

INDIRU01

LOCATION: Approximately 20 yards upstream of Fairview Avenue.

Latitude 41° 06' 20.88"

Longitude -75° 22' 27.05"

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
INDIRU01	4/13/03	9.53	297	10.06	5.90	357	88.20	209	193
INDIRU01	5/18/03	9.43	226	9.04	5.47	368	79.10	158	147
INDIRU01	6/15/03	12.74	254	9.59	6.11	321	90.60	195	165
INDIRU01	7/20/03	9.97	219	10.23	5.56	370	90.60	156	142
INDIRU01	8/14/03	11.31	235	9.17	5.85	327	83.80	173	153
INDIRU01	9/29/03	11.43	235	9.75	6.28	457	89.30	1	153
INDIRU01	11/30/03	7.34	213	10.72	6.74	308	89.10	141	139
INDIRU01	1/29/04	7.48	208	9.54	7.03	323	79.60	139	135
INDIRU01	2/25/04	8.32	214	9.51	5.91	289	81.00	146	139
INDIRU01	3/15/04	8.36	227	10.13	5.91	308	86.30	155	148
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 su	NITRATE mg/l	NITRITE mg/l	TOTAL SUPSENDED SOLIDS mg/l	TOTAL PHOSPHORUS mg/l	FECAL COLIFORM CFU/100ml
INDIRU01	8/14/03	5.47	0.86	<0.005	<1.0	0.21	2
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:

PARACR04	Paradise Creek	31								
YANKRU01	Yankee Run	29					25			
TANKCR01	Tank Creek	33								
DEHOCR03	Devils Hole Creek	31								
CRCRPA02	Cranberry Creek (Paradise)	31								
CRCRPA03	Cranberry Creek (Paradise)	23								
PARACR03	Paradise Creek	31								31
BUTZRU01	Butz Run	23								
PARACR01	Paradise Creek	29								
FOHIRU01	Forest Hills Run	25								
SWIFCR06	Swiftwater Creek	23								
SWIFCR02	Swiftwater Creek	27								
BUTZRU02	Butz Run	21								
BUTZRU03	Butz Run	13								
BUTZRU04	Butz Run	15								
PARACR06	Paradise Creek	33					35			
DEHOCR04	Devils Hole Creek	31								
DEHOCR01	Devils Hole Creek	31								
INDIRU01	Indian Run	31	31	31						
SWIFCR08	Swiftwater Creek	29								
SWIFCR07	Swiftwater Creek	25	29	33						
FOHIRU09	Forest Hills Run	17								
SWIFCR05	Swiftwater Creek	23	25	29	27	25	29	21	25	19

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

INDIRU01	203	Optimal	Water reaches base of both lower banks and minimal amount of channel substrate is exposed. Width of riparian zone greater than 18 meters. Only 3 of the 4 velocity/depth regimes present.
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MACROINVERTEBRATE IDENTIFICATIONS

2003 MONROE COUNTY WATER QUALITY STUDY

SITE ID: INDIRU01

Insecta		Philopotamidae		Simuliidae	1
Ephemeroptera		Polycentropodidae		Tabanidae	
Baetidae	5	Psychomyiidae		Dixidae	
Baetiscidae		Beraeidae		Collembola	
Caenidae		Brachycentridae	3	Poduridae	
Ephemerellidae	6	Lepidostomatidae	2	Nemertea	
Ephemeridae		Helicopsychidae		Nematoda	
Heptageniidae		Leptoceridae		Nematomorpha	
Leptophlebiidae		Limnephilidae	1	Annelida	
Metretopodidae		Molannidae		Hirudinea	
Neoephemeridae		Odontoceridae		Oligochaeta	
Oligoneuriidae		Phryganeidae		Lumbriculida	
Polymitarcyidae		Sericostomatidae		Lumbriculidae	
Potamanthidae		Uenoidae	13	Tubificida	
Siphonuridae		Glossosomatidae		Platyhelminthes	
Tricorythidae		Hydroptilidae	35	Turbellaria	
Odonata		Rhyacophilidae	4	Planariidae	
Aeshnidae		Lepidoptera		Mollusca	
Cordulegastridae		Pyralidae		Bivalva	
Corduliidae		Coleoptera		Unionidae	
Gomphidae		Dytiscidae		Sphaeriidae	6
Libellulidae		Gyrinidae		Cyrenidae	
Macromiidae		Haliplidae		Corbiculidae	
Calopterygidae		Noteridae		Gastropoda	
Coenagrionidae		Elmidae	2	Ancylidae	
Lestidae		Hydraenidae		Physidae	
Plecoptera		Hydrophilidae		Planorbidae	
Capniidae		Limnichidae		Bulimidae	
Chloroperlidae	4	Psephenidae		Limnaeidae	
Leuctridae	17	Ptilodactylidae		Crustacea	

Nemouridae	3	Megaloptera		Amphipoda	
Peltoperlidae		Corydalidae		Gammaridae	5
Perlidae	5	Sialidae		Talitridae	
Perlodidae		Neuroptera		Isopoda	
Pteronarcyidae		Sisyridae		Asellidae	
Taeniopterygidae		Diptera		Decapoda	
Hemiptera		Ephydriidae		Cambaridae	
Belostomatidae		Athericidae		Arachnidia	
Corixidae		Tipulidae	6	Acari	
Gerridae		Empididae		Hydrachnidia	
Mesoveliidae		Blephariceridae			
Notonectidae		Ceratopogonidae			
Saldidae		Chaoboridae			
Veliidae		Chironomidae	64		
Trichoptera		Culicidae			
Hydropsychidae		Muscidae			

Pebble Count (Cross Section)

INDIRU01

Material	Size Range (mm)		Particle Count	Cumulative Percent
silt/clay	0	0.062	12	12%
very fine sand	0.062	0.13	0	12%
fine sand	0.13	0.25	2	14%
medium sand	0.25	0.5	0	14%
coarse sand	0.5	1	0	14%
very coarse sand	1	2	0	14%
very fine gravel	2	4	0	14%
fine gravel	4	6	0	14%
fine gravel	6	8	4	18%
medium gravel	8	11	4	22%
medium gravel	11	16	4	26%
coarse gravel	16	22	13	39%
coarse gravel	22	32	3	42%
very coarse gravel	32	45	15	57%
very coarse gravel	45	64	11	68%
small cobble	64	90	10	78%
medium cobble	90	128	11	89%
large cobble	128	180	3	92%
very large cobble	180	256	6	98%
small boulder	256	362	2	100%
small boulder	362	512	0	100%
medium boulder	512	1024	0	100%
large - very large boulder	1024	2048	0	100%
bedrock	2048	4096	0	100%
Total Particle Count:			100	

