

## SWIFCR02

**LOCATION:** Approximately 25 yards downstream of confluence with Forest Hills Run.

Latitude 41° 06' 03.70"

Longitude -75° 16' 16.70"

### 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
SWIFCR02	4/4/03	6.38	167	11.76	7.29	320	95.40	107	108
SWIFCR02	5/2/03	14.37	199	9.82	8.00	288	96.10	158	129
SWIFCR02	6/17/03	13.70	147	10.18	7.58	214	98.20	115	95
SWIFCR02	7/9/03	18.56	168	9.08	7.43	264	97.00	148	109
SWIFCR02	8/12/03	18.70	165	9.54	7.65	348	102.20	145	107
SWIFCR02	9/10/03	16.72	183	8.70	7.72	359	89.50	154	119
SWIFCR02	10/29/03	10.78	120	11.36	7.50	373	102.50	88	78
SWIFCR02	11/22/03	8.56	127	11.45	7.49	298	98.00	87	83
SWIFCR02	12/13/03	4.21	118	12.71	7.61	300	97.50	71	77
SWIFCR02	1/24/04	1.03	166	12.91	8.17	214	91.00	90	108
SWIFCR02	2/21/04	2.82	197	12.68	7.98	287	93.80	114	128
SWIFCR02	3/27/04	7.56	239	12.40	7.60	304	103.60	159	155
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
SWIFCR02	4/4/03	6.29	0.23	<0.005	<1.0	0.14	2
SWIFCR02	5/2/03	7.38	<0.1	<0.005	<1.0	0.16	0
SWIFCR02	6/17/03	7.03	0.29	<0.005	<1.0	0.18	305
SWIFCR02	7/9/03	7.53	0.27	0.02	5.2	0.09	6
SWIFCR02	8/12/03	7.06	0.54	0.05	<1.0	0.14	13
SWIFCR02	10/29/03	7.12	0.17	0.009	1.2	0.07	2800
SWIFCR02	11/22/03	7.08	0.98	0.01	<1.0	0.06	3
SWIFCR02	12/13/03	6.85	0.67	0.02	4.4	0.06	550
SWIFCR02	1/24/04	7.01	<0.1	0.02	<1.0	0.07	1
SWIFCR02	2/21/04	6.99	0.48	0.05	3.0	0.03	230
SWIFCR02	3/27/04	7.01	0.50	<0.01	<1.0	<0.02	1
SWIFCR02	9/10/03	7.15	0.57	0.01	13	0.06	0
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

SWIFCR02            194            Optimal            All four velocity/depth regimes present.  
Occurrence of riffles relatively frequent.  
Width of riparian zone 12-18 meters.

### 2004

SWIFCR02            177            Suboptimal            Water fills > 75% of the available channel.  
Banks moderately stable; infrequent, small areas of erosion mostly healed over.  
Width of riparian zone 12-18 meters

**MACROINVERTEBRATE IDENTIFICATIONS**

**2003 MONROE COUNTY WATER QUALITY STUDY**

**SITE ID: SWIFCR02**

Insecta		Philopotamidae	13	Simuliidae	18
Ephemeroptera		Polycentropodidae	11	Tabanidae	
Baetidae	31	Psychomyiidae		Dixidae	
Baetiscidae		Beraeidae		Collembola	
Caenidae		Brachycentridae	4	Poduridae	
Ephemerellidae		Lepidostomatidae		Nemertea	
Ephemeridae		Helicopsychidae		Nematoda	
Heptageniidae	4	Leptoceridae		Nematomorpha	
Leptophlebiidae		Limnephilidae		Annelida	
Metretopodidae		Molannidae		Hirudinea	
Neoephemeridae		Odontoceridae		Oligochaeta	
Oligoneuriidae	5	Phryganeidae		Lumbriculida	
Polymitarcyidae		Sericostomatidae		Lumbriculidae	3
Potamanthidae		Uenoidae	4	Tubificida	
Siphonuridae		Glossosomatidae		Platyhelminthes	
Tricorythidae		Hydroptilidae		Turbellaria	
Odonata		Rhyacophilidae	1	Planariidae	
Aeshnidae		Lepidoptera		Mollusca	
Cordulegastridae		Pyralidae		Bivalva	
Corduliidae		Coleoptera		Unionidae	
Gomphidae	2	Dytiscidae		Sphaeriidae	37
Libellulidae		Gyrinidae		Cyrenidae	
Macromiidae		Haliplidae		Corbiculidae	
Calopterygidae		Noteridae		Gastropoda	
Coenagrionidae		Elmidae	3	Ancylidae	4
Lestidae		Hydraenidae		Physidae	
Plecoptera		Hydrophilidae		Planorbidae	
Capniidae		Limnichidae		Bulimidae	
Chloroperlidae		Psephenidae	4	Limnaeidae	
Leuctridae		Ptilodactylidae		Crustacea	
Nemouridae		Megaloptera		Amphipoda	
Peltoperlidae		Corydalidae	5	Gammaridae	
Perlidae	3	Sialidae		Talitridae	
Perlodidae		Neuroptera		Isopoda	
Pteronarcyidae		Sisyridae		Asellidae	
Taeniopterygidae		Diptera		Decapoda	
Hemiptera		Ephydriidae		Cambaridae	
Belostomatidae		Athericidae		Arachnidia	
Corixidae		Tipulidae	1	Acari	
Gerridae		Empididae		Hydrachnidia	
Mesoveliidae		Blephariceridae			

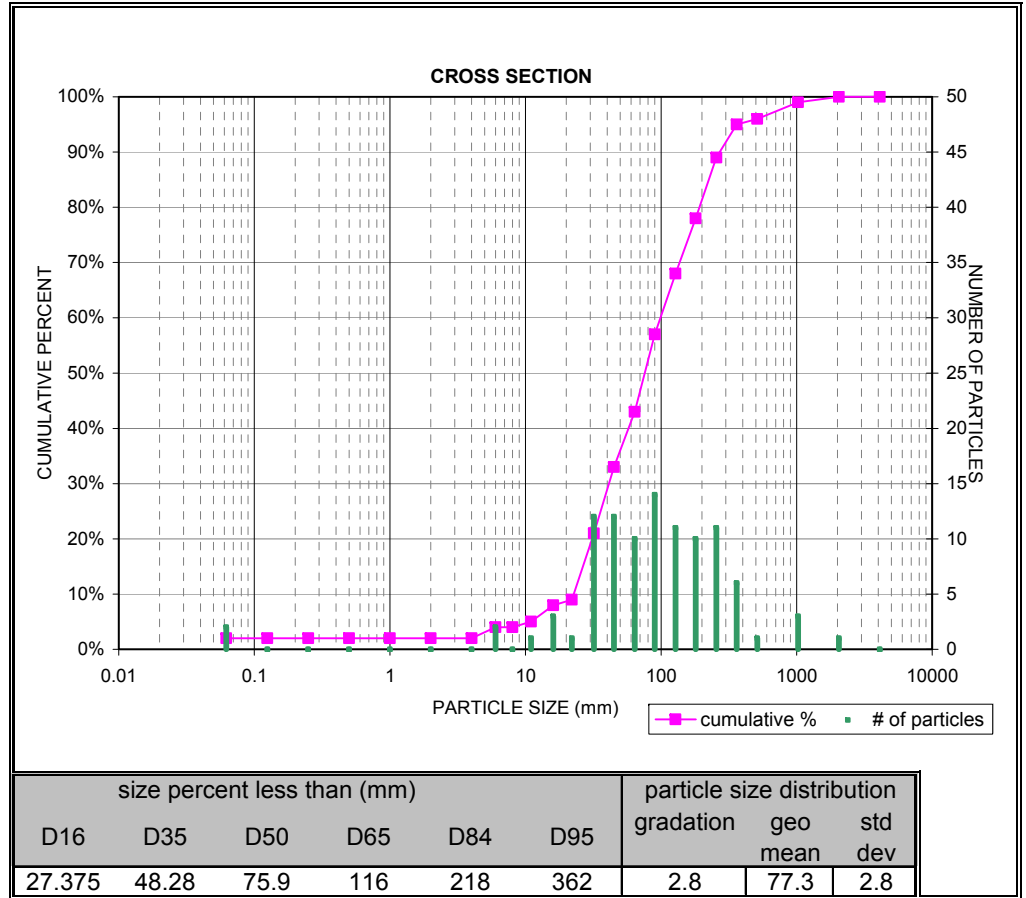
Notonectidae		Ceratopogonidae		
Saldidae		Chaoboridae		
Veliidae		Chironomidae	61	
Trichoptera		Culicidae		
Hydropsychidae	145	Muscidae		

MONROE COUNTY WATER QUALITY STUDY			SITE ID. SWIFCR02		
Insecta		Philopotamidae	32	Simuliidae	6
Ephemeroptera		Polycentropodidae	11	Tabanidae	2
Baetidae	5	Psychomyiidae		Dixidae	
Baetiscidae		Beraeidae		Collembola	
Caenidae		Brachycentridae		Poduridae	
Ephemerellidae		Lepidostomatidae		Nemertea	
Ephemeridae		Helicopsychidae		Nematoda	
Heptageniidae	36	Leptoceridae		Nematomorpha	
Leptophlebiidae		Limnephilidae		Annelida	
Metretopodidae		Molannidae		Hirudinea	
Neoephemeridae		Odontoceridae		Oligochaeta	
Oligoneuriidae		Phryganeidae		Lumbriculida	
Polymitarcyidae		Sericostomatidae		Lumbriculidae	3
Potamanthidae		Uenoidae	2	Tubificida	
Siphonuridae		Glossosomatidae		Platyhelminthes	
Tricorythidae		Hydroptilidae		Turbellaria	
Odonata		Rhyacophilidae	1	Planariidae	
Aeshnidae		Lepidoptera		Mollusca	
Cordulegastridae		Pyrilidae		Bivalva	
Corduliidae		Coleoptera		Unionidae	
Gomphidae	1	Dytiscidae		Sphaeriidae	29
Libellulidae		Gyrinidae		Cyrenidae	
Macromiidae		Haliplidae		Corbiculidae	
Calopterygidae		Noteridae		Gastropoda	
Coenagrionidae		Elmidae	5	Ancylidae	1
Lestidae		Hydraenidae		Physidae	7
Plecoptera		Hydrophilidae		Planorbidae	5
Capniidae		Limnichidae		Bulimidae	
Chloroperlidae		Psephenidae	2	Limnaeidae	
Leuctridae	36	Ptilodactylidae		Crustacea	
Nemouridae		Megaloptera		Amphipoda	
Peltoperlidae		Corydalidae	6	Gammaridae	13
Perlidae	6	Sialidae		Talitridae	
Perlodidae		Neuroptera		Isopoda	
Pteronarcyidae		Sisyridae		Asellidae	
Taeniopterygidae		Diptera		Decapoda	
Hemiptera		Ephydriidae		Cambaridae	
Belostomatidae		Athericidae		Arachnidia	
Corixidae		Tipulidae	3	Acari	
Gerridae		Empididae		Hydrachnidia	
Mesoveliidae		Blephariceridae			
Notonectidae		Ceratopogonidae			
Saldidae		Chaoboridae			
Veliidae		Chironomidae	68		
Trichoptera		Culicidae			
Hydropsychidae	51	Muscidae			

### Pebble Count (Cross Section)

SWIFCR02

Material	Size Range (mm)		Particle Count	Cumulative Percent
silt/clay	0	0.062	2	2%
very fine sand	0.062	0.13	0	2%
fine sand	0.13	0.25	0	2%
medium sand	0.25	0.5	0	2%
coarse sand	0.5	1	0	2%
very coarse sand	1	2	0	2%
very fine gravel	2	4	0	2%
fine gravel	4	6	2	4%
fine gravel	6	8	0	4%
medium gravel	8	11	1	5%
medium gravel	11	16	3	8%
coarse gravel	16	22	1	9%
coarse gravel	22	32	12	21%
very coarse gravel	32	45	12	33%
very coarse gravel	45	64	10	43%
small cobble	64	90	14	57%
medium cobble	90	128	11	68%
large cobble	128	180	10	78%
very large cobble	180	256	11	89%
small boulder	256	362	6	95%
small boulder	362	512	1	96%
medium boulder	512	1024	3	99%
large - very large boulder	1024	2048	1	100%
bedrock	2048	4096	0	100%
Total Particle Count:			100	



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silt/clay	0	0.062	0	0%
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medium sand	0.25	0.5	0	0%
coarse sand	0.5	1	0	0%
very coarse sand	1	2	1	1%
very fine gravel	2	4	0	1%
fine gravel	4	6	2	3%
fine gravel	6	8	0	3%
medium gravel	8	11	3	6%
medium gravel	11	16	3	9%
coarse gravel	16	22	10	19%
coarse gravel	22	32	18	37%
very coarse gravel	32	45	17	54%
very coarse gravel	45	64	13	67%
small cobble	64	90	18	85%
medium cobble	90	128	11	96%
large cobble	128	180	2	98%
very large cobble	180	256	1	99%
small boulder	256	362	0	99%
small boulder	362	512	0	99%
medium boulder	512	1024	0	99%
large - very large boulder	1024	2048	1	100%
bedrock	2048	4096	0	100%
Total Particle Count:			100	

