	--	3	25	212	Serratella
						Heptageniidae
--	--	--	--	1	30	Epeorus
5	8	--	23	245	64	Stenonema
						Isonychiidae
1	9	--	2	--	9	Isonychia
						Leptohyphidae
1	1	--	--	--	--	Tricorythodes
						Leptophlebiidae
--	--	--	--	44	33	Paraleptophelbia
						Odonata (DRAGONFLIES AND DAMSELFLIES)
						Aeshnidae
--	--	--	--	--	--	Boyeria
						Coenagrionidae
--	--	--	--	--	--	Argia
						Gomphidae
--	--	--	--	--	20	Lanthus
--	--	--	--	--	--	Stylogomphus
						Plecoptera (STONEFLIES)
--	--	--	--	6	97	Capniidae
7	76	3	1	--	--	Allocapnia
--	--	--	--	--	--	Chloroperlidae
--	--	--	--	--	--	Alloperla
--	1	--	--	--	--	Sweltsa
						Perlidae
--	--	--	--	1	18	Acroneuria
--	--	--	--	--	--	Agnatina
--	--	--	--	--	--	Paragnetina
						Perlodidae
--	61	--	--	2	1	Isoperla

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

BIOLOGICAL DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
 BENTHIC MACROINVERTEBRATES--Continued

01478120	01478230	01479700	01479800	01480376	01480389	Station number
11/22/04	11/16/04	11/23/04	11/23/04	10/22/04	10/22/04	Date
Count	Count	Count	Count	Count	Count	Benthic macroinvertebrate
						Plecoptera (STONEFLIES)
						Taeniopterygidae
--	57	--	--	--	--	<i>Strophopteryx</i>
--	--	1	--	--	--	<i>Taenionema</i>
7	20	--	1	1	59	<i>Taeniopteryx</i>
						Megaloptera
						Corydalidae (FISHFLIES AND DOBSONFLIES)
--	1	--	--	--	--	<i>Corydalus</i>
--	--	--	1	14	2	<i>Nigronia</i>
						Sialidae (ALDERFLIES)
--	--	--	--	--	--	<i>Sialis</i>
						Trichoptera (CADDISFLIES)
						Apataniidae
--	--	--	--	1	5	<i>Apatania</i>
						Brachycentridae
--	--	--	--	--	17	<i>Micrasema</i>
						Glossosomatidae
--	20	--	--	--	12	<i>Glossosoma</i>
						Goeridae
1	--	--	--	--	--	<i>Goera</i>
						Hydropsychidae
--	--	20	365	--	--	<i>Ceratopsyche</i>
--	51	21	24	700	187	<i>Cheumatopsyche</i>
--	--	4	--	--	--	<i>Diplectronea</i>
52	177	93	45	246	252	<i>Hydropsyche</i>
--	--	--	--	--	--	<i>Macrostemum</i>
2	--	--	--	--	--	<i>Potamyia</i>
						Hydroptilidae
--	--	--	2	--	1	<i>Hydroptila</i>
4	--	--	2	--	--	<i>Leucotrichia</i>
						Leptoceridae
--	--	--	--	--	--	<i>Oecetis</i>
						Limnephilidae
--	1	--	--	--	1	<i>Hydatophylax</i>
						Philopotamidae
18	18	--	202	141	18	<i>Chimarra</i>
--	2	3	--	--	108	<i>Dolophilodes</i>
						Polycentropodidae
--	--	--	--	--	--	<i>Nyctiophylax</i>
--	4	--	--	4	1	<i>Polycentropus</i>
						Psychomyiidae
--	--	--	--	3	--	<i>Psychomyia</i>
						Rhyacophilidae
--	--	--	--	4	22	<i>Rhyacophila</i>
						Uenoidae
--	--	--	--	1	--	<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 2004 TO SEPTEMBER 2005
 BENTHIC MACROINVERTEBRATES--Continued

Station number	01472080	01472170	014721854	01472190	01476450	01476835
Date	10/07/04	10/18/04	10/18/04	12/17/04	10/08/04	11/15/04
Benthic macroinvertebrate	Count	Count	Count	Count	Count	Count
Coleoptera (BEETLES)						
Dryopidae						
<i>Helichus</i>	--	--	1	--	--	--
Elmidae (RIFFLE BEETLES)						
<i>Ancyronyx</i>	--	--	--	--	--	14
<i>Dubiraphia</i>	4	1	13	1	5	27
<i>Macronychus</i>	--	--	--	--	--	3
<i>Microcylloepus</i>	--	--	--	--	--	12
<i>Optioservus</i>	109	111	87	2	154	100
<i>Oulimnius</i>	49	56	71	1	89	47
<i>Promoresia</i>	7	--	14	--	3	--
<i>Stenelmis</i>	84	1	18	--	239	697
Hydrophilidae						
<i>Berosus</i>	--	--	--	--	--	1
Psephenidae (WATER PENNIES)						
<i>Ectopria</i>	1	--	--	--	--	--
<i>Psephenus</i>	7	5	4	--	21	114
Ptilodactylidae						
<i>Anchytarsus</i>	--	1	--	--	--	--
Diptera (TRUE FLIES)						
Athericidae						
<i>Atherix</i>	--	--	--	--	--	--
Ceratopogonidae						
<i>Ceratopogonidae</i>	--	--	--	--	--	18
Chironomidae (MIDGES)						
<i>Chironomidae</i>	60	397	277	149	95	1930
Empididae (DANCE FLIES)						
<i>Chelifera</i>	2	--	--	--	--	34
<i>Hemerodromia</i>	2	9	4	1	1	22
Simuliidae (BLACK FLIES)						
<i>Prosimulium</i>	--	--	--	17	--	10
<i>Simulium</i>	18	13	18	--	208	326
Tabanidae						
<i>Tabanidae</i>	--	--	--	--	--	--
Tipulidae (CRANE FLIES)						
<i>Antocha</i>	12	102	35	4	3	103
<i>Dicranota</i>	2	1	--	2	2	16
<i>Hexatoma</i>	--	--	--	--	--	2
<i>Tipula</i>	--	--	3	--	1	1
Total organisms	1204	1338	2344	648	1493	5468
Total number of taxa	42	40	42	33	40	47

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

BIOLOGICAL DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
 BENTHIC MACROINVERTEBRATES--Continued

01478120	01478230	01479700	01479800	01480376	01480389	Station number
11/22/04	11/16/04	11/23/04	11/23/04	10/22/04	10/22/04	Date
Count	Count	Count	Count	Count	Count	Benthic macroinvertebrate
						Coleoptera (BEETLES)
						Dryopidae
--	--	--	--	--	1	<i>Helichus</i>
						Elmidae (RIFPLE BEETLES)
--	--	1	1	--	--	<i>Ancyronyx</i>
--	--	--	2	25	--	<i>Dubiraphia</i>
--	--	--	--	--	--	<i>Macronychus</i>
--	--	--	--	--	--	<i>Microcylloepus</i>
133	21	14	141	38	31	<i>Optioservus</i>
2	7	--	33	56	184	<i>Oulimnius</i>
--	--	--	--	--	35	<i>Promoresia</i>
19	2	2	148	255	5	<i>Stenelmis</i>
						Hydrophilidae
--	--	--	--	--	--	<i>Berosus</i>
						Psephenidae (WATER PENNIES)
--	--	--	1	3	12	<i>Ectopria</i>
4	2	1	26	65	16	<i>Psephenus</i>
						Ptilodactylidae
--	--	--	--	6	--	<i>Anchytarsus</i>
						Diptera (TRUE FLIES)
						Athericidae
--	--	--	2	--	--	<i>Atherix</i>
--	--	1	--	--	--	Ceratopogonidae
617	120	440	509	219	224	Chironomidae (MIDGES)
						Empididae (DANCE FLIES)
6	--	2	--	--	--	<i>Chelifera</i>
25	5	11	11	2	3	<i>Hemerodromia</i>
						Simuliidae (BLACK FLIES)
--	--	--	--	--	--	<i>Prosimulium</i>
41	5	38	16	13	16	<i>Simulium</i>
--	--	--	--	2	--	Tabanidae
						Tipulidae (CRANE FLIES)
24	9	17	31	23	20	<i>Antocha</i>
--	--	--	--	3	3	<i>Dicranota</i>
--	--	--	--	--	10	<i>Hexatoma</i>
--	1	5	1	1	1	<i>Tipula</i>
1129	790	717	1657	2500	1820	Total organisms
30	35	30	39	46	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 2004 TO SEPTEMBER 2005
 BENTHIC MACROINVERTEBRATES--Continued

Station number	014800390	01480396	01480420	01480434	01480629	01480653	01494953
Date	10/22/04	10/21/04	11/02/04	11/02/04	12/17/04	10/12/04	12/17/04
Benthic macroinvertebrate	Count	Count	Count	Count	Count	Count	Count
Platyhelminthes							
Turbellaria (FLATWORMS)							
Tricladida							
Planariidae	5	12	--	7	35	4	2
Nematoda (NEMATODES)	3	--	19	21	4	38	5
Nemertea (PROBOSCIS WORMS)							
Enopla							
Hoploneurata							
Tetrastemmatidae							
Prostoma	7	2	4	9	5	12	5
Mollusca							
Gastropoda (SNAILS)							
Basommatophora							
Ancyliidae							
Ferrissia	--	--	--	5	2	18	--
Physidae							
Physa	1	--	--	--	--	--	--
Planorbidae							
Gyraulus	--	--	--	--	1	--	--
Bivalvia (CLAMS)							
Veneroida							
Sphaeriidae							
Pisidium	--	1	--	--	--	--	--
Sphaerium	3	44	10	7	8	1	--
Annelida							
Oligochaeta (AQUATIC EARTHWORMS)							
Lumbriculida							
Lumbriculidae	2	2	1	--	--	4	--
Tubificida							
Naididae	3	--	--	4	--	--	3
Tubificidae	--	8	--	--	--	2	--
Arthropoda							
Acariformes							
Hydrachnidia (WATER MITES)	88	31	33	18	15	30	3
Crustacea							
Copepoda	1	1	--	--	1	--	--
Amphipoda (SCUDS)							
Crangonyctidae							
Stygonectes	--	--	--	--	2	--	--
Isopoda (AQUATIC SOWBUGS)							
Asellidae							
Caecidotea	--	--	--	--	2	--	--
Decapoda							
Cambaridae (CRAYFISH)	--	--	--	--	--	1	--
Podocopa (SEED SHRIMP)	--	--	--	1	--	--	--

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

BIOLOGICAL DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
 BENTHIC MACROINVERTEBRATES--Continued

Station number	014800390	01480396	01480420	01480434	01480629	01480653	01494953
Date	10/22/04	10/21/04	11/02/04	11/02/04	12/17/04	10/12/04	12/17/04
Benthic macroinvertebrate	Count	Count	Count	Count	Count	Count	Count
Insecta							
Ephemeroptera (MAYFLIES)							
Baetidae							
<i>Acentrella</i>	--	--	--	4	--	22	2
<i>Baetis</i>	3	75	--	--	--	5	--
<i>Cloeon</i>	--	--	--	1	--	--	--
Ephemerellidae							
<i>Ephemerella</i>	--	--	--	1	--	--	--
<i>Eurylophella</i>	1	20	--	1	--	--	--
<i>Serratella</i>	51	--	17	15	372	25	--
Heptageniidae							
<i>Epeorus</i>	9	1	--	2	21	--	--
<i>Stenonema</i>	76	111	33	64	134	208	--
Isonychiidae							
<i>Isonychia</i>	3	--	16	21	134	153	--
Leptohyphidae							
<i>Tricorythodes</i>	--	--	--	--	1	--	--
Leptophlebiidae							
<i>Paraleptophlebia</i>	4	94	--	--	--	1	--
Odonata (DRAGONFLIES AND DAMSELFLIES)							
Aeshnidae							
<i>Boyeria</i>	--	3	--	--	--	--	--
Calopterygidae							
<i>Calopteryx</i>	--	2	--	--	--	--	--
Coenagrionidae							
<i>Argia</i>	--	--	1	--	--	--	--
Gomphidae							
<i>Lanthus</i>	6	1	--	--	--	--	--
Plecoptera (STONEFLIES)							
Capniidae							
<i>Allocapnia</i>	--	--	--	213	50	--	--
Chloroperlidae							
<i>Sweltsa</i>	--	--	--	--	--	2	--
Leuctridae							
<i>Paraleuctra</i>	--	100	--	--	--	--	--
Nemouridae							
<i>Nemoura</i>	--	2	--	--	--	--	--
Perlidae							
<i>Acroneuria</i>	12	2	1	7	--	6	--
<i>Agnatina</i>	--	1	--	--	--	--	--
<i>Paragnetina</i>	--	--	--	2	--	--	--
Perlodidae							
<i>Isoperla</i>	--	5	--	--	--	--	--
Taeniopterygidae							
<i>Strophopteryx</i>	--	--	--	--	123	--	--
<i>Taeniopteryx</i>	33	2	10	29	67	77	--

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

BIOLOGICAL DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
 BENTHIC MACROINVERTEBRATES--Continued

Station number	014800390	01480396	01480420	01480434	01480629	01480653	01494953
Date	10/22/04	10/21/04	11/02/04	11/02/04	12/17/04	10/12/04	12/17/04
Benthic macroinvertebrate	Count	Count	Count	Count	Count	Count	Count
Coleoptera (BEETLES)							
Dryopidae							
<i>Helichus</i>	7	--	--	--	--	--	--
Elmidae (RIFFLE BEETLES)							
<i>Ancyronyx</i>	--	--	--	--	1	--	--
<i>Dubiraphia</i>	--	2	--	--	4	1	--
<i>Optioservus</i>	32	4	140	48	91	76	4
<i>Oulimnius</i>	167	20	32	19	24	32	2
<i>Promoresia</i>	153	--	--	--	--	--	--
<i>Stenelmis</i>	71	7	226	44	52	64	2
Psephenidae (WATER PENNIES)							
<i>Ectopria</i>	7	21	--	--	--	--	--
<i>Psephenus</i>	10	1	27	11	28	14	--
Ptilodactylidae							
<i>Anchytarsus</i>	--	12	--	--	--	--	--
Diptera (TRUE FLIES)							
Ceratopogonidae							
<i>Chironomidae</i> (MIDGES)	254	292	417	225	722	127	445
Dixidae							
<i>Dixa</i>	--	3	--	--	--	--	--
Empididae (DANCE FLIES)							
<i>Chelifera</i>	--	--	--	1	5	--	44
<i>Hemerodromia</i>	7	--	5	3	6	5	2
Psychodidae							
<i>Telmatoctopus</i>	--	--	--	--	1	--	--
Simuliidae (BLACK FLIES)							
<i>Prosimulium</i>	--	--	--	--	86	--	--
<i>Simulium</i>	16	--	7	3	11	182	5
Tabanidae							
<i>Tipulidae</i> (CRANE FLIES)	--	--	--	--	--	--	1
<i>Antocha</i>	105	1	38	10	13	38	5
<i>Hexatoma</i>	--	23	--	--	--	--	--
<i>Tipula</i>	2	5	--	--	--	--	--
Total organisms	2697	1166	1673	1062	2678	1731	644
Total number of taxa	46	51	27	39	43	47	19