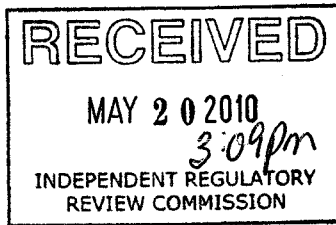


2834

FRIENDS OF PINE CREEK INC.
433 Pine Creek Drive
Barnesville, Pa 18241



RECEIVED

MAY 19 2010

ENVIRONMENTAL QUALITY BOARD

May 12, 2010

RE: Proposed Rulemaking- Clarks Creek, et al. Stream Redesignation

Dear Mr. Shertzer,

This letter is in regards to the proposed rulemaking of the Environmental Quality Board dated February 16, 2010 stating that Pine Creek (Schuylkill County) has been denied its Exceptional Value or High Quality Redesignation.

There are a number of test results which are not included in the summary which may be important in this decision making process. I am submitting the 2003 Water Quality Sampling results prepared by Skelly and Loy Environmental Consultants, which monitored Pine Creek for 5 consecutive years and also the Friends of Pine Creek water sampling results for the summer season of 2003 which includes 8 test sites.

Because of the long time frame involved in this redesignation process, it is in our hopes that another water quality test can be given to Pine Creek to insure that everything is up to date in this process.

Pine Creek is a natural resort of our community and also the residents of Pennsylvania. We want to be assured that this creek will always be an asset to be proud of. We only borrow Pine Creek from our future generations, let us return to them in pristine condition.

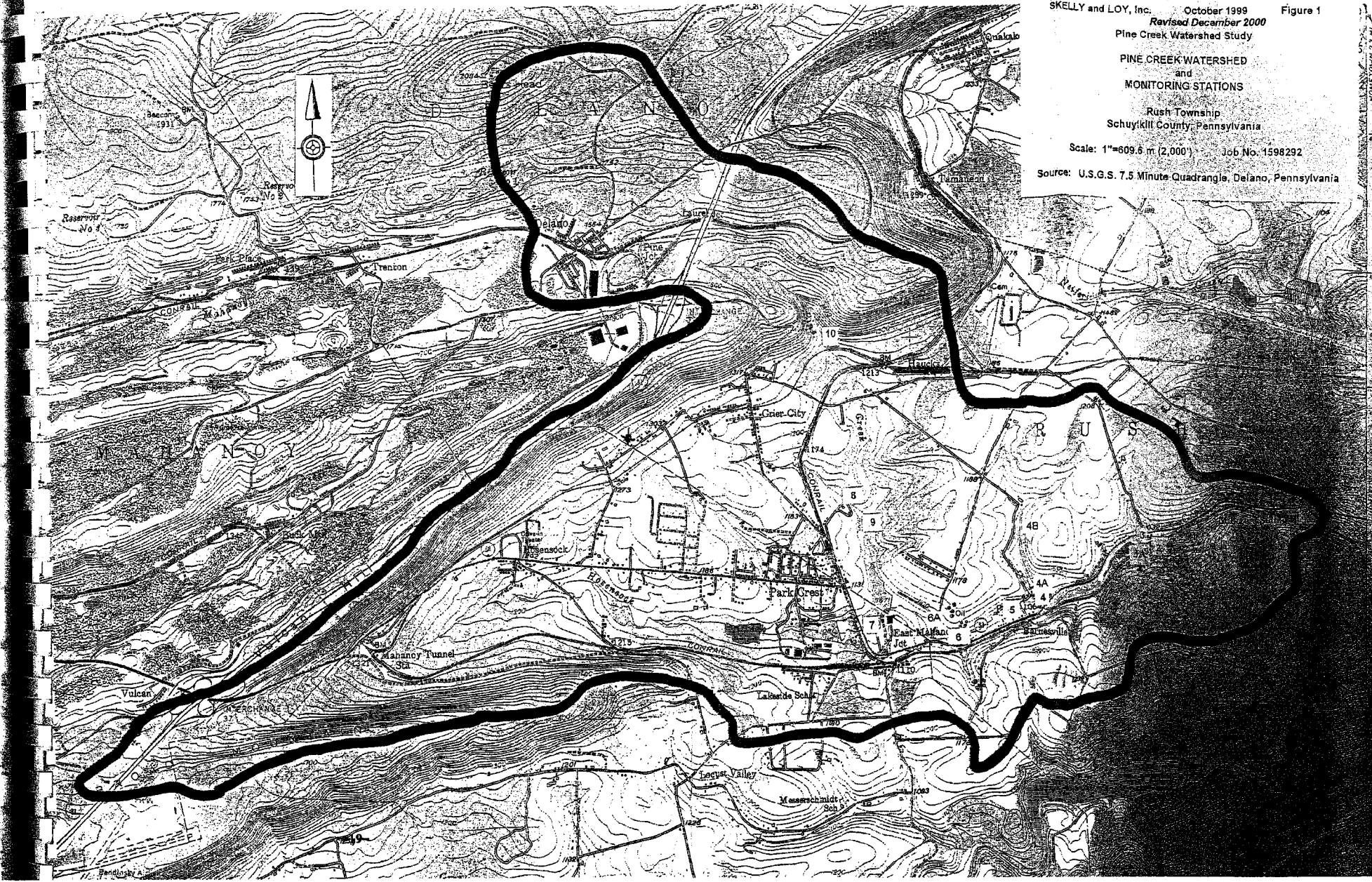
Thank You for any consideration in this matter.

Sincerely Yours,

Victoria Sobolewski

Victoria Sobolewski
President

SKELLY and LOY, Inc. October 1999 Figure 1
Revised December 2000
Pine Creek Watershed Study
PINE CREEK WATERSHED
and
MONITORING STATIONS
Rush Township
Schuylkill County, Pennsylvania
Scale: 1"=609.6 m (2,000') Job No. 1598292
Source: U.S.G.S. 7.5 Minute Quadrangle, Delano, Pennsylvania



PINE CREEK WATERSHED STUDY SAMPLING LOCATION

Sample Locations:

- Station #1: Pine Creek upstream of the confluence with the little Schuylkill River and east of Minzers Siding.
- Station #2: Pine Creek downstream of the railroad bridge crossing.
- Station #3: Unnamed tributary to Pine Creek upstream of the confluence with Pine Creek. (Discontinued - 2003)
- Station #3A: Pine Creek on the Sobolewski Property. (Added - 2003)
- Station #4: Pine Creek at the S.R. 54 Bridge.
- Station #4A: Unnamed tributary to Pine Creek downstream of Holly Road and upstream of the confluence with Pine Creek.
- Station #4B: unnamed tributary to Pine Creek approximately 2000 feet upstream of Holly Road. (Discontinued - 2003)
- Station #5: Pine creek upstream of the historical/abandoned bridge in Barnesville.
- Station #6: Unnamed tributary to Pine Creek upstream of the confluence with Pine Creek at East Mahanoy near the oil storage facility (Discontinued - 2003)
- Station #6A: Pine Creek upstream of the S.R. 1020 bridge. (Added - 2000)
- Station #7: Hosensock Run downstream of S.R. 54 and upstream of the confluence with Pine Creek.
- Station #8: Unnamed tributary to Pine Creek north of Park Crest and upstream of the Crist Farm. The station is approximately 900 feet upstream of the confluence with Pine Creek. (Discontinued - 2003)
- Station #9: Pine Creek northeast of Park Crest and downstream of the confluence with an unnamed tributary near the Crist Farm.
- Station #10: Pine Creek just north of abandoned railroad bridge at the Rush Township/Delano Township line.

PINE CREEK WATERSHED STUDY

Station # 1 PINE CREEK UPSTREAM OF LITTLE SCHUYLKILL RIVER

PHYSICOCHEMICAL PARAMETER	Fall 1998	Spring 1999	Storm Event	Spring 2000	Fall 2000	Spring 2001	Fall 2001	Spring 2002	Sum. 2002	Fall 2002	Spring 2003	Fall 2003
Field Water Temperature (Celsius)	0.10	10.40	14.70	6.40	12.00	9.70	9.30	8.50	20.70	6.20	8.10	12.00
Field Specific Conductance (microsiemens)	70.50	101.70	97.00	71.00	103.00	109.00	87.00	97.10	160.00	98.40	88.00	79.80
Field Dissolved Oxygen (mg/L)	11.88	7.21	6.00	7.39	9.08	9.77	9.30	10.33	8.20	11.73	9.98	7.81
Field pH (Standard Units)	6.84	7.02	6.56	7.15	7.07	7.05	6.96	6.58	7.29	6.83	6.24	5.94
Laboratory Acidity (mg/L)	ND	ND	ND	ND	6.00	ND	24.00	ND	ND	ND	ND	ND
Laboratory Alkalinity (milligrams/Liter)	20.00	10.00	12.00	12.00	18.00	12.00	28.00	12.00	24.00	16.00	10.00	14.00
Laboratory Nitrates (milligrams/Liter)	NA	1.13	1.25	1.28	1.04	1.33	1.29	1.38	3.53	1.74	1.67	0.90
Laboratory pH (Standard Units)	7.42	7.08	6.85	6.98	7.40	7.43	7.53	7.27	7.57	6.26	7.10	7.30
Laboratory Total Phosphorus (mg/L)	ND	ND	ND	ND	ND	ND	ND	ND	0.27	ND	ND	ND
Laboratory Suspended Solids (mg/L)	ND	ND	27.00	ND	ND	5.00	ND	ND	6.00	ND	5.00	48.00
Lab. Fecal Coliform Bacteria (colonies/L)	6	50	47	1	56	48	7	8	47	9	4	3200
Stream Flow Estimate (CFS/GPM)	2.90 1302	6.50 2928	84.50 37971	26.60 12007	1.50 668	16.40 7375	2.40 1059	18.60 8357	1.70 756	18.50 8297	41.10 18435	58.50 26263

PINE CREEK WATERSHED STUDY

Station # 2 PINE CREEK DOWNSTREAM OF RAILROAD

PHYSICOCHEMICAL PARAMETER	Fall 1998	Spring 1999	Storm Event	Spring 2000	Fall 2000	Spring 2001	Fall 2001	Spring 2002	Sum. 2002	Fall 2002	Spring 2003	Fall 2003
Field Water Temperature (Celsius)	1.40	10.70	14.60	6.90	12.10	10.00	9.30	8.80	21.20	6.20	8.30	12.00
Field Specific Conductance (microsiemens)	73.90	103.70	97.00	80.00	77.00	111.00	108.00	98.70	177.70	98.30	94.80	83.30
Field Dissolved Oxygen (mg/L)	9.07	6.80	5.09	7.73	8.45	10.40	8.14	9.44	6.86	9.01	9.77	7.48
Field pH (Standard Units)	7.24	7.13	6.60	6.91	6.93	7.21	7.05	6.87	7.24	6.55	6.47	6.89
Laboratory Acidity (mg/L)	ND	ND	ND	ND	ND	ND	26.00	ND	ND	ND	ND	ND
Laboratory Alkalinity (milligrams/Liter)	24.00	10.00	12.00	14.00	20.00	12.00	26.00	12.00	24.00	14.00	14.00	14.00
Laboratory Nitrates (milligrams/Liter)	NA	1.10	1.22	1.24	0.99	1.28	1.25	1.32	3.55	1.65	1.66	0.86
Laboratory pH (Standard Units)	7.78	7.12	6.88	7.12	7.42	7.32	7.42	7.32	7.45	7.13	7.10	7.30
Laboratory Total Phosphorus (mg/L)	ND	ND	ND	ND	ND	ND	ND	ND	0.34	ND	ND	ND
Laboratory Suspended Solids (mg/L)	ND	ND	21.00	ND	ND	5.00	ND	ND	8.00	ND	7.00	45.00
Lab. Fecal Coliform Bacteria (colonies/L)	3	40	17	5	90	31	18	7	260	11	3	2500
Stream Flow Estimate (CFS/GPM)	3.00 1365	9.70 4355	68.40 30691	30.80 13814	2.40 1070	18.00 8061	2.20 1001	12.30 5542	1.60 736	17.40 7812	26.60 11941	51.20 22978

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PINE CREEK WATERSHED STUDY

Station # 3 TRIBUTARY TO PINE CREEK ALONG ORCHARD ROAD

PHYSICOCHEMICAL PARAMETER	Fall 1998	Spring 1999	Storm Event	Spring 2000	Fall 2000	Spring 2001	Fall 2001	Spring 2002	Sum. 2002	Fall 2002	Spring 2003	Fall 2003
Field Water Temperature (Celsius)	4.70	8.80	13.20	7.30	11.30	9.80	9.70	9.10	NS	NS	NS	NS
Field Specific Conductance (microsiemens)	67.20	98.00	138.00	93.00	120.00	107.00	124.00	105.00	NS	NS	NS	NS
Field Dissolved Oxygen (mg/L)	8.20	6.93	5.69	7.43	8.44	10.10	8.18	8.73	NS	NS	NS	NS
Field pH (Standard Units)	7.58	7.42	7.22	7.51	7.46	7.49	7.26	7.25	NS	NS	NS	NS
Laboratory Acidity (mg/L)	ND	ND	ND	ND	ND	ND	40.00	ND	NS	NS	NS	NS
Laboratory Alkalinity (milligrams/Liter)	41.00	22.00	28.00	36.00	40.00	22.00	42.00	24.00	NS	NS	NS	NS
Laboratory Nitrates (milligrams/Liter)	NA	6.12	7.36	6.14	5.92	6.69	6.61	6.60	NS	NS	NS	NS
Laboratory pH (Standard Units)	7.70	7.50	7.41	7.43	7.73	7.55	7.70	7.64	NS	NS	NS	NS
Laboratory Total Phosphorus (mg/L)	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS
Laboratory Suspended Solids (mg/L)	ND	8.00	11.00	ND	ND	10.00	ND	6.00	NS	NS	NS	NS
Lab. Fecal Coliform Bacteria (colonies/L)	8	30	7	21	195	51	29	26	NS	NS	NS	NS
Stream Flow Estimate (CFS/GPM)	0.01 5	0.20 127	1.10 502	0.80 348	0.05 24	0.30 147	0.07 30	0.20 108	NS NS	NS NS	NS NS	NS NS

PINE CREEK WATERSHED STUDY

Station # 3A PINE CREEK - SOBOLEWSKI PROPERTY

PHYSICOCHEMICAL PARAMETER	Fall 1998	Spring 1999	Storm Event	Spring 2000	Fall 2000	Spring 2001	Fall 2001	Spring 2002	Sum. 2002	Fall 2002	Spring 2003	Fall 2003
Field Water Temperature (Celsius)								NS	20.20	NS	8.20	12.00
Field Specific Conductance (microsiemens)								NS	149.10	NS	102.10	79.50
Field Dissolved Oxygen (mg/L)								NS	7.62	NS	9.92	7.45
Field pH (Standard Units)								NS	6.75	NS	6.43	5.86
Laboratory Acidity (mg/L)								NS	ND	ND	ND	ND
Laboratory Alkalinity (milligrams/Liter)								NS	22.00	14.00	10.00	14.00
Laboratory Nitrates (milligrams/Liter)								NS	1.96	1.41	1.96	0.70
Laboratory pH (Standard Units)								NS	7.47	7.12	7.00	7.20
Laboratory Total Phosphorus (mg/L)								NS	0.15	ND	ND	ND
Laboratory Suspended Solids (mg/L)								NS	6.00	ND	8.00	53.00
Lab. Fecal Coliform Bacteria (colonies/L)								NS	380	14	2	4500
Stream Flow Estimate (CFS/GPM)								NS	1.40	12.50	28.90	56.30
								NS	606	5609	12950	25275

PINE CREEK WATERSHED STUDY

Station # 4 PINE CREEK AT HOLLY ROAD AND ROUTE 54

PHYSICOCHEMICAL PARAMETER	Fall 1998	Spring 1999	Storm Event	Spring 2000	Fall 2000	Spring 2001	Fall 2001	Spring 2002	Sum. 2002	Fall 2002	Spring 2003	Fall 2003
Field Water Temperature (Celsius)	2.10	10.40	13.50	7.40	11.40	10.80	8.50	9.10	20.20	6.20	8.70	12.20
Field Specific Conductance (microsiemens)	65.70	103.00	94.00	83.00	110.00	100.00	112.00	97.60	135.10	95.30	101.60	75.60
Field Dissolved Oxygen (mg/L)	9.09	9.58	5.62	7.66	7.98	10.82	8.45	9.05	7.97	10.43	9.77	7.54
Field pH (Standard Units)	7.13	7.03	6.72	7.12	7.01	7.11	7.04	6.71	6.98	6.54	6.36	5.99
Laboratory Acidity (mg/L)	ND	ND	ND	ND	ND	ND	22.00	ND	ND	ND	ND	ND
Laboratory Alkalinity (milligrams/Liter)	14.00	12.00	12.00	8.00	20.00	10.00	20.00	10.00	18.00	12.00	8.00	12.00
Laboratory Nitrates (milligrams/Liter)	NA	1.04	0.68	1.06	0.88	0.94	1.09	1.12	1.07	1.11	1.07	0.66
Laboratory pH (Standard Units)	7.36	7.13	6.82	7.17	7.35	7.27	7.25	7.25	7.42	7.18	7.00	7.20
Laboratory Total Phosphorus (mg/L)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Laboratory Suspended Solids (mg/L)	ND	ND	14.00	ND	ND	ND	ND	ND	ND	ND	ND	48.00
Lab. Fecal Coliform Bacteria (colonies/L)	7	130	220	16	1500	20	900	13	490.00	19	1	2300
Stream Flow Estimate (CFS/GPM)	2.80 1242	9.30 4200	61.10 27410	27.70 12422	2.50 1131	18.20 8174	2.30 1017	14.30 6420	1.50 662	15.10 6770	29.00 13033	52.70 23650

PINE CREEK WATERSHED STUDY

Station # 4A TRIBUTARY TO PINE CREEK AT HOLLY ROAD DOWNSTREAM

PHYSICOCHEMICAL PARAMETER	Fall 1998	Spring 1999	Storm Event	Spring 2000	Fall 2000	Spring 2001	Fall 2001	Spring 2002	Sum. 2002	Fall 2002	Spring 2003	Fall 2003
Field Water Temperature (Celsius)				8.00	11.10	11.80	8.60	9.70	19.30	7.10	8.50	12.20
Field Specific Conductance (microsiemens)				87.00	112.00	100.00	109.00	98.20	133.00	95.40	91.80	76.70
Field Dissolved Oxygen (mg/L)				7.46	7.25	5.85	7.86	8.39	7.33	9.66	9.78	7.49
Field pH (Standard Units)				7.21	7.22	7.23	7.15	6.59	5.67	6.60	6.74	6.36
Laboratory Acidity (mg/L)				ND	ND	ND	28.00	ND	ND	ND	ND	ND
Laboratory Alkalinity (milligrams/Liter)				14.00	32.00	18.00	32.00	16.00	28.00	18.00	8.00	20.00
Laboratory Nitrates (milligrams/Liter)				3.27	2.83	3.69	3.46	3.92	3.16	4.00	4.19	1.56
Laboratory pH (Standard Units)				7.34	7.48	7.37	7.36	7.44	7.51	7.34	7.20	7.30
Laboratory Total Phosphorus (mg/L)				ND	ND	ND	ND	ND	ND	ND	ND	ND
Laboratory Suspended Solids (mg/L)				ND	ND	ND	ND	ND	6.00	ND	ND	34.00
Lab. Fecal Coliform Bacteria (colonies/L)				80	180	870	4000	29	3000	60	280	1500
Stream Flow Estimate (CFS/GPM)				1.50 693	0.10 65	0.70 334	0.10 53	0.60 246	0.03 15	0.80 288	1.80 818	2.90 1315

PINE CREEK WATERSHED STUDY

Station # 4B TRIBUTARY TO PINE CREEK AT HOLLY ROAD UPSTREAM

PHYSICOCHEMICAL PARAMETER	Fall 1998	Spring 1999	Storm Event	Spring 2000	Fall 2000	Spring 2001	Fall 2001	Spring 2002	Sum. 2002	Fall 2002	Spring 2003	Fall 2003
Field Water Temperature (Celsius)				NS	10.70	12.00	NS	NS	NS	NS	NS	NS
Field Specific Conductance (microsiemens)				NS	105.00	101.00	NS	NS	NS	NS	NS	NS
Field Dissolved Oxygen (mg/L)				NS	7.26	12.90	NS	NS	NS	NS	NS	NS
Field pH (Standard Units)				NS	6.98	7.02	NS	NS	NS	NS	NS	NS
Laboratory Acidity (mg/L)				NS	ND	ND	NS	NS	NS	NS	NS	NS
Laboratory Alkalinity (milligrams/Liter)				NS	24.00	16.00	NS	NS	NS	NS	NS	NS
Laboratory Nitrates (milligrams/Liter)				NS	3.70	3.93	NS	NS	NS	NS	NS	NS
Laboratory pH (Standard Units)				NS	7.39	7.34	NS	NS	NS	NS	NS	NS
Laboratory Total Phosphorus (mg/L)				NS	ND	ND	NS	NS	NS	NS	NS	NS
Laboratory Suspended Solids (mg/L)				NS	ND	ND	NS	NS	NS	NS	NS	NS
Lab. Fecal Coliform Bacteria (colonies/L)				NS	225	9	NS	NS	NS	NS	NS	NS
Stream Flow Estimate (CFS/GPM)				NS	0.07	0.60	NS	NS	NS	NS	NS	NS
				NS	30	247	NS	NS	NS	NS	NS	NS

PINE CREEK WATERSHED STUDY

Station # 5 PINE CREEK UPSTREAM OF HOLLY ROAD AND ROUTE 54

PHYSICOCHEMICAL PARAMETER	Fall 1998	Spring 1999	Storm Event	Spring 2000	Fall 2000	Spring 2001	Fall 2001	Spring 2002	Sum. 2002	Fall 2002	Spring 2003	Fall 2003
Field Water Temperature (Celsius)	3.50	10.40	14.70	8.30	11.60	12.70	8.60	9.90	20.30	6.40	9.30	11.90
Field Specific Conductance (microsiemens)	36.60	102.40	97.00	86.00	104.00	121.00	113.00	102.50	134.70	93.20	99.10	76.10
Field Dissolved Oxygen (mg/L)	8.80	6.64	5.42	7.58	7.87	9.30	8.80	8.74	8.79	10.03	9.79	7.61
Field pH (Standard Units)	7.08	6.94	6.67	6.99	7.15	6.75	6.98	6.69	7.10	6.41	6.42	5.68
Laboratory Acidity (mg/L)	ND	ND	ND	ND	ND	ND	24.00	ND	ND	ND	ND	ND
Laboratory Alkalinity (milligrams/Liter)	22.00	10.00	10.00	12.00	28.00	10.00	22.00	10.00	18.00	12.00	8.00	10.00
Laboratory Nitrates (milligrams/Liter)	NA	0.88	1.00	0.97	0.88	0.92	1.10	1.02	1.02	1.06	1.10	0.56
Laboratory pH (Standard Units)	7.30	7.11	6.83	7.02	7.40	7.20	7.30	7.25	7.43	7.14	7.00	7.30
Laboratory Total Phosphorus (mg/L)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Laboratory Suspended Solids (mg/L)	ND	ND	15.00	ND	ND	ND	ND	ND	ND	ND	6.00	41.00
Lab. Fecal Coliform Bacteria (colonies/L)	3	30	12	0	255	21	53	11	370	15	1	2800
Stream Flow Estimate (CFS/GPM)	3.00 1338	30.00 4551	12.00 22596	25.90 11643	2.70 1215	17.40 7790	2.20 982	12.10 5444	1.20 523	17.20 7727	26.90 12065	66.80 29962

PINE CREEK WATERSHED STUDY

Station # 6 UNNAMED TRIBUTARY TO PINE CREEK ALONG ROUTE 54

PHYSICOCHEMICAL PARAMETER	Fall 1998	Spring 1999	Storm Event	Spring 2000	Fall 2000	Spring 2001	Fall 2001	Spring 2002	Sum. 2002	Fall 2002	Spring 2003	Fall 2003
Field Water Temperature (Celsius)	3.20	9.00	14.60	9.30	11.30	12.80	9.50	10.10	19.60	8.40	NS	NS
Field Specific Conductance (microsiemens)	40.70	100.00	92.00	86.00	109.00	103.00	106.00	95.90	146.00	88.70	NS	NS
Field Dissolved Oxygen (mg/L)	9.92	9.14	5.92	7.43	7.79	10.40	9.08	9.99	7.27	9.11	NS	NS
Field pH (Standard Units)	7.34	6.97	6.83	7.41	7.09	7.25	7.23	6.94	6.46	6.69	NS	NS
Laboratory Acidity (mg/L)	ND	ND	ND	ND	ND	ND	26.00	ND	ND	ND	NS	NS
Laboratory Alkalinity (milligrams/Liter)	22.00	14.00	14.00	14.00	30.00	12.00	26.00	16.00	28.00	16.00	NS	NS
Laboratory Nitrates (milligrams/Liter)	NA	4.01	3.66	3.66	2.44	4.12	2.66	3.95	2.84	4.47	NS	NS
Laboratory pH (Standard Units)	7.66	7.22	6.99	7.30	7.71	7.13	7.64	7.64	7.46	7.31	NS	NS
Laboratory Total Phosphorus (mg/L)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS
Laboratory Suspended Solids (mg/L)	ND	ND	15.00	ND	ND	ND	ND	ND	8.00	8.00	NS	NS
Lab. Fecal Coliform Bacteria (colonies/L)	0	20	890	16	2300	8	13	145	173	5	NS	NS
Stream Flow Estimate (CFS/GPM)	0.01 5	0.09 44.2	3.10 1395	0.30 122	0.05 23	0.30 138	0.04 15	0.20 65	0.03 10	0.20 87	NS	NS

PINE CREEK WATERSHED STUDY

Station # 6A PINE CREEK UPSTREAM OF ROUTE 1020

PHYSICOCHEMICAL PARAMETER	Fall 1998	Spring 1999	Storm Event	Spring 2000	Fall 2000	Spring 2001	Fall 2001	Spring 2002	Sum. 2002	Fall 2002	Spring 2003	Fall 2003
Field Water Temperature (Celsius)				9.00	11.60	13.40	9.30	10.30	21.40	6.70	10.00	11.90
Field Specific Conductance (microsiemens)				85.00	101.00	116.00	105.00	98.60	133.00	89.90	104.40	72.70
Field Dissolved Oxygen (mg/L)				7.18	7.66	10.09	9.03	9.33	7.62	9.68	9.70	7.69
Field pH (Standard Units)				6.99	7.05	6.90	6.94	6.71	6.83	6.17	6.48	5.60
Laboratory Acidity (mg/L)				ND	ND	ND	18.00	ND	ND	ND	ND	ND
Laboratory Alkalinity (milligrams/Liter)				8.00	18.00	8.00	18.00	10.00	14.00	10.00	8.00	8.00
Laboratory Nitrates (milligrams/Liter)				0.90	0.86	0.86	1.02	0.91	0.97	0.91	0.92	0.48
Laboratory pH (Standard Units)				7.07	7.37	7.13	7.25	7.16	7.35	7.10	7.00	7.10
Laboratory Total Phosphorus (mg/L)				ND	ND	ND	ND	ND	ND	ND	ND	0.10
Laboratory Suspended Solids (mg/L)				ND	ND	6.00	ND	5.00	5.00	ND	ND	106.00
Lab. Fecal Coliform Bacteria (colonies/L)				1	35	13	12	24	47	9	4	1800
Stream Flow Estimate (CFS/GPM)				25.10 11248	2.50 1112	16.70 499	1.30 572	12.20 5485	2.10 936	13.30 5971	34.70 15587	88.00 39511

PINE CREEK WATERSHED STUDY

Station # 7 HOSENSOCK RUN AT ROUTE 54

PHYSICOCHEMICAL PARAMETER	Fall 1998	Spring 1999	Storm Event	Spring 2000	Fall 2000	Spring 2001	Fall 2001	Spring 2002	Sum. 2002	Fall 2002	Spring 2003	Fall 2003
Field Water Temperature (Celsius)	3.80	12.90	15.30	10.10	12.90	14.40	10.90	11.90	24.90	6.80	11.70	11.40
Field Specific Conductance (microsiemens)	79.60	126.60	106.00	110.00	115.00	141.00	116.00	154.70	167.00	100.50	132.40	98.30
Field Dissolved Oxygen (mg/L)	7.97	8.30	6.13	7.77	6.72	7.52	7.70	9.40	5.85	10.33	9.78	2.53
Field pH (Standard Units)	6.80	6.70	6.55	7.03	6.81	6.66	6.66	6.15	6.36	6.21	6.23	5.88
Laboratory Acidity (mg/L)	ND	ND	ND	ND	ND	ND	18.00	ND	14.00	ND	ND	ND
Laboratory Alkalinity (milligrams/Liter)	22.00	12.00	14.00	10.00	20.00	8.00	20.00	12.00	18.00	14.00	10.00	16.00
Laboratory Nitrates (milligrams/Liter)	NA	0.62	0.52	0.88	0.61	0.80	0.83	0.84	0.58	0.91	0.96	0.50
Laboratory pH (Standard Units)	7.18	6.82	6.80	7.08	7.22	6.80	6.90	7.22	7.01	7.25	6.90	7.20
Laboratory Total Phosphorus (mg/L)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Laboratory Suspended Solids (mg/L)	ND	ND	10.00	ND	ND	ND	ND	ND	8.00	ND	ND	23.00
Lab. Fecal Coliform Bacteria (colonies/L)	0	13	22	0	16	15	33	<1	28	4	17	1600
Stream Flow Estimate (CFS/GPM)	1.30 589	4.70 2110	30.80 13836	12.30 5503	1.80 820	8.50 3806	0.90 416	6.30 2828	0.80 354	7.70 3449	12.10 5410	26.80 12042

PINE CREEK WATERSHED STUDY

Station # 8 TRIBUTARY TO PINE CREEK AT CRIST FARM

PHYSICOCHEMICAL PARAMETER	Fall 1998	Spring 1999	Storm Event	Spring 2000	Fall 2000	Spring 2001	Fall 2001	Spring 2002	Sum. 2002	Fall 2002	Spring 2003	Fall 2003
Field Water Temperature (Celsius)	4.10	8.50	14.20	10.50	10.40	13.20	8.60	10.70	17.90	7.10	NS	NS
Field Specific Conductance (microsiemens)	50.70	79.60	98.00	77.00	73.00	105.00	53.00	90.20	87.00	98.20	NS	NS
Field Dissolved Oxygen (mg/L)	8.45	6.50	5.55	6.93	7.31	8.10	8.28	8.49	8.15	9.69	NS	NS
Field pH (Standard Units)	7.10	6.90	7.02	7.08	6.94	7.10	6.82	6.60	6.69	6.30	NS	NS
Laboratory Acidity (mg/L)	ND	ND	ND	ND	ND	ND	30.00	ND	ND	ND	NS	NS
Laboratory Alkalinity (milligrams/Liter)	16.00	16.00	20.00	12.00	24.00	16.00	16.00	14.00	18.00	16.00	NS	NS
Laboratory Nitrates (milligrams/Liter)	NA	1.04	1.64	0.91	1.06	0.96	0.98	1.01	1.37	0.88	NS	NS
Laboratory pH (Standard Units)	7.41	7.09	7.14	7.12	7.27	7.29	7.16	7.35	7.45	7.35	NS	NS
Laboratory Total Phosphorus (mg/L)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS
Laboratory Suspended Solids (mg/L)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS
Lab. Fecal Coliform Bacteria (colonies/L)	6	30	15	90	85	36	18	5	54	35	NS	NS
Stream Flow Estimate (CFS/GPM)	0.20 68	0.90 384	1.61 724	2.00 889	0.30 113	1.00 436	0.08 38	0.90 385	0.10 44	0.70 298	NS NS	NS NS



PINE CREEK WATERSHED STUDY

Station # 9 PINE CREEK DOWNSTREAM OF CRIST FARM

PHYSICOCHEMICAL PARAMETER	Fall 1998	Spring 1999	Storm Event	Spring 2000	Fall 2000	Spring 2001	Fall 2001	Spring 2002	Sum. 2002	Fall 2002	Spring 2003	Fall 2003
Field Water Temperature (Celsius)	2.80	8.30	14.10	8.70	10.50	12.00	9.20	9.60	17.70	7.00	9.60	12.30
Field Specific Conductance (microsiemens)	69.20	75.00	89.00	65.00	83.00	91.00	92.00	81.20	98.20	81.80	82.90	53.60
Field Dissolved Oxygen (mg/L)	11.10	6.44	5.94	7.31	8.16	8.10	9.54	8.82	8.21	10.32	9.59	7.94
Field pH (Standard Units)	6.67	6.59	6.55	6.62	6.73	6.66	6.64	6.30	6.49	5.89	6.23	6.82
Laboratory Acidity (mg/L)	ND	ND	ND	ND	ND	ND	14.00	ND	ND	ND	ND	11.00
Laboratory Alkalinity (milligrams/Liter)	8.00	6.00	8.00	6.00	16.00	ND	12.00	8.00	10.00	6.00	ND	6.00
Laboratory Nitrates (milligrams/Liter)	NA	0.86	0.89	0.78	1.01	0.78	1.11	0.85	1.25	0.68	0.63	0.42
Laboratory pH (Standard Units)	7.02	6.77	6.65	6.63	6.95	7.01	7.08	6.93	7.10	6.92	7.50	6.90
Laboratory Total Phosphorus (mg/L)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.30
Laboratory Suspended Solids (mg/L)	9.00	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.00	124.00
Lab. Fecal Coliform Bacteria (colonies/L)	870	90	0	0	106	10	27	19	60	23	9	4200
Stream Flow Estimate (CFS/GPM)	1.10 491	4.90 2224	10.80 4838	11.60 5225	1.20 558	7.60 3400	1.00 434	4.80 2144	1.10 480	5.50 2459	11.70 5257	58.40 26221

PINE CREEK WATERSHED STUDY

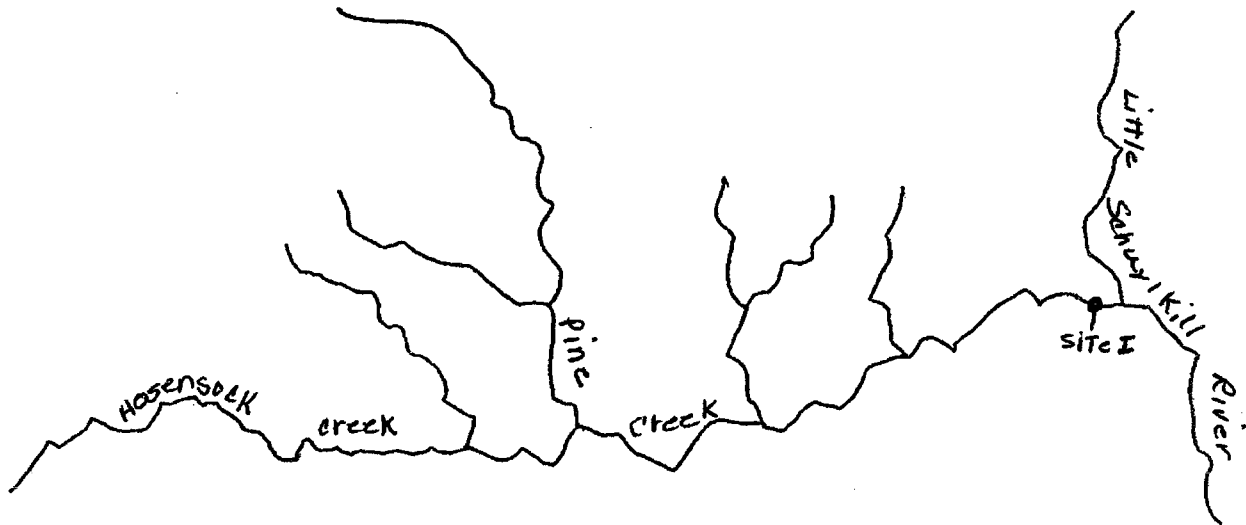
Station # 10 PINE CREEK AT TOWNSHIP BOUNDARY

PHYSICOCHEMICAL PARAMETER	Fall 1998	Spring 1999	Storm Event	Spring 2000	Fall 2000	Spring 2001	Fall 2001	Spring 2002	Sum. 2002	Fall 2002	Spring 2003	Fall 2003
Field Water Temperature (Celsius)	4.90	8.10	14.10	7.80	10.40	9.60	9.80	8.40	17.30	7.30	9.10	12.00
Field Specific Conductance (microsiemens)	85.50	117.10	109.00	63.00	96.00	90.00	128.00	80.70	119.10	83.40	84.60	72.10
Field Dissolved Oxygen (mg/L)	7.71	6.81	5.70	7.14	8.90	9.40	8.87	8.65	8.15	10.06	9.65	8.03
Field pH (Standard Units)	5.25	5.93	6.69	5.92	5.80	5.87	5.48	5.50	5.07	5.38	5.61	5.43
Laboratory Acidity (mg/L)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Laboratory Alkalinity (milligrams/Liter)	ND	ND	8.00	ND	8.00	ND	ND	ND	ND	ND	ND	16.00
Laboratory Nitrates (milligrams/Liter)	NA	0.51	0.89	0.58	0.91	0.48	0.76	0.62	0.62	ND	0.31	0.32
Laboratory pH (Standard Units)	5.92	5.72	6.65	6.01	6.08	5.81	5.55	5.91	5.37	6.14	5.90	6.70
Laboratory Total Phosphorus (mg/L)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.14
Laboratory Suspended Solids (mg/L)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.00	47.00
Lab. Fecal Coliform Bacteria (colonies/L)	0	0	34	0	33	52	1	71	8	800	3	2000
Stream Flow Estimate (CFS/GPM)	0.90 406	3.00 1354	7.00 3153	6.30 2846	0.70 319	4.40 1954	0.60 260	3.70 1649	0.50 221	4.10 1829	5.90 2635	41.60 18686

**FRIEND OF PINE CREEK
2003 WATER QUALITY SAMPLING RESULTS**

SITE I

	MAY 17	JUNE 26	JULY 28	AUG. 25	SEPT. 25
Field Water Temperature (Celsius)	10.3°C	68°F	72°F	72°F	62°F
Field Specific Conductance	90	90	110	110	90
Field pH	7.4	6.9	7.6	6.9	7.3
Field Air Temperature	53°F	90°F	72°F	82°F	66°F
Laboratory Nitrate-nitrogen	0.86 ppm	0.98 ppm	0.55 ppm	.84 ppm	.97 ppm
Laboratory Phosphate	0.15	0.30	0.32	N/A	.17
Laboratory Dissolved Oxygen	11.19	10.46	7.2	6.9	7.5
Stream Width	25' 4"	19' 11"	26' 3"	24'	29' 6"
H ₂ O Odors	NONE	NONE	NONE	NONE	NONE
H ₂ O Surface	NONE	NONE	NONE	NONE	NONE
Turbidity	Clear (2FTU)	Clear (6FTU)	Clear (1FTU)	Clear (3FTU)	Clear (4FTU)
Deposits	Slight silt	Slight silt	Slight silt	NONE	NONE

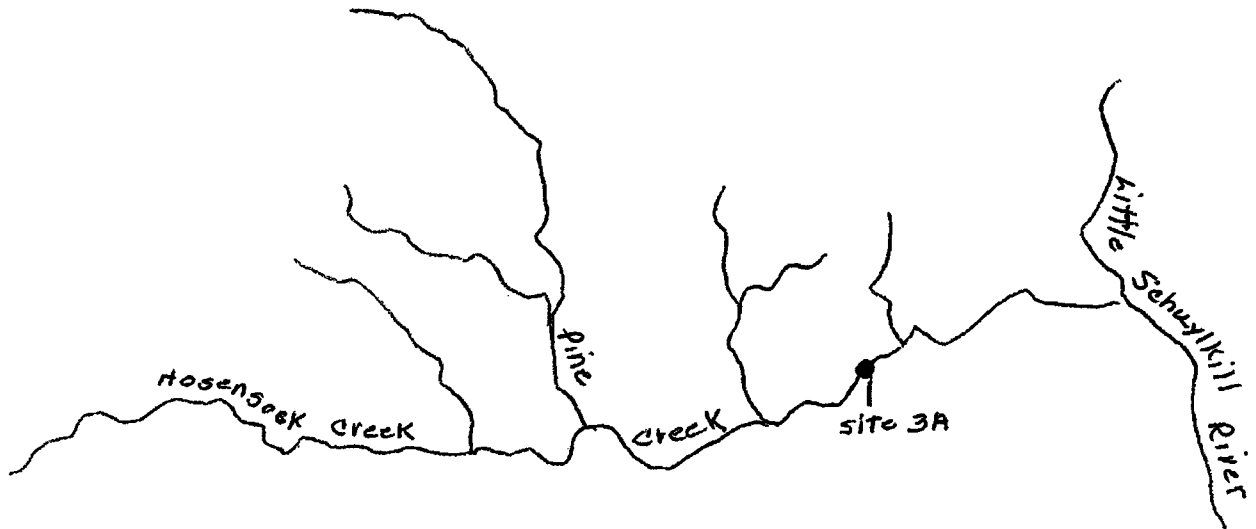


Site I - Pine creek upstream of The confluence with The Little Schuylkill River

**FRIEND OF PINE CREEK
2003 WATER QUALITY SAMPLING RESULTS**

SITE 3A

	MAY 17	JUNE 26	JULY 28	AUG. 25	SEPT. 25
Field Water Temperature (Celsius)	10.5 ^c	19.1 ^c	70 ^o F	70 ^o F	60 ^o F
Field Specific Conductance	100	96	110	90	96
Field pH	6.9	7.1	7.4	7.0	7.3
Field Air Temperature	55 ^o F	82 ^o F	82 ^o F	78 ^o F	74 ^o F
Laboratory Nitrate-nitrogen	1.11	0.95ppm	0.73ppm	1.30	.88
Laboratory Phosphate	0.57	0.18ppm	3.30	2.40	3.70
Laboratory Dissolved Oxygen	10.36	10.6	7.2	7	6.2
Stream Width	18' 8"	22' 8"	22' 11"	23' 2"	23'
H ₂ O Odors	NONE	NONE	NONE	NONE	NONE
H ₂ O Surface	NONE	NONE	NONE	NONE	NONE
Turbidity	clear (10FTU)	slight (0FTU)	clear (1FTU)	clear (3FTU)	clear (5FTU)
Deposits	Slight silt	NONE	slight silt	NONE	NONE

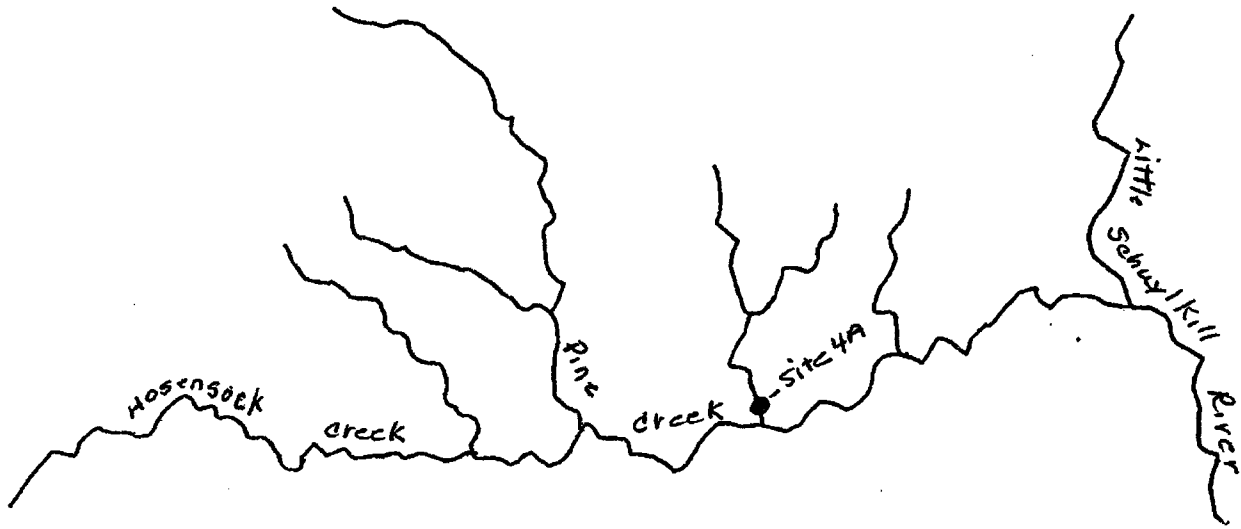


Site A - Pine Creek on The Sobolewski Property

**FRIEND OF PINE CREEK
2003 WATER QUALITY SAMPLING RESULTS**

SITE 4A

	MAY 17	JUNE 26	JULY 28	AUG. 25	SEPT. 25
Field Water Temperature (Celsius)	9.6°C	13.6°C	60°F	63°F	58°F
Field Specific Conductance	90	90	100	100	100
Field pH	7.1	6.9	6.8	6.9	6.9
Field Air Temperature	41°F	76°F	80°F	80°F	70°F
Laboratory Nitrate-nitrogen	3 ppm	2.23 ppm	3.60 ppm	2.80 ppm	2.5 ppm
Laboratory Phosphate	0.21 ppm	0.11 ppm	0.28 ppm	2.70 ppm	.11 ppm
Laboratory Dissolved Oxygen	10.53	12.40	8.1	6.7	6.5
Stream Width	7' 10"	11' 4"	9' 5"	6' 10"	8' 10"
H ₂ O Odors	Sewerage	NONE	Sewerage	NONE	NONE
H ₂ O Surface	NONE	NONE	NONE	NONE	NONE
Turbidity	clear (1 FTU)	slight (1 FTU)	NONE (3 FTU)	clear (4 FTU)	clear (3 FTU)
Deposits	silt	SAND, MOSS	SAND	SILT	SILT

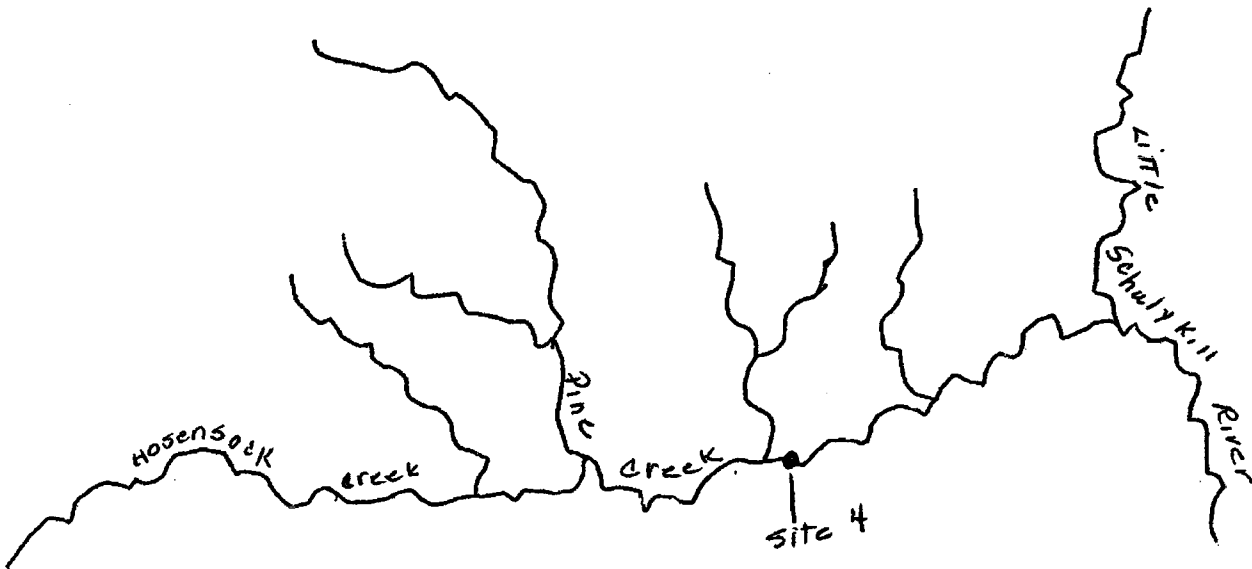


Site 4A - Holly Road Tributary (Rodger's Run) to Pine Creek

**FRIEND OF PINE CREEK
2003 WATER QUALITY SAMPLING RESULTS**

SITE 4

	MAY 17	JUNE 26	JULY 28	AUG. 25	SEPT. 25
Field Water Temperature (Celsius)	10.4°	19.3°C	72°F	72°F	62°F
Field Specific Conductance	100.10	90	100	100	90
Field pH	6.9	6.8	6.9	6.9	6.9
Field Air Temperature	51°F	82°F	72°F	76°F	62°F
Laboratory Nitrate-nitrogen	0.71ppm	0.72ppm	0.41ppm	0.56ppm	0.73ppm
Laboratory Phosphate	0.08ppm	0.10ppm	0.29ppm	0.70ppm	0.07ppm
Laboratory Dissolved Oxygen	10.85	10.12	7.2	6.5	6.5
Stream Width	26' 2"	21' 10"	19' 10"	18' 10"	23'
H ₂ O Odors	NONE	NONE	NONE	NONE	NONE
H ₂ O Surface	NONE	NONE	NONE	NONE	NONE
Turbidity	clear (4FTU)	clear (0FTU)	clear (4FTU)	clear (2FTU)	clear (6FTU)
Deposits	SILT	SAND	SAND	SAND	SAND

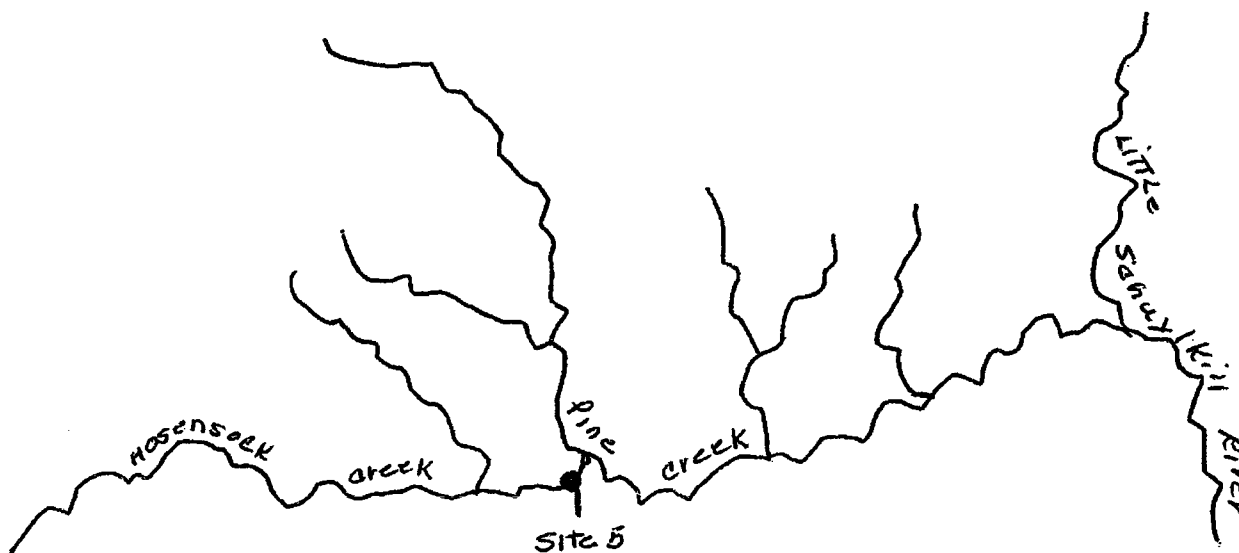


site 4 - Pine Creek Directly ACROSS From Sewerage Treatment Plant.

**FRIEND OF PINE CREEK
2003 WATER QUALITY SAMPLING RESULTS**

SITE 5

	MAY 17	JUNE 26	JULY 28	AUG. 25	SEPT. 25
Field Water Temperature (Celsius)	12.2°C	22.2°C	80°F	79°F	63°F
Field Specific Conductance	130	100	110	90	100
Field pH	6.9	7.2	6.9	6.8	6.8
Field Air Temperature	53°F	82°F	72°F	78°F	64°F
Laboratory Nitrate-nitrogen	0.42 ppm	0.49 ppm	0.28 ppm	0.31 ppm	0.39 ppm
Laboratory Phosphate	0.00 ppm	0.09 ppm	0.06 ppm	0.22 ppm	0.07 ppm
Laboratory Dissolved Oxygen	9.43	12.22	6.8	6.9	6.5
Stream Width	11' 2"	15' 10"	7' 11"	8' 2"	10' 11"
H ₂ O Odors	NONE	NONE	NONE	NONE	NONE
H ₂ O Surface	NONE	NONE	NONE	NONE	NONE
Turbidity	clear (8FTU)	slight (1FTU)	clear (4FTU)	clear (3FTU)	clear (2FTU)
Deposits	sand	sand	sand	sand	foam

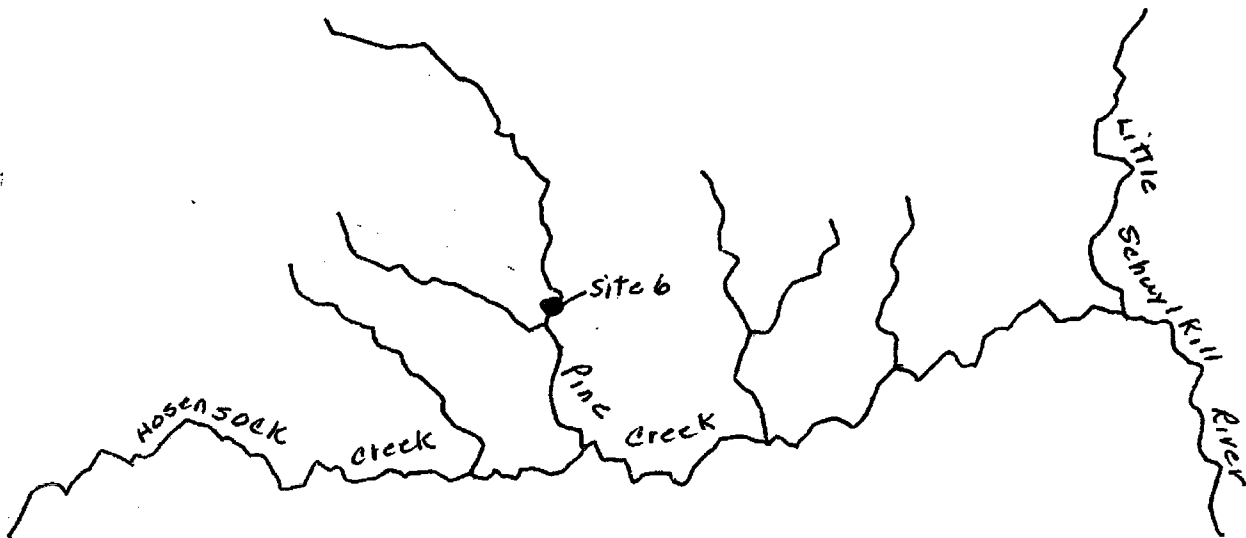


Site 5 - Hosensack Creek Tributary upstream of confluence of Pine Creek

**FRIEND OF PINE CREEK
2003 WATER QUALITY SAMPLING RESULTS**

SITE 6

	MAY 17	JUNE 26	JULY 28	AUG. 25	SEPT. 25
Field Water Temperature (Celsius)	52°F	64°F	68°F	70°F	60°F
Field Specific Conductance	140	70	100	110	70
Field pH	7.2	7.4	6.9	7.5	7.4
Field Air Temperature	49°F	90°F	70°F	78°F	63°F
Laboratory Nitrate-nitrogen	0.03 ppm	0.11 ppm	0.07 ppm	0.15 ppm	0.07 ppm
Laboratory Phosphate	0.04 ppm	0.06 ppm	0.09 ppm	0.33 ppm	0.09 ppm
Laboratory Dissolved Oxygen	10.4	7.2	6.7	6.5	6
Stream Width	33"	N/A	58"	1'8"	N/A
H ₂ O Odors	NONE	NONE	NONE	NONE	NONE
H ₂ O Surface	NONE	NONE	NONE	NONE	NONE
Turbidity	clear (9FTU)	clear (1FTU)	clear (3FTU)	clear (1FTU)	clear (9FTU)
Deposits	N/A	N/A	SAND	SAND/ROCKS	SAND

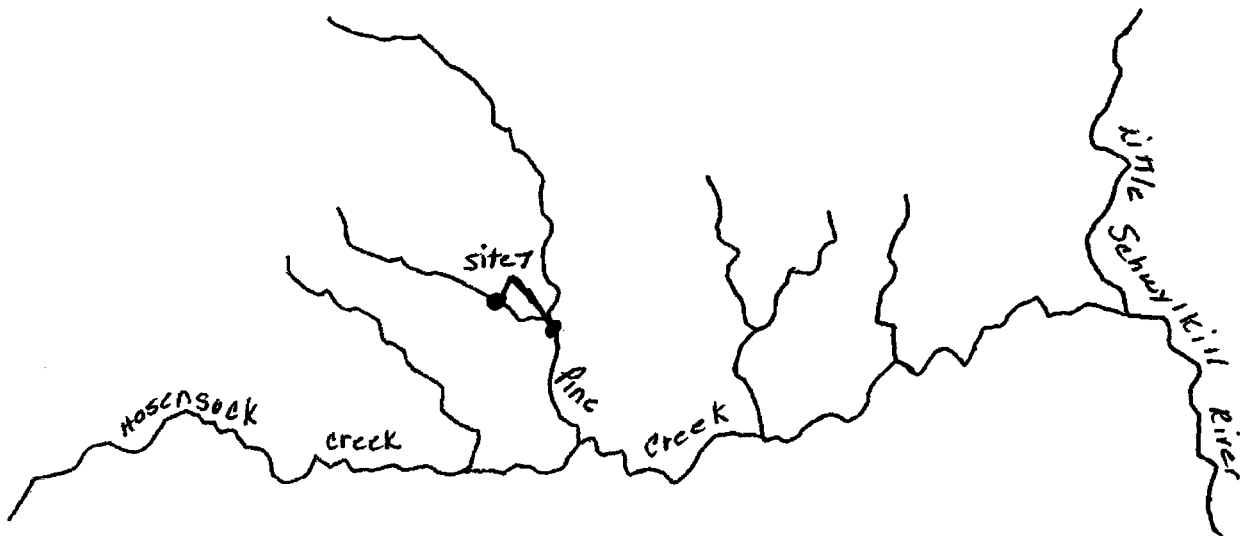


Site 6 - Delano East Tributary

**FRIEND OF PINE CREEK
2003 WATER QUALITY SAMPLING RESULTS**

SITE 7

	MAY 17	JUNE 26	JULY 28	AUG. 25	SEPT. 25
Field Water Temperature (Celsius)	50°F	64°F	60°F	61°F	60°F
Field Specific Conductance	90	60	70	60	60
Field pH	6.9	7.0	7.2	7.3	8.2
Field Air Temperature	50°F	78°F	68°F	70°F	62°F
Laboratory Nitrate-nitrogen	0.52 ppm	0.26 ppm	0.32 ppm	0.41 ppm	0.18 ppm
Laboratory Phosphate	0.17 ppm	0.14 ppm	0.11 ppm	0.43 ppm	0.28 ppm
Laboratory Dissolved Oxygen	10.0	8	6.2	6.3	6
Stream Width	54"	5'6"	48"	5'6"	10"
H ₂ O Odors	N/A	N/A	NONE	NONE	NONE
H ₂ O Surface	N/A	N/A	NONE	NONE	NONE
Turbidity	clear (3FTU)	clear (1FTU)	clear (0FTU)	clear (4FTU)	clear (9FTU)
Deposits	N/A	N/A	SAND, ROCKS	N/A	N/A

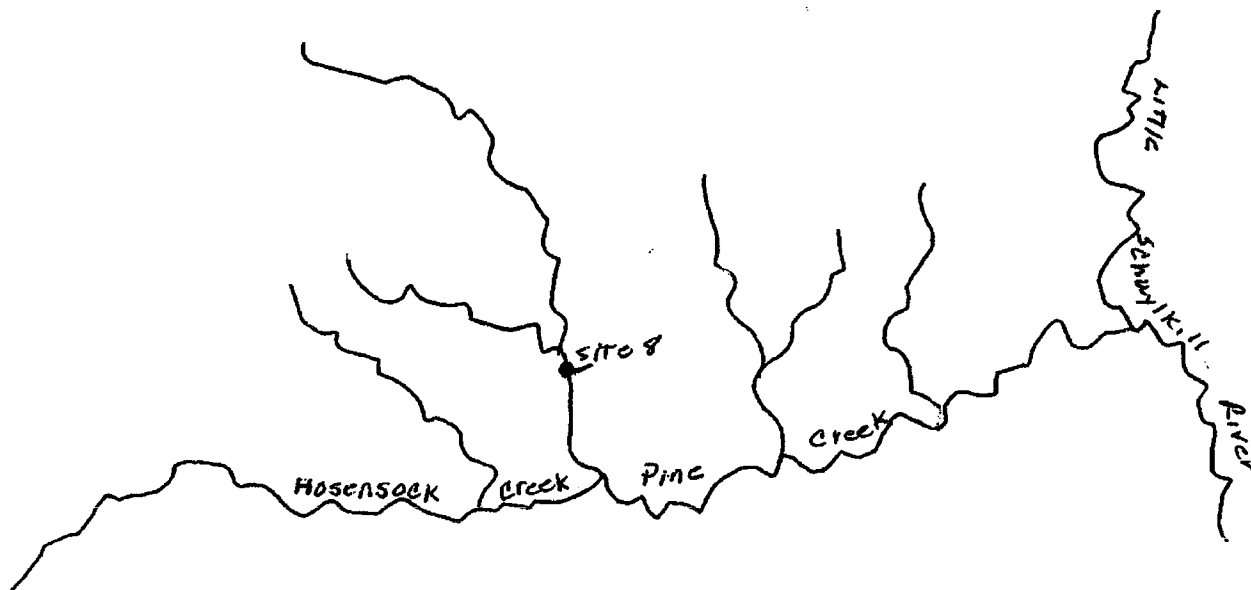


site 7 - Delano West Tributary AND Pine Creek

**FRIEND OF PINE CREEK
2003 WATER QUALITY SAMPLING RESULTS**

SITE 8

	MAY 17	JUNE 26	JULY 28	AUG. 25	SEPT. 25
Field Water Temperature (Celsius)	50°F	64°F	60°F	61°F	60°F
Field Specific Conductance	100	60	80	80	60
Field pH	7.2	7.0	7.2	6.6	7.8
Field Air Temperature	50°F	80°F	68°F	70°F	63°F
Laboratory Nitrate-nitrogen	0.71 ppm	0.15 ppm	0.26 ppm	0.38 ppm	0.16 ppm
Laboratory Phosphate	0.07 ppm	0.13 ppm	0.13 ppm	1.27 ppm	0.12 ppm
Laboratory Dissolved Oxygen	10.0	9	9	N/A	6
Stream Width	12'	16'	14'	14'	N/A
H ₂ O Odors	NONE	NONE	NONE	NONE	NONE
H ₂ O Surface	NONE	NONE	NONE	NONE	NONE
Turbidity	N/A	N/A	Clear (FTU)	Clear (FTU)	Clear (FTU)
Deposits	N/A	N/A	Sand, rocks	N/A	N/A



Site 8 - Grier City Bridge - Pine Creek