

## SWIFCR06

**LOCATION:** Approximately 20 yards upstream of confluence with Forest Hills Run.

Latitude 41° 06' 06.80"

Longitude -75° 16' 18.80"

### FIELD CHEMISTRY:

SITE ID	SAMPLE DATE	TEMP C	SpC mScm	DO mg/l	pH su	ORP mV	DO % sat.	COND mS/cm	TDS mg/l
SWIFCR06	4/4/03	6.54	213	11.72	7.25	301	95.50	138	139
SWIFCR06	5/2/03	13.71	203	9.94	7.95	284	95.80	159	132
SWIFCR06	6/11/03	13.78	159	10.26	7.33	272	99.10	125	103
SWIFCR06	7/9/03	17.80	160	9.25	7.55	266	97.30	138	104
SWIFCR06	8/12/03	18.48	165	9.48	7.60	346	101.20	145	108
SWIFCR06	9/10/03	17.39	171	8.62	7.76	359	90.00	147	111
SWIFCR06	10/29/03	10.49	108	11.53	7.54	372	103.30	78	71
SWIFCR06	11/22/03	8.47	122	11.53	7.57	305	98.50	84	79
SWIFCR06	12/13/03	4.46	118	12.63	7.71	302	97.60	71	76
SWIFCR06	1/24/04	1.28	163	12.85	8.28	207	91.20	89	106
SWIFCR06	2/21/04	3.28	202	12.55	8.02	284	93.90	118	131
SWIFCR06	3/27/04	7.41	253	12.40	7.62	303	103.30	168	165
wshed min.		0.01	29	5.42	5.47	46	57.70	1	19
wshed max.		26.25	548	14.37	8.99	561	113.10	388	356
wshed avg.		10.04	146	10.97	7.50	304	96.14	104	95

Temperatures that exceed Specific Water Quality Criteria in Chapter 93 of Title 25 of the PA Code are shown in red. SpC is specific conductance. DO is dissolved oxygen. ORP is oxidation reduction potential. COND is conductivity. TDS is total dissolved solids. Refer to Sampling and Analysis Plan under Phase I study results for quality assurance/quality control information.

**LABORATORY DATA:**

SITE ID	SAMPLE DATE	pH	NITRATE	NITRITE	TOTAL SUPSENDED	TOTAL PHOSPHORUS	FECAL COLIFORM
		su	mg/l	mg/l	SOLIDS mg/l	mg/l	CFU/100ml
SWIFCR06	4/4/03	6.24	0.23	<0.005	<1.0	0.10	0
SWIFCR06	5/2/03	7.45	0.16	<0.005	1.3	0.11	0
SWIFCR06	6/11/03	6.97	0.31	<0.005	2.1	0.13	9
SWIFCR06	7/9/03	7.58	0.26	0.01	7.7	0.06	17
SWIFCR06	8/12/03	6.99	0.61	0.02	<1.0	0.09	17
SWIFCR06	10/29/03	6.98	0.11	<0.005	2.8	0.10	115
SWIFCR06	11/22/03	7.04	1.00	0.02	1.4	0.16	8
SWIFCR06	12/13/03	6.87	0.70	0.02	1.5	0.8	390
SWIFCR06	1/24/04	6.95	<0.1	0.05	<1.0	0.06	100
SWIFCR06	2/21/04	6.90	0.45	0.05	6.5	0.03	0
SWIFCR06	3/27/04	6.93	0.49	<0.01	<1.0	<0.02	1
SWIFCR06	9/10/03	7.08	0.55	0.02	2.0	0.02	1
Wshed min		5.47	0.10	0.005	1.0	0.01	0
Wshed max		8.19	1.51	0.050	13.0	0.90	5700
Wshed avg		6.85	0.50	0.019	2.7	0.11	

If the number of sample results where the analytical parameter was not detected exceeded 20% of the sample pool, they were not included in the calculated watershed average. If the number of non-detect samples was less than 20% of the sample pool, ½ of the detection limit was used to represent those samples in the calculated watershed average. Refer to Sampling and Analysis Plan under Phase I of study results for quality assurance/quality control information.

## BENTHIC MACROINVERTEBRATES:

The following table compares trending results of the EPA/County scoring schemes for repeat sites (1995 through 2004).

Site #	Site Name	2004	2003	2002	2001	2000	1999	1998	1997	1996	1995
PARACR03	Paradise Creek	33	31								31
BUTZRU01	Butz Run	29	23								
CRANCR01	Cranberry Creek (Paradise)	29									
PARACR04	Paradise Creek	33	31								
DEHOCR04	Devils Hole Creek	31	31								
CRANCR03	Cranberry Creek (Paradise)	21	23								
SWIFCR06	Swiftwater Creek	21	23								
SWIFCR02	Swiftwater Creek	25	27								
FOHIRU01	Forest Hills Run	29	25								
PARACR01	Paradise Creek	29	29								
FOHIRU04	Forest Hills Run	25	19	25	29	25	27	27	23	31	
FOHIRU09	Forest Hills Run	15	17								
SWIFCR07	Swiftwater Creek	29	25	29	33						
SWIFCR05	Swiftwater Creek	33	23	25	29	27	25	29	21	25	19
SWIFCR03	Swiftwater Creek	29	29	25	29	29	17	27	19	27	23

The range 35 - 29 is considered optimal. The range 28 - 14 is the slightly to moderately impaired category, and any site with a total score of less than 14 is considered severely impaired.

## HABITAT ANALYSIS

### 2003

SWIFCR06            200            Optimal            Greater than 50% mix of boulder, cobble, or other stable habitat. Well developed riffle and run. Water reaches base of both lower banks and minimal amount of channel substrate is exposed.

### 2004

SWIFCR06            213            Optimal            Occurrence of riffles relatively frequent. Banks stable; no evidence of erosion or bank failure.

**MACROINVERTEBRATE IDENTIFICATIONS**

**2003 MONROE COUNTY WATER QUALITY STUDY**

**SITE ID: SWIFCR06**

Insecta		Philopotamidae	25	Simuliidae	8
Ephemeroptera		Polycentropodidae	3	Tabanidae	
Baetidae	11	Psychomyiidae		Dixidae	
Baetiscidae		Beraeidae		Collembola	
Caenidae		Brachycentridae	2	Poduridae	
Ephemerellidae	1	Lepidostomatidae		Nemertea	
Ephemeridae		Helicopsychidae		Nematoda	
Heptageniidae	2	Leptoceridae		Nematomorpha	
Leptophlebiidae		Limnephilidae		Annelida	
Metretopodidae		Molannidae		Hirudinea	
Neophemeridae		Odontoceridae		Oligochaeta	
Oligoneuriidae	3	Phryganeidae		Lumbriculida	
Polymitarcyidae		Sericostomatidae		Lumbriculidae	23
Potamanthidae		Uenoidae		Tubificida	
Siphonuridae		Glossosomatidae		Platyhelminthes	
Tricorythidae		Hydroptilidae		Turbellaria	
Odonata		Rhyacophilidae	2	Planariidae	
Aeshnidae		Lepidoptera		Mollusca	
Cordulegastridae		Pyralidae		Bivalva	
Corduliidae		Coleoptera		Unionidae	
Gomphidae	1	Dytiscidae		Sphaeriidae	273
Libellulidae		Gyrinidae		Cyrenidae	
Macromiidae		Haliplidae		Corbiculidae	
Calopterygidae		Noteridae		Gastropoda	
Coenagrionidae		Elmidae	2	Ancylidae	5
Lestidae		Hydraenidae		Physidae	2
Plecoptera		Hydrophilidae		Planorbidae	
Capniidae		Limnichidae		Bulimidae	
Chloroperlidae	1	Psephenidae		Limnaeidae	
Leuctridae		Ptilodactylidae		Crustacea	
Nemouridae	1	Megaloptera		Amphipoda	
Peltoperlidae		Corydalidae	5	Gammaridae	
Perlidae	1	Sialidae		Talitridae	
Perlodidae		Neuroptera		Isopoda	
Pteronarcyidae		Sisyridae		Asellidae	
Taeniopterygidae		Diptera		Decapoda	
Hemiptera		Ephydriidae	1	Cambaridae	
Belostomatidae		Athericidae		Arachnidia	
Corixidae		Tipulidae		Acari	
Gerridae		Empididae		Hydrachnidia	
Mesoveliidae		Blephariceridae			

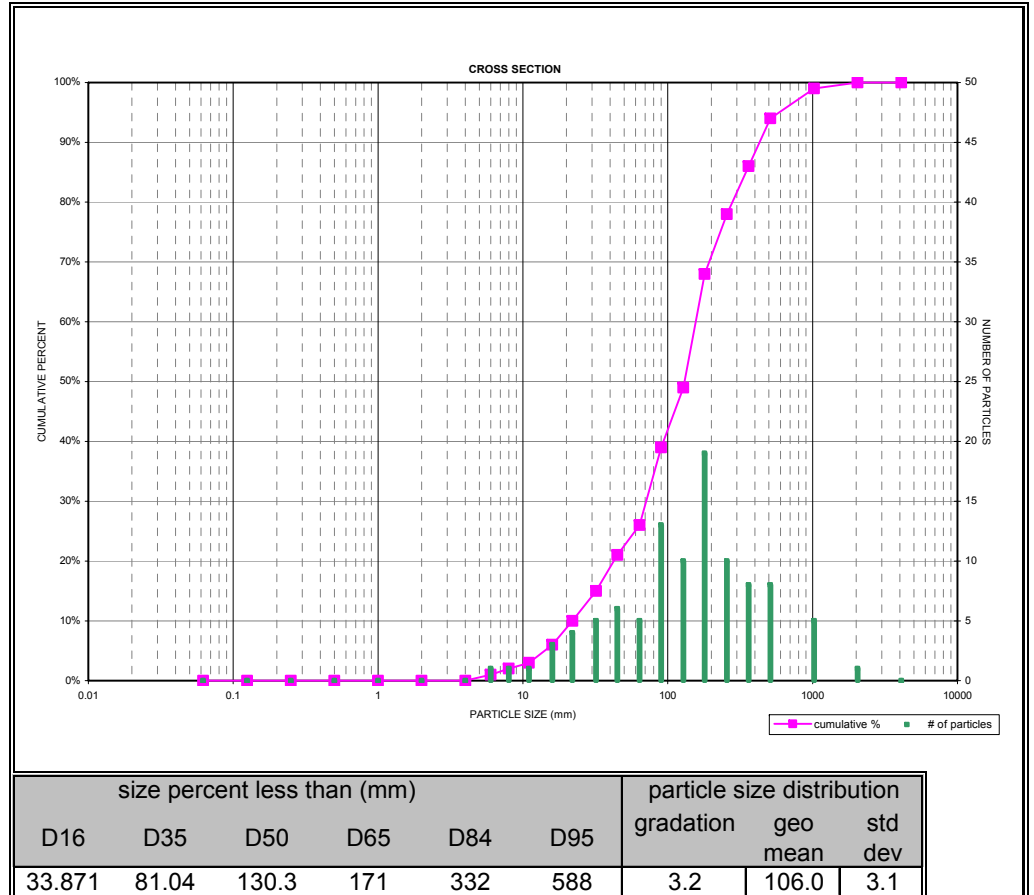
Notonectidae		Ceratopogonidae		
Saldidae		Chaoboridae		
Veliidae		Chironomidae	69	
Trichoptera		Culicidae		
Hydropsychidae	61	Muscidae		

MONROE COUNTY WATER QUALITY STUDY			SITE ID. SWIFCR06		
Insecta		Philopotamidae	26	Simuliidae	6
Ephemeroptera		Polycentropodidae	9	Tabanidae	
Baetidae	10	Psychomyiidae		Dixidae	
Baetiscidae		Beraeidae		Collembola	
Caenidae		Brachycentridae		Poduridae	
Ephemerellidae		Lepidostomatidae		Nemertea	
Ephemeridae		Helicopsychidae		Nematoda	
Heptageniidae	16	Leptoceridae		Nematomorpha	
Leptophlebiidae	2	Limnephilidae		Annelida	
Metretopodidae		Molannidae		Hirudinea	
Neoephemeridae		Odontoceridae		Oligochaeta	
Oligoneuriidae		Phryganeidae		Lumbriculida	
Polymitarcyidae		Sericostomatidae		Lumbriculidae	4
Potamanthidae		Uenoidae		Tubificida	
Siphonuridae		Glossosomatidae	1	Platyhelminthes	
Tricorythidae		Hydroptilidae		Turbellaria	
Odonata		Rhyacophilidae		Planariidae	
Aeshnidae		Lepidoptera		Mollusca	
Cordulegastridae		Pyralidae		Bivalva	
Corduliidae		Coleoptera		Unionidae	
Gomphidae		Dytiscidae		Sphaeriidae	53
Libellulidae		Gyrinidae		Cyrenidae	
Macromiidae		Haliplidae		Corbiculidae	
Calopterygidae		Noteridae		Gastropoda	
Coenagrionidae		Elmidae	2	Ancylidae	
Lestidae		Hydraenidae		Physidae	7
Plecoptera		Hydrophilidae		Planorbidae	
Capniidae		Limnichidae		Bulimidae	
Chloroperlidae		Psephenidae		Limnaeidae	
Leuctridae	11	Ptilodactylidae		Crustacea	
Nemouridae		Megaloptera		Amphipoda	
Peltoperlidae		Corydalidae	1	Gammaridae	
Perlidae	2	Sialidae		Talitridae	
Perlodidae		Neuroptera		Isopoda	
Pteronarcyidae		Sisyridae		Asellidae	
Taeniopterygidae		Diptera		Decapoda	
Hemiptera		Ephydriidae		Cambaridae	
Belostomatidae		Athericidae	1	Arachnidia	
Corixidae		Tipulidae		Acari	
Gerridae		Empididae		Hydrachnidia	
Mesoveliidae		Blephariceridae			
Notonectidae		Ceratopogonidae			
Saldidae		Chaoboridae			
Veliidae		Chironomidae	113		
Trichoptera		Culicidae			
Hydropsychidae	58	Muscidae			

### Pebble Count (Cross Section)

SWIFCR06

Material	Size Range (mm)		Particle Count	Cumulative Percent
silt/clay	0	0.062	0	0%
very fine sand	0.062	0.13	0	0%
fine sand	0.13	0.25	0	0%
medium sand	0.25	0.5	0	0%
coarse sand	0.5	1	0	0%
very coarse sand	1	2	0	0%
very fine gravel	2	4	0	0%
fine gravel	4	6	1	1%
fine gravel	6	8	1	2%
medium gravel	8	11	1	3%
medium gravel	11	16	3	6%
coarse gravel	16	22	4	10%
coarse gravel	22	32	5	15%
very coarse gravel	32	45	6	21%
very coarse gravel	45	64	5	26%
small cobble	64	90	13	39%
medium cobble	90	128	10	49%
large cobble	128	180	19	68%
very large cobble	180	256	10	78%
small boulder	256	362	8	86%
small boulder	362	512	8	94%
medium boulder	512	1024	5	99%
large - very large boulder	1024	2048	1	100%
bedrock	2048	4096	0	100%
Total Particle Count:			100	



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SWIFCR06

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silt/clay	0	0.062	0	0%
very fine sand	0.062	0.13	0	0%
fine sand	0.13	0.25	0	0%
medium sand	0.25	0.5	0	0%
coarse sand	0.5	1	0	0%
very coarse sand	1	2	0	0%
very fine gravel	2	4	0	0%
fine gravel	4	6	2	2%
fine gravel	6	8	3	5%
medium gravel	8	11	2	7%
medium gravel	11	16	7	14%
coarse gravel	16	22	7	21%
coarse gravel	22	32	6	27%
very coarse gravel	32	45	4	31%
very coarse gravel	45	64	16	47%
small cobble	64	90	12	59%
medium cobble	90	128	20	79%
large cobble	128	180	16	95%
very large cobble	180	256	2	97%
small boulder	256	362	0	97%
small boulder	362	512	0	97%
medium boulder	512	1024	0	97%
large - very large boulder	1024	2048	3	100%
bedrock	2048	4096	0	100%
Total Particle Count:			100	

