

BUTZRU01

LOCATION: Approximately 50 yards upstream of confluence with Paradise Creek.

Latitude 41° 04' 41.20"

Longitude -75° 13' 44.50"

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
BUTZRU01	4/4/03	6.46	106	11.87	7.21	337	96.50	68	68
BUTZRU01	5/2/03	14.36	124	9.64	7.49	273	94.30	99	80
BUTZRU01	6/11/03	15.54	101	9.79	7.33	280	98.30	83	65
BUTZRU01	7/9/03	19.34	103	8.90	7.50	253	96.60	92	67
BUTZRU01	8/12/03	21.14	115	8.86	7.68	313	99.70	107	75
BUTZRU01	9/10/03	14.38	122	9.01	7.71	351	88.20	97	79
BUTZRU01	10/29/03	10.71	71	11.50	7.73	336	103.60	52	46
BUTZRU01	11/22/03	7.31	85	11.88	7.70	305	98.60	56	55
BUTZRU01	12/13/03	2.08	73	13.64	8.23	303	98.80	41	47
BUTZRU01	1/24/04	0.03	111	13.46	8.42	55	92.20	58	72
BUTZRU01	2/21/04	1.77	117	13.33	8.55	278	95.80	65	76
BUTZRU01	3/27/04	8.50	122	12.03	7.57	289	102.80	84	79
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
BUTZRU01	4/4/03	6.31	<0.1	<0.005	<1.0	<0.02	0
BUTZRU01	5/2/03	7.14	<0.1	<0.005	2.9	0.13	2
BUTZRU01	6/11/03	6.84	<0.1	<0.005	1.8	0.12	5
BUTZRU01	7/9/03	7.29	0.10	0.01	<1.0	0.14	180
BUTZRU01	8/12/03	7.14	0.23	0.02	<1.0	0.09	180
BUTZRU01	10/29/03	6.88	<0.10	0.007	1.0	0.08	4700
BUTZRU01	11/22/03	6.98	0.49	0.02	1.4	0.17	10
BUTZRU01	12/13/03	6.84	0.35	0.01	<1.0	0.09	476
BUTZRU01	1/24/04	6.77	<0.1	0.01	<1.0	0.06	3
BUTZRU01	2/21/04	6.94	0.32	0.04	4.5	0.03	3
BUTZRU01	3/27/04	6.80	0.21	<0.01	<1.0	<0.02	9
BUTZRU01	9/10/03	7.08	0.33	0.01	<1.0	0.09	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

BUTZRU01 213 Optimal Greater than 50% mix of boulder, cobble, submerged logs or other stable habitat.
Well developed riffle and run.
No channelization present.

2004

BUTZRU01 210 Optimal Well developed riffle and run.
No channelization or dredging present. More than 90% of the streambank surfaces covered by vegetation.

MACROINVERTEBRATE IDENTIFICATIONS

2003 MONROE COUNTY WATER QUALITY STUDY

SITE ID: BUTZRU01

Insecta		Philopotamidae	18	F	Simuliidae	4
Ephemeroptera		Polycentropodidae	3	F	Tabanidae	
Baetidae	14	Psychomyiidae		I	Dixidae	
Baetiscidae		Beraeidae		F	Collembola	
Caenidae		Brachycentridae		I	Poduridae	
Ephemerellidae		Lepidostomatidae		I	Nemertea	
Ephemeridae		Helicopsychidae		F	Nematoda	
Heptageniidae	3	Leptoceridae		F	Nematomorpha	
Leptophlebiidae	2	Limnephilidae		F	Annelida	
Metretopodidae		Molannidae		F	Hirudinea	
Neophemeridae		Odontoceridae		I	Oligochaeta	
Oligoneuriidae		Phryganeidae	1	F	Lumbriculida	
Polymitarcyidae		Sericostomatidae		I	Lumbriculidae	
Potamanthidae		Uenoidae		F	Tubificida	
Siphonuridae		Glossosomatidae		I	Platyhelminthes	
Tricorythidae		Hydroptilidae	13	F	Turbellaria	
Odonata		Rhyacophilidae		I	Planariidae	
Aeshnidae		Lepidoptera			Mollusca	
Cordulegastridae		Pyalidae		F	Bivalva	
Corduliidae		Coleoptera			Unionidae	
Gomphidae		Dytiscidae		F	Sphaeriidae	
Libellulidae		Gyrinidae		F	Cyrenidae	
Macromiidae		Haliplidae		F	Corbiculidae	
Calopterygidae		Noteridae		F	Gastropoda	
Coenagrionidae		Elmidae	1	F	Ancyliidae	1
Lestidae		Hydraenidae		F	Physidae	
Plecoptera		Hydrophilidae		F	Planorbidae	
Capniidae		Limnichidae		F	Bulimidae	
Chloroperlidae	1	Psephenidae	6	F	Limnaeidae	
Leuctridae	1	Ptilodactylidae		F	Crustacea	
Nemouridae		Megaloptera			Amphipoda	
Peltoperlidae		Corydalidae	3	I	Gammaridae	
Perlidae	6	Sialidae		F	Talitridae	
Perlodidae		Neuroptera			Isopoda	
Pteronarcyidae	1	Sisyridae		F	Asellidae	
Taeniopterygidae		Diptera			Decapoda	
Hemiptera		Ephydriidae		F	Cambaridae	
Belostomatidae		Athericidae		F	Arachnidia	
Corixidae		Tipulidae	5	F	Acari	
Gerridae		Empididae		F	Hydrachnidia	
Mesoveliidae		Blephariceridae		I		

Notonectidae		F	Ceratopogonidae		F		
Saldidae		F	Chaoboridae		F		
Veliidae		F	Chironomidae	31	F		
Trichoptera			Culicidae		T		
Hydropsychidae	46	F	Muscidae		F		

MONROE COUNTY WATER QUALITY STUDY			SITE ID. BUTZRU01		
Insecta		Philopotamidae	6	Simuliidae	6
Ephemeroptera		Polycentropodidae		Tabanidae	
Baetidae	4	Psychomyiidae		Dixidae	
Baetiscidae		Beraeidae		Collembola	
Caenidae		Brachycentridae		Poduridae	
Ephemerellidae		Lepidostomatidae		Nemertea	
Ephemeridae		Helicopsychidae		Nematoda	
Heptageniidae	3	Leptoceridae		Nematomorpha	
Leptophlebiidae	2	Limnephilidae	3	Annelida	
Metretopodidae		Molannidae		Hirudinea	
Neoephemeridae		Odontoceridae	1	Oligochaeta	
Oligoneuriidae		Phryganeidae		Lumbriculida	
Polymitarcyidae		Sericostomatidae		Lumbriculidae	
Potamanthidae		Uenoidae		Tubificida	
Siphonuridae		Glossosomatidae		Platyhelminthes	
Tricorythidae		Hydroptilidae	14	Turbellaria	
Odonata		Rhyacophilidae		Planariidae	
Aeshnidae		Lepidoptera		Mollusca	
Cordulegastridae		Pyalidae		Bivalva	
Corduliidae		Coleoptera		Unionidae	
Gomphidae	4	Dytiscidae		Sphaeriidae	
Libellulidae		Gyrinidae		Cyrenidae	
Macromiidae		Haliplidae		Corbiculidae	
Calopterygidae		Noteridae		Gastropoda	
Coenagrionidae		Elmidae	2	Ancylidae	
Lestidae		Hydraenidae		Physidae	
Plecoptera		Hydrophilidae		Planorbidae	
Capniidae		Limnichidae		Bulimidae	
Chloroperlidae	3	Psephenidae	3	Limnaeidae	
Leuctridae	5	Ptilodactylidae		Crustacea	
Nemouridae		Megaloptera		Amphipoda	
Peltoperlidae		Corydalidae	1	Gammaridae	
Perlidae	6	Sialidae		Talitridae	
Perlodidae		Neuroptera		Isopoda	
Pteronarcyidae		Sisyridae		Asellidae	
Taeniopterygidae		Diptera		Decapoda	
Hemiptera		Ephydriidae		Cambaridae	1
Belostomatidae		Athericidae		Arachnidia	
Corixidae		Tipulidae	5	Acari	
Gerridae		Empididae		Hydrachnidia	
Mesoveliidae		Blephariceridae			
Notonectidae		Ceratopogonidae			
Saldidae		Chaoboridae			
Veliidae		Chironomidae	24		
Trichoptera		Culicidae			
Hydropsychidae	1	Muscidae			