

Summary of Data
Produced by the Pennsylvania Senior Environmental Corps
(PaSEC)
Indiana County Chapter

For The Blacklick Creek Watershed
Collected 1998 to 2007

This work was done using the “Water Quality Monitoring Field Manual For The Pennsylvania Senior Environmental Corps” written by Nature Abounds in cooperation with the Pennsylvania Department of Environmental Protection and US EPA’s 319 Non-Point Source Program.

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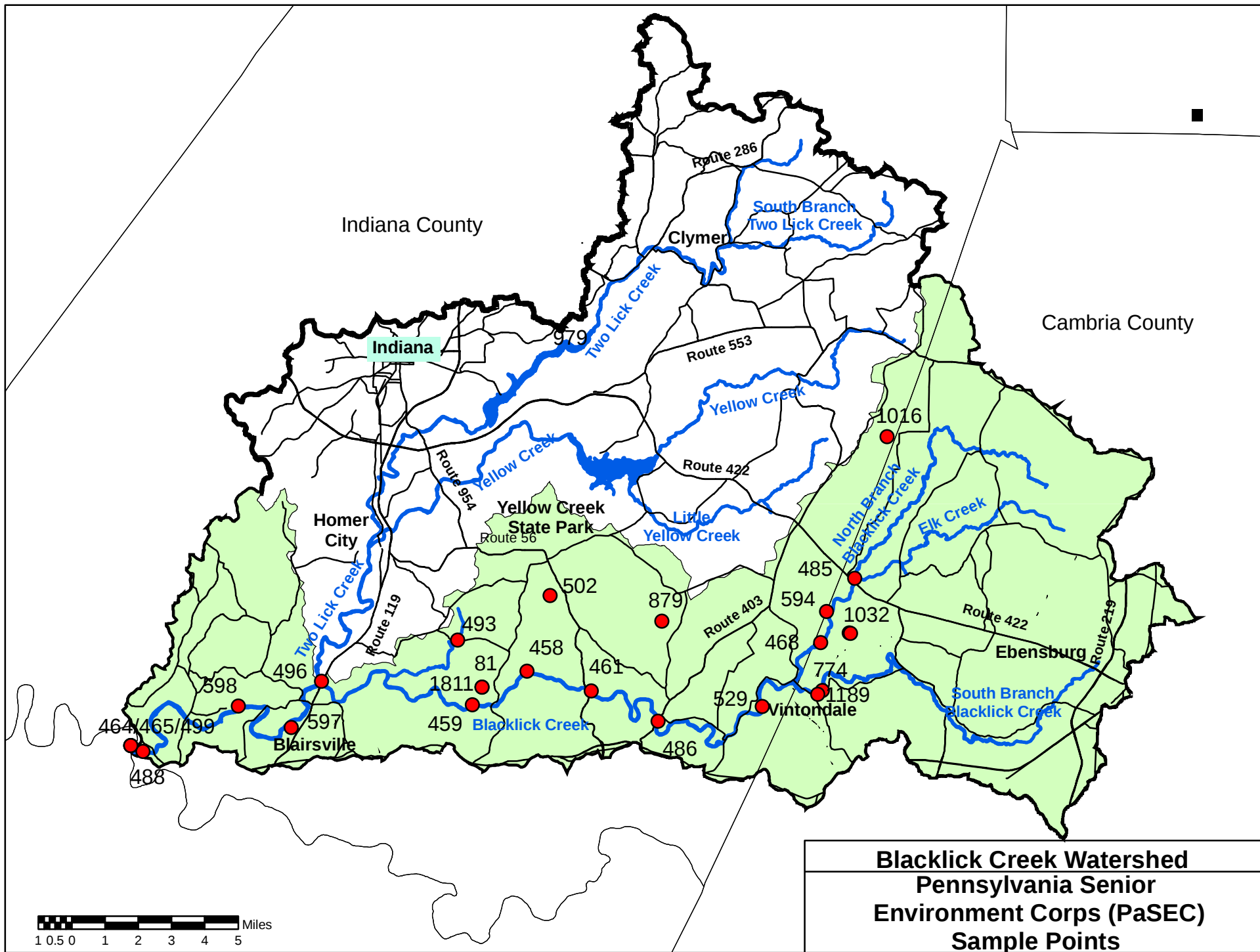
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BLACKLICK CREEK WATERSHED

SITE ID LOCATIONS

Site ID	Water Body Name
458	Brush Creek
459	Aulds Run
461	Oneida #1
464	South Branch of Blacklick Creek
465	North Branch of Blacklick Creek
468	Downey Run
478	Palmer Run
485	Elk Creek
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872	Walker Run
879	Downey Run
1016	Dutch Run
1032	Williams Run
1189	Shuman Run

Table 1
Summary of Data From The Pennsylvania Senior Environmental Corps (PaSEC)
Streams Located In The Blacklick Creek Watershed

[illegible]

Table 1
Summary Of Data From The Pennsylvanis Senior Environment Corps (PaSEC)
Streams Located In The Blacklick Creek Watershed
(Continued)

Water Body Name	Little Brush Creek	Mardis Run	Muddy Run	North Branch of Blacklick Creek	Oneida #1	Palmer Run	Ramsey Run	Rummel Run	Shuman Run	South Branch of Blacklick Creek
Site ID	502	486	598	465	461	478	823	529	1189	464
Stream Habitat Completed?	No	Yes	No	No	Yes	Yes	Yes	No	No	No
Macroinvertebrate Study Completed?	No	Yes	No	No	Yes	Yes	Yes	Yes	No	No
Water Quality Study Completed?	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes	No
Watershed Name	Blacklick Creek Watershed	Blacklick Creek Watershed	Blacklick Creek Watershed	Blacklick Creek Watershed	Blacklick Creek Watershed	Blacklick Creek Watershed	Blacklick Creek Watershed	Blacklick Creek Watershed	Blacklick Creek Watershed	Blacklick Creek Watershed
Township	Brush Valley	Buffington	Burrell	Buffington	Brush Valley	Burrel	White	Buffington		Jackson
County	Indiana	Indiana	Indiana	Indiana	Indiana	Indiana	Indiana	Indiana	Cambria	Indiana
State	PA	PA	PA	PA	PA	PA	PA	PA	PA	PA
Site Description Location	at Brush Valley	Dilltown		N. Branch Black Lick Creek @ Vintondale 706 0240	near Armagh - 1/2 mile north of Rt. 56 bridge	at Palmer Town near Blacklick	Ramsey Run Road, south 1 mile of East Pike Road	near wehrum, south of Blacklick Creek	1j50 ft. south from main street of Vintondale going out of town by Roberts Garage	S. Branch Black Lick Crrek @ Vintondale 7090 220
Stream Code DEP ID#	44445	44465	44010	43979	43979	44410	44249	44493	44619	43979
River Mile Index	2.8	22.16	5.6	16.44	16.44	1	13.82	31.02	0.92	16.44
Latitude	40.520556	40.466389	40.470556	40.452778	40.479167	40.475000	40.591667	40.473333	40.478889	40.452778
Longitude	-79.063333	-70.000833	-79.240278	-79.301389	-79.039167	-78.150000	-79.110833	-78.941389	-78.910000	-79.301389
Type of Water Body	stream	stream	stream	stream	stream	stream	stream	stream	stream	stream

Table 1
Summary Of Data From The Pennsylvanis Senior Environment Corps (PaSEC)
Streams Located In The Blacklick Creek Watershed
(Continued)

Water Body Name	Stewart Run	Two Lick	Walker Run	Weir Run	Williams Run
Site ID	488	496	872	597	1032
Stream Habitat Completed?	No	No	Yes	No	No
Macroinvertebrate Study Completed?	No	No	Yes	No	No
Water Quality Study Completed?	Yes	No	No	No	No
Watershed Name	Blacklick Creek Watershed	Blacklick Creek Watershed	Blacklick Creek Watershed	Blacklick Creek Watershed	Blacklick Creek Watershed
Township	Black Lick	Center	Black Lick	Burrell	Jackson Township
County	Indiana	Indiana	Cambria	Indiana	Cambria
State	PA	PA	PA	PA	PA
Site Description Location	near Blairsville	near Josephine	between Twin Rocks and Red Mill parking lot of State Game Lands #79 - Strongstown Quadrangle	Near Blacklick Rt. #119-TR #515	SGL 79 - parking lot above Red Mill
Stream Code DEP ID#	43980	44073	44511	44049	44648
River Mile Index	40	10.72	2.08	8.38	12.8
Latitude	40.450278	40.481944	40.505278	40.461667	40.505556
Longitude	-79.294444	-79.193056	-78.892222	-79.210000	-78.891667
Type of Water Body	stream	stream	stream	stream	stream

Table 2
Summary Of Data From Pennsylvania Senior Environment Corps (PaSEC)
Stream Habitat Evaluation Of The Blacklick Creek Watershed

Water Body Name	Aulds Run	Aulds Run	Aulds Run	Aulds Run	Aulds Run	Aulds Run	Brush Creek	Brush Creek	Brush Creek	Brush Creek	Brush Creek
Site ID	459	811	811	811	811	811	458	458	458	458	458
Monitor Date	10/8/1998	10/2/2001	5/6/2004	10/26/2006	5/3/2007	10/18/2007	10/2/2001	5/29/2003	10/16/2003	11/9/2006	5/10/2007
Stream Code DEP ID#	44421	44421	44421	44421	44421	44421	44430	44430	44430	44430	44430
River Mile Index	17.26	18.26	18.26	18.26	18.26	18.26	19.44	19.44	19.44	19.44	19.44
Type of Water Body	stream	stream	stream	stream	stream	stream	stream	stream	stream	stream	stream
Length of Assessed Area	1.9	10	10	10	10	10	22.5	22.5	22.5	22.5	22.5
Features											
Attachment Sites for Macroinvertebrates	16	18	20	18	18	15	13	17	20	18	18
Embeddedness	20	14	20	18	16	16	13	17	19	18	15
Shelter for Fish and Macroinvertebrates	18	13	20	15	13	15	14	16	20	20	18
Channel Alteration	13	17	20	16	14	18	16	18	20	20	18
Sediment Deposition	0	18	18	18	18	15	18	16	18	15	15
Stream Velocity and Depth Combinations	12	14	18	18	18	15	16	18	18	16	18
Channel Flow Status	15	15	15	16	18	10	12	15	20	15	18
Bank Vegetative Protection - Left Bank	4	9	10	10	9	8	7	10	10	10	10
Bank Vegetative Protection - Right Bank	5	9	9	10	9	10	7	10	10	10	10
Bank Condition - Left Bank	0	8	10	8	8	8	8	8	8	8	8
Bank Condition - Right Bank	0	8	8	8	8	8	7	8	8	8	8
Riparian Width - Left Bank	5	6	10	10	5	10	7	10	10	10	10
Riparian Width - Right Bank	5	6	10	10	5	10	7	10	10	10	10
Total (out of possible 200)	113	155	188	175	159	158	145	173	191	178	176

NOTE: A description of the criteria can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 2
Summary Of Data From Pennsylvania Senior Environmental Corps (PaSEC)
Stream Habitat Evaluation Of the Blacklick Creek Watershed
(Continued)

Water Body Name	Carney Run	Carney Run	Carney Run	Laurel Run	Laurel Run	Laurel Run	Laurel Run	Laurel Run	Mardis Run	Oneida #1	Oneida #1
Site ID	594	594	594	493	493	493	493	493	486	461	461
Monitor Date	10/4/2001	5/25/2006	4/19/2007	10/16/2003	3/11/2004	10/5/2006	5/3/2007	10/18/2007	10/15/1998	9/10/1998	9/10/1998
Stream Code DEP ID#	44512	44512	44512	44410	44410	44410	44410	44410	44465	43979	43979
River Mile Index	3.02	3.02	3.02	13.58	13.58	13.58	13.58	13.58	22.16	16.44	16.44
Type of Water Body	stream	stream	stream	stream	stream	stream	stream	stream	stream	stream	stream
Length of Assessed Area	10	10	10	4.09	4.09	4.09	4.09	4.09	2.96	5	5
Features											
Attachment Sites for Macroinvertebrates	10	18	18	18	20	16	15	16	19	20	20
Embeddedness	10	18	16	15	20	14	16	13	13	10	20
Shelter for Fish and Macroinvertebrates	13	15	15	10	10	15	15	16	18	18	20
Channel Alteration	18	18	18	18	20	14	14	13	15	20	20
Sediment Deposition	15	18	18	16	20	14	16	10	5	10	15
Stream Velocity and Depth Combinations	13	16	15	15	15	16	16	15	15	20	18
Channel Flow Status	10	15	15	19	20	14	15	10	15	10	10
Bank Vegetative Protection - Left Bank	9	10	10	10	10	10	9	10	10	10	10
Bank Vegetative Protection - Right Bank	9	8	10	10	8	10	10	10	10	10	10
Bank Condition - Left Bank	6	6	8	9	8	7	8	8	10	8	7
Bank Condition - Right Bank	8	8	8	9	6	7	6	8	10	8	7
Riparian Width - Left Bank	7	8	8	10	10	10	9	10	3	10	10
Riparian Width - Right Bank	6	8	8	10	10	10	9	10	3	10	10
Total (out of possible 200)	134	166	167	169	177	157	158	149	146	164	177

NOTE: A description of the criteria can be found in the
 "Water Quality Monitoring Field Manual For The
 Pennsylvania Senior Environment Corps", page 72

Table 2
Summary Of Data From Pennsylvania Senior Environmental Corps (PaSEC)
Stream Habitat Evaluation Of the Blacklick Creek Watershed
(Continued)

Water Body Name	Oneida #1	Palmer Run	Ramsey Run	Walker Run
Site ID	461	478	823	872
Monitor Date	9/10/1998	9/3/1998	6/8/2006	6/2/2005
Stream Code DEP ID#	43979	44410	44249	44511
River Mile Index	16.44	1	13.82	2.08
Type of Water Body	stream	stream	stream	stream
Length of Assessed Area	5	5	10	30
Features				
Attachment Sites for Macroinvertebrates	0	18	18	20
Embeddedness	0	19	18	20
Shelter for Fish and Macroinvertebrates	0	20	20	20
Channel Alteration	0	18	15	20
Sediment Deposition	0	15	18	15
Stream Velocity and Depth Combinations	0	10	18	15
Channel Flow Status	0	10	14	10
Bank Vegetative Protection - Left Bank	0	10	8	10
Bank Vegetative Protection - Right Bank	0	10	10	10
Bank Condition - Left Bank	0	5	8	8
Bank Condition - Right Bank	0	5	6	8
Riparian Width - Left Bank	0	10	10	8
Riparian Width - Right Bank	0	5	10	8
Total (out of possible 200)	0	155	173	172

NOTE: A description of the criteria can be found in the
 "Water Quality Monitoring Field Manual For The
 Pennsylvania Senior Environment Corps", page 72

Table 3
Summary Of Data From Pennsylvania Environment Corps (PaSEC)
Macroinvertebrate Study Of Aulds Run
Site ID's 459 nd 811

Water Body Name	Aulds Run	Aulds Run	Aulds Run	Aulds Run	Aulds Run	Aulds Run	Aulds Run	Aulds Run
Site ID	459	811	811	811	811	811	811	811
Date	10/8/1998	9/14/2000	10/2/2001	4/18/2002	10/23/2002	4/10/2003	5/6/2004	10/7/2004
Length of Assessed Area	1.9	10	10	10	10	10	10	10
Stream Type								
Precipitation recent								
Precipitation current								
Stream Bottom								
silt sand gravel substrate								
vegetated bank margins								
snags and logs								
aquatic vegetation beds								
GROUP 1 - Sensitive								
gilled snails	0	1	0	0	0	0	0	0
helgrammites	0	15	7	15	6	2	11	3
mayfly nymphs	0	0	1	55	8	0	19	8
non net spinning caddisfly larvae	0	3	32	9	25	0	12	15
riffle beetle adults	0	0	0	0	0	0	0	0
stonefly nymphs	0	3	10	2	9	32	25	5
water penny larvae	0	3	0	0	0	0	0	1
GROUP 2 - Somewhat Sensitive								
alderfly larvae	0	0	0	0	0	0	0	0
Beetle Larvae	0	1	0	0	0	0	0	0
clams	0	0	0	0	0	0	0	0
crane fly larvae	0	3	0	3	6	0	4	1
crayfish	0	2	0	0	2	5	6	4
damselfly nymphs	0	0	10	0	0	1	0	0
dragonfly nymphs	0	0	0	0	0	1	0	0
fishfly larvae	0	0	0	0	0	0	0	0
net spinning caddisfly larvae	0	8	0	0	0	23	0	0
scuds	0	0	0	0	0	0	0	0
sowbugs	0	0	0	0	0	0	0	0
GROUP 3 - Tolerant								
blackfly larvae	0	0	0	0	0	0	0	0
leeches	0	0	0	0	0	0	0	0
midge larvae	0	4	0	0	0	0	0	0
snails	0	0	0	0	0	0	0	0
aquatic worms	0	0	0	0	0	0	0	0
Water Quality Score	0	39.6	24.6	24.4	27	23.6	28.8	32
Water Quality Rating	Poor	Fair	Fair	Fair	Fair	Fair	Fair	Fair

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 4
Summary of Data From Pennsylvania Senior Environment Corps (PaSEC)
Macroinvertebrate Study Of Aulds Run
Site ID's 459 and 811
(Continued)

Water Body Name	Aulds Run	Aulds Run	Aulds Run	Aulds Run	Aulds Run	Aulds Run
Site ID	811	811	811	811	811	811
Date	3/24/2005	4/13/2006	10/26/2006	5/3/2007	10/18/2007	4/29/2010
Length of Assessed Area	10	10	10	10	10	10
Stream Type		meandering	ol/riffle	meandering	meandering	meandering
Precipitation recent		rain	overcast	clear	clear	clear
Precipitation current		clear	overcast	clear	clear	clear
Stream Bottom		rocky	rocky	rocky	rocky	rocky
silt sand gravel substrate						
vegetated bank margins						
snags and logs						
aquatic vegetation beds						
GROUP 1 - Sensitive						
gilled snails	0	0	0	0	0	0
helgrammites	2	6	18	10	6	0
mayfly nymphs	14	0	12	17	13	26
non net spinning caddisfly larvae	9	27	33	14	12	15
rifle beetle adults	0	0	0	0	0	0
stonefly nymphs	25	45	13	70	3	23
water penny larvae	0	0	0	0	0	0
GROUP 2 - Somewhat Sensitive						
alderfly larvae	0	0	0	0	0	0
Beetle Larvae	0	0	0	0	0	0
clams	0	0	0	0	0	0
crane fly larvae	5	13	19	6	7	6
crayfish	1	1	11	13	14	5
damselfly nymphs	0	0	0	1	0	0
dragonfly nymphs	0	0	1	0	0	0
fishfly larvae	0	0	0	0	0	4
net spinning caddisfly larvae	0	0	0	30	8	0
scuds	0	0	0	0	0	0
sowbugs	0	0	0	0	0	0
GROUP 3 - Tolerant						
blackfly larvae	0	0	0	0	0	2
leeches	0	0	0	0	0	0
midge larvae	0	0	0	0	0	0
snails	0	0	0	0	0	0
aquatic worms	0	0	0	0	0	0
Water Quality Score	27.6	22.8	32.4	35.6	31	26.4
Water Quality Rating	Fair	Fair	Fair	Fair	Fair	Fair

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 4
Summary Of Data From Pennsylvania Environment Corps (PaSEC)
Macroinvertebrate Study Of Bracken Run
Site ID 468

Water Body Name	Bracken Run
Site ID	468
Date	4/7/2005
Length of Assessed Area	3
Stream Type	
Precipitation recent	
Precipitation current	
Stream Bottom	
silt sand gravel substrate	
vegetated bank margins	
snags and logs	
aquatic vegetation beds	
GROUP 1 - Sensitive	0
gilled snails	0
helgrammites	8
mayfly nymphs	7
non net spinning caddisfly larvae	0
riffle beetle adults	12
stonefly nymphs	3
water penny larvae	0
GROUP 2 - Somewhat Sensitive	
alderfly larvae	0
Beetle Larvae	0
clams	5
crane fly larvae	13
crayfish	0
damselfly nymphs	2
dragonfly nymphs	0
fishfly larvae	0
net spinning caddisfly larvae	0
scuds	0
sowbugs	0
GROUP 3 - Tolerant	
blackfly larvae	0
leeches	0
midge larvae	0
snails	0
aquatic worms	0
Water Quality Score	30.4
Water Quality Rating	Fair

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 5
Summary Of Data From Pennsylvania Environment Corps (PaSEC)
Macroinvertebrate Study Of Bracken Run
Site ID 774

Water Body Name	Bracken Run
Site ID	774
Date	4/24/2001
Length of Assessed Area	30
Stream Type	
Precipitation recent	
Precipitation current	
Stream Bottom	
silt sand gravel substrate	
vegetated bank margins	
snags and logs	
aquatic vegetation beds	
GROUP 1 - Sensitive	
gilled snails	0
helgrammites	0
mayfly nymphs	0
non net spinning caddisfly larvae	0
riffle beetle adults	0
stonefly nymphs	0
water penny larvae	0
GROUP 2 - Somewhat Sensitive	
alderfly larvae	0
Beetle Larvae	0
clams	0
crane fly larvae	0
crayfish	0
damselfly nymphs	0
dragonfly nymphs	0
fishfly larvae	0
net spinning caddisfly larvae	0
scuds	0
sowbugs	0
GROUP 3 - Tolerant	
blackfly larvae	0
leeches	0
midge larvae	0
snails	0
aquatic worms	0
Water Quality Score	0
Water Quality Rating	Poor

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 6
Summary Of Data From Pennsylvania Environment Corps (PaSEC)
Macroinvertebrate StudyOf Brush Creek
Site ID 458

Water Body Name	Brush Creek	Brush Creek	Brush Creek	Brush Creek	Brush Creek	Brush Creek	Brush Creek
Site ID	458	458	458	458	458	458	458
Date	6/17/1999	9/14/2000	5/17/2001	10/21/2001	4/18/2002	10/3/2002	5/29/2003
Length of Assessed Area	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Stream Type							
Precipitation recent							
Precipitation current							
Stream Bottom							
silt sand gravel substrate							
vegetated bank margins							
snags and logs							
aquatic vegetation beds							
GROUP 1 - Sensitive							
gilled snails	0	0	0	0	0	0	0
helgrammites	3	7	1	14	17	10	19
mayfly nymphs	9	1	28	15	26	9	65
non net spinning caddisfly larvae	9	12	16	18	7	25	4
riffle beetle adults	0	0	0	0	0	0	0
stonefly nymphs	0	6	0	12	0	5	2
water penny larvae	0	0	0	0	0	0	0
GROUP 2 - Somewhat Sensitive							
alderfly larvae	0	0	0	0	0	0	0
Beetle Larvae	2	3	0	0	0	0	0
clams	0	0	0	0	0	0	0
crane fly larvae	0	0	0	0	0	0	0
crayfish	2	4	2	1	1	5	8
damsel fly nymphs	0	0	0	0	0	0	20
dragonfly nymphs	0	0	0	0	0	0	0
fish fly larvae	0	0	0	0	0	0	0
net spinning caddisfly larvae	0	4	0	0	0	0	0
scuds	0	0	0	0	0	0	0
sowbugs	0	0	0	0	0	0	0
GROUP 3 - Tolerant							
black fly larvae	0	0	0	0	0	0	0
leeches	0	0	0	0	0	0	0
midge larvae	0	3	0	0	7	0	0
snails	0	0	0	0	0	0	0
aquatic worms	0	1	0	1	0	1	0
Water Quality Score	21.4	32.6	19.4	26.8	20.6	25.6	27.8
Water Quai ty Rating	Fair	Fair	Poor	Fair	Fair	Fair	Fair

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 6
Summary of Data From Pennsylvania Senior Environment Corps (PaSEC)
Macroinvertebrate Study
Site ID 458
(Continued)

Water Body Name	Brush Creek	Brush Creek	Brush Creek	Brush Creek	Brush Creek	Brush Creek	Brush Creek
Site ID	458	458	458	458	458	458	458
Date	10/16/2003	5/13/2004	10/21/2004	5/12/2005	4/20/2006	11/9/2006	5/10/2007
Length of Assessed Area	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Stream Type					pool/riffle	meandering	meandering
Precipitation recent					clear	overcast	clear
Precipitation current					clear	overcast	clear
Stream Bottom					rocky	rocky	rocky
silt sand gravel substrate							
vegetated bank margins							
snags and logs							
aquatic vegetation beds							
GROUP 1 - Sensitive							
gilled snails	0	0	0	0	0	0	0
helgrammites	10	8	5	4	4	5	12
mayfly nymphs	39	15	17	40	31	35	42
non net spinning caddisfly larvae	11	0	55	48	3	12	22
riffle beetle adults	0	0	0	0	0	0	0
stonefly nymphs	0	3	0	5	7	11	11
water penny larvae	0	1	0	0	0	0	0
GROUP 2 - Somewhat Sensitive							
alderfly larvae	0	0	0	0	0	0	0
Beetle Larvae	0	0	0	0	0	0	0
clams	0	1	0	0	0	0	0
crane fly larvae	0	1	1	0	6	2	4
crayfish	2	5	3	8	11	5	5
damselfly nymphs	0	0	0	1	0	0	0
dragonfly nymphs	0	1	0	0	0	1	0
fishfly larvae	0	0	0	0	0	0	0
net spinning caddisfly larvae	0	0	0	5	11	30	28
scuds	0	0	0	0	0	0	0
sowbugs	0	1	0	0	0	0	0
GROUP 3 - Tolerant							
blackfly larvae	0	0	0	0	0	0	0
leeches	0	0	0	0	0	0	0
midge larvae	0	1	0	0	0	0	0
snails	0	0	0	0	0	0	0
aquatic worms	0	0	1	1	0	0	0
Water Quality Score	18.2	31.4	23.8	37	30.6	34.8	32.2
Water Quaity Rating	Poor	Fair	Fair	Fair	Fair	Fair	Fair

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 7
Summary Of Data From Pennsylvania Environment Corps (PaSEC)
Macroinvertebrate Study Of Carney Run
Site ID 594

Water Body Name	Carney Run	Carney Run	Carney Run	Carney Run	Carney Run	Carney Run	Carney Run	Carney Run
Site ID	594	594	594	594	594	594	594	594
Date	6/10/1999	4/20/2000	10/4/2001	10/17/2002	4/17/2003	4/14/2005	5/25/2006	4/19/2007
Length of Assessed Area	10	10	10	10	10	10	10	10
Stream Type							meandering	meandering
Precipitation recent							clear	overcast
Precipitation current							showers	overcast
Stream Bottom							rocky	rocky
silt sand gravel substrate								
vegetated bank margins								
snags and logs								
aquatic vegetation beds								
GROUP 1 - Sensitive								
gilled snails	0	0	0	0	0	0	0	0
helgrammites	0	0	2	0	0	1	4	0
mayfly nymphs	4	26	0	6	10	8	10	42
non net spinning caddisfly larvae	25	0	5	8	5	4	17	0
riffle beetle adults	0	0	0	0	0	0	0	0
stonefly nymphs	0	34	5	13	6	5	16	33
water penny larvae	0	0	0	0	0	0	0	0
GROUP 2 - Somewhat Sensitive								
alderfly larvae	0	0	0	0	0	0	0	0
Beetle Larvae	0	0	0	0	0	0	0	0
clams	0	0	0	0	0	0	0	0
crane fly larvae	1	1	0	2	9	4	4	4
crayfish	6	10	2	4	9	8	12	5
damselfly nymphs	0	0	0	2	2	0	4	0
dragonfly nymphs			0	2	2	1	0	0
fishfly larvae	0	0	0	0	0	0	0	0
net spinning caddisfly larvae	0	0	2	0	0	0	0	47
scuds	0	0	0	0	0	0	0	0
sowbugs	0	0	0	0	0	0	0	0
GROUP 3 - Tolerant								
blackfly larvae	0	0	0	5	0	0	0	0
leeches	0	0	0	0	0	0	0	0
midge larvae	0	0	0	0	0	0	0	0
snails	0	0	0	0	0	0	0	0
aquatic worms	0	2	0	0	3	0	1	0
Water Quality Score	13.8	19	21.4	29.6	29.6	29.6	32.8	22.2
Water Quality Rating	Poor	Poor	Fair	Fair	Fair	Fair	Fair	Fair

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 8
Summary Of Data From Pennsylvania Environment Corps (PaSEC)
Macroinvertebrate Study Of Downey Run
Site ID 879

Water Body Name	Downey Run	Downey Run
Site ID	879	879
Date	9/9/1999	11/2/2000
Length of Assessed Area	10	10
Stream Type		
Precipitation recent		
Precipitation current		
Stream Bottom		
silt sand gravel substrate		
vegetated bank margins		
snags and logs		
aquatic vegetation beds		
GROUP 1 - Sensitive	0	0
gilled snails	5	0
helgrammites	1	0
mayfly nymphs	0	16
non net spinning caddisfly larvae	0	0
riffle beetle adults	1	17
stonefly nymphs	0	0
water penny larvae	0	0
GROUP 2 - Somewhat Sensitive		
alderfly larvae	0	0
Beetle Larvae	0	0
clams	2	11
crane fly larvae	4	3
crayfish	0	0
damselfly nymphs	0	0
dragonfly nymphs	0	0
fishfly larvae	0	0
net spinning caddisfly larvae	0	0
scuds	0	0
sowbugs	0	0
GROUP 3 - Tolerant		
blackfly larvae	0	0
leeches	0	0
midge larvae	0	0
snails	0	0
aquatic worms	0	0
Water Quality Score	21.4	20.2
Water Quality Rating	Fair	Fair

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 9
Summary Of Data From Pennsylvania Environment Corps (PaSEC)
Macroinvertebrate Study Of Dutch Run
Site ID 1016

Water Body Name	Dutch Run
Site ID	1016
Date	4/24/2003
Length of Assessed Area	10
Stream Type	
Precipitation recent	
Precipitation current	
Stream Bottom	
silt sand gravel substrate	
vegetated bank margins	
snags and logs	
aquatic vegetation beds	
GROUP 1 - Sensitive	
gilled snails	0
helgrammites	0
mayfly nymphs	100
non net spinning caddisfly larvae	0
riffle beetle adults	0
stonefly nymphs	0
water penny larvae	0
GROUP 2 - Somewhat Sensitive	
alderfly larvae	0
Beetle Larvae	0
clams	0
crane fly larvae	0
crayfish	4
damselfly nymphs	0
dragonfly nymphs	0
fishfly larvae	0
net spinning caddisfly larvae	0
scuds	0
sowbugs	0
GROUP 3 - Tolerant	
blackfly larvae	0
leeches	0
midge larvae	0
snails	0
aquatic worms	0
Water Quality Score	8.5
Water Quality Rating	Poor

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 10
Summary Of Data From Pennsylvania Environment Corps (PaSEC)
Macroinvertebrate Study Of Laurel Run
Site ID 493

Water Body Name	Laurel Run	Laurel Run	Laurel Run	Laurel Run	Laurel Run	Laurel Run	Laurel Run	Laurel Run
Site ID	493	493	493	493	493	493	493	493
Date	10/23/2002	10/16/2003	5/6/2004	10/7/2004	3/30/2005	3/30/2006	10/5/2006	5/3/2007
Length of Assessed Area	4.09	4.09	4.09	4.09	4.09	4.09	4.09	4.09
Stream Type						meandering	meandering	pool/riffle
Precipitation recent						clear	showers	clear
Precipitation current						clear	overcast	clear
Stream Bottom						rocky	rocky	rocky
silt sand gravel substrate								
vegetated bank margins								
snags and logs								
aquatic vegetation beds								
GROUP 1 - Sensitive								
gilled snails	0	0	0	0	0	0	0	0
helgrammites	5	19	4	1	0	0	0	0
mayfly nymphs	0	0	0	0	0	0	0	0
non net spinning caddisfly larvae	15	29	21	35	25	27	0	0
riffle beetle adults	0	0	0	0	0	0	0	0
stonefly nymphs	0	0	1	1	1	3	0	0
water penny larvae	0	0	0	0	0	0	0	0
GROUP 2 - Somewhat Sensitive								
alderfly larvae	0	0	0	0	0	0	0	0
Beetle Larvae	2	0	0	0	0	0	0	0
clams	0	0	0	0	0	0	0	0
crane fly larvae	0	9	3	15	9	2	2	5
crayfish	0	2	3	5	6	7	3	6
damselfly nymphs	1	0	0	0	0	0	3	0
dragonfly nymphs	1	0	0	0	2	0	0	0
fishfly larvae	0	0	0	0	0	0	0	0
net spinning caddisfly larvae	0	0	0	0	0	0	0	4
scuds	0	0	0	0	0	0	0	0
sowbugs	0	0	0	0	0	0	0	0
GROUP 3 - Tolerant								
blackfly larvae	0	0	0	0	0	0	0	0
leeches	0	0	0	0	0	0	0	0
midge larvae	0	0	0	0	0	0	0	0
snails	0	0	0	0	0	0	0	0
aquatic worms	0	0	0	0	0	0	0	0
Water Quality Score	17	17.6	22	22.2	20.2	17	9.6	9.6
Water Quality Rating	Poor	Poor	Pair	Pair	Pair	Poor	Poor	Poor

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 9
Summary of Data From Pennsylvania Senior Environmental Corps (PaSEC)
Macroinvertebrate Study Of Laurel Run
Site ID 493
(Continued)

Water Body Name	Laurel Run	Laurel Run
Site ID	493	493
Date	10/18/2007	4/15/2009
Length of Assessed Area	4.09	4.09
Stream Type	ool/riffle	
Precipitation recent	clear	rain
Precipitation current	clear	overcast
Stream Bottom	rocky	rocky
silt sand gravel substrate		
vegetated bank margins		
snags and logs		
aquatic vegetation beds		
GROUP 1 - Sensitive		
gilled snails	0	0
helgrammites	1	0
mayfly nymphs	5	0
non net spinning caddisfly larvae	12	11
riffle beetle adults	0	1
stonefly nymphs	3	0
water penny larvae	0	0
GROUP 2 - Somewhat Sensitive		
alderfly larvae	0	0
Beetle Larvae	0	1
clams	0	0
crane fly larvae	5	3
crayfish	11	0
damselfly nymphs	0	0
dragonfly nymphs	0	0
fishfly larvae	0	2
net spinning caddisfly larvae	0	0
scuds	0	0
sowbugs	0	0
GROUP 3 - Tolerant		
blackfly larvae	0	0
leeches	0	0
midge larvae	0	0
snails	0	0
aquatic worms	0	0
Water Quality Score	27.2	20.2
Water Quality Rating	Pair	Pair

Table 11
Summary Of Data From Pennsylvania Environment Corps (PaSEC)
Macroinvertebrate Study Of Mardis Run
Site ID 486

Water Body Name	Mardis Run
Site ID	486
Date	10/15/1998
Length of Assessed Area	2.96
Stream Type	
Precipitation recent	
Precipitation current	
Stream Bottom	
silt sand gravel substrate	
vegetated bank margins	
snags and logs	
aquatic vegetation beds	
GROUP 1 - Sensitive	0
gilled snails	1
helgrammites	55
mayfly nymphs	34
non net spinning caddisfly larvae	0
riffle beetle adults	8
stonefly nymphs	3
water penny larvae	0
GROUP 2 - Somewhat Sensitive	
alderfly larvae	1
Beetle Larvae	0
clams	6
crane fly larvae	2
crayfish	0
damselfly nymphs	0
dragonfly nymphs	0
fishfly larvae	0
net spinning caddisfly larvae	0
scuds	0
sowbugs	0
GROUP 3 - Tolerant	
blackfly larvae	0
leeches	0
midge larvae	0
snails	0
aquatic worms	0
Water Quality Score	35.8
Water Quality Rating	Fair

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 12
Summary Of Data From Pennsylvania Environment Corps (PaSEC)
Macroinvertebrate Study Of Oneida #1
Site ID 461

Water Body Name	Oneida #1
Site ID	461
Date	9/10/1998
Length of Assessed Area	5
Stream Type	
Precipitation recent	
Precipitation current	
Stream Bottom	
silt sand gravel substrate	
vegetated bank margins	
snags and logs	
aquatic vegetation beds	
GROUP 1 - Sensitive	0
gilled snails	0
helgrammites	0
mayfly nymphs	0
non net spinning caddisfly larvae	0
riffle beetle adults	0
stonefly nymphs	0
water penny larvae	0
GROUP 2 - Somewhat Sensitive	
alderfly larvae	0
Beetle Larvae	0
clams	0
crane fly larvae	0
crayfish	0
damselfly nymphs	0
dragonfly nymphs	0
fishfly larvae	0
net spinning caddisfly larvae	0
scuds	0
sowbugs	0
GROUP 3 - Tolerant	
blackfly larvae	0
leeches	0
midge larvae	0
snails	0
aquatic worms	0
Water Quality Score	0
Water Quality Rating	Poor

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 13
Summary Of Data From Pennsylvania Environment Corps (PaSEC)
Macroinvertebrate Study Of Palmer Run
Site ID 478

Water Body Name	Palmer Run
Site ID	478
Date	9/3/1998
Length of Assessed Area	5
Stream Type	
Precipitation recent	
Precipitation current	
Stream Bottom	
silt sand gravel substrate	
vegetated bank margins	
snags and logs	
aquatic vegetation beds	
GROUP 1 - Sensitive	0
gilled snails	0
helgrammites	0
mayfly nymphs	0
non net spinning caddisfly larvae	0
riffle beetle adults	0
stonefly nymphs	0
water penny larvae	0
GROUP 2 - Somewhat Sensitive	
alderfly larvae	0
Beetle Larvae	0
clams	0
crane fly larvae	0
crayfish	0
damselfly nymphs	0
dragonfly nymphs	0
fishfly larvae	0
net spinning caddisfly larvae	0
scuds	0
sowbugs	0
GROUP 3 - Tolerant	
blackfly larvae	0
leeches	0
midge larvae	0
snails	0
aquatic worms	0
Water Quality Score	0
Water Quality Rating	Poor

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 14
Summary Of Data From Pennsylvania Environment Corps (PaSEC)
Macroinvertebrate Study Of Ramsey Run
Site ID 823

Water Body Name	Ramsey Run
Site ID	823
Date	6/8/2006
Length of Assessed Area	10
Stream Type	ol/riffle
Precipitation recent	clear
Precipitation current	clear
Stream Bottom	rocky
silt sand gravel substrate	
vegetated bank margins	
snags and logs	
aquatic vegetation beds	
GROUP 1 - Sensitive	
gilled snails	0
helgrammites	2
mayfly nymphs	0
non net spinning caddisfly larvae	4
riffle beetle adults	0
stonefly nymphs	27
water penny larvae	4
GROUP 2 - Somewhat Sensitive	
alderfly larvae	0
Beetle Larvae	0
clams	0
crane fly larvae	0
crayfish	7
damselfly nymphs	4
dragonfly nymphs	0
fishfly larvae	0
net spinning caddisfly larvae	0
scuds	0
sowbugs	0
GROUP 3 - Tolerant	
blackfly larvae	0
leeches	0
midge larvae	0
snails	0
aquatic worms	0
Water Quality Score	27
Water Quality Rating	Fair

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 15
Summary Of Data From Pennsylvania Environment Corps (PaSEC)
Macroinvertebrate Study Of Rummel Run
Site ID 529

Water Body Name	Rummel Run
Site ID	529
Date	4/25/2001
Length of Assessed Area	4.52
Stream Type	
Precipitation recent	
Precipitation current	
Stream Bottom	
silt sand gravel substrate	
vegetated bank margins	
snags and logs	
aquatic vegetation beds	
GROUP 1 - Sensitive	
gilled snails	0
helgrammites	0
mayfly nymphs	0
non net spinning caddisfly larvae	0
riffle beetle adults	0
stonefly nymphs	9
water penny larvae	0
GROUP 2 - Somewhat Sensitive	
alderfly larvae	0
Beetle Larvae	0
clams	0
crane fly larvae	0
crayfish	4
damselfly nymphs	0
dragonfly nymphs	0
fishfly larvae	0
net spinning caddisfly larvae	0
scuds	0
sowbugs	0
GROUP 3 - Tolerant	
blackfly larvae	0
leeches	0
midge larvae	0
snails	0
aquatic worms	0
Water Quality Score	3.2
Water Quality Rating	Poor

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 16
Summary Of Data From Pennsylvania Environment Corps (PaSEC)
Macroinvertebrate Study Of Walker Run
Site ID 872

Water Body Name	Walker Run
Site ID	872
Date	6/2/2005
Length of Assessed Area	30
Stream Type	
Precipitation recent	
Precipitation current	
Stream Bottom	
silt sand gravel substrate	
vegetated bank margins	
snags and logs	
aquatic vegetation beds	
GROUP 1 - Sensitive	
gilled snails	0
helgrammites	3
mayfly nymphs	0
non net spinning caddisfly larvae	0
riffle beetle adults	0
stonefly nymphs	2
water penny larvae	0
GROUP 2 - Somewhat Sensitive	
alderfly larvae	0
Beetle Larvae	0
clams	0
crane fly larvae	2
crayfish	20
damselfly nymphs	0
dragonfly nymphs	0
fishfly larvae	0
net spinning caddisfly larvae	0
scuds	0
sowbugs	0
GROUP 3 - Tolerant	
blackfly larvae	0
leeches	0
midge larvae	0
snails	0
aquatic worms	0
Water Quality Score	16.6
Water Quality Rating	Poor

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 17
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data Of Aulds Run
Site ID 459

Water Body Name	Aulds Run	Aulds Run	Aulds Run
Site ID	459	459	459
Monitor Date	10/8/1998	7/1/1999	8/22/1999
River Mile Index	17.26	17.26	17.26
Type of Water Body	stream	stream	stream
Length of Assessed Area	1.9	1.9	1.9
Features			
Water Appearance	orange/red	orange/red foamy	orange/red
Water Appearance Note			
Soil Odors	sulfur	sulfur	sulfur
Soil Odors Note			
Sediment Deposits	sludge	sludge	none
Sediment Deposits Note	leaves		
Stream Type	meandering	meandering	straight
Dams	no		
High Water Mark	2.5	1	4
Highwater Estimate		yes	
Stream Bank Cross- Section Shape	rectangular	rectangular	rectangular
Stream Bank Erosion	occasional	extensive	extensive
Inorganic Stream Bottom			
% Bedrock		60	90
% Boulder	10	20	8
% Cobble	60	15	1
% Gravel		2	
% Sand		1	
% Silt			
% Clay			
% Other			
other note			
Organic Stream Bottom			
%_Muck-mud	10		
% Pulpy peat	10		
% Fibrous peat			
% Detritus	10	1	
% Logs limbs		1	1
% Marl			
% Other			
Other description			

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 18
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data Of Aulds Run
Site ID 459
(Continued)

Site ID	459	459	459
Monitor Date	10/8/1998	7/1/1999	8/22/1999
Non Wadable			
Land Use			
% Wetlands			
% Forest	50	50	10
% Cropland			
% Pasture			
% Residential			
% Commercial			
% Industrial	50		
% Unused abandoned		25	80
% Overgrown shrub and small trees		25	10
% Other			
Other Land Use Note			
Precipitation current	clear	overcast	clear
Precipitation recent	clear	showers	clear
Water Odors	sulfur mus ty	sulfur spic y	sulfur
Water Odors Note			
Stream Width	8.84		
Non-Wadable		non-wadable	non-wadable
Stream Width Note			
Stream Depth	5.74		
Non-Wadable		non-wadable	non-wadable
Stream depth note			
Surface Velocity	0.29		
Surface Velocity Note			
Stream Flow Volume or Discharge	0.96		
USGS Gaging			
Air Temperature C		24	26
Air Temperature F			
Water Temperature C		16	19
Water Temperature F			
pH		3.2	3.2
Dissolved Oxygen		3	5
Specific Conductance		1270	1340
Nitrate		0	0
Total Phosphate Result		0.24	0.06
Sulfate		200	200
Total Alkalinity		20	20

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 18a
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Aulds Run
Site ID 811

Water Body Name	Aulds Run	Aulds Run	Aulds Run	Aulds Run	Aulds Run	Aulds Run	Aulds Run
Site ID	811	811	811	811	811	811	811
Monitor Date	9/14/1998	10/2/2001	4/18/2002	9/19/2002	10/23/2002	11/14/2002	4/10/2003
River Mile Index	18.26	18.26	18.26	18.26	18.26	18.26	18.26
Type of Water Body	stream	stream	stream	stream	stream	stream	stream
Length of Assessed Area	10	10	10	10	10	10	10
Features							
Water Appearance	muddy/ cloudy	clear	clear	dark brown	clear	clear	clear
Water Appearance Note							
Soil Odors	earthy	non-wadable	non-wadable	earthy	musty	earthy	earthy
Soil Odors Note							
Sediment Deposits	sand	none	sludge	none	sand	sand	sand
Sediment Deposits Note	gravel, mud		gravel			mud	
Stream Type	meandering pool/riffle	meandering	meandering pool/riffle	meandering braided	meandering pool/riffle	meandering braided p ool/riffle	meandering pool/riffle
Dams	no						
High Water Mark	1.5		1				
Highwater Estimate							
Stream Bank Cross- Section Shape	rectangular	rectangular	U	rectangular	rectangular	U	rectangular
Stream Bank Erosion	occasional	occasional	occasional	extensive	occasional	occasional	occasional
Inorganic Stream Bottom							
% Bedrock	20	60	10				25
% Boulder	40	30	30	20	50	25	40
% Cobble	20	5	40	50	20	25	20
% Gravel	10		10	15	10	5	5
% Sand	5		5	5	10	10	5
% Silt					5	10	1
% Clay				3			1
% Other							
other note							
Organic Stream Bottom							
% Muck-mud				5		20	1
% Pulpy peat			1	1	1		
% Fibrous peat	3		1			2	
% Detritus	2	5	1		3	1	1
% Logs limbs			2	1	1	2	1
% Marl							
% Other							
Other description							

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 31a
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Aulds Run
Sample Point 811 Aulds Run
(Continued)

Site ID	811	811	811	811	811	811	811
Monitor Date	9/14/1998	10/2/2001	4/18/2002	9/19/2002	10/23/2002	11/14/2002	4/10/2003
Non Wadable							
Land Use							
% Wetlands	20		5		5		
% Forest	70	50	60	25	80	50	25
% Cropland							
% Pasture			5				
% Residential			5				
% Commercial							
% Industrial			5				
% Unused abandoned		50					25
% Overgrown shrub and small trees	10		15	75	15	50	50
% Other			5				
Other Land Use Note			unidentified				
Precipitation current	clear	clear	clear	rain	overcast	clear	clear
Precipitation recent	clear	clear	overcast	rain	clear	clear	overcast
Water Odors	earthy	none	none	moldy	none	none	none
Water Odors Note							
Stream Width	2.86	2.8	2.8	1.8	2.8	1.8	2.6
Non-Wadable							
Stream Width Note							
Stream Depth	0.14	0.1	0.122	0.07	0.076	0.11	0.15
Non-Wadable							
Stream depth note							
Surface Velocity	0.71	0.41	0.68	0.55	0.63	0.55	0.76
Surface Velocity Note							
Stream Flow Volume or Discharge	0.23	0.091	0.186	0.005	0.107	0.008	0.237
USGS Gaging							
Air Temperature C	20	17	24	19	11		12
Air Temperature F							
Water Temperature C	14	16	15	17	8		7
Water Temperature F							
pH	7	6.9	6.7	7.2	7.2	6.4	6.4
Dissolved Oxygen	8	8	10	6	8	10	8
Specific Conductance	570	1260	480	620	390	300	350
Nitrate	0.44	0	0.88	0.62	0.86	0.44	0.14
Total Phosphate Result	0.1	1	0	0.7	0.5	0.5	0.2
Sulfate	200	200	0	200	200	0	150
Total Alkalinity	30	220	75	75	60	20	45

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 31b
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Aulds Run
Site ID 811

Water Body Name	Aulds Run	Aulds Run	Aulds Run	Aulds Run	Aulds Run	Aulds Run	Aulds Run
Site ID	811	811	811	811	811	811	811
Monitor Date	3/25/2004	5/6/2004	10/7/2004	3/24/2005	10/26/2005	4/13/2006	5/3/2007
River Mile Index	18.26	18.26	18.26	18.26	18.26	18.26	18.26
Type of Water Body	stream	stream	stream	stream	stream	stream	stream
Length of Assessed Area	10	10	10	10	10	10	10
Features							
Water Appearance	clear	clear	clear	muddy/ cloudy	clear	clear	clear
Water Appearance Note							
Soil Odors	earthy	non-wadable	non-wadable	non-wadable	earthy	earthy	none
Soil Odors Note							
Sediment Deposits	sand	other	sludge	sand	none	none	sand
Sediment Deposits Note		mud and gravel	gravel and mud	gravel			
Stream Type	meandering pool/riffle	meandering	meandering pool/riffle	meandering	meandering, pool/riffle	meandering, pool/riffle	meandering, pool/riffle
Dams					no	no	no
High Water Mark							
Highwater Estimate							
Stream Bank Cross- Section Shape	rectangular	U	U	U	rectangular	rectangular	rectangular
Stream Bank Erosion	occasional	occasional	occasional	occasional	occasional	occasional	occasional
Inorganic Stream Bottom							
% Bedrock		20			15	20	10
% Boulder		30	50	50	25	30	20
% Cobble	75	40	20	30	60	40	60
% Gravel	10	3	10	5	6	5	5
% Sand	10	2	10	5	1	2	1
% Silt					1	1	
% Clay	2				1		1
% Other		3					
other note		mud					
Organic Stream Bottom							
%_Muck-mud	2		3				1
% Pulpy peat			2				
% Fibrous peat		1	2	3			1
% Detritus			2	5		1	
% Logs limbs	1	1	1	2	1	1	1
% Marl							
% Other							
Other description							

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 31b
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Aulds Run
Site ID 811

Site ID	811	811	811	811	811	811	811
Monitor Date	3/25/2004	5/6/2004	10/7/2004	3/24/2005	10/26/2005	4/13/2006	5/3/2007
Non Wadable							
Land Use							
% Wetlands							
% Forest	25	60	80	80	50	50	50
% Cropland							
% Pasture							
% Residential							
% Commercial							
% Industrial							
% Unused abandoned							50
% Overgrown shrub and small trees	75	40	20	20	50	50	
% Other							
Other Land Use Note							
Precipitation current	showers	clear	clear	overcast	overcast	clear	clear
Precipitation recent	showers	clear	clear	overcast	overcast	rain	clear
Water Odors	none	none	none	none	none	none	none
Water Odors Note							
Stream Width	2	4.2	2.9	3.6	2.6	3.3	3.3
Non-Wadable							
Stream Width Note							
Stream Depth	0.19	0.124	0.106	0.106	0.1192	0.13	0.12
Non-Wadable							
Stream depth note							
Surface Velocity	1.2	0.63	0.46	0.9	0.79	0.85	0.91
Surface Velocity Note							
Stream Flow Volume or Discharge	0.353	0.26	0.113	0.43	0.181	0.29	0.288
USGS Gaging							
Air Temperature C	15	9	9	2	5	12	15
Air Temperature F							
Water Temperature C	8	7	8	4	7	9	11
Water Temperature F							
pH	6.7	7	6.8	6.2	6.4	6.2	7.2
Dissolved Oxygen	10	11	10	9	11	10	10
Specific Conductance	345	490	540	200	310	180	360
Nitrate	0.88	0.44	0.44	1	2.2	0.88	0.88
Total Phosphate Result	1	0.1	0	0	0.1	0.3	0.5
Sulfate	0	175	200	75	150	100	>200
Total Alkalinity	5	25	165	40	70	40	90
Other observations comments					acidity 5, total iron 0		acidity 10; total iron N/D

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 31c
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Aulds Run
Site ID 811
(Continued)

Water Body Name	Aulds Run
Site ID	811
Monitor Date	10/18/2007
River Mile Index	18.26
Type of Water Body	stream
Length of Assessed Area	10
Features	
Water Appearance	clear
Water Appearance Note	
Soil Odors	none
Soil Odors Note	
Sediment Deposits	none
Sediment Deposits Note	
Stream Type	meandering,pool/riffle
Dams	no
High Water Mark	
Highwater Estimate	
Stream Bank Cross-Section Shape	rectangular
Stream Bank Erosion	occasional
Inorganic Stream Bottom	
% Bedrock	20
% Boulder	40
% Cobble	20
% Gravel	10
% Sand	5
% Silt	1
% Clay	1
% Other	
other note	
Organic Stream Bottom	
%_Muck-mud	1
% Pulpy peat	
% Fibrous peat	
% Detritus	
% Logs limbs	2
% Marl	
% Other	
Other description	

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 31c
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Aulds Run
Site ID 811
(Continued)

Site ID	811
Monitor Date	10/18/2007
Non Wadable	
Land Use	
% Wetlands	
% Forest	50
% Cropland	
% Pasture	
% Residential	
% Commercial	
% Industrial	
% Unused abandoned	
% Overgrown shrub and small trees	50
% Other	
Other Land Use Note	
Precipitation current	clear
Precipitation recent	clear
Water Odors	none
Water Odors Note	
Stream Width	1.3
Non-Wadable	
Stream Width Note	
Stream Depth	0.07
Non-Wadable	
Stream depth note	
Surface Velocity	0.45
Surface Velocity Note	
Stream Flow Volume or Discharge	0.032
USGS Gaging	
Air Temperature C	16
Air Temperature F	
Water Temperature C	12
Water Temperature F	
pH	7.4
Dissolved Oxygen	9
Specific Conductance	705
Nitrate	0.88
Total Phosphate Result	0.02
Sulfate	>200
Total Alkalinity	90
Other observations comments	acidity 20; total iron N/D

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 19a
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Bracken Run
Site ID 774

Water Body Name	Bracken Run	Bracken Run	Bracken Run	Bracken Run	Bracken Run	Bracken Run	Bracken Run
Site ID	774	774	774	774	774	774	774
Monitor Date	7/27/2000	3/15/2001	4/24/2001	12/13/2001	3/20/2002	11/21/2002	3/13/2003
River Mile Index	4.22	4.22	4.22	4.22	4.22	4.22	4.22
Type of Water Body	stream	stream	stream	stream	stream	stream	stream
Length of Assessed Area	30	30	30	30	30	30	30
Features							
Water Appearance	clear	clear	clear	clear	clear	clear	clear
Water Appearance Note							
Soil Odors	earthy	musty	spicy	earthy	musty	non-wadable	non-wadable
Soil Odors Note							
Sediment Deposits	sand	sand	none	none	none	sand	sand
Sediment Deposits Note	gravel					gravel	
Stream Type	meandering pool/riffle	pool/riffle	pool/riffle	meandering	meandering pool/riffle	meandering pool/riffle	meandering pool/riffle
Dams	no	yes	no				
High Water Mark	2	3	3				
Highwater Estimate		yes					
Stream Bank Cross-Section Shape	rectangular	rectangular	rectangular	undercut	rectangular	U	U
Stream Bank Erosion	extensive	extensive	occasional	extensive	extensive	extensive	occasional
Inorganic Stream Bottom							
% Bedrock	80	60	50	50	50		5
% Boulder	5	20	20	20	10	50	30
% Cobble		10	25	15	35	25	40
% Gravel	5	5	2	10	2	5	10
% Sand	5		1	3	1	5	5
% Silt				1			
% Clay							
% Other							
other note							
Organic Stream Bottom							
%_Muck-mud							
% Pulpy peat						1	5
% Fibrous peat	2					10	2
% Detritus	3	1	1			2	
% Logs limbs		4	1	1	1	2	3
% Marl							
% Other					1		
Other description					unknown		

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 30a
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Bracken Run
Site ID 774
(Continued)

Site ID	774	774	774	774	774	774	774
Monitor Date	7/27/2000	3/15/2001	4/24/2001	12/13/2001	3/20/2002	11/21/2002	3/13/2003
Non Wadable							
Land Use							
% Wetlands							
% Forest	80	75	90	75	90	90	80
% Cropland							
% Pasture							
% Residential							
% Commercial							
% Industrial							
% Unused abandoned		15					
% Overgrown shrub and small trees	20	10	10	25	10	10	10
% Other							10
Other Land Use Note							cemetery
Precipitation current	clear	overcast	rain	rain	overcast	overcast	overcast
Precipitation recent	clear	overcast	rain	clear	clear	clear	clear
Water Odors	sulfur	none	none	none	sulfur	none	none
Water Odors Note							
Stream Width	2.4	4.08	4	2.8	2.1	3	4.2
Non-Wadable							
Stream Width Note							
Stream Depth	0.193	0.193	0.141	0.086	0.12	0.158	0.036
Non-Wadable							
Stream depth note							
Surface Velocity	0.09	0.61	0.63	0.49	0.57	0.64	0.95
Surface Velocity Note							
Stream Flow Volume or Discharge	0.035	0.3842	0.63	0.379	0.115	0.24	0.114
USGS Gaging							
Air Temperature C	17	5	16	11	4	8	7
Air Temperature F							
Water Temperature C	15	3	10	8	2	7	3
Water Temperature F							
pH	4.8	4.2	4.3	4.8	4.9	4.5	4.8
Dissolved Oxygen	6	8	9	8	8	10	10
Specific Conductance	420	190	178	400	270	155	200
Nitrate	4.4	1.3	0.44	0.44	0.44	0.08	0.35
Total Phosphate Result	0.08	0.07	0.6	0.3	0.1	0.5	0
Sulfate	200	150	125	50	0	100	100
Total Alkalinity	200	10	20	5	5	20	20

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 30a
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Bracken Run
Site ID 774
(Continued)

Water Body Name	Bracken Run	Bracken Run	Bracken Run	Bracken Run
Site ID	774	774	774	774
Monitor Date	5/26/2005	2/2/2006	5/31/2007	10/18/07
River Mile Index	4.22	4.22	4.22	4.22
Type of Water Body	stream	stream	stream	stream
Length of Assessed Area	30	30	30	30
Features				
Water Appearance	clear	clear	clear	clear
Water Appearance Note				
Soil Odors	non-wadable	none	none	other
Soil Odors Note				slight iron
Sediment Deposits	none	none	none	sludge
Sediment Deposits Note				gravel
Stream Type	meandering pool/riffle	meandering	meandering, pool/riffle	meandering pool/riffle
Dams		no	no	
High Water Mark			3	
Highwater Estimate			yes	
Stream Bank Cross-Section Shape	rectangular	rectangular	rectangular	U
Stream Bank Erosion	extensive	occasional	occasional	extensive
Inorganic Stream Bottom				
% Bedrock	50	50	30	20
% Boulder	30	35	10	30
% Cobble	15	10	30	10
% Gravel	2	3	25	20
% Sand	2	1	3	10
% Silt				
% Clay				
% Other				
other note				
Organic Stream Bottom				
% Muck-mud	1			
% Pulpy peat			1	2
% Fibrous peat			1	3
% Detritus		1		2
% Logs limbs				3
% Marl				
% Other				
Other description				

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 30a
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Bracken Run
Site ID 774
(Continued)

Site ID	774	774	774	774
Monitor Date	5/26/2005	2/2/2006	5/31/2007	10/18/07
Non Wadable				
Land Use				
% Wetlands				
% Forest	50	90	100	80
% Cropland				
% Pasture				
% Residential				
% Commercial				
% Industrial				
% Unused abandoned				
% Overgrown shrub and small trees	50	10		20
% Other				
Other Land Use Note				
Precipitation current	clear	overcast	clear	clear
Precipitation recent	rain	overcast	clear	clear
Water Odors	earthy	none	none	none
Water Odors Note				
Stream Width	2.2	2.6	2.5	2.4
Non-Wadable				
Stream Width Note				
Stream Depth	0.12	0.13	0.09	0.13
Non-Wadable				
Stream depth note				
Surface Velocity	0.85	0.48	0.56	0.49
Surface Velocity Note				
Stream Flow Volume or Discharge	0.5756	0.129	0.1008	0.123
USGS Gaging				
Air Temperature C	15	2	18	18
Air Temperature F				
Water Temperature C	9	4	13	13
Water Temperature F				
pH	3.5	4.2	3.7	4
Dissolved Oxygen	10	10	9	2
Specific Conductance	150	160	218	200
Nitrate	1.3	0.88	1.34	0
Total Phosphate Result	0.44	0.15	0.5	0
Sulfate	150	150	200	90
Total Alkalinity	5	5	5	5

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 20a
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data Of Brush Creek
Site ID 458

Water Body Name	Brush Creek	Brush Creek	Brush Creek	Brush Creek	Brush Creek	Brush Creek	Brush Creek
Site ID	458	458	458	458	458	458	458
Monitor Date	5/20/1999	6/17/1999	8/11/1999	9/23/1999	7/6/2000	9/14/2000	5/17/2001
River Mile Index	19.44	19.44	19.44	19.44	19.44	19.44	19.44
Type of Water Body	stream	stream	stream	stream	stream	stream	stream
Length of Assessed Area	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Features							
Water Appearance	clear	clear	clear	clear	clear	muddy/cloudy	clear
Water Appearance Note							
Soil Odors	musty	earthy	earthy	earthy	musty	earthy	musty
Soil Odors Note							
Sediment Deposits	sand	sand	other	none	sludge	sand	sand
Sediment Deposits Note		silt	dead algae			gravel	gravel, algae
Stream Type	meandering pool/riffle	meandering pool/riffle	meandering	straight	meandering pool/riffle	meandering pool/riffle	meandering
Dams		no	no	no	no	no	
High Water Mark		1		2	1	1	
Highwater Estimate				yes			
Stream Bank Cross-Section Shape	rectangular	rectangular	rectangular	rectangular	rectangular	rectangular	U
Stream Bank Erosion	occasional	occasional	none	occasional	occasional	occasional	occasional
Inorganic Stream Bottom							
% Bedrock							
% Boulder	35	25	40	10	30	20	40
% Cobble	35	50	30	50	50	60	30
% Gravel	1	5	10	5	5	5	5
% Sand	20	5	5	5	5	5	15
% Silt	5	5		20	5		
% Clay						5	
% Other						5	
other note							
Organic Stream Bottom							
%_Muck-mud	1	1		5			3
% Pulpy peat	1	1					3
% Fibrous peat	1	2	5		2		1
% Detritus	1	2	5	3	2		1
% Logs limbs		4	5	2	1		2
% Marl							
% Other							
Other description							

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 17a
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data Of Brush Creek
Site ID 458
(continued)

Site ID	458	458	458	458	458	458	458
Monitor Date	5/20/1999	6/17/1999	8/11/1999	9/23/1999	7/6/2000	9/14/2000	5/17/2001
Non Wadable							
Land Use							
% Wetlands					10	10	10
% Forest	80	80	50	70	70	80	80
% Cropland							
% Pasture							
% Residential							
% Commercial	5			10			
% Industrial							
% Unused abandoned							
% Overgrown shrub and small trees	15	20	50	20	20	10	10
% Other							
Other Land Use Note							
Precipitation current	clear	overcast	clear	clear	clear	clear	overcast
Precipitation recent	clear	overcast	overcast	clear	clear	clear	overcast
Water Odors	musty earthy	none	none	earthy	earthy	earthy	none
Water Odors Note							
Stream Width	10.52	5.057	7.93	9.33	8.96	9.52	13.8
Non-Wadable							
Stream Width Note							
Stream Depth	0.2082	0.141	0.135	0.1168	0.208	0.32	0.208
Non-Wadable							
Stream depth note							
Surface Velocity	0.23	0.26	0.19	0.2	20	0.58	0.52
Surface Velocity Note							
Stream Flow Volume or Discharge	0.404	0.152	0.1681	0.1796	30.4	1.41	1.56
USGS Gaging							
Air Temperature C	18	15	30	11	20	17	12
Air Temperature F							
Water Temperature C	15	15	20	10	18	14	8
Water Temperature F							
pH	6.8	6.2	6.3	6.2	6	6.8	6.5
Dissolved Oxygen	8	7		6	8	8	7
Specific Conductance	230	270	320	240	190	160	183
Nitrate	0.4	1.7	0.35	0.35	8.8	4.4	3
Total Phosphate Result	0.04	0.1	0.1	0.1	0.08	0.1	1
Sulfate	75	100	50	200	100	65	90
Total Alkalinity	40	40	40	20	20	20	20

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 17b
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data Of Brush Creek
Sample Point 458 Brush Creek
(Continued)

Water Body Name	Brush Creek	Brush Creek	Brush Creek	Brush Creek	Brush Creek	Brush Creek	Brush Creek
Site ID	458	458	458	458	458	458	458
Monitor Date	10/2/2001	4/18/2002	6/20/2002	10/3/2002	5/29/2003	10/16/2003	5/13/2004
River Mile Index	19.44	19.44	19.44	19.44	19.44	19.44	19.44
Type of Water Body	stream	stream	stream	stream	stream	stream	stream
Length of Assessed Area	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Features							
Water Appearance	clear	clear	clear	clear	clear	other	clear
Water Appearance Note						slightly murky	
Soil Odors	non-wadable	non-wadable	non-wadable	earthy	earthy	non-wadable	musty
Soil Odors Note							
Sediment Deposits	none	sludge	sand	sand	none	sand	sludge
Sediment Deposits Note		gravel	gravel	gravel		gravel	gravel
Stream Type	meandering	meandering pool/riffle	meandering pool/riffle	meandering	meandering pool/riffle	meandering pool/riffle	meandering pool/riffle
Dams	no						
High Water Mark		2					
Highwater Estimate							
Stream Bank Cross-Section Shape	rectangular	U	U	V	rectangular	U	U
Stream Bank Erosion	occasional	occasional	occasional	occasional	occasional	occasional	occasional
Inorganic Stream Bottom							
% Bedrock	30						
% Boulder	20	50	40	20	15	20	20
% Cobble	40	25	30	50	70	70	50
% Gravel	5	10	15	10	10	5	10
% Sand		10		10	2	5	10
% Silt							5
% Clay			5		1		
% Other							
other note							
Organic Stream Bottom							
%_Muck-mud		1			1		3
% Pulpy peat		1		5			
% Fibrous peat		1					
% Detritus	5	1		2			
% Logs limbs		1		3	1		2
% Marl							
% Other			10				
Other description			unknown				

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 17b
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data Of Brush Creek
Sample Point 458 Brush Creek
(Continued)

Site ID	458	458	458	458	458	458	458
Monitor Date	10/2/2001	4/18/2002	6/20/2002	10/3/2002	5/29/2003	10/16/2003	5/13/2004
Non Wadable							
Land Use							
% Wetlands		10	10	10			
% Forest		80	70	80	100	70	80
% Cropland							
% Pasture			5				
% Residential							
% Commercial							
% Industrial							
% Unused abandoned	50						
% Overgrown shrub and small trees	50	10	15	10		30	20
% Other							
Other Land Use Note							
Precipitation current	clear	overcast	clear	overcast	showers	clear	clear
Precipitation recent	clear	overcast	overcast	clear	showers	clear	clear
Water Odors	none	none	none	none	none	none	musty earthy
Water Odors Note							
Stream Width	12.6	10.6	10.4	16	4.27	15.4	7.6
Non-Wadable							
Stream Width Note							
Stream Depth	0.2032	0.3	0.34	0.134	0.31	0.278	0.246
Non-Wadable							
Stream depth note							
Surface Velocity	0.42	1.1	0.63	0.76	0.62	0.85	0.81
Surface Velocity Note							
Stream Flow Volume or Discharge	0.86	2.8	1.79	1.3	0.472	2.91	1.21
USGS Gaging							
Air Temperature C	16	21	21	20	14	10	20
Air Temperature F							
Water Temperature C	15	14	15	17	11	9	17
Water Temperature F							
pH	6.5	6.9	7.1	6.7	6.8	6.6	6.3
Dissolved Oxygen	7	8	8	8	5	9	8
Specific Conductance	340	170	190	180	120	150	125
Nitrate	0.88	2.6	3.5	1.7	1.7	2.6	3.1
Total Phosphate Result	1	0.2	0.7	0.7	0.5	0	1
Sulfate	175	75	75	100	50	50	50
Total Alkalinity	35	15	15	40	20	15	20

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 17c
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data Of Brush Creek
Site ID 458
(Continued)

Water Body Name	Brush Creek	Brush Creek	Brush Creek	Brush Creek	Brush Creek	Brush Creek
Site ID	458	458	458	458	458	458
Monitor Date	10/21/2004	5/12/2005	4/20/2006	11/9/2006	5/10/2007	11/8/2007
River Mile Index	19.44	19.44	19.44	19.44	19.44	19.44
Type of Water Body	stream	stream	stream	stream	stream	stream
Length of Assessed Area	22.5	22.5	22.5	22.5	22.5	22.5
Features						
Water Appearance	clear	clear	clear	clear	clear	clear
Water Appearance Note						
Soil Odors	non-wadable	earthy	earthy	earthy	none	none
Soil Odors Note						
Sediment Deposits	sand	sand	none	none	none	none
Sediment Deposits Note	gravel					
Stream Type	meandering pool/riffle	meandering pool/riffle	meandering, pool/riffle	meandering, pool/riffle	meandering, pool/riffle	meandering, pool/riffle
Dams			no	no	no	no
High Water Mark			2		2	
Highwater Estimate			yes		yes	
Stream Bank Cross-Section Shape	U	rectangular	rectangular	rectangular	rectangular	rectangular
Stream Bank Erosion	occasional	occasional	occasional	occasional	occasional	occasional
Inorganic Stream Bottom						
% Bedrock		15				
% Boulder	50		20	25	20	20
% Cobble	25	75	65	55	40	45
% Gravel	5	2	15	15	30	25
% Sand	5		1	2	5	5
% Silt		5	1		1	
% Clay				1	1	1
% Other						
other note						
Organic Stream Bottom						
% Muck-mud	5	1		1	1	2
% Pulpy peat	5	1	1			1
% Fibrous peat					1	
% Detritus	2		1	1		
% Logs limbs	3	1	1		1	1
% Marl						
% Other						
Other description						

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 17c
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data Of Brush Creek
Site ID 458
(Continued)

Site ID	458	458	458	458	458	458
Monitor Date	10/21/2004	5/12/2005	4/20/2006	11/9/2006	5/10/2007	11/8/2007
Non Wadable						
Land Use						
% Wetlands						
% Forest	80	50	100	100	100	100
% Cropland						
% Pasture						
% Residential						
% Commercial						
% Industrial						
% Unused abandoned						
% Overgrown shrub and small trees	20	50				
% Other						
Other Land Use Note						
Precipitation current	overcast	overcast	clear	overcast	clear	showers
Precipitation recent	showers	storm	clear	overcast	clear	overcast
Water Odors	none	none	none	none	none	none
Water Odors Note						
Stream Width	9	9.2	8.5	8.2	6.5	6.5
Non-Wadable						
Stream Width Note						
Stream Depth	0.224	0.0196	0.228	0.22	0.19	0.18
Non-Wadable						
Stream depth note						
Surface Velocity	0.71	0.81	0.94	1.17	0.83	0.71
Surface Velocity Note						
Stream Flow Volume or Discharge	1.15	0.1168	0.1457	1.69	0.82	0.0066
USGS Gaging						
Air Temperature C	10	14	10	9	15	
Air Temperature F						
Water Temperature C	11	15	9	8	16	3
Water Temperature F						
pH	6.2	6.1	6	6.3	6.3	6.2
Dissolved Oxygen	10	10	12	9	8	10
Specific Conductance	140	180	100	115	130	150
Nitrate	1.7	1.7	0.44	4.4	0.88	1.76
Total Phosphate Result	0	0.1	0.1	1.92	0.1	N/D
Sulfate	60	55	75	<50	<50	50
Total Alkalinity	40	20	15	40	20	30
Other observations comments				acidity 10; total iron .6	acidity 5 total iron n/d	acidity 20

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 21a
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Carney Run
Site ID 594

Water Body Name	Carney Run	Carney Run	Carney Run	Carney Run	Carney Run	Carney Run	Carney Run
Site ID	594	594	594	594	594	594	594
Monitor Date	6/6/1999	10/7/1999	4/20/2000	7/13/2000	4/19/2001	8/2/2001	10/4/2001
River Mile Index	3.02	3.02	3.02	3.02	3.02	3.02	3.02
Type of Water Body	stream	stream	stream	stream	stream	stream	stream
Length of Assessed Area	10	10	10	10	10	10	10
Features							
Water Appearance	clear	clear	clear	clear	clear	clear	clear
Water Appearance Note							
Soil Odors	earthy	earthy	earthy	earthy	non-wadable	earthy	non-wadable
Soil Odors Note							
Sediment Deposits	sand	sand	sand	sand	sand	none	none
Sediment Deposits Note	silt		Gravel	gravel	gravel		
Stream Type	meandering pool/riffle	meandering pool/riffle	meandering pool/riffle	meandering	meandering	meandering pool/riffle	meandering
Dams	no	no	no	no	no		
High Water Mark	2.5	1	1	1	1		
Highwater Estimate							
Stream Bank Cross-Section Shape	undercut	rectangular	rectangular	rectangular	rectangular	rectangular	rectangular
Stream Bank Erosion	occasional	occasional	occasional	occasional	occasional	occasional	occasional
Inorganic Stream Bottom							
% Bedrock							
% Boulder	40	20	25	50	40	2	2
% Cobble	30	60	30	35	40	90	70
% Gravel	5	5	20	5	5	5	10
% Sand	2	5	10	5	5	1	10
% Silt	10						5
% Clay						1	
% Other							
other note							
Organic Stream Bottom							
%_Muck-mud	1	1					
% Pulpy peat	2						
% Fibrous peat	5	3	5	1	5		
% Detritus	3	5	5	2	3		5
% Logs limbs	2	1	5	2	2	1	
% Marl							
% Other							
Other description							

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 28a
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Carney Run
Site ID 594
(Continue)

Site ID	594	594	594	594	594	594	594
Monitor Date	6/6/1999	10/7/1999	4/20/2000	7/13/2000	4/19/2001	8/2/2001	10/4/2001
Non Wadable							
Land Use							
% Wetlands	10		10	10			
% Forest	60	80	60	80	60	20	
% Cropland							
% Pasture							
% Residential	10	10	20		30	5	
% Commercial							
% Industrial							
% Unused abandoned				10			50
% Overgrown shrub and small trees	20	10	10		10	75	50
% Other							
Other Land Use Note							
Precipitation current	clear	clear	overcast	clear	clear	clear	clear
Precipitation recent	clear	clear	overcast	clear	showers	clear	clear
Water Odors	earthy	musty	earthy	none	none	none	none
Water Odors Note							
Stream Width	2.9	2.26	2.87	2.13	4.2	4	2.2
Non-Wadable							
Stream Width Note							
Stream Depth	0.1366	0.117	0.22	0.162	0.212	0.16	0.034
Non-Wadable							
Stream depth note							
Surface Velocity	0.2	0.1	0.58	18	0.87	0.24	0.39
Surface Velocity Note							
Stream Flow Volume or Discharge	0.063	0.0211	0.33	5.07	0.619	0.012	0.024
USGS Gaging							
Air Temperature C	20	8		25	7	21	15
Air Temperature F							
Water Temperature C	15	8	9	15	4	16	10
Water Temperature F							
pH	6.4	6.3	5.5	6.5	6.3	6.6	6.3
Dissolved Oxygen	6	6		6	9	7	8
Specific Conductance	120	110	70	800	105	90	150
Nitrate	0.96	0.26	1	4.4	1.3	0.66	0.18
Total Phosphate Result	0	0.18		0.06	0.5	0.6	0.4
Sulfate	50	50		50	50	50	50
Total Alkalinity	20	20		40	5	30	20

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 28b
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Carney Run
Site ID 594
(Continue)

Water Body Name	Carney Run	Carney Run	Carney Run	Carney Run	Carney Run	Carney Run
Site ID	594	594	594	594	594	594
Monitor Date	4/24/2002	10/17/2002	4/17/2003	7/22/2004	4/14/2005	7/21/2005
River Mile Index	3.02	3.02	3.02	3.02	3.02	3.02
Type of Water Body	stream	stream	stream	stream	stream	stream
Length of Assessed Area	10	10	10	10	10	10
Features						
Water Appearance	clear	clear	clear	clear	clear	clear
Water Appearance Note						
Soil Odors	earthy	earthy	non-wadable	non-wadable	non-wadable	non-wadable
Soil Odors Note						
Sediment Deposits	none	none	none	sludge	sand	sludge
Sediment Deposits Note				gravel and silt		gravel
Stream Type	meandering pool/riffle	meandering	meandering pool/riffle	meandering pool/riffle	pool/riffle	meandering pool/riffle
Dams						
High Water Mark	1					1
Highwater Estimate						
Stream Bank Cross-Section Shape	rectangular	rectangular	U	U	U	U
Stream Bank Erosion	occasional	occasional	occasional	occasional	occasional	occasional
Inorganic Stream Bottom						
% Bedrock						
% Boulder	30	25	20	50	5	5
% Cobble	50	50	50	25	75	60
% Gravel	15	20	15	10	5	10
% Sand	2	2	10	10	5	15
% Silt				3		
% Clay				1		
% Other						
other note						
Organic Stream Bottom						
%_Muck-mud						
% Pulpy peat			1		3	2
% Fibrous peat		1	1			3
% Detritus	1		1	1	2	2
% Logs limbs	1	2	2			3
% Marl	1					
% Other					5	
Other description					not specified	

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 28b
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Carney Run
Site ID 594
(Continue)

Site ID	594	594	594	594	594	594
Monitor Date	4/24/2002	10/17/2002	4/17/2003	7/22/2004	4/14/2005	7/21/2005
Non Wadable						
Land Use						
% Wetlands						
% Forest	10	25	80	60	80	70
% Cropland						
% Pasture						
% Residential		25	10	10	5	10
% Commercial				10		
% Industrial						
% Unused abandoned						
% Overgrown shrub and small trees	80	50	10	20	15	20
% Other	10					
Other Land Use Note	lawn					
Precipitation current	rain	overcast	clear	clear	clear	clear
Precipitation recent	overcast	rain	clear	clear	clear	clear
Water Odors	none	none	none	none	none	none
Water Odors Note						
Stream Width	4.7	4.1	5.2	3.3	5	3.1
Non-Wadable						
Stream Width Note						
Stream Depth	0.23	0.19	1.54	0.136	0.1506	0.092
Non-Wadable						
Stream depth note						
Surface Velocity	0.86	0.56	0.48	0.4	0.73	0.2
Surface Velocity Note						
Stream Flow Volume or Discharge	0.691	0.349	3.126	0.143	0.438	0.045
USGS Gaging						
Air Temperature C	6	8	9	22		24
Air Temperature F						
Water Temperature C	8	9	8	17	5	16
Water Temperature F						
pH	6.3	6.2	6.5	6.3	5.8	6.3
Dissolved Oxygen	9	10	8	8	11	8
Specific Conductance	140	110	100	105	70	80
Nitrate	0.84	0.22	0.44	0		0.7
Total Phosphate Result	0	0	0.7	0.1	0.1	0.5
Sulfate	50	50	50	50	50	50
Total Alkalinity	40	45	10	15	10	20

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 28c
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Carney Run
Site ID 594
(Continue)

Water Body Name	Carney Run	Carney Run	Carney Run	Carney Run
Site ID	594	594	594	594
Monitor Date	5/25/2006	1/4/2007	4/19/2007	11/1/2007
River Mile Index	3.02	3.02	3.02	3.02
Type of Water Body	stream	stream	stream	stream
Length of Assessed Area	10	10	10	10
Features				
Water Appearance	clear	clear	clear	clear
Water Appearance Note				
Soil Odors	none	non-wadable,none	none	none
Soil Odors Note				
Sediment Deposits	none	none,non-wadable	none	none
Sediment Deposits Note				
Stream Type	meandering	meandering	meandering,braided,pool/riffle	meandering,pool/riffle
Dams	no	no	no	no
High Water Mark				
Highwater Estimate				
Stream Bank Cross-Section Shape	rectangular	rectangular	rectangular	rectangular
Stream Bank Erosion	occasional	occasional	occasional	occasional
Inorganic Stream Bottom				
% Bedrock				
% Boulder	20	15	30	20
% Cobble	70	70	40	50
% Gravel	6	6	20	25
% Sand	1	2	5	1
% Silt	1	1		
% Clay		1	1	
% Other				
other note				
Organic Stream Bottom				
%_Muck-mud	1		1	1
% Pulpy peat			1	2
% Fibrous peat			2	
% Detritus		5		
% Logs limbs	1			1
% Marl				
% Other				
Other description				

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 28c
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Carney Run
Site ID 594
(Continue)

Non Wadable		yes		
Land Use				
% Wetlands				
% Forest	50	75	100	50
% Cropland				
% Pasture				
% Residential	30			
% Commercial				
% Industrial				
% Unused abandoned				
% Overgrown shrub and small trees	20	25		50
% Other				
Other Land Use Note				
Precipitation current	showers	clear	overcast	clear
Precipitation recent	clear	clear	clear	rain
Water Odors	none	non-wadable,none	none	none
Water Odors Note				
Stream Width	3.8		4.4	2.4
Non-Wadable		yes		
Stream Width Note				
Stream Depth	0.12		0.18	0.09
Non-Wadable		yes		
Stream depth note				
Surface Velocity	1.046		1.08	0.43
Surface Velocity Note				
Stream Flow Volume or Discharge	0.3816		0.68	0.074
USGS Gaging		yes		
Air Temperature C	14	4	8	6
Air Temperature F				
Water Temperature C	10	2	6	8
Water Temperature F				
pH	5.8	5.4	5.9	6.2
Dissolved Oxygen	10	12	12	10
Specific Conductance	70	85	140	120
Nitrate	0.88	0.88	0.44	0.44
Total Phosphate Result	0.1	0.1	0.1	0.3
Sulfate	<50	<50	<50	<50
Total Alkalinity	15	10	5	20
Other observations comments		acidity 20 total N/D	total iron N/D	acidity 40; total n/d

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 22a
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Downey Run
Site ID 879

Water Body Name	Downey Run	Downey Run	Downey Run	Downey Run	Downey Run	Downey Run	Downey Run
Site ID	879	879	879	879	879	879	879
Monitor Date	5/13/1999	7/29/1999	9/9/1999	6/1/2000	11/2/2000	3/29/2001	7/19/2001
River Mile Index	2.26	2.26	2.26	2.26	2.26	2.26	2.26
Type of Water Body	stream	stream	stream	stream	stream	stream	stream
Length of Assessed Area	10	10	10	10	10	10	10
Features							
Water Appearance	clear	clear	clear	clear	clear	clear	clear
Water Appearance Note							
Soil Odors	earthy	earthy	musty	musty	non-wadable	non-wadable	non-wadable
Soil Odors Note							
Sediment Deposits	sand	none	none	sludge	sand	sand	none
Sediment Deposits Note				gravel	gravel		
Stream Type	straight	straight	straight	straight	straight	meandering	meandering
Dams	no	no	no		no	no	no
High Water Mark	1	1			1	2	
Highwater Estimate						yes	
Stream Bank Cross-Section Shape	rectangular	rectangular	rectangular	rectangular	rectangular	rectangular	rectangular
Stream Bank Erosion	none	occasional	occasional	none	occasional	occasional	occasional
Bottom							
% Bedrock	5			20	20	10	10
% Boulder	65	50	10	20	30	50	50
% Cobble	10	30	25	30	20	30	25
% Gravel	3	10	10	10	10	5	10
% Sand	2	5	5	10	10	2	1
% Silt	2	1			5	1	
% Clay			20	3			
% Other							
other note							
Organic Stream Bottom							
%_Muck-mud		1					
% Pulpy peat	5		5	2		1	
% Fibrous peat	5	1	10	2			2
% Detritus	2	1	5	2	5	1	1
% Logs limbs	1	1	5	1			1
% Marl							
% Other			5				
Other description							
Non Wadable							

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 33a
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Downey Run
Site ID 879
(Continued)

Site ID	879	879	879	879	879	879	879
Monitor Date	5/13/1999	7/29/1999	9/9/1999	6/1/2000	11/2/2000	3/29/2001	7/19/2001
Land Use							
% Wetlands			25				
% Forest	80	90	50	60	90	40	90
% Cropland							
% Pasture				20			
% Residential							
% Commercial							
% Industrial							
% Unused abandoned						20	
% Overgrown shrub and small trees	20	10	25	20	10	40	10
% Other							
Other Land Use Note							
Precipitation current	overcast	overcast	overcast	clear	clear	clear	clear
Precipitation recent	clear	rain	overcast	clear	clear	clear	rain
Water Odors	musty	earthy	musty earthy	earthy	none	none	none
Water Odors Note							
Stream Width	3.29	2.5	2.44	3.65	2.9	4.8	4.4
Non-Wadable							
Stream Width Note							
Stream Depth	0.095	0.58	0.058	0.345	0.13	0.15	0.11
Non-Wadable							
Stream depth note							
Surface Velocity	0.49		0.21	0.39	0.3	0.51	0.49
Surface Velocity Note							
Stream Flow Volume or Discharge	0.122		0.023	0.398	0.09	1.02	0.19
USGS Gaging							
Air Temperature C	10	26	20	22	9	4	22
Air Temperature F							
Water Temperature C	13	18	15	13	5	6	20
Water Temperature F							
pH	6.2	5.6	6.3	6.3	6	5.7	6.2
Dissolved Oxygen	8	7	6	8	9	8	7
Specific Conductance	800	100	120	600	70	100	130
Nitrate	0.35	1.3	0.35	1	4.4	4.4	3.5
Total Phosphate Result	0.08	0.1	0.18	0.01	0.16	0.1	0.3
Sulfate	50	50	50	50	50	50	50
Total Alkalinity	20	20	40	20	20	5	15

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 33b
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Downey Run
Site ID 879
(Continued)

Water Body Name	Downey Run	Downey Run	Downey Run	Downey Run	Downey Run
Site ID	879	879	879	879	879
Monitor Date	1/3/2002	7/3/2002	3/27/2003	4/1/2004	7/28/2005
River Mile Index	2.26	2.26	2.26	2.26	2.26
Type of Water Body	stream	stream	stream	stream	stream
Length of Assessed Area	10	10	10	10	10
Features					
Water Appearance	other	clear	clear	muddy/cloudy	clear
Water Appearance Note	creek ice covered				
Soil Odors	non-wadable	non-wadable	non-wadable	non-wadable	non-wadable
Soil Odors Note					
Sediment Deposits	non-wadable	sand	sand	none	sand
Sediment Deposits Note			gravel		gravel
Stream Type	meandering	meandering pool/riffle	meandering pool/riffle	meandering pool/riffle	meandering pool/riffle
Dams					
High Water Mark					2
Highwater Estimate					
Stream Bank Cross-Section Shape	rectangular	rectangular	U	rectangular	U
Stream Bank Erosion	occasional	occasional	occasional	occasional	occasional
Inorganic Stream Bottom					
% Bedrock		10	5		40
% Boulder		60	40		20
% Cobble		15	30		10
% Gravel		10	10		10
% Sand		2	10		15
% Silt					
% Clay					
% Other				95	
other note				unwadable stream	
Organic Stream Bottom					
% Muck-mud			1		1
% Pulpy peat			2		1
% Fibrous peat			1		1
% Detritus		1	1		1
% Logs limbs		2			1
% Marl					
% Other	100			5	
Other description	ice covered			unwadable stream	

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 33b
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Downey Run
Site ID 879
(Continued)

Site ID	879	879	879	879	879
Monitor Date	1/3/2002	7/3/2002	3/27/2003	4/1/2004	7/28/2005
Non Wadable	non-wadable			non-wadable	
Land Use					
% Wetlands					
% Forest	90	50	80	100	80
% Cropland					
% Pasture					
% Residential					
% Commercial					
% Industrial					
% Unused abandoned		10			20
% Overgrown shrub and small trees	10	40	20		
% Other					
Other Land Use Note					
Precipitation current	clear	clear	clear	rain	clear
Precipitation recent	clear	showers	clear	showers	showers
Water Odors	spicy	none	none	none	none
Water Odors Note					
Stream Width		2.6	4.2		1.8
Non-Wadable	non-wadable			non-wadable	
Stream Width Note					
Stream Depth		0.196	0.162		0.116
Non-Wadable	non-wadable			non-wadable	
Stream depth note					
Surface Velocity		0.79	0.88		0.25
Surface Velocity Note					
Stream Flow Volume or Discharge		0.322	0.48		0.041
USGS Gaging					
Air Temperature C	0	28	8	6	
Air Temperature F					
Water Temperature C	-3	18	5	5	16
Water Temperature F					
pH	6.4	6.3	6.2	6.8	6.5
Dissolved Oxygen	7	8	10	10	10
Specific Conductance	120	110	100	100	90
Nitrate	0	0.18	1.5	1.3	0.44
Total Phosphate Result	0.1	0	0.46	0	0
Sulfate	50	50	50	50	50
Total Alkalinity	25	20	5	5	25

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 23
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data Of Downey Run
Site ID 468

Water Body Name	Downey Run	Downey Run	Downey Run	Downey Run	Downey Run	Downey Run	Downey Run
Site ID	468	468	468	468	468	468	468
Monitor Date	1/7/1999	4/1/1999	6/1/2000	4/7/2005	6/15/2006	9/28/2006	5/24/2007
River Mile Index	1.76	1.76	1.76	1.76	1.76	1.76	1.76
Type of Water Body	stream	stream	stream	stream	stream	stream	stream
Length of Assessed Area	3	3	3	3	3	3	3
Features							
Water Appearance			clear	clear	clear	clear	clear
Water Appearance Note							
Soil Odors			musty	earthy	earthy	none	earthy
Soil Odors Note							
Sediment Deposits			sludge	none	sand	sand	none
Sediment Deposits Note			gravel				
Stream Type			straight	meandering pool/riffle	meandering	meandering ,pool/riffle	meandering ,pool/riffle
Dams					no	no	no
High Water Mark							
Highwater Estimate							
Stream Bank Cross-Section Shape			rectangular	rectangular	rectangular	rectangular	rectangular
Stream Bank Erosion			none	occasional	occasional	occasional	occasional
Inorganic Stream Bottom							
% Bedrock			20	40	50	25	25
% Boulder			20	30	25	10	25
% Cobble			20	10	20	50	35
% Gravel			10	10	2	5	10
% Sand			10	5	1	6	3
% Silt				1	1	2	
% Clay			3			1	
% Other							
other note							
Organic Stream Bottom							
% Muck-mud							
% Pulpy peat			2				
% Fibrous peat			2				1
% Detritus			2	2		1	
% Logs limbs			1	2	1	1	1
% Marl							
% Other							
Other description							

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 20
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data Of Downey Run
Site ID 468
(Continued)

Site ID	468	468	468	468	468	468	468
Monitor Date	1/7/1999	4/1/1999	6/1/2000	4/7/2005	6/15/2006	9/28/2006	5/24/2007
Non Wadable							
Land Use							
% Wetlands							
% Forest			60	90	100	100	100
% Cropland							
% Pasture			20				
% Residential							
% Commercial							
% Industrial							
% Unused abandoned							
% Overgrown shrub and small trees			20	10			
% Other							
Other Land Use Note							
Precipitation current	clear	clear	clear	overcast	clear	clear	rain
Precipitation recent	clear	clear	clear	clear	clear	showers	clear
Water Odors			musty earthy	none	none	none	none
Water Odors Note							
Stream Width			3.65	4.1	1.9	1.6	1.4
Non-Wadable							
Stream Width Note							
Stream Depth			0.345	0.518	0.082	0.16	0.17
Non-Wadable							
Stream depth note							
Surface Velocity			0.39	0.78	0.6754	0.51	5.6
Surface Velocity Note							
Stream Flow Volume or Discharge			0.398	1.3	0.084	0.105	1.06
USGS Gaging							
Air Temperature C	-8	10	22	8	17	13	15
Air Temperature F							
Water Temperature C	-1	8	13	11	11	10	12
Water Temperature F							
pH	6.8	6.9	6.3	5.6	6.2	6	6.1
Dissolved Oxygen	6	12	8	8	10	8	9
Specific Conductance	280	180	600	50	80	85	84
Nitrate	0.2	2.2		0	0.88	2.64	1.76
Total Phosphate Result	0.02	0.01	0.01	0.2	N/D	0.1	0.25
Sulfate	50	50	50	50	<50	<50	<50
Total Alkalinity	60	40	20	10	15	15	15
Other observations comments					acidity 20	acidity 40	acidity 5, total iron N/D

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 24a
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Dutch Run
Site ID 1016

Water Body Name	Dutch Run	Dutch Run	Dutch Run	Dutch Run	Dutch Run	Dutch Run	Dutch Run
Site ID	1016	1016	1016	1016	1016	1016	1016
Monitor Date	3/29/2002	6/27/2002	10/31/2002	3/20/2003	4/24/2003	2/26/2004	6/3/2004
River Mile Index	1.8	1.8	1.8	1.8	1.8	1.8	1.8
Type of Water Body	stream	stream	stream	stream	stream	stream	stream
Length of Assessed Area	10	10	10	10	10	10	10
Features							
Water Appearance	clear	muddy /cloudy	clear	green	muddy/ cloudy	clear	clear
Water Appearance Note							
Soil Odors	non-wadable	moldy	non- wadable	non-wadable	musty	non-wadable	non-wadable
Soil Odors Note							
Sediment Deposits	sand	sand	sand	sand	sand	sludge	none
Sediment Deposits Note					gravel	gravel	
Stream Type	meandering	straight	meandering braided	meandering pool/riffle	meandering	meandering	meandering
Dams							
High Water Mark					2		
Highwater Estimate							
Stream Bank Cross-Section Shape	rectangular	rectangular	rectangular	U	U	U	rectangular
Stream Bank Erosion	occasional	stabilized	occasional	occasional	occasional	occasional	occasional
Inorganic Stream Bottom							
% Bedrock					10		
% Boulder		5	5	10	30	2	5
% Cobble	5	70	40	30	40	80	75
% Gravel	50	15	40	10	10	5	10
% Sand	30	2	5	25	5	5	5
% Silt	5	20	5	15		5	1
% Clay		10	3			1	2
% Other				10			
other note				not specified			
Organic Stream Bottom							
%_Muck-mud	10	2	1		1		
% Pulpy peat		1			1		
% Fibrous peat					1		
% Detritus		1					1
% Logs limbs		1	1		2	2	1
% Marl							
% Other							
Other description							

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 34a
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Dutch Run
Site ID 1016
(Continued)

Site ID	1016	1016	1016	1016	1016	1016	1016
Monitor Date	3/29/2002	6/27/2002	10/31/2002	3/20/2003	4/24/2003	2/26/2004	6/3/2004
Non Wadable							
Land Use							
% Wetlands				10			
% Forest	20		50	80	50	75	50
% Cropland							
% Pasture							
% Residential							
% Commercial						10	
% Industrial					30		
% Unused abandoned	50	75					10
% Overgrown shrub and small trees	30	25	50	10	20	15	40
% Other							
Other Land Use Note							
Precipitation current	clear	showers	overcast	showers	clear	overcast	clear
Precipitation recent	rain	clear	rain	rain	clear	clear	storm
Water Odors	none	moldy	none	none	none	none	none
Water Odors Note							
Stream Width		4.8	4.4	8.8	5.2	6.8	3.2
Non-Wadable	non-wadable						
Stream Width Note							
Stream Depth		0.12	0.17	0.27	0.22	0.15	0.1
Non-Wadable	non-wadable						
Stream depth note							
Surface Velocity		0.42	0.58	0.96	0.43	0.44	0.33
Surface Velocity Note							
Stream Flow Volume or Discharge		0.193	0.347	1.82	0.117	0.355	0.845
USGS Gaging							
Air Temperature C	12	24	2	9	8	-3	16
Air Temperature F							
Water Temperature C	6	19	5	5	7	1	14
Water Temperature F							
pH	6.2	6.7	6.6	6.4	6.4	6.4	7
Dissolved Oxygen	10	10	10	10	10	12	8
Specific Conductance	120	300	105	100	225	139	210
Nitrate	0.26	0.35	0.44	0.44	0.22	2.2	0.88
Total Phosphate Result	0	0.7	0	0.2	0	0.14	0.2
Sulfate	50	90	200	50	80	50	75
Total Alkalinity	40	25	30	40	40	30	35

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 34b
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Dutch Run
Site ID 1016
(Continued)

Water Body Name	Dutch Run	Dutch Run	Dutch Run	Dutch Run	Dutch Run	Dutch Run
Site ID	1016	1016	1016	1016	1016	1016
Monitor Date	9/2/2004	6/7/2005	9/13/2005	8/10/2006	11/16/2006	8/2/2007
River Mile Index	1.8	1.8	1.8	1.8	1.8	1.8
Type of Water Body	stream	stream	stream	stream	stream	stream
Length of Assessed Area	10	10	10	10	10	10
Features						
Water Appearance	clear	clear	clear	clear	muddy/cloudy, non-wadable	clear
Water Appearance Note						
Soil Odors	earthy	non-wadable	non-wadable	earthy	non- wadable,none	none
Soil Odors Note						
Sediment Deposits	none	none	none	none	none,non- wadable	none
Sediment Deposits Note						
Stream Type	meandering p ool/riffle	meandering p ool/riffle	meandering p ool/riffle	meandering	meandering	meandering,po ol/riffle
Dams				no	no	no
High Water Mark						
Highwater Estimate						
Stream Bank Cross- Section Shape	rectangular	U	rectangular	rectangular	rectangular	rectangular
Stream Bank Erosion	occasional	extensive	extensive	occasional	occasional	occasional
Inorganic Stream Bottom						
% Bedrock						10
% Boulder	2			10	20	25
% Cobble	40	10		60	30	40
% Gravel	50	20		20	40	15
% Sand	2	10		4	5	5
% Silt	1	20		2	1	
% Clay	1			1	2	2
% Other			50			
other note			not specified			2
Organic Stream Bottom						
%_Muck-mud	1	20		1	1	
% Pulpy peat						
% Fibrous peat						
% Detritus	2	10		1		
% Logs limbs	1	10		1	1	1
% Marl						
% Other			50			
Other description			not specified			
Non Wadable			non-wadable		yes	

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 34b
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Dutch Run
Site ID 1016
(Continued)

Site ID	1016	1016	1016	1016	1016	1016
Monitor Date	9/2/2004	6/7/2005	9/13/2005	8/10/2006	11/16/2006	8/2/2007
Land Use						
% Wetlands		20				
% Forest	25	60		25	50	50
% Cropland						
% Pasture						
% Residential						
% Commercial						
% Industrial						
% Unused abandoned						50
% Overgrown shrub and small trees	75	20		75	50	
% Other			100			
Other Land Use Note			not specified			
Precipitation current	clear	clear	clear	clear	storm	clear
Precipitation recent	clear	storm	clear	clear	storm	clear
Water Odors	musty	none	none	none	non-wadable,none	none
Water Odors Note						
Stream Width	4.5	4.8		2.7		3.1
Non-Wadable			non-wadable		yes	
Stream Width Note						
Stream Depth	0.13	0.17		0.06		0.06
Non-Wadable			non-wadable		yes	
Stream depth note						
Surface Velocity	0.39	0.43		0.31		0.31
Surface Velocity Note						
Stream Flow Volume or Discharge	0.182	0.316		0.04		0.046
USGS Gaging					yes	
Air Temperature C	16	25	24	21	14	24
Air Temperature F						
Water Temperature C	14	18	20	18	9	20
Water Temperature F						
pH	6.5	7.7	8	6.4	6.3	6.5
Dissolved Oxygen	8	10	7	8	10	7
Specific Conductance	220	250	435	240	80	320
Nitrate	0.44	0	0	N/D	0.88	0.44
Total Phosphate Result	0	0.1	0	0.1	0.7	0.1
Sulfate	100	75	125	100	<50	100
Total Alkalinity	50	85	15	115	20	115
Other observations comments				acidity of 60 and total iron of 1.4	acidity 0, total iron .8	acidity 40; total iron 1.4

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 25
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Elk Creek
Site ID 485

Water Body Name	Elk Creek	Elk Creek
Site ID	485	485
Monitor Date	10/29/1998	7/8/1999
River Mile Index	4.41	4.41
Type of Water Body	stream	stream
Length of Assessed Area	22.7	22.7
Features		
Water Appearance		clear
Water Appearance Note		
Soil Odors		musty
Soil Odors Note		
Sediment Deposits		none
Sediment Deposits Note		
Stream Type		braided
Dams		no
High Water Mark		1.5
Highwater Estimate		
Stream Bank Cross-Section Shape		rectangular
Stream Bank Erosion		occasional
Inorganic Stream Bottom		
% Bedrock		
% Boulder		25
% Cobble		60
% Gravel		5
% Sand		5
% Silt		1
% Clay		1
% Other		
other note		
Organic Stream Bottom		
%_Muck-mud		
% Pulpy peat		
% Fibrous peat		1
% Detritus		2
% Logs limbs		
% Marl		
% Other		
Other description		

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 22
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Elk Creek
Site ID 485
(Continued)

Site ID	485	485
Monitor Date	10/29/1998	7/8/1999
Non Wadable		
Land Use		
% Wetlands		
% Forest		50
% Cropland		
% Pasture		
% Residential		
% Commercial		
% Industrial		
% Unused abandoned		25
% Overgrown shrub and small trees		25
% Other		
Other Land Use Note		
Precipitation current	clear	clear
Precipitation recent	clear	showers
Water Odors		spicy
Water Odors Note		
Stream Width		
Non-Wadable		
Stream Width Note		
Stream Depth		
Non-Wadable		
Stream depth note		
Surface Velocity		
Surface Velocity Note		
Stream Flow Volume or Discharge		
USGS Gaging		
Air Temperature C	12	22
Air Temperature F		
Water Temperature C	10	
Water Temperature F		
pH	7.6	6.2
Dissolved Oxygen	8	8
Specific Conductance	1290	750
Nitrate	0.26	0.44
Total Phosphate Result	0.2	0.1
Sulfate	50	200
Total Alkalinity	120	20

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 26a
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Laurel Run
Site ID 493

Water Body Name	Laurel Run	Laurel Run	Laurel Run	Laurel Run	Laurel Run	Laurel Run	Laurel Run
Site ID	493	493	493	493	493	493	493
Monitor Date	4/25/1998	5/8/1998	6/1/1998	6/11/1998	9/3/1998	10/1/1998	12/12/1998
River Mile Index	13.58	13.58	13.58	13.58	13.58	13.58	13.58
Type of Water Body	stream	stream	stream	stream	stream	stream	stream
Length of Assessed Area	4.09	4.09	4.09	4.09	4.09	4.09	4.09
Features							
Water Appearance	orange/red	other	other	clear	clear	other	
Water Appearance Note		not specified	high level		low level	not specified	
Soil Odors	sulfur	non-wadable	non-wadable	non-wadable	non-wadable	non-wadable	
Soil Odors Note							
Sediment Deposits	sand	none	none non-wadable	none	none	none	
Sediment Deposits Note							
Stream Type	channelized	meandering	meandering	meandering	meandering	meandering	
Dams							
High Water Mark							
Highwater Estimate							
Stream Bank Cross-Section Shape	rectangular	rectangular	rectangular	rectangular	rectangular	rectangular	
Stream Bank Erosion	none	occasional	occasional	occasional	occasional	occasional	
Inorganic Stream Bottom							
% Bedrock							
% Boulder		10	10	10			
% Cobble	50	60	60	60			
% Gravel	10	10	10	10			
% Sand	10	10	10	10			
% Silt	5	5	5	5			
% Clay	5	2	2	2			
% Other					99	50	
other note					not specified	not specified	
Organic Stream Bottom							
%_Muck-mud		1	1	1			
% Pulpy peat	10			1			
% Fibrous peat							
% Detritus	5	1	1	1			
% Logs limbs	5	1	1				
% Marl							
% Other					1	50	
Other description					not specified	not specified	

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 25a
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Laurel Run
Site ID 493
(Comtinued)

Site ID	493	493	493	493	493	493	493
Monitor Date	4/25/1998	5/8/1998	6/1/1998	6/11/1998	9/3/1998	10/1/1998	12/12/1998
Non Wadable							
Land Use							
% Wetlands	25						
% Forest	50	10	10	10			
% Cropland							
% Pasture							
% Residential							
% Commercial							
% Industrial	15						
% Unused abandoned		10	10	10			
% Overgrown shrub and small trees	10	80	80	80			
% Other					100	100	
Other Land Use Note					not specified	not specified	
Precipitation current	clear	clear	clear	clear	clear	clear	clear
Precipitation recent	clear	overcast	clear	clear	clear	clear	clear
Water Odors	none	none	none	none	none	none	
Water Odors Note							
Stream Width	8.8	3					
Non-Wadable	non-wadable		non-wadable	non-wadable	non-wadable	non-wadable	
Stream Width Note							
Stream Depth	1.2	0.1					
Non-Wadable	non-wadable		non-wadable	non-wadable	non-wadable	non-wadable	
Stream depth note							
Surface Velocity							
Surface Velocity Note							
Stream Flow Volume or Discharge							
USGS Gaging							
Air Temperature C	25	20	25	20	28	20	0
Air Temperature F							
Water Temperature C	14	12	17	19	15	14	2
Water Temperature F							
pH	6.8	6.2	7.3	6.2	6.2	4.4	4.4
Dissolved Oxygen	6	8	6	6	3	4	4
Specific Conductance	70	100	180	840	1020	900	650
Nitrate	0.88	0.2	0.01	0.4	0.8	0.04	0.26
Total Phosphate Result	0.1	0.01	0.01	0.04	0.02	0.02	0.06
Sulfate	50	50	100	50	200	50	200
Total Alkalinity		20	140	20	20	20	20
Notes On This Monitoring Site							

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 25b
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Laurel Run
Site ID 493
(Continued)

Water Body Name	Laurel Run	Laurel Run	Laurel Run	Laurel Run	Laurel Run	Laurel Run	Laurel Run
Site ID	493	493	493	493	493	493	493
Monitor Date	1/28/1999	3/18/1999	7/15/1999	4/7/2000	5/25/2000	2/15/2001	7/12/2001
River Mile Index	13.58	13.58	13.58	13.58	13.58	13.58	13.58
Type of Water Body	stream	stream	stream	stream	stream	stream	stream
Length of Assessed Area	4.09	4.09	4.09	4.09	4.09	4.09	4.09
Features							
Water Appearance			orange/red foamy	clear	orange/red	other	milky/white
Water Appearance Note						muddy green	
Soil Odors			sulfur	musty	sulfur	non-wadable	sulfur
Soil Odors Note							
Sediment Deposits			none	sludge	sand	sand	sludge
Sediment Deposits Note					Gravel	leafy muck	
Stream Type			straight	straight	meandering pool/riffle	straight	meandering
Dams			no	no	no	no	
High Water Mark			0.5	0.5	0.5	2	
Highwater Estimate							
Stream Bank Cross-Section Shape			rectangular	rectangular	rectangular	rectangular	undercut
Stream Bank Erosion			occasional	occasional	none	extensive	occasional
Inorganic Stream Bottom							
% Bedrock							
% Boulder					10	25	50
% Cobble			85	70		25	30
% Gravel				5	40	20	1
% Sand				5	40	10	2
% Silt			5	3		5	3
% Clay							4
% Other							
other note							
Organic Stream Bottom							
% Muck-mud			5				5
% Pulpy peat							2
% Fibrous peat				7	5		
% Detritus			5	5	5	10	
% Logs limbs				5		5	3
% Marl							
% Other							
Other description							

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 25b
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Laurel Run
Site ID 493
(Continued)

Site ID	493	493	493	493	493	493	493
Monitor Date	1/28/1999	3/18/1999	7/15/1999	4/7/2000	5/25/2000	2/15/2001	7/12/2001
Non Wadable							
Land Use							
% Wetlands							
% Forest							50
% Cropland							
% Pasture							
% Residential					100		
% Commercial							
% Industrial							
% Unused abandoned				70		80	40
% Overgrown shrub and small trees			50	30		10	10
% Other			50			10	
Other Land Use Note			50			weeds	
Precipitation current	overcast	overcast	clear	clear	clear	overcast	clear
Precipitation recent	overcast	clear	clear	clear	storm	rain	clear
Water Odors			sulfur mol dy	sulfur	sulfur	none	sulfur
Water Odors Note							
Stream Width				3.2		4.69	2.6
Non-Wadable					non-wadable		
Stream Width Note							
Stream Depth				0.23		0.228	0.14
Non-Wadable					non-wadable		
Stream depth note							
Surface Velocity				0.56		0.54	0.19
Surface Velocity Note							
Stream Flow Volume or Discharge				0.33		0.467	0.05
USGS Gaging							
Air Temperature C	12	6	26	16	16	7	17
Air Temperature F							
Water Temperature C	4	5	16	10	13	5	13
Water Temperature F							
pH	6	5.4	5.1	4.8	5.5	6.2	4.4
Dissolved Oxygen	7	9	6	7	7	9	7
Specific Conductance	320	200	700	300	280	127	590
Nitrate	1.6	1.3	0.44	0.15	0.15	4.4	0.44
Total Phosphate Result	0.18	0.5	0.06	0.02	0.04	0.06	1
Sulfate	50	200	200	150	200	50	0
Total Alkalinity	20	20	20	20	20	40	20

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 25c
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Laurel Run
Site ID 493
(Continued)

Water Body Name	Laurel Run	Laurel Run	Laurel Run	Laurel Run	Laurel Run	Laurel Run	Laurel Run
Site ID	493	493	493	493	493	493	493
Monitor Date	8/9/2001	10/25/2001	12/20/2001	6/6/2002	8/1/2002	10/18/2002	10/23/2002
River Mile Index	13.58	13.58	13.58	13.58	13.58	13.58	13.58
Type of Water Body	stream	stream	stream	stream	stream	stream	stream
Length of Assessed Area	4.09	4.09	4.09	4.09	4.09	4.09	4.09
Features							
Water Appearance	milky/white	muddy/ cloudy	muddy/ cloudy	clear	clear	clear	clear
Water Appearance Note							
Soil Odors	musty	earthy	earthy	musty	musty	non-wadable	musty
Soil Odors Note							
Sediment Deposits	sludge	sludge	other	sand	other	none	sludge
Sediment Deposits Note	algae	leaves	iron		undetermine d fine sediments		
Stream Type	meandering pool/riffle	meandering pool/riffle	meandering	meandering pool/riffle	meandering	meandering pool/riffle	meandering pool/riffle
Dams							
High Water Mark			2				
Highwater Estimate							
Stream Bank Cross- Section Shape	U	U	rectangular	U	U	rectangular	rectangular
Stream Bank Erosion	occasional	occasional	occasional	extensive	extensive	occasional	occasional
Inorganic Stream Bottom							
% Bedrock							
% Boulder	25		25	5	20		
% Cobble	40		65	50	60		80
% Gravel			5	25	5		5
% Sand			1	5	5		5
% Silt		20		10	5		
% Clay		80	1	1	1		
% Other							
other note							
Organic Stream Bottom							
%_Muck-mud	10			2	1		1
% Pulpy peat	5		1		1		2
% Fibrous peat	5						5
% Detritus					1		
% Logs limbs	10		2	2	1		2
% Marl							
% Other	5					100	

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 25c
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Laurel Run
Site ID 493
(Continued)

Site ID	493	493	493	493	493	493	493
Monitor Date	8/9/2001	10/25/2001	12/20/2001	6/6/2002	8/1/2002	10/18/2002	10/23/2002
Other description	aluminum sludge					not listed	
Non Wadable							
Land Use							
% Wetlands		10					
% Forest	50	80	50	50	50	50	80
% Cropland							
% Pasture							
% Residential							
% Commercial							
% Industrial							
% Unused abandoned	50						
% Overgrown shrub and small trees		10	50	50	50	50	20
% Other							
Other Land Use Note							
Precipitation current	clear	overcast	showers	showers	clear	overcast	overcast
Precipitation recent	clear	storm	rain	storm	clear	showers	clear
Water Odors	musty mold y	earthy spic y	none	musty	none	none	none
Water Odors Note							
Stream Width	2.4	2.5	3	2.6	2.1		2.2
Non-Wadable						non-wadable	
Stream Width Note							
Stream Depth	0.156	0.168	0.17	0.2	0.36		0.07
Non-Wadable						non-wadable	
Stream depth note							
Surface Velocity	0.17	0.21	0.89	0.54	0.45		0.58
Surface Velocity Note							
Stream Flow Volume or Discharge	0.053	0.07	0.363	0.224	0.27		0.07
USGS Gaging							
Air Temperature C	22	9	3	17	32	6	10
Air Temperature F							
Water Temperature C	19	12	5	15		8	8
Water Temperature F							
pH	4.6	6.6	6.4	6.3	7.3	6.5	6.9
Dissolved Oxygen	6	6	8	8	8	8	10
Specific Conductance	780	1360	365	700	525	385	450
Nitrate	0.35	4.4	0.44	0.8	1.5	0.26	0.44
Total Phosphate Result	0.5	1	0.5	0.3	0.5	1	0.5
Sulfate	0	0	200	0	125	200	150
Total Alkalinity	10	20	20	45	20	35	40

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 25d
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Laurel Run
Site ID 493
(Continued)

Water Body Name	Laurel Run	Laurel Run	Laurel Run	Laurel Run	Laurel Run	Laurel Run	Laurel Run
Site ID	493	493	493	493	493	493	493
Monitor Date	8/9/2001	10/25/2001	12/20/2001	6/6/2002	8/1/2002	10/18/2002	10/23/2002
River Mile Index	13.58	13.58	13.58	13.58	13.58	13.58	13.58
Type of Water Body	stream	stream	stream	stream	stream	stream	stream
Length of Assessed Area	4.09	4.09	4.09	4.09	4.09	4.09	4.09
Features							
Water Appearance	milky/ white	muddy cloudy	muddy /cloudy	clear	clear	clear	clear
Water Appearance Note							
Soil Odors	musty	earthy	earthy	musty	musty	non-wadable	musty
Soil Odors Note							
Sediment Deposits	sludge	sludge	other	sand	other	none	sludge
Sediment Deposits Note	algae	leaves	iron		undetermined fine sediments		
Stream Type	meandering pool/riffle	meandering pool/riffle	meandering	meandering pool/riffle	meandering	meandering pool/riffle	meandering pool/riffle
Dams							
High Water Mark			2				
Highwater Estimate							
Stream Bank Cross-Section Shape	U	U	rectangular	U	U	rectangular	rectangular
Stream Bank Erosion	occasional	occasional	occasional	extensive	extensive	occasional	occasional
Inorganic Stream Bottom							
% Bedrock							
% Boulder	25		25	5	20		
% Cobble	40		65	50	60		80
% Gravel			5	25	5		5
% Sand			1	5	5		5
% Silt		20		10	5		
% Clay		80	1	1	1		
% Other							
other note							
Organic Stream Bottom							
% Muck-mud	10			2	1		1
% Pulpy peat	5		1		1		2
% Fibrous peat	5						5
% Detritus					1		
% Logs limbs	10		2	2	1		2
% Marl							
% Other	5					100	
Other description	aluminum sludge					not listed	

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 25d
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Laurel Run
Site ID 493
(Continued)

Site ID	493	493	493	493	493	493	493
Monitor Date	8/9/2001	10/25/2001	12/20/2001	6/6/2002	8/1/2002	10/18/2002	10/23/2002
Non Wadable							
Land Use							
% Wetlands		10					
% Forest	50	80	50	50	50	50	80
% Cropland							
% Pasture							
% Residential							
% Commercial							
% Industrial							
% Unused abandoned	50						
% Overgrown shrub and small trees		10	50	50	50	50	20
% Other							
Other Land Use Note							
Precipitation current	clear	overcast	showers	showers	clear	overcast	overcast
Precipitation recent	clear	storm	rain	storm	clear	showers	clear
Water Odors	musty moldy	earthy spicy	none	musty	none	none	none
Water Odors Note							
Stream Width	2.4	2.5	3	2.6	2.1		2.2
Non-Wadable						non-wadable	
Stream Width Note							
Stream Depth	0.156	0.168	0.17	0.2	0.36		0.07
Non-Wadable						non-wadable	
Stream depth note							
Surface Velocity	0.17	0.21	0.89	0.54	0.45		0.58
Surface Velocity Note							
Stream Flow Volume or Discharge	0.053	0.07	0.363	0.224	0.27		0.07
USGS Gaging							
Air Temperature C	22	9	3	17	32	6	10
Air Temperature F							
Water Temperature C	19	12	5	15		8	8
Water Temperature F							
pH	4.6	6.6	6.4	6.3	7.3	6.5	6.9
Dissolved Oxygen	6	6	8	8	8	8	10
Specific Conductance	780	1360	365	700	525	385	450
Nitrate	0.35	4.4	0.44	0.8	1.5	0.26	0.44
Total Phosphate Result	0.5	1	0.5	0.3	0.5	1	0.5
Sulfate	0	0	200	0	125	200	150
Total Alkalinity	10	20	20	45	20	35	40

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 25e
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Laurel Run
Site ID 493
(Continued)

Water Body Name	Laurel Run	Laurel Run	Laurel Run	Laurel Run	Laurel Run	Laurel Run	Laurel Run
Site ID	493	493	493	493	493	493	493
Monitor Date	2/4/2003	6/12/2003	7/31/2003	10/16/2003	12/18/2003	3/11/2004	5/6/2004
River Mile Index	13.58	13.58	13.58	13.58	13.58	13.58	13.58
Type of Water Body	stream	stream	stream	stream	stream	stream	stream
Length of Assessed Area	4.09	4.09	4.09	4.09	4.09	4.09	4.09
Features							
Water Appearance	muddy/ cloudy	clear	clear	clear	clear	clear	clear
Water Appearance Note							
Soil Odors	earthy	non- wadable	musty	musty	non-wadable	non- wadable	non- wadable
Soil Odors Note							
Sediment Deposits	none	sludge	sand	sand	sand	sand	none
Sediment Deposits Note		gravel		gravel		gravel	
Stream Type	meandering pool/riffle	straight	meandering pool/riffle	meandering	meandering	meandering pool/riffle	meandering
Dams							
High Water Mark							
Highwater Estimate							
Stream Bank Cross- Section Shape	rectangular	U	rectangular	U	rectangular	U	rectangular
Stream Bank Erosion	occasional	none	occasional	occasional	occasional	occasional	occasional
Inorganic Stream Bottom							
% Bedrock							
% Boulder	25	10	10		10	10	
% Cobble	50	70	50	80	70	65	70
% Gravel	20	10	25	5	10	10	10
% Sand	2	5	5	5	5		5
% Silt	1		2		1	10	5
% Clay	1		2		1		
% Other							
other note							
Organic Stream Bottom							
%_Muck-mud		2	2		1		
% Pulpy peat			1	2		2	2
% Fibrous peat				5		3	1
% Detritus		2	2	1	1		2
% Logs limbs	1	1	1	2	1	1	2
% Marl							3
% Other							
Other description							

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 25e
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Laurel Run
Site ID 493
(Continued)

Site ID	493	493	493	493	493	493	493
Monitor Date	2/4/2003	6/12/2003	7/31/2003	10/16/2003	12/18/2003	3/11/2004	5/6/2004
Non Wadable							
Land Use							
% Wetlands		10					60
% Forest	50	60	50	80	25	60	
% Cropland							
% Pasture							
% Residential							
% Commercial							
% Industrial							
% Unused abandoned		10		10		30	10
% Overgrown shrub and small trees	50	20	50	10	75	10	20
% Other							10
Other Land Use Note							ROAD
Precipitation current	showers	showers	clear	clear	overcast	clear	clear
Precipitation recent	showers	showers	clear	clear	overcast	clear	clear
Water Odors	none	none	none	earthy	none	none	none
Water Odors Note							
Stream Width	2.4	3	2.2	2	2.2	3.2	2.6
Non-Wadable							
Stream Width Note							
Stream Depth	0.28	0.015	0.096	0.146	0.13	0.166	0.128
Non-Wadable							
Stream depth note							
Surface Velocity	1	1	0.71	0.64	0.98	0.84	0.73
Surface Velocity Note							
Stream Flow Volume or Discharge	0.537	0.038	0.119	0.15	0.224	0.358	0.195
USGS Gaging							
Air Temperature C	4		24		-5	7	17
Air Temperature F							
Water Temperature C	2		17	9	-3	5	10
Water Temperature F							
pH	6.7	6.5	6.4	6.5	6.6	6.9	6.5
Dissolved Oxygen	10	10	9	8	11	13	10
Specific Conductance	260	395	495	400	35	380	425
Nitrate	1.7	0.04	0.44	0	1.7	2.6	0
Total Phosphate Result	0.3	0.24	0.1	0	0.1	0.08	0.1
Sulfate	200	200	200	200	200	0	200
Total Alkalinity	15	60	45	20	25	25	10

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 25f
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Laurel Run
Site ID746
(Continued)

Water Body Name	Laurel Run	Laurel Run	Laurel Run	Laurel Run	Run	Laurel Run	Laurel Run
Site ID	493	493	493	493	493	493	493
Monitor Date	7/8/2004	9/16/2004	10/7/2004	12/16/2004	2/3/2005	3/30/2005	7/7/2005
River Mile Index	13.58	13.58	13.58	13.58	13.58	13.58	13.58
Type of Water Body	stream	stream	stream	stream	stream	stream	stream
Length of Assessed Area	4.09	4.09	4.09	4.09	4.09	4.09	4.09
Features							
Water Appearance	clear	clear	clear	clear	clear	clear	clear
Water Appearance Note							
Soil Odors	earthy	earthy	non-wadable	non-wadable	non-wadable	non-wadable	musty
Soil Odors Note							
Sediment Deposits	none	none	sand	none	sand	sand	sludge
Sediment Deposits Note			gravel			gravel	
Stream Type	meandering	pool/riffle	meandering pool/riffle	meandering	straight	meandering pool/riffle	meandering pool/riffle
Dams							
High Water Mark							1
Highwater Estimate							
Stream Bank Cross-Section Shape	rectangular	rectangular	rectangular	rectangular	rectangular	U	U
Stream Bank Erosion	occasional	occasional	occasional	occasional	occasional	occasional	occasional
Inorganic Stream Bottom							
% Bedrock							
% Boulder	15	15	10	5	5	20	5
% Cobble	75	75	50	75	70	60	60
% Gravel	5	5	15	5	10	5	10
% Sand	2	2	10	5	5	5	10
% Silt	1			1	1		5
% Clay	1	1		5	4		
% Other							
other note							
Organic Stream Bottom							
%_Muck-mud		1		1	3	5	5
% Pulpy peat	1		5			3	
% Fibrous peat			5	1	1	1	
% Detritus				1			
% Logs limbs		1	5	1	1	1	5
% Marl							
% Other							
Other description							

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 25f
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Laurel Run
Site ID746
(Continued)

Site ID	493	493	493	493	493	493	493
Monitor Date	7/8/2004	9/16/2004	10/7/2004	12/16/2004	2/3/2005	3/30/2005	7/7/2005
Non Wadable							
Land Use							
% Wetlands						20	
% Forest	50	50	80	50	50	80	80
% Cropland							
% Pasture							
% Residential							
% Commercial							
% Industrial							
% Unused abandoned					50		
% Overgrown shrub and small trees	50	50		50			20
% Other			20				
Other Land Use Note							
Precipitation current	clear	clear	clear	clear	overcast	clear	clear
Precipitation recent	showers	clear	clear	clear	clear	clear	clear
Water Odors	none	none	none	none	none	none	none
Water Odors Note							
Stream Width	2.1	2.5	2.8	2.2	2.4	2.8	3.2
Non-Wadable							
Stream Width Note							
Stream Depth	0.13	0.076	0.13	0.15	0.13	0.166	0.024
Non-Wadable							
Stream depth note							
Surface Velocity	0.62	0.53	0.47	0.78	0.78	0.92	0.57
Surface Velocity Note							
Stream Flow Volume or Discharge	0.135	0.081	0.135	0.2064	0.195	0.539	0.108
USGS Gaging							
Air Temperature C	18	17		-4	0		21
Air Temperature F							
Water Temperature C	16	14	9	2	2	7	18
Water Temperature F							
pH	6.5	6.8	6.8	6.8	6.6	6.5	6.5
Dissolved Oxygen	8	9	45	8	14	11	8
Specific Conductance	400	420	530	200	320	240	670
Nitrate	0.88	0.44	0.16	0.44	0.22	0.35	0.44
Total Phosphate Result	0.5	0	0	0	0	0.1	0
Sulfate	200	200	200	200	200	200	0
Total Alkalinity	40	45	50	25	40	5	85

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 25g
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Laurel Run
Site ID 746
(Continued)

Water Body Name	Laurel Run	Laurel Run	Laurel Run	Laurel Run	Laurel Run	Laurel Run	Laurel Run
Site ID	493	493	493	493	493	493	493
Monitor Date	9/8/2005	1/5/2006	3/30/2006	7/6/2006	8/24/2006	10/5/2006	3/22/2007
River Mile Index	13.58	13.58	13.58	13.58	13.58	13.58	13.58
Type of Water Body	stream	stream	stream	stream	stream	stream	stream
Length of Assessed Area	4.09	4.09	4.09	4.09	4.09	4.09	4.09
Features							
Water Appearance	clear	clear	clear	clear	clear	clear	clear
Water Appearance Note							
Soil Odors	earthy	earthy	none	earthy	earthy	moldy	earthy
Soil Odors Note							
Sediment Deposits	none	other	none	none	none	none	sand
Sediment Deposits Note		no unusual sediment deposits					
Stream Type	meandering pool/riffle	meandering	meandering, pool/riffle	meandering, pool/riffle	meandering	meandering	meandering, pool/riffle
Dams		no	no	no	no	no	no
High Water Mark							
Highwater Estimate							
Stream Bank Cross-Section Shape	rectangular	rectangular	rectangular	rectangular	rectangular	rectangular	rectangular
Stream Bank Erosion	occasional	occasional	occasional	occasional	occasional	occasional	occasional
Inorganic Stream Bottom							
% Bedrock							
% Boulder	20	2	25	20	25	25	25
% Cobble	55	60	60	65	60	60	60
% Gravel	15	25	10	10	2	2	5
% Sand	5	10	2	2	1	1	2
% Silt	4	1		1	1	1	
% Clay		1		1	10	10	4
% Other							
other note							
Organic Stream Bottom							
%_Muck-mud	1	1	2				2
% Pulpy peat					1	1	1
% Fibrous peat							
% Detritus				1			
% Logs limbs			1				1
% Marl							
% Other							
Other description							

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 25g
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Laurel Run
Site ID 746
(Continued)

Site ID	493	493	493	493	493	493	493
Monitor Date	9/8/2005	1/5/2006	3/30/2006	7/6/2006	8/24/2006	10/5/2006	3/22/2007
Non Wadable							
Land Use							
% Wetlands							
% Forest	25	50	50		50	50	50
% Cropland							
% Pasture							
% Residential							
% Commercial							
% Industrial							
% Unused abandoned				50			
% Overgrown shrub and small trees	75	50	50	50	50	50	50
% Other							
Other Land Use Note							
Precipitation current	clear	showers	clear	clear	clear	showers	clear
Precipitation recent	clear	showers	clear	clear	clear	overcast	clear
Water Odors	none	other	none	none	none	none	none
Water Odors Note		no unusual odors					
Stream Width	1.6	2.1	2.3	2.5	1.9	2.25	3.5
Non-Wadable							
Stream Width Note							
Stream Depth	0.052	0.16	0.086	0.1	0.07	0.076	0.19
Non-Wadable							
Stream depth note							
Surface Velocity	0.37	1	0.77	0.8214	0.083	0.64	1.52
Surface Velocity Note							
Stream Flow Volume or Discharge	0.246	0.27	0.122	0.16428	0.088	0.078	0.8
USGS Gaging							
Air Temperature C	16	3		14	23	11	16
Air Temperature F							
Water Temperature C	13	5		12	18	12	8
Water Temperature F							
pH	6.7	6.1	6.3	6.8	6.8	6.5	4.4
Dissolved Oxygen	7	11	9	9	9	8	8
Specific Conductance	580	240	350	300	520	510	250
Nitrate	4.4	0.88	0.42	20	0.44	0.44	0.44
Total Phosphate Result	0	ND	0.1	0.1	0.1	ND	0.7
Sulfate	0	125	>200	200	>200	?200	150
Total Alkalinity	80	20	30	25	50	10	10
Other observations comments				acidity 20	acidity of 80 and total iron of .08	acidity 5; total iron 1	acidity 40 and total iron .8

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 25g
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Laurel Run
Site ID 746
(Continued)

Water Body Name	Laurel Run	Laurel Run	Laurel Run	Laurel Run	Laurel Run	Run	Laurel Run
Site ID	493	493	493	493	493	493	493
Monitor Date	4/12/2007	5/3/2007	6/14/2007	7/19/2007	8/30/2007	10/11/2007	10/18/2007
River Mile Index	13.58	13.58	13.58	13.58	13.58	13.58	13.58
Type of Water Body	stream	stream	stream	stream	stream	stream	stream
Length of Assessed Area	4.09	4.09	4.09	4.09	4.09	4.09	4.09
Features							
Water Appearance	clear	clear	clear	clear	clear	clear	clear
Water Appearance Note							
Soil Odors	earthy	musty	none	none	none	none	none
Soil Odors Note							
Sediment Deposits	none	sand	none	sand	sand	none	none
Sediment Deposits Note							
Stream Type	meandering, braided, pool/riffle	meandering, pool/riffle	meandering, pool/riffle	meandering, pool/riffle	meandering, pool/riffle	meandering, pool/riffle	meandering, pool/riffle
Dams	no	no	no	no	no	no	no
High Water Mark			2				
Highwater Estimate			yes				
Stream Bank Cross-Section Shape	rectangular	rectangular	rectangular	rectangular	rectangular	rectangular	rectangular
Stream Bank Erosion	occasional	occasional	occasional	occasional	occasional	occasional	occasional
Inorganic Stream Bottom							
% Bedrock							
% Boulder	25	10	30	25	25	25	25
% Cobble	60	70	50	50	50	40	60
% Gravel	20	10	10	15	15	30	10
% Sand	2	5	2	3	5	2	2
% Silt		2	5		2		
% Clay	2	1		5	2	2	2
% Other							
other note							
Organic Stream Bottom							
% Muck-mud	1	1	2	1	1		1
% Pulpy peat		1					
% Fibrous peat							
% Detritus							
% Logs limbs			1	1		1	
% Marl							
% Other							
Other description							

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 25g
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Laurel Run
Site ID 746
(Continued)

Site ID	493	493	493	493	493	493	493
Monitor Date	4/12/2007	5/3/2007	6/14/2007	7/19/2007	8/30/2007	10/11/2007	10/18/2007
Non Wadable							
Land Use							
% Wetlands							
% Forest	50	50	50	50	50	50	50
% Cropland							
% Pasture							
% Residential							
% Commercial							
% Industrial							
% Unused abandoned			50				
% Overgrown shrub and small trees	50	50		50	50	50	50
% Other							
Other Land Use Note							
Precipitation current	rain	clear	rain	storm	clear	clear	clear
Precipitation recent	showers	clear	overcast	rain	clear	showers	clear
Water Odors	none	none	none	none	none	none	none
Water Odors Note							
Stream Width	3.01	3	2	2.6	2.6	1.6	2.5
Non-Wadable							
Stream Width Note							
Stream Depth	0.15	0.11	0.08	0.106	0.11	0.07	0.076
Non-Wadable							
Stream depth note							
Surface Velocity	0.96	0.81	0.69	0.67	0.96	0.64	0.42
Surface Velocity Note							
Stream Flow Volume or Discharge	0.35	0.21	0.088	0.1477	0.219	0.057	0.051
USGS Gaging							
Air Temperature C	5	13			18	8	17
Air Temperature F							
Water Temperature C	8	8		16	16	12	13
Water Temperature F							
pH	6.2	6.2	6.6	6.7	6.4	6.8	6.7
Dissolved Oxygen	10	10	9	9	9	9	9
Specific Conductance	220	380	480	440	410	655	665
Nitrate	0.88	0.44	0.44	0.52	0.44	0.44	0.44
Total Phosphate Result	0.2	0.1	ND	0.3	0.1	N/D	
Sulfate	>200	>200	200	200	>200	>200	
Total Alkalinity	20	25	40	40	30	55	
Other observations comments	acidity 40 iron n/d	acidity 5; total iron N/D	acidity 5; total iron 1	acidity 5; total iron .8	acidity 20; total iron .6		ACIDITY N/D TOTAL IRON 2

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 27
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data Of Little Brush Creek
Site ID 502

Water Body Name	Little Brush Creek	Little Brush Creek	Little Brush Creek	Little Brush Creek
Site ID	502	502	502	502
Monitor Date	1/2/1998	10/19/1998	11/25/1998	2/25/1999
River Mile Index	2.8	2.8	2.8	2.8
Type of Water Body	stream	stream	stream	stream
Length of Assessed Area	4.7	4.7	4.7	4.7
Features				
Water Appearance	other	other	other	other
Water Appearance Note	not specified	not specified	not specified	not specified
Soil Odors	other	other	other	other
Soil Odors Note	not specified	not specified	not specified	not specified
Sediment Deposits	other	none	none	none
Sediment Deposits Note	not specified			
Stream Type	meandering	meandering	meandering	meandering
Dams				
High Water Mark				
Highwater Estimate	yes			
Stream Bank Cross-Section Shape	rectangular	rectangular	rectangular	rectangular
Stream Bank Erosion	occasional	occasional	occasional	occasional
Inorganic Stream Bottom				
% Bedrock				
% Boulder				
% Cobble	50	50	50	50
% Gravel	40	40	40	40
% Sand				
% Silt				
% Clay				
% Other				
other note				
Organic Stream Bottom				
%_Muck-mud				
% Pulpy peat				
% Fibrous peat				
% Detritus	10	10	10	10
% Logs limbs				
% Marl				
% Other				
Other description				

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 26a
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data Of Little Brush Creek
Site ID 502

Site ID	502	502	502	502
Monitor Date	1/2/1998	10/19/1998	11/25/1998	2/25/1999
Non Wadable				
Land Use				
% Wetlands				
% Forest				
% Cropland				
% Pasture				
% Residential				
% Commercial				
% Industrial				
% Unused abandoned				
% Overgrown shrub and small trees				
% Other	100	100	100	100
Other Land Use Note	not specified	not specified	not specified	not specified
Precipitation current	clear	clear	clear	clear
Precipitation recent	clear	clear	clear	clear
Water Odors	other	other	other	other
Water Odors Note				
Stream Width				
Non-Wadable	non-wadable	non-wadable	non-wadable	non-wadable
Stream Width Note				
Stream Depth				
Non-Wadable	non-wadable	non-wadable	non-wadable	non-wadable
Stream depth note				
Surface Velocity				
Surface Velocity Note				
Stream Flow Volume or Discharge				
USGS Gaging				
Air Temperature C	8	9	6	-3
Air Temperature F				
Water Temperature C	8	16	8	0
Water Temperature F				
pH	6.8	7.1	6.4	7.1
Dissolved Oxygen	11	9	11	12
Specific Conductance	135	340	107	110
Nitrate	0.05	0.04	0.05	0.44
Nitrate Standards Check	not specified	not specified	not specified	not specified
Total Phosphate Result	0.04	0.1	0.4	0.08
Sulfate	50	50	50	50
Total Alkalinity	40	60	40	20

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 28a
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Mardis Run
Site ID 486

Water Body Name	Mardis Run	Mardis Run	Mardis Run	Mardis Run	Mardis Run	Mardis Run	Mardis Run
Site ID	486	486	486	486	486	486	486
Monitor Date	1/7/1998	4/25/1998	5/8/1998	9/17/1998	10/15/1998	10/15/1998	1/21/1999
River Mile Index	22.16	22.16	22.16	22.16	22.16	22.16	22.16
Type of Water Body	stream	stream	stream	stream	stream	stream	stream
Length of Assessed Area	2.96	2.96	2.96	2.96	2.96	2.96	2.96
Features							
Water Appearance	other	clear	clear	clear	clear	clear	clear
Water Appearance Note	not specified						
Soil Odors	other	non-wadable	non-wadable	non-wadable	musty	musty	non-wadable
Soil Odors Note	not specified						
Sediment Deposits	other	sand	none	none	sand	sand	none
Sediment Deposits Note	not specified				silt and leaves		
Stream Type	meandering	channelized	meandering channelized	meandering	straight	straight	meandering
Dams		no			no	no	
High Water Mark					1		
Highwater Estimate							
Stream Bank Cross-Section Shape	rectangular	rectangular	rectangular	rectangular	rectangular	rectangular	rectangular
Stream Bank Erosion	occasional	extensive	occasional	occasional	occasional	occasional	occasional
Inorganic Stream Bottom							
% Bedrock							
% Boulder		10	10	10	10	10	10
% Cobble		60	60	60	15	15	15
% Gravel		10	10	10	30	30	30
% Sand		10	10	10	35	35	35
% Silt		5	5	5			
% Clay		2	2	2			
% Other	100						
other note	not specified						
Organic Stream Bottom							
%_Muck-mud		1	1	1			
% Pulpy peat							
% Fibrous peat			1				
% Detritus		1	1	1	10	10	10
% Logs limbs		1		1			
% Marl							
% Other							
Other description							

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 23a
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Mardis Run
Site ID 486
(Continued)

Site ID	486	486	486	486	486	486	486
Monitor Date	1/7/1998	4/25/1998	5/8/1998	9/17/1998	10/15/1998	10/15/1998	1/21/1999
Non Wadable							
Land Use							
% Wetlands							
% Forest		10	10	10			
% Cropland							
% Pasture							
% Residential					100	100	100
% Commercial							
% Industrial							
% Unused abandoned		10	10	10			
% Overgrown shrub and small trees		80	80	80			
% Other	100						
Other Land Use Note	not specified						
Precipitation current	clear	clear	rain	clear	clear	clear	overcast
Precipitation recent	clear	overcast	NA	clear	clear	clear	overcast
Water Odors	other	musty	none	none	sewage	sewage	none
Water Odors Note							
Stream Width		3	3	3	9.22	2.81	
Non-Wadable	non-wadable						non-wadable
Stream Width Note							
Stream Depth		0.11	0.11	0.1	4.8	0.12	
Non-Wadable	non-wadable						non-wadable
Stream depth note							
Surface Velocity		0.38	0.3	0.38	0.4	0.4	
Surface Velocity Note							
Stream Flow Volume or Discharge		0.08	0.08	0.08	1.18	1.18	
USGS Gaging							
Air Temperature C	-8	25	20	26		12	4
Air Temperature F							
Water Temperature C	-1		12	18		10	3
Water Temperature F							
pH	6.5	7.9	7.2	7.4		6.8	6.9
Dissolved Oxygen	6	8	8	4		8	6
Specific Conductance	210	210	370	520		380	110
Nitrate	0.3	0.2	0.2	0.7		0.44	4.4
Total Phosphate Result	0.1	0.04	0.02	0.1		0.1	0.08
Sulfate	50	50	50	0		50	50
Total Alkalinity	100		60	140		120	60
Other observations comments							

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 23b
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Mardis Run
Site ID 486
(Continued)

Water Body Name	Mardis Run
Site ID	486
Monitor Date	11/29/2001
River Mile Index	22.16
Type of Water Body	stream
Length of Assessed Area	2.96
Features	
Water Appearance	other
Water Appearance Note	slightly cloudy
Soil Odors	moldy
Soil Odors Note	
Sediment Deposits	sand
Sediment Deposits Note	
Stream Type	meandering
Dams	
High Water Mark	
Highwater Estimate	
Stream Bank Cross-Section Shape	rectangular
Stream Bank Erosion	occasional
Inorganic Stream Bottom	
% Bedrock	
% Boulder	10
% Cobble	60
% Gravel	10
% Sand	10
% Silt	5
% Clay	2
% Other	
other note	
Organic Stream Bottom	
%_Muck-mud	1
% Pulpy peat	
% Fibrous peat	
% Detritus	1
% Logs limbs	1
% Marl	
% Other	
Other description	

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 23b
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Mardis Run
Site ID 486
(Continued)

Site ID	486
Monitor Date	11/29/2001
Non Wadable	
Land Use	
% Wetlands	
% Forest	10
% Cropland	
% Pasture	
% Residential	
% Commercial	
% Industrial	
% Unused abandoned	10
% Overgrown shrub and small trees	80
% Other	
Other Land Use Note	
Precipitation current	showers
Precipitation recent	rain
Water Odors	none
Water Odors Note	
Stream Width	3
Non-Wadable	
Stream Width Note	
Stream Depth	0.11
Non-Wadable	
Stream depth note	
Surface Velocity	0.32
Surface Velocity Note	
Stream Flow Volume or Discharge	0.08
USGS Gaging	
Air Temperature C	12
Air Temperature F	
Water Temperature C	9
Water Temperature F	
pH	6.1
Dissolved Oxygen	9
Specific Conductance	200
Nitrate	0.44
Total Phosphate Result	1
Sulfate	60
Total Alkalinity	35

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 29a
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Muddy Run
Site ID 598

Water Body Name	Muddy Run	Muddy Run	Muddy Run	Muddy Run	Muddy Run	Muddy Run	Muddy Run
Site ID	598	598	598	598	598	598	598
Monitor Date	5/6/1999	8/5/1999	9/2/1999	3/16/2000	7/26/2002	5/2/2003	8/1/2003
River Mile Index	5.6	5.6	5.6	5.6	5.6	5.6	5.6
Type of Water Body	stream	stream	stream	stream	stream	stream	stream
Length of Assessed Area	10	10	10	10	10	10	10
Features							
Water Appearance	clear	clear	clear	clear	clear	clear	darkbrown muddy
Water Appearance Note							
Soil Odors	earthy	non-wadable	musty	musty	earthy	non-wadable	earthy
Soil Odors Note							
Sediment Deposits	sand	none	sand	sludge	none	none	none
Sediment Deposits Note	a small amount of silt		silt, gravel				
Stream Type	meandering	straight	straight	meandering pool /riffle	meandering pool /riffle	meandering	meandering
Dams	no	no		no			
High Water Mark	13		1	2		0.5	
Highwater Estimate							
Stream Bank Cross-Section Shape	undercut	rectangular	rectangular	undercut	rectangular	rectangular	rectangular
Stream Bank Erosion	occasional	extensive	occasional	extensive	occasional	occasional	occasional
Inorganic Stream Bottom							
% Bedrock						50	50
% Boulder		20	10	5			
% Cobble	85	60	60	20	50	20	25
% Gravel	5	10	10	20	25	20	25
% Sand	5	5	10	30	5		
% Silt		4	5	15			
% Clay	5		5				
% Other							
other note							
Organic Stream Bottom							
% Muck-mud				5			
% Pulpy peat							
% Fibrous peat				4			
% Detritus		1		1	10		
% Logs limbs					10	10	
% Marl							
% Other							
Other description							

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 29a
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Muddy Run
Site ID 598

Site ID	598	598	(Continued) 598	598	598	598	598
Monitor Date	5/6/1999	8/5/1999	9/2/1999	3/16/2000	7/26/2002	5/2/2003	8/1/2003
Non Wadable							
Land Use							
% Wetlands			70	10			
% Forest	100	80	30	70	50		
% Cropland							
% Pasture		10					
% Residential							
% Commercial							
% Industrial							
% Unused abandoned						50	50
% Overgrown shrub and small trees		10		20	50	50	50
% Other							
Other Land Use Note							
Precipitation current	overcast	overcast	clear	overcast	overcast	overcast	overcast
Precipitation recent	overcast	showers	clear	overcast	overcast	overcast	rain
Water Odors	earthy	none	musty	earthy	earthy	none	musty earthy
Water Odors Note							
Stream Width	8.34	2.44	1.59	5.58	2.44	4.2	6
Non-Wadable							
Stream Width Note							
Stream Depth	0.108	0.1168	0.0762	0.31	0.05	0.33	0.3
Non-Wadable							
Stream depth note							
Surface Velocity	0.29	0.15	0.11	0.28	0.33	0.55	0.71
Surface Velocity Note							
Stream Flow Volume or Discharge	0.212	0.0363	0.0107	0.44	0.0322	0.6	1.02
USGS Gaging							
Air Temperature C	22	28	23	15	26	22	
Air Temperature F							
Water Temperature C	16	21	17	9	21	16	
Water Temperature F							
pH	7.1	6.5	6.2	5.9	6.8	6.6	6.6
Dissolved Oxygen	7	5	4	7	10	10	9
Specific Conductance	250	310	350	160	280	260	190
Nitrate	0.18	0.61	0.44	0.15	0.62	0.44	2.9
Total Phosphate Result	0.16	0.14	0.1	0.01	0.24	0	0.22
Sulfate	90	125	50	200	115	65	60
Total Alkalinity	20	100	20	60	40	65	45

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 29b
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Muddy Run
Site ID 598
(Continued)

Water Body Name	Muddy Run	Muddy Run	Run	Run	Run	Run	Run
Site ID	598	598	598	598	598	598	598
Monitor Date	3/5/2004	8/27/2004	11/26/2004	4/15/2005	8/12/2005	1/20/2006	6/16/2006
River Mile Index	5.6	5.6	5.6	5.6	5.6	5.6	5.6
Type of Water Body	stream	stream	stream	stream	stream	stream	stream
Length of Assessed Area	10	10	10	10	10	10	10
Features							
Water Appearance	muddy/ cloudy	clear	clear	clear	clear	clear	clear
Water Appearance Note							
Soil Odors	moldy	non-wadable	earthy	non-wadable	non-wadable	none	none
Soil Odors Note							
Sediment Deposits	non-wadable	none	none	none	none	none	none
Sediment Deposits Note							
Stream Type	meandering	meandering	meandering	meandering	meandering	meandering	meandering
Dams						no	no
High Water Mark		1			1	1	1
Highwater Estimate						yes	yes
Stream Bank Cross-Section Shape	rectangular	rectangular	rectangular	rectangular	rectangular	rectangular	rectangular
Stream Bank Erosion	occasional	occasional	occasional	occasional	occasional	occasional	occasional
Inorganic Stream Bottom							
% Bedrock		50	10	25		20	10
% Boulder							
% Cobble		20	35	25	50	30	25
% Gravel		20	35	25	35	30	20
% Sand			10	15	10	10	10
% Silt				5			
% Clay							
% Other	100						
other note	flood stage						
Organic Stream Bottom							
%_Muck-mud							
% Pulpy peat							
% Fibrous peat							
% Detritus		5		5	5	5	20
% Logs limbs		5	10			5	15
% Marl							
% Other							
Other description							

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 29b
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Muddy Run
Site ID 598
(Continued)

Site ID	598	598	598	598	598	598	598
Monitor Date	3/5/2004	8/27/2004	11/26/2004	4/15/2005	8/12/2005	1/20/2006	6/16/2006
Non Wadable							
Land Use							
% Wetlands							
% Forest							
% Cropland	25						
% Pasture	25						
% Residential							
% Commercial							
% Industrial							
% Unused abandoned	25	50	50	50	50	50	50
% Overgrown shrub and small trees	25	50	50	50	50	50	50
% Other							
Other Land Use Note							
Precipitation current	overcast	clear	overcast	clear	clear	overcast	clear
Precipitation recent	overcast	clear	overcast	clear	showers	overcast	clear
Water Odors	earthy spicy	none	earthy	none	none	none	none
Water Odors Note							
Stream Width		5	3.6	6.39	4	5	5.08
Non-Wadable	non-wadable						
Stream Width Note							
Stream Depth		0.1	0.2	0.2	0.1	0.25	0.15
Non-Wadable	non-wadable						
Stream depth note							
Surface Velocity		0.83	1.2	0.83	0.83	1	0.66
Surface Velocity Note							
Stream Flow Volume or Discharge		0.33	0.72	0.7968	0.2656	1	0.36
USGS Gaging							
Air Temperature C	17		3	11	23	15	15
Air Temperature F							
Water Temperature C	7		5	8	20	7	12
Water Temperature F							
pH	6.5	6.6	6.4	6.6	6.9	6.8	6.6
Dissolved Oxygen	10	5	8	12	7	12	10
Specific Conductance	150	250	170	180	210	140	200
Nitrate	3.5	0.02	1.3	8.8	13	4.4	4.4
Total Phosphate Result	0.28	0	0.28	0.24	0.6	0.4	0.2
Sulfate	50	60	50	60	50	<50	60
Total Alkalinity	30	75	160	55	70	35	65

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 29c
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Muddy Run
Site IDt 598
(Continued)

Water Body Name	Run	Run	Run
Site ID	598	598	598
Monitor Date	6/8/2007	11/2/2007	11/2/2007
River Mile Index	5.6	5.6	5.6
Type of Water Body	stream	stream	stream
Length of Assessed Area	10	10	10
Features			
Water Appearance	clear	clear	clear
Water Appearance Note			
Soil Odors	earthy	none	none
Soil Odors Note			
Sediment Deposits	none	none	none
Sediment Deposits Note			
Stream Type	meandering	meandering	meandering
Dams	no	no	no
High Water Mark		0.5	0.5
Highwater Estimate		yes	yes
Stream Bank Cross-Section Shape	rectangular	rectangular	rectangular
Stream Bank Erosion	occasional	occasional	occasional
Inorganic Stream Bottom			
% Bedrock			
% Boulder			
% Cobble			
% Gravel			
% Sand			
% Silt			
% Clay			
% Other	99	99	99
other note	did not specify	listed as "same as before"	listed as "same as before"
Organic Stream Bottom			
%_Muck-mud			
% Pulpy peat			
% Fibrous peat			
% Detritus			
% Logs limbs			
% Marl			
% Other	1	1	1
Other description	same as before	listed as "same as before"	listed as "same as before"

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 29c
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Muddy Run
Site IDt 598
(Continued)

Site ID	598	598	598
Monitor Date	6/8/2007	11/2/2007	11/2/2007
Non Wadable			
Land Use			
% Wetlands			
% Forest			
% Cropland			
% Pasture			
% Residential			
% Commercial			
% Industrial			
% Unused abandoned	50		
% Overgrown shrub and small trees	50		
% Other		100	100
Other Land Use Note		"same as before"	"same as before"
Precipitation current	clear	clear	clear
Precipitation recent	clear	clear	clear
Water Odors	earthy	none	none
Water Odors Note			
Stream Width	4.5	3	3
Non-Wadable			
Stream Width Note			
Stream Depth	0.1	0.12	0.12
Non-Wadable			
Stream depth note			
Surface Velocity	0.55	0.83	0.83
Surface Velocity Note			
Stream Flow Volume or Discharge	0.198	0.239	0.239
USGS Gaging			
Air Temperature C	23	6	6
Air Temperature F			
Water Temperature C	18	4	4
Water Temperature F			
pH	7	7.5	7.5
Dissolved Oxygen	8	7	7
Specific Conductance	300	335	335
Nitrate	1.7	4.4	4.4
Total Phosphate Result	2	0.3	0.3
Sulfate	75	90	90
Total Alkalinity	80	85	85

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 30a
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data Oneida #1
Site ID 461

Water Body Name	Oneida #1	Oneida #1	Oneida #1	Oneida #1	Oneida #1	Oneida #1	Oneida #1
Site ID	461	461	461	461	461	461	461
Monitor Date	9/10/1998	12/14/1998	2/4/1999	2/4/1999	4/15/1999	7/22/1999	1/17/2002
River Mile Index	16.44	16.44	16.44	16.44	16.44	16.44	16.44
Type of Water Body	stream	stream	stream	stream	stream	stream	stream
Length of Assessed Area	5	5	5	5	5	5	5
Features							
Water Appearance	orange/red	other	other	other	orange/red	orange/red	milky/white
Water Appearance Note		not specified	not specified	not specified			
Soil Odors	sulfur	other	other	other	sulfur	sulfur	sulfur
Soil Odors Note		not specified	not specified	not specified			
Sediment Deposits	sand	none	other	other	sludge	none	other
Sediment Deposits Note	silt and detritus		not specified	not specified			iron
Stream Type	meandering pool/riffle	meandering	meandering	meandering	meandering pool/riffle	meandering	meandering braided pool/riffle
Dams	no						
High Water Mark	1				1.2		
Highwater Estimate							
Stream Bank Cross-Section Shape	rectangular	U	U	U	undercut	rectangular	U
Stream Bank Erosion	occasional	occasional	occasional	occasional	extensive	extensive	extensive
Inorganic Stream Bottom							
% Bedrock	10						10
% Boulder	10				55	45	75
% Cobble	10				15	40	10
% Gravel	10				5	4	2
% Sand	20				5	2	1
% Silt	10				5	2	1
% Clay						1	
% Other		95	95	95			
other note		not specified	not specified	not specified			
Organic Stream Bottom							
%_Muck-mud							
% Pulpy peat					5		
% Fibrous peat	10				5	1	
% Detritus	10				2	2	
% Logs limbs	10				2	1	1
% Marl						1	
% Other		5	5	5	1	1	
Other description		not specified	not specified	not specified			

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 19a
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data Oneida #1
Site ID 461
(Continued)

Site ID	461	461	461	461	461	461	461
Monitor Date	9/10/1998	12/14/1998	2/4/1999	2/4/1999	4/15/1999	7/22/1999	1/17/2002
Non Wadable							
Land Use							
% Wetlands	10						
% Forest	60		20	20	15	10	10
% Cropland							
% Pasture							
% Residential							
% Commercial							
% Industrial							
% Unused abandoned						50	50
% Overgrown shrub and small trees	30		80	80	85	40	40
% Other		100					
Other Land Use Note		not specified					
Precipitation current	clear	clear	overcast	clear	overcast	overcast	overcast
Precipitation recent	showers	clear	overcast	clear	overcast	storm	overcast
Water Odors	sulfur	other	other	other	sulfur	sulfur eart hy	sulfur mol dy
Water Odors Note							
Stream Width	5.1				3.12		3.2
Non-Wadable		non-wadable	non-wadable	non-wadable			
Stream Width Note							
Stream Depth	0.458				28.9		0.16
Non-Wadable		non-wadable	non-wadable				
Stream depth note							
Surface Velocity	0.43				0.86		0.64
Surface Velocity Note							
Stream Flow Volume or Discharge	0.82				62		0.262
USGS Gaging							
Air Temperature C		0	5	5	10	26	1
Air Temperature F					50		
Water Temperature C		2	4	4	8	20	3
Water Temperature F					46		
pH		4	3.5	3.8	3.4	3	4
Dissolved Oxygen		4	8	7	7	5	7
Specific Conductance		950	430	590		1670	900
Nitrate		0.08	4.4	4.4	4.4	0.01	1.3
Total Phosphate Result		0.1	0.14	0.08	0.08	0.1	0.24
Sulfate		200	50	50	200	200	200
Total Alkalinity		20	20	20	20	20	40

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 19b
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data Oneida #1
Site ID 461
(Continued)

Water Body Name	Oneida #1
Site ID	461
Monitor Date	4/8/2004
River Mile Index	16.44
Type of Water Body	stream
Length of Assessed Area	5
Features	
Water Appearance	other
Water Appearance Note	milky clean
Soil Odors	sulfur
Soil Odors Note	
Sediment Deposits	sludge
Sediment Deposits Note	gravel and yellow boy
Stream Type	meandering pool/riffle
Dams	
High Water Mark	
Highwater Estimate	
Stream Bank Cross- Section Shape	U
Stream Bank Erosion	extensive
Inorganic Stream Bottom	
% Bedrock	
% Boulder	50
% Cobble	30
% Gravel	
% Sand	10
% Silt	
% Clay	
% Other	5
other note	gravel
Organic Stream Bottom	
%_Muck-mud	1
% Pulpy peat	1
% Fibrous peat	2
% Detritus	
% Logs limbs	1
% Marl	
% Other	
Other description	

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 19b
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data Oneida #1
Site ID 461
(Continued)

Site ID	461
Monitor Date	4/8/2004
Non Wadable	
Land Use	
% Wetlands	
% Forest	20
% Cropland	
% Pasture	
% Residential	
% Commercial	
% Industrial	
% Unused abandoned	
% Overgrown shrub and small trees	80
% Other	
Other Land Use Note	
Precipitation current	showers
Precipitation recent	showers
Water Odors	sulfur
Water Odors Note	
Stream Width	5.4
Non-Wadable	
Stream Width Note	
Stream Depth	0.198
Non-Wadable	
Stream depth note	
Surface Velocity	0.68
Surface Velocity Note	
Stream Flow Volume or Discharge	0.579
USGS Gaging	
Air Temperature C	7
Air Temperature F	
Water Temperature C	9
Water Temperature F	
pH	3.6
Dissolved Oxygen	11
Specific Conductance	390
Nitrate	0.04
Total Phosphate Result	0.1
Sulfate	0
Total Alkalinity	5

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 31a
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Palmer Run
Site ID 478

Water Body Name	Palmer Run	Palmer Run	Palmer Run	Palmer Run	Palmer Run	Palmer Run	Palmer Run
Site ID	478	478	478	478	478	478	478
Monitor Date	9/3/1998	10/1/1998	12/17/1998	3/18/1999	7/15/1999	11/18/1999	3/16/2000
River Mile Index	1	1	1	1	1	1	1
Type of Water Body	stream	stream	stream	stream	stream	stream	stream
Length of Assessed Area	5	5	5	5	5	5	5
Features							
Water Appearance	orange/red	other			clear	clear	clear
Water Appearance Note		not specified					
Soil Odors	sulfur	non-wadable			non-wadable	earthy	sulfur
Soil Odors Note							
Sediment Deposits	sludge	none			none	sand	sand
Sediment Deposits Note						gravel	Gravel
Stream Type	meandering	meandering			meandering pool/riffle	meandering pool/riffle	pool/riffle
Dams	no				no	no	no
High Water Mark	18				1.5		1
Highwater Estimate							
Stream Bank Cross-Section Shape	undercut	rectangular			undercut	undercut	undercut
Stream Bank Erosion	extensive	occasional			extensive	extensive	extensive
Inorganic Stream Bottom							
% Bedrock	10						
% Boulder	10				20	25	25
% Cobble	10				40	25	25
% Gravel	10				10	20	20
% Sand	20				4	5	10
% Silt	10				10	10	
% Clay					2		
% Other		50					
other note		not specified					
Organic Stream Bottom							
%_Muck-mud							
% Pulpy peat					5		3
% Fibrous peat	10				3		10
% Detritus	10				5	10	5
% Logs limbs	10				1	5	2
% Marl							
% Other		50					
Other description		not specified					

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 21a
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Palmer Run
Site ID 478
(Comtinued)

Site ID	478	478	478	478	478	478	478
Monitor Date	9/3/1998	10/1/1998	12/17/1998	3/18/1999	7/15/1999	11/18/1999	3/16/2000
Non Wadable							
Land Use							
% Wetlands							
% Forest	50				80	80	80
% Cropland							
% Pasture							
% Residential							
% Commercial							
% Industrial	30					10	5
% Unused abandoned						10	
% Overgrown shrub and small trees	20				20		15
% Other		100					
Other Land Use Note		not specified					
Precipitation current	clear	clear	overcast	overcast	clear	clear	showers
Precipitation recent	clear	clear	overcast	clear	clear	clear	overcast
Water Odors	sulfur	none			none	none	none
Water Odors Note							
Stream Width	6					1.52	3.54
Non-Wadable		non-wadable					
Stream Width Note							
Stream Depth	3.2					0.09	0.48
Non-Wadable		non-wadable					
Stream depth note							
Surface Velocity	0.36						0.51
Surface Velocity Note							
Stream Flow Volume or Discharge	0.469						0.69
USGS Gaging							
Air Temperature C		18	-2	6	25	3	10
Air Temperature F							
Water Temperature C		15	3	4	20	3	8
Water Temperature F							
pH		4.5	4.9	5	4.2	4.8	4.5
Dissolved Oxygen		2	6	11	7	7	8
Specific Conductance		850	600	300	670	600	510
Nitrate		0.6	7.6	2.2	0	1	0.01
Total Phosphate Result		0.14	0.1	0.3	0.04	0.14	0.02
Sulfate		50		125	200	200	100
Total Alkalinity		20		20	20	20	20

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 21b
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Palmer Run
Site ID 478
(Continued)

Water Body Name	Palmer Run	Palmer Run	Palmer Run	Palmer Run	Palmer Run	Palmer Run
Site ID	478	478	478	478	478	478
Monitor Date	6/8/2000	4/12/2001	6/21/2001	8/6/2001	6/13/2002	8/2/2002
River Mile Index	1	1	1	1	1	1
Type of Water Body	stream	stream	stream	stream	stream	stream
Length of Assessed Area	5	5	5	5	5	5
Features						
Water Appearance	clear	clear	clear	clear	clear	clear
Water Appearance Note						
Soil Odors	earthy	musty	other	musty	non-wadable	earthy
Soil Odors Note			metallic			
Sediment Deposits	sludge	sand	sand	none	sand	none
Sediment Deposits Note	gravel					
Stream Type	pool/riffle	meandering	meandering pool/riffle	meandering pool/riffle	meandering pool/riffle	meandering pool/riffle
Dams		no				
High Water Mark	2	2				
Highwater Estimate						
Stream Bank Cross-Section Shape	rectangular	rectangular	rectangular	rectangular	U	rectangular
Stream Bank Erosion	occasional	occasional	occasional	extensive	extensive	occasional
Inorganic Stream Bottom						
% Bedrock		10				
% Boulder	50	70	60	50	30	20
% Cobble	20	10	25	40	30	65
% Gravel	20	3	10	3	20	10
% Sand	5	2	5	3	10	2
% Silt				1		1
% Clay						1
% Other						
other note						
Organic Stream Bottom						
%_Muck-mud						
% Pulpy peat	1					
% Fibrous peat	1			1	5	
% Detritus	1	2		1	3	
% Logs limbs	2	3		1	2	1
% Marl						
% Other						
Other description						

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 21b
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Palmer Run
Site ID 478
(Continued)

Site ID	478	478	478	478	478	478
Monitor Date	6/8/2000	4/12/2001	6/21/2001	8/6/2001	6/13/2002	8/2/2002
Non Wadable						
Land Use						
% Wetlands						
% Forest	80	75	80	90	80	90
% Cropland						
% Pasture						
% Residential						
% Commercial	10					
% Industrial						
% Unused abandoned			10			
% Overgrown shrub and small trees	10	25	10	10	10	10
% Other					10	
Other Land Use Note					roads	
Precipitation current	clear	storm	clear	clear	overcast	clear
Precipitation recent	clear	storm	overcast	clear	clear	clear
Water Odors	earthy	none	none	none	none	none
Water Odors Note						
Stream Width	2.49	6.8	2.7	1.7	5.1	2.2
Non-Wadable						
Stream Width Note						
Stream Depth	0.207	0.17	0.114	0.116	0.1	0.064
Non-Wadable						
Stream depth note						
Surface Velocity	0.45	0.9	0.52	0.39	0.55	0.37
Surface Velocity Note						
Stream Flow Volume or Discharge	0.185	6.31	0.12	0.061	0.226	0.0041
USGS Gaging						
Air Temperature C	23	18	22	18	23	20
Air Temperature F						
Water Temperature C	13	11	15	14	16	14
Water Temperature F						
pH	3.9	4.4	4.8	4.8	3.3	4.2
Dissolved Oxygen	6	8	7	8	8	8
Specific Conductance	530	395	556	1050	850	650
Nitrate	1	2.2	0.88	0.26	0	0.44
Total Phosphate Result	0.01	0.7	1	1	0.2	0.7
Sulfate	50	200	0	200	200	200
Total Alkalinity	20	5	20	10	5	5

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 21c
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Palmer Run
Site ID 478
(Continued)

Water Body Name	Palmer Run	Palmer Run	Palmer Run	Palmer Run	Palmer Run	Palmer Run	Palmer Run
Site ID	478	478	478	478	478	478	478
Monitor Date	6/8/2000	4/12/2001	6/21/2001	8/6/2001	6/13/2002	8/2/2002	5/5/2005
River Mile Index	1	1	1	1	1	1	1
Type of Water Body	stream	stream	stream	stream	stream	stream	stream
Length of Assessed Area	5	5	5	5	5	5	5
Features							
Water Appearance	clear	clear	clear	clear	clear	clear	clear
Water Appearance Note							
Soil Odors	earthy	musty	other	musty	non-wadable	earthy	non-wadable
Soil Odors Note			metallic				
Sediment Deposits	sludge	sand	sand	none	sand	none	none
Sediment Deposits Note	gravel						
Stream Type	pool/riffle	meandering	meandering pool/riffle	meandering pool/riffle	meandering pool/riffle	meandering pool/riffle	pool/riffle
Dams		no					
High Water Mark	2	2					2
Highwater Estimate							
Stream Bank Cross-Section Shape	rectangular	rectangular	rectangular	rectangular	U	rectangular	U
Stream Bank Erosion	occasional	occasional	occasional	extensive	extensive	occasional	occasional
Inorganic Stream Bottom							
% Bedrock		10					10
% Boulder	50	70	60	50	30	20	25
% Cobble	20	10	25	40	30	65	50
% Gravel	20	3	10	3	20	10	5
% Sand	5	2	5	3	10	2	5
% Silt				1		1	1
% Clay						1	
% Other							
other note							
Organic Stream Bottom							
% Muck-mud							
% Pulpy peat	1						
% Fibrous peat	1			1	5		
% Detritus	1	2		1	3		
% Logs limbs	2	3		1	2	1	1
% Marl							
% Other							3
Other description							not specified

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 21c
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Palmer Run
Site ID 478
(Continued)

Site ID	478	478	478	478	478	478	478
Monitor Date	6/8/2000	4/12/2001	6/21/2001	8/6/2001	6/13/2002	8/2/2002	5/5/2005
Non Wadable							
Land Use							
% Wetlands							
% Forest	80	75	80	90	80	90	80
% Cropland							
% Pasture							
% Residential							
% Commercial	10						
% Industrial							
% Unused abandoned			10				
% Overgrown shrub and small trees	10	25	10	10	10	10	20
% Other					10		
Other Land Use Note					roads		
Precipitation current	clear	storm	clear	clear	overcast	clear	clear
Precipitation recent	clear	storm	overcast	clear	clear	clear	clear
Water Odors	earthy	none	none	none	none	none	none
Water Odors Note							
Stream Width	2.49	6.8	2.7	1.7	5.1	2.2	3.4
Non-Wadable							
Stream Width Note							
Stream Depth	0.207	0.17	0.114	0.116	0.1	0.064	0.142
Non-Wadable							
Stream depth note							
Surface Velocity	0.45	0.9	0.52	0.39	0.55	0.37	0.45
Surface Velocity Note							
Stream Flow Volume or Discharge	0.185	6.31	0.12	0.061	0.226	0.0041	0.175
USGS Gaging							
Air Temperature C	23	18	22	18	23	20	
Air Temperature F							
Water Temperature C	13	11	15	14	16	14	7
Water Temperature F							
pH	3.9	4.4	4.8	4.8	3.3	4.2	4.4
Dissolved Oxygen	6	8	7	8	8	8	10
Specific Conductance	530	395	556	1050	850	650	400
Nitrate	1	2.2	0.88	0.26	0	0.44	0.02
Total Phosphate Result	0.01	0.7	1	1	0.2	0.7	0
Sulfate	50	200	0	200	200	200	200
Total Alkalinity	20	5	20	10	5	5	5

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 21d
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Palmer Run
Site ID 478
Continued)

Water Body Name	Palmer Run	Palmer Run
Site ID	478	478
Monitor Date	8/18/2005	12/28/2006
River Mile Index	1	1
Type of Water Body	stream	stream
Length of Assessed Area	5	5
Features		
Water Appearance	clear	clear
Water Appearance Note		
Soil Odors	non-wadable	none
Soil Odors Note		
Sediment Deposits	sludge	none
Sediment Deposits Note	gravel and mud	
Stream Type	meandering pool/riffle	meandering
Dams		no
High Water Mark	2	
Highwater Estimate		
Stream Bank Cross-Section Shape	U	rectangular
Stream Bank Erosion	extensive	occasional
Inorganic Stream Bottom		
% Bedrock		
% Boulder	20	25
% Cobble	60	65
% Gravel	10	5
% Sand	5	2
% Silt		
% Clay		1
% Other		
other note		
Organic Stream Bottom		
%_Muck-mud	1	
% Pulpy peat	1	1
% Fibrous peat	1	
% Detritus	1	1
% Logs limbs	1	
% Marl		
% Other		
Other description		

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 21d
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Palmer Run
Site ID 478
Continued)

Site ID	478	478
Monitor Date	8/18/2005	12/28/2006
Non Wadable		
Land Use		
% Wetlands		
% Forest	70	100
% Cropland		
% Pasture		
% Residential		
% Commercial	10	
% Industrial		
% Unused abandoned		
% Overgrown shrub and small trees	20	
% Other		
Other Land Use Note		
Precipitation current	clear	clear
Precipitation recent	clear	clear
Water Odors	none	none
Water Odors Note		
Stream Width	3.5	3.2
Non-Wadable		
Stream Width Note		
Stream Depth	0.058	0.0916
Non-Wadable		
Stream depth note		
Surface Velocity	0.31	0.85
Surface Velocity Note		
Stream Flow Volume or Discharge	0.052	0.195
USGS Gaging		
Air Temperature C	18	2
Air Temperature F		
Water Temperature C	21	4
Water Temperature F		
pH	4.4	4
Dissolved Oxygen	8	9
Specific Conductance	530	410
Nitrate	0.53	0.44
Total Phosphate Result	0	0.1
Sulfate	0	>200
Total Alkalinity	5	5
Other observations comments		acidity 400; total iron .8

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 32a
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Ramsey Run
Site ID 823

Water Body Name	Ramsey Run	Ramsey Run	Ramsey Run	Ramsey Run	Ramsey Run	Ramsey Run
Site ID	823	823	823	823	823	823
Monitor Date	10/18/2000	11/8/2001	6/19/2003	6/9/2005	6/8/2006	1/18/2007
River Mile Index	13.82	13.82	13.82	13.82	13.82	13.82
Type of Water Body	stream	stream	stream	stream	stream	stream
Length of Assessed Area	10	10	10	10	10	10
Features						
Water Appearance	muddy/cloudy	clear	clear	clear	clear	clear,non-wadable
Water Appearance Note						
Soil Odors	non-wadable	earthy	musty	earthy	musty	non-wadable,none
Soil Odors Note						
Sediment Deposits	sand	sand	sand	sludge	none	none,non-wadable
Sediment Deposits Note		grave;		gravel		
Stream Type	straight	pool/riffle	meandering b raided pool/riffle	meandering pool/riffle	meandering, pool/riffle	meandering,po ol/riffle
Dams	no	no			no	no
High Water Mark	3	2		2		
Highwater Estimate						
Stream Bank Cross-Section Shape	rectangular	rectangular	rectangular	U	rectangular	rectangular
Stream Bank Erosion	occasional	extensive	occasional	occasional	occasional	occasional
Inorganic Stream Bottom						
% Bedrock					5	
% Boulder	50	20	40	50	25	25
% Cobble	20	20	30	30	55	60
% Gravel	10	20	20	5	10	10
% Sand	10	10		5	2	2
% Silt	5	5	1	2	1	1
% Clay			2		1	
% Other						
other note						
Organic Stream Bottom						
%_Muck-mud			2	5		1
% Pulpy peat		5				
% Fibrous peat		5				
% Detritus	3	10				
% Logs limbs	2	5	5	1	1	1
% Marl						
% Other				2		
Other description				unknown		

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 32a
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Ramsey Run
Site ID 823
(Continued)

Site ID	823	823	823	823	823	823
Monitor Date	10/18/2000	11/8/2001	6/19/2003	6/9/2005	6/8/2006	1/18/2007
Non Wadable						yes
Land Use						
% Wetlands						
% Forest	80	80	80	80	100	100
% Cropland						
% Pasture						
% Residential						
% Commercial						
% Industrial						
% Unused abandoned						
% Overgrown shrub and small trees	20	20	20	20		
% Other						
Other Land Use Note						
Precipitation current	showers	clear	showers	clear	clear	clear
Precipitation recent	overcast	clear	clear	clear	clear	clear
Water Odors	none	none	musty	earthy	none	non-wadable,none
Water Odors Note						
Stream Width	8.83	3.2	6.4	2.8	6.6	
Non-Wadable						yes
Stream Width Note						
Stream Depth	0.228	0.193	0.16	0.114	0.16	
Non-Wadable						yes
Stream depth note						
Surface Velocity	0.71	0.33	0.7	0.91	0.81	
Surface Velocity Note						
Stream Flow Volume or Discharge	1.156	0.163	0.587	0.232	0.68	
USGS Gaging						
Air Temperature C	11	10	21	22	17	25
Air Temperature F						
Water Temperature C	12	8	8	19	15	3
Water Temperature F						
pH	6.7	6.3	6.6	6.6	6.4	6.5
Dissolved Oxygen	7	9	10	9	9	13
Specific Conductance	260	700	340	360	225	160
Nitrate	0.88	0	2.2	0.88	1.76	4.4
Total Phosphate Result	0.1	1	0.14	0.14	0.1	N/D
Sulfate	55	90	50	50	55	55
Total Alkalinity	60	40	45	90	50	35
Other observations comments					acidity 0	acidity 20; fe iron .2

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 32b
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Ramsey Run
Site ID 823
(Continued)

Water Body Name	Ramsey Run	Ramsey Run
Site ID	823	823
Monitor Date	6/7/2007	11/15/2007
River Mile Index	13.82	13.82
Type of Water Body	stream	stream
Length of Assessed Area	10	10
Features		
Water Appearance	clear	muddy/cloudy
Water Appearance Note		
Soil Odors	none	none
Soil Odors Note		
Sediment Deposits	none	none
Sediment Deposits Note		
Stream Type	meandering, braided, pool/riffle	meandering, pool/riffle
Dams	no	no
High Water Mark		
Highwater Estimate		
Stream Bank Cross-Section Shape	rectangular	rectangular
Stream Bank Erosion	occasional	occasional
Inorganic Stream Bottom		
% Bedrock		
% Boulder	30	25
% Cobble	50	50
% Gravel	15	15
% Sand	2	5
% Silt	2	
% Clay		2
% Other		
other note		
Organic Stream Bottom		
%_Muck-mud		2
% Pulpy peat		
% Fibrous peat		1
% Detritus		
% Logs limbs	1	
% Marl		
% Other		
Other description		

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 32b
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Ramsey Run
Site ID 823
(Continued)

Site ID	823	823
Monitor Date	6/7/2007	11/15/2007
Non Wadable		yes
Land Use		
% Wetlands		
% Forest	100	100
% Cropland		
% Pasture		
% Residential		
% Commercial		
% Industrial		
% Unused abandoned		
% Overgrown shrub and small trees		
% Other		
Other Land Use Note		
Precipitation current	clear	rain
Precipitation recent	clear	rain
Water Odors	none	none
Water Odors Note		
Stream Width	3	
Non-Wadable		yes
Stream Width Note		
Stream Depth	0.1	
Non-Wadable		yes
Stream depth note		
Surface Velocity	0.55	
Surface Velocity Note		
Stream Flow Volume or Discharge	0.132	
USGS Gaging		
Air Temperature C	15	4
Air Temperature F		
Water Temperature C	13	6
Water Temperature F		
pH	6.8	6.7
Dissolved Oxygen	9	11
Specific Conductance	418	290
Nitrate	0.44	0.44
Total Phosphate Result	0.1	N/D
Sulfate	50	75
Total Alkalinity	80	65
Other observations comments	acidity 40; total iron N/D	acidity 40

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 33a
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Rummel Run
Site ID 529

Water Body Name	Rummel Run	Rummel Run	Rummel Run	Rummel Run	Rummel Run	Rummel Run	Rummel Run
Site ID	529	529	529	529	529	529	529
Monitor Date	2/18/1999	5/27/1999	7/29/1999	4/20/2000	3/1/2001	4/25/2001	7/30/2001
River Mile Index	31.02	31.02	31.02	31.02	31.02	31.02	31.02
Type of Water Body	stream	stream	stream	stream	stream	stream	stream
Length of Assessed Area	4.52	4.52	4.52	4.52	4.52	4.52	4.52
Features							
Water Appearance		clear	clear	clear	clear	clear	clear
Water Appearance Note							
Soil Odors		musty	earthy	sulfur	non-wadable	non-wadable	non-wadable
Soil Odors Note							
Sediment Deposits		sand	none	sand	sand	none	none
Sediment Deposits Note				Gravel			
Stream Type		meandering	straight	straight	straight	meandering	meandering
Dams			no				
High Water Mark			0.5	0.5	0.5		2
Highwater Estimate							
Stream Bank Cross-Section Shape		rectangular	rectangular	rectangular	rectangular	rectangular	rectangular
Stream Bank Erosion		occasional	occasional	occasional	occasional	occasional	occasional
Inorganic Stream Bottom							
% Bedrock							
% Boulder		20	20	5	10	5	5
% Cobble		30	25	70	70	70	75
% Gravel		30	40	10	15	10	15
% Sand		10	10	10	3	10	1
% Silt		5			1		
% Clay							1
% Other							
other note							
Organic Stream Bottom							
%_Muck-mud							1
% Pulpy peat							
% Fibrous peat			3				
% Detritus		5	2	5		5	1
% Logs limbs					1		1
% Marl							
% Other							
Other description							

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 27a
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Rummel Run
Site ID 529
(Continued)

Site ID	529	529	529	529	529	529	529
Monitor Date	2/18/1999	5/27/1999	7/29/1999	4/20/2000	3/1/2001	4/25/2001	7/30/2001
Non Wadable							
Land Use							
% Wetlands				5		5	
% Forest		50	80	80	60	80	75
% Cropland							
% Pasture							
% Residential							
% Commercial							
% Industrial							
% Unused abandoned					30		
% Overgrown shrub and small trees		50	20	15	10	15	25
% Other							
Other Land Use Note							
Precipitation current	clear	clear	clear	overcast	clear	clear	clear
Precipitation recent	clear	overcast	rain	overcast	clear	showers	clear
Water Odors		musty	earthy	sulfur eart hy	none	none	none
Water Odors Note							
Stream Width		5.09	7.69	6.59	5.06	6.46	4.4
Non-Wadable							
Stream Width Note							
Stream Depth		0.1526	0.508	0.22	0.18	0.23	0.092
Non-Wadable							
Stream depth note							
Surface Velocity		2.9	0.2	0.55	0.43	0.55	0.18
Surface Velocity Note							
Stream Flow Volume or Discharge		0.05	0.6531	0.72	0.31	0.65	0.058
USGS Gaging							
Air Temperature C	0	18	25	13	-2	10	18
Air Temperature F							
Water Temperature C	4	10	18	9	0	8	17
Water Temperature F							
pH	4.3	4.8	4.9	4.5	4.5	4.6	4.6
Dissolved Oxygen	11	8	8		9	9	6
Specific Conductance	220	250	220	200	265	259	360
Nitrate	0.88	0.79	0.96	0.1	0.88	0.44	0.18
Total Phosphate Result	0.2	0.08	0.3		0.5	0.36	0.2
Sulfate	50	125	150		200	150	200
Total Alkalinity	20	20	20		5	5	20

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 27b
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Rummel Run
Site ID 529

Water Body Name	Rummel Run	Rummel Run	Rummel Run	Rummel Run	Rummel Run	Rummel Run	Rummel Run
Site ID	529	529	529	529	529	529	529
Monitor Date	2/7/2002	3/7/2002	7/25/2002	9/12/2002	2/27/2003	7/17/2003	6/24/2004
River Mile Index	31.02	31.02	31.02	31.02	31.02	31.02	31.02
Type of Water Body	stream	stream	stream	stream	stream	stream	stream
Length of Assessed Area	4.52	4.52	4.52	4.52	4.52	4.52	4.52
Features							
Water Appearance	clear	clear	clear	clear	clear	clear	clear
Water Appearance Note							
Soil Odors	non-wadable	non-wadable	non-wadable	non-wadable	non-wadable	earthy	non-wadable
Soil Odors Note							
Sediment Deposits	none	sand	sand	sand	sand	sand	none
Sediment Deposits Note		gravel					
Stream Type	meandering pool/riffle	straight	meandering pool/riffle	meandering pool/riffle	meandering pool/riffle	meandering pool/riffle	meandering pool/riffle
Dams							
High Water Mark					2		
Highwater Estimate							
Stream Bank Cross-Section Shape	rectangular	U	rectangular	U	U	rectangular	rectangular
Stream Bank Erosion	occasional	occasional	occasional	occasional	occasional	occasional	occasional
Inorganic Stream Bottom							
% Bedrock							
% Boulder	20	20	25	40	30	10	30
% Cobble	60	40	50	20	20	45	55
% Gravel	10	20	15	10	30	30	10
% Sand	5	15	5	10	10	10	1
% Silt			2	10		2	
% Clay	1		1			1	1
% Other							
other note							
Organic Stream Bottom							
%_Muck-mud					2	1	1
% Pulpy peat		1		3	5	1	
% Fibrous peat	2				3		
% Detritus		1	2	2			1
% Logs limbs	2	3		5			1
% Marl							
% Other							
Other description							

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 27b
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Rummel Run
Site ID 529

Site ID	529	529	529	529	529	529	529
Monitor Date	2/7/2002	3/7/2002	7/25/2002	9/12/2002	2/27/2003	7/17/2003	6/24/2004
Non Wadable							
Land Use							
% Wetlands							
% Forest	80	80	75	90	80	90	90
% Cropland							
% Pasture				10			
% Residential							
% Commercial							
% Industrial							
% Unused abandoned	10					10	
% Overgrown shrub and small trees	10	20	25		20		10
% Other							
Other Land Use Note							
Precipitation current	clear	overcast	overcast	clear	clear	clear	clear
Precipitation recent	overcast	overcast	clear	clear	clear	clear	clear
Water Odors	none	none	none	none	none	none	none
Water Odors Note							
Stream Width	5.2	5	4.2	1	6.8	6.4	5.6
Non-Wadable							
Stream Width Note							
Stream Depth	0.132	3.32	0.09	0.062	0.204	0.167	0.14
Non-Wadable							
Stream depth note							
Surface Velocity	0.66	0.81	0.27	0.29	0.67	0.48	0.64
Surface Velocity Note							
Stream Flow Volume or Discharge	0.109	0.103	0.008	0.014	0.81	0.41	0.359
USGS Gaging							
Air Temperature C	0	4	23	15	4	23	17
Air Temperature F							
Water Temperature C	4	3	18	13	2	14	12
Water Temperature F							
pH	4.7	4.7	4.7	4.5	4.5	4	4
Dissolved Oxygen	7	8	8	8	10	3	8
Specific Conductance	300	340	230	240	222	220	170
Nitrate	0.88	0.79	0.44	0.35	0.18	0.44	0.44
Total Phosphate Result	0.4	0	0.9	0.4	0.2	0.1	0.1
Sulfate	150	150	200	200	100	125	80
Total Alkalinity	5	5	20	5	5	5	5

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 27c
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Rummel Run
Site ID 529
(Continued)

Water Body Name	Rummel Run	Rummel Run	Rummel Run	Rummel Run	Rummel Run
Site ID	529	529	529	529	529
Monitor Date	10/28/2004	3/17/2005	8/11/2005	1/12/2006	6/1/2006
River Mile Index	31.02	31.02	31.02	31.02	31.02
Type of Water Body	stream	stream	stream	stream	stream
Length of Assessed Area	4.52	4.52	4.52	4.52	4.52
Features					
Water Appearance	clear	clear	clear	clear	clear
Water Appearance Note					
Soil Odors	spicy	non-wadable	non-wadable	earthy	spicy
Soil Odors Note					
Sediment Deposits	sludge	sand	sand	other	none
Sediment Deposits Note				no unusual sediments	
Stream Type	meandering pool/riffle	meandering pool/riffle	meandering pool/riffle	meandering, pool/riffle	meandering
Dams				no	no
High Water Mark		2			
Highwater Estimate					
Stream Bank Cross-Section Shape	rectangular	U	rectangular	rectangular	rectangular
Stream Bank Erosion	occasional	occasional	extensive	occasional	occasional
Inorganic Stream Bottom					
% Bedrock					
% Boulder	15	30	25	10	10
% Cobble	75	50	60	80	70
% Gravel	5	10	10	4	15
% Sand	1	5	2	2	1
% Silt	2	1	1	1	2
% Clay				1	1
% Other					
other note					
Organic Stream Bottom					
%_Muck-mud		1		1	
% Pulpy peat					1
% Fibrous peat		1			
% Detritus	1	1	1		
% Logs limbs	1	1	1	1	
% Marl					
% Other					
Other description					

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 27c
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Rummel Run
Site ID 529
(Continued)

Site ID	529	529	529	529	529
Monitor Date	10/28/2004	3/17/2005	8/11/2005	1/12/2006	6/1/2006
Non Wadable					
Land Use					
% Wetlands					
% Forest	75	80	60	90	100
% Cropland					
% Pasture					
% Residential					
% Commercial					
% Industrial					
% Unused abandoned					
% Overgrown shrub and small trees	25	20	40	10	
% Other					
Other Land Use Note					
Precipitation current	clear	clear	clear	clear	showers
Precipitation recent	clear	clear	showers	rain	showers
Water Odors	moldy spicy	none	earthy	none	non-wadable
Water Odors Note					
Stream Width	4.6	5.4	2.8	6.1	6.3
Non-Wadable					
Stream Width Note					
Stream Depth	0.34	0.172	0.086	0.15	0.13
Non-Wadable					
Stream depth note					
Surface Velocity	0.44	0.62	0.25	0.77	0.68
Surface Velocity Note					
Stream Flow Volume or Discharge	0.55	0.462	0.048	0.56364	0.46
USGS Gaging					
Air Temperature C	12	4	20		
Air Temperature F					
Water Temperature C	10	20	18		
Water Temperature F					
pH	4.5	4.1	5.6	4.4	4.2
Dissolved Oxygen	9	13	8	12	9
Specific Conductance	190	165	190	180	170
Nitrate	0.44	0.26	0.52	0.44	0.44
Total Phosphate Result	0.1	0.1	0	ND	0.1
Sulfate	150	125	0	125	100
Total Alkalinity	10	5	10	5	5

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 34
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Shuman Run
Site ID 1189

Water Body Name	Shuman Run
Site ID	1189
Monitor Date	7/15/2004
River Mile Index	0.92
Type of Water Body	stream
Length of Assessed Area	1
Features	
Water Appearance	clear
Water Appearance Note	
Soil Odors	non-wadable
Soil Odors Note	
Sediment Deposits	sand
Sediment Deposits Note	gravel
Stream Type	meandering p ool/riffle
Dams	
High Water Mark	
Highwater Estimate	
Stream Bank Cross- Section Shape	V
Stream Bank Erosion	stabilized
Inorganic Stream Bottom	
% Bedrock	
% Boulder	40
% Cobble	15
% Gravel	20
% Sand	10
% Silt	10
% Clay	
% Other	4
other note	not specified
Organic Stream Bottom	
%_Muck-mud	
% Pulpy peat	
% Fibrous peat	
% Detritus	
% Logs limbs	1
% Marl	
% Other	
Other description	
Non Wadable	

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 35
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Shuman Run
Site ID 1189
(Continued)

Site ID	1189
Monitor Date	7/15/2004
Land Use	
% Wetlands	
% Forest	
% Cropland	
% Pasture	
% Residential	
% Commercial	50
% Industrial	20
% Unused abandoned	
% Overgrown shrub and small trees	20
% Other	10
Other Land Use Note	roads
Precipitation current	overcast
Precipitation recent	showers
Water Odors	none
Water Odors Note	
Stream Width	2.8
Non-Wadable	
Stream Width Note	
Stream Depth	0.162
Non-Wadable	
Stream depth note	
Surface Velocity	0.34
Surface Velocity Note	
Stream Flow Volume or Discharge	0.123
USGS Gaging	
Air Temperature C	
Air Temperature F	
Water Temperature C	17
Water Temperature F	
pH	4.5
Dissolved Oxygen	7
Specific Conductance	290
Nitrate	0.35
Total Phosphate Result	0.1
Sulfate	125
Total Alkalinity	5

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 35a
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Stewart Run
Site ID 488

Water Body Name	Stewart Run	Stewart Run	Stewart Run	Stewart Run	Stewart Run	Stewart Run	Stewart Run
Site ID	488	488	488	488	488	488	488
Monitor Date	10/30/1998	3/12/1999	5/28/1999	3/31/2000	5/26/2000	2/9/2001	3/16/2001
River Mile Index	40	40	40	40	40	40	40
Type of Water Body	stream	stream	stream	stream	stream	stream	stream
Length of Assessed Area	7.54	7.54	7.54	7.54	7.54	7.54	7.54
Features							
Water Appearance			clear	clear	clear	clear	clear
Water Appearance Note							
Soil Odors			earthy	earthy	earthy	non-wadable	non-wadable
Soil Odors Note							
Sediment Deposits			sand	none	sand	none	none
Sediment Deposits Note			gravel		Rocks & Pebbles		
Stream Type			meandering	straight	meandering pool/riffle	straight	meandering
Dams			no	no	no		
High Water Mark				0.5	0.5	1	0.5
Highwater Estimate						yes	
Stream Bank Cross-Section Shape			undercut	rectangular	rectangular	rectangular	rectangular
Stream Bank Erosion			occasional	occasional	none	occasional	occasional
Inorganic Stream Bottom							
% Bedrock				15		40	40
% Boulder							
% Cobble				20	30	20	20
% Gravel				20	30	10	10
% Sand				10	30	5	5
% Silt				5		5	5
% Clay				5			
% Other							
other note							
Organic Stream Bottom							
%_Muck-mud							
% Pulpy peat							
% Fibrous peat				10		5	5
% Detritus					10	5	5
% Logs limbs				10		10	10
% Marl							
% Other							
Other description							

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 24a
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Stewart Run
Site ID 488
(Continued)

Site ID	488	488	488	488	488	488	488
Monitor Date	10/30/1998	3/12/1999	5/28/1999	3/31/2000	5/26/2000	2/9/2001	3/16/2001
Non Wadable							
Land Use							
% Wetlands					10		
% Forest				10	50		
% Cropland							
% Pasture							
% Residential							
% Commercial							
% Industrial							
% Unused abandoned				50	10	50	50
% Overgrown shrub and small trees				40	30	50	50
% Other							
Other Land Use Note							
Precipitation current	clear	clear	clear	clear	overcast	overcast	rain
Precipitation recent	clear	clear	clear	rain	showers	overcast	overcast
Water Odors			earthy none	earthy	earthy	none	none
Water Odors Note							
Stream Width			4.23		3	4.8	3.4
Non-Wadable				non-wadable			
Stream Width Note							
Stream Depth			0.57		0.25	22.38	0.21
Non-Wadable				non-wadable			
Stream depth note							
Surface Velocity			0.29		1	0.58	0.82
Surface Velocity Note							
Stream Flow Volume or Discharge			0.56			49.84	0.464
USGS Gaging							
Air Temperature C	26	2	35	10	20	4	8
Air Temperature F							
Water Temperature C	10	4	18	5	15	14	5
Water Temperature F							
pH	6.5	6.4	6.8	5.9	6	7	6
Dissolved Oxygen	7	7	6	9	8	9	8
Specific Conductance	900	190	190	142	500	130	165
Nitrate	0.7	0.35	6.1	0.35	2.2	3	0.88
Total Phosphate Result	0.1	0.1	0.28	0.44	0.02	0.54	0
Sulfate	200	50	50	50	80	52	50
Total Alkalinity	40	20	40	40	35	30	35

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 24b
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Stewart Run
Site ID 488
(Continued)

Water Body Name	Stewart Run	Stewart Run	Stewart Run	Stewart Run	Stewart Run	Stewart Run	Stewart Run
Site ID	488	488	488	488	488	488	488
Monitor Date	5/25/2001	7/6/2001	9/7/2001	12/7/2001	3/22/2002	7/12/2002	11/15/2002
River Mile Index	40	40	40	40	40	40	40
Type of Water Body	stream	stream	stream	stream	stream	stream	stream
Length of Assessed Area	7.54	7.54	7.54	7.54	7.54	7.54	7.54
Features							
Water Appearance	muddy/ cloudy	muddy/ cloudy	clear	clear	multicolored	muddy/cloudy	clear
Water Appearance Note							
Soil Odors	non- wadable	earthy	earthy	non- wadable	non-wadable	non-wadable	non-wadable
Soil Odors Note							
Sediment Deposits	none	sand	none	sand	none	none	none
Sediment Deposits Note							
Stream Type	meandering	meandering	meandering	meandering	meandering	meandering	meandering
Dams			no	no			
High Water Mark				0.5	1		0.5
Highwater Estimate							
Stream Bank Cross- Section Shape	rectangular	rectangular	rectangular	rectangular	rectangular	rectangular	rectangular
Stream Bank Erosion	occasional	occasional	occasional	occasional	occasional	occasional	occasional
Inorganic Stream Bottom							
% Bedrock	40	10				20	10
% Boulder		10			10	10	10
% Cobble	30	20	30	50	25	20	25
% Gravel	10	20	40	10	25	20	50
% Sand	5		5	10	5	10	5
% Silt	5	10	5	5			
% Clay				5			
% Other		5					
other note							
Organic Stream Bottom							
%_Muck-mud							
% Pulpy peat							
% Fibrous peat	5						
% Detritus	5	5	10	10	10	10	
% Logs limbs		20	10	10	25	10	
% Marl							
% Other							
Other description							

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 24b
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Stewart Run
Site ID 488
(Continued)

Site ID	488	488	488	488	488	488	488
Monitor Date	5/25/2001	7/6/2001	9/7/2001	12/7/2001	3/22/2002	7/12/2002	11/15/2002
Non Wadable							
Land Use							
% Wetlands							
% Forest			50	10	50	50	
% Cropland							
% Pasture							
% Residential							
% Commercial							
% Industrial							
% Unused abandoned	50	50		40			50
% Overgrown shrub and small trees	50	50	50	50	50	50	50
% Other							
Other Land Use Note							
Precipitation current	showers	overcast	clear	overcast	clear	clear	clear
Precipitation recent	showers	rain	clear	showers	overcast	clear	clear
Water Odors	none	earthy	earthy	none	earthy	none	none
Water Odors Note							
Stream Width	4	6.7	1	2.7		1.5	4
Non-Wadable					non-wadable		
Stream Width Note							
Stream Depth	0.19	0.12	0.015	0.05		0.1	0.17
Non-Wadable					non-wadable		
Stream depth note							
Surface Velocity	0.35	0.89	0.25	0.54	0.09	0.05	0.41
Surface Velocity Note							
Stream Flow Volume or Discharge	0.35	0.57	0.003	0.058	0.16	0.006	0.22
USGS Gaging							
Air Temperature C	18	24	18	10	4	22	9
Air Temperature F							
Water Temperature C	14	20	18	14	2	16	6
Water Temperature F							
pH	7.6	6.5	6.7	6.7	6.5	6.6	6.5
Dissolved Oxygen	8	6	6	10	14	10	11
Specific Conductance	187	177	300	300	200	195	200
Nitrate	2.2	3.5	0.17	1.8	3	0.43	0.9
Total Phosphate Result	0.66	0.7	0.36	0.1	2	0.24	0.6
Sulfate	50	50	50	50	50	50	50
Total Alkalinity	65	55	90	100	25	90	60

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 24c
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Stewart Run
Site ID 488
(Continued)

Water Body Name	Stewart Run	Stewart Run	Stewart Run	Stewart Run	Stewart Run	Stewart Run	Stewart Run
Site ID	488	488	488	488	488	488	488
Monitor Date	4/11/2003	7/25/2003	10/31/2003	4/30/2004	7/30/2004	4/1/2005	7/29/2005
River Mile Index	40	40	40	40	40	40	40
Type of Water Body	stream	stream	stream	stream	stream	stream	stream
Length of Assessed Area	7.54	7.54	7.54	7.54	7.54	7.54	7.54
Features							
Water Appearance	muddy/ cloudy other	muddy/ cloudy	clear	clear	muddy/ cloudy	clear	clear
Water Appearance Note	very high						
Soil Odors	non-wadable	non-wadable	non-wadable	earthy	earthy	non-wadable	non-wadable
Soil Odors Note							
Sediment Deposits	none non-wadable	non-wadable	none	none	none non-wadable	none	none
Sediment Deposits Note							
Stream Type	meandering	meandering	meandering	meandering	meandering	meandering	meandering
Dams							
High Water Mark				1			1
Highwater Estimate							
Stream Bank Cross-Section Shape	rectangular	rectangular	rectangular	rectangular	rectangular	rectangular	rectangular
Stream Bank Erosion	occasional	occasional	occasional	occasional	occasional	occasional	occasional
Inorganic Stream Bottom							
% Bedrock		25		50		25	50
% Boulder			50				10
% Cobble		50	10	20		30	10
% Gravel		25	25	20		25	10
% Sand			10			10	10
% Silt						5	
% Clay							
% Other							
other note							
Organic Stream Bottom							
%_Muck-mud							
% Pulpy peat							
% Fibrous peat							
% Detritus			5	5		5	5
% Logs limbs				5			5
% Marl							
% Other	100				100		
Other description	unwadable						

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 24c
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Stewart Run
Site ID 488
(Continued)

Site ID	488	488	488	488	488	488	488
Monitor Date	4/11/2003	7/25/2003	10/31/2003	4/30/2004	7/30/2004	4/1/2005	7/29/2005
Non Wadable	non-wadable				non-wadable		
Land Use							
% Wetlands							
% Forest							
% Cropland							
% Pasture							
% Residential							
% Commercial							
% Industrial							
% Unused abandoned	50	50	50	50	50	50	50
% Overgrown shrub and small trees	50	50	50	50	50	50	50
% Other							
Other Land Use Note							
Precipitation current	rain	clear	clear	clear	overcast	clear	clear
Precipitation recent	showers	rain	clear	showers	showers	clear	showers
Water Odors	none	spicy	none	earthy	earthy spicy	none	none
Water Odors Note							
Stream Width			5.4	5.5		6	2
Non-Wadable	non-wadable	non-wadable			non-wadable		
Stream Width Note							
Stream Depth			0.137	0.15		0.22	0.076
Non-Wadable	non-wadable	non-wadable			non-wadable		
Stream depth note							
Surface Velocity			0.66	10		0.76	0.5
Surface Velocity Note							
Stream Flow Volume or Discharge			0.39	6.6		0.8	0.0608
USGS Gaging							
Air Temperature C	11	18		16	21	12	20
Air Temperature F							
Water Temperature C	9	17		16	18	7	18
Water Temperature F							
pH	7	6.8	7.2	6.8	6.1	6.8	6.8
Dissolved Oxygen	5	10	11	11	9	11	7
Specific Conductance	200	220	190	160	200	115	245
Nitrate	0.44	2.6	0.44	0.44	2.2	16	0.44
Total Phosphate Result	0.08	0.1	0.2	0.9	0	0.32	0.3
Sulfate	100	50	50	50	50	50	50
Total Alkalinity	50	55	55	40	50	35	90

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 24d
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Stewart Run
Site ID 488
(Continued)

Water Body Name	Stewart Run	Stewart Run	Stewart Run	Stewart Run	Stewart Run	Stewart Run
Site ID	488	488	488	488	488	488
Monitor Date	2/3/2006	4/21/2006	5/19/2006	8/18/2006	4/13/2007	9/7/2007
River Mile Index	40	40	40	40	40	40
Type of Water Body	stream	stream	stream	stream	stream	stream
Length of Assessed Area	7.54	7.54	7.54	7.54	7.54	7.54
Features						
Water Appearance	clear	clear	muddy/cloudy, non-wadable	clear	muddy/cloudy	clear
Water Appearance Note			stream flooded			
Soil Odors	none	none	earthy, non-wadable	earthy	earthy	earthy
Soil Odors Note						
Sediment Deposits	none	none	none, non-wadable	none	none	none
Sediment Deposits Note						
Stream Type	meandering	meandering	meandering	meandering	meandering	meandering
Dams	no	no	no	no	no	no
High Water Mark		0.5	1	1	1	1
Highwater Estimate		yes	yes	yes	yes	yes
Stream Bank Cross-Section Shape	rectangular	rectangular	rectangular	rectangular	rectangular	rectangular
Stream Bank Erosion	occasional	occasional	occasional	occasional	occasional	occasional
Inorganic Stream Bottom						
% Bedrock	50			25	10	10
% Boulder		10		10		10
% Cobble	20	65		30	40	20
% Gravel	20	20		20	25	30
% Sand	5			10	5	
% Silt					5	
% Clay					5	
% Other			50			
other note			undetectable due to flood stage			
Organic Stream Bottom						
%_Muck-mud						
% Pulpy peat						
% Fibrous peat						
% Detritus	3	3		3	5	15
% Logs limbs	2	2		2	5	15
% Marl						
% Other			50			
Other description			undetectable due to flood stage			

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72

Table 24d
Summary Of Data From The Pennsylvania Environment Corps (PaSEC)
Stream Description And Water Quality Data For Stewart Run
Site ID 488
(Continued)

Site ID	488	488	488	488	488	488
Monitor Date	2/3/2006	4/21/2006	5/19/2006	8/18/2006	4/13/2007	9/7/2007
Non Wadable			yes			
Land Use						
% Wetlands						
% Forest						
% Cropland						
% Pasture						
% Residential						
% Commercial						
% Industrial						
% Unused abandoned	50	50	50	50	50	50
% Overgrown shrub and small trees	50	50	50	50	50	50
% Other						
Other Land Use Note						
Precipitation current	rain	clear	showers	clear	rain	clear
Precipitation recent	overcast	clear	rain	clear	rain	clear
Water Odors	none	other	earthy,non-wadable	none	earthy	none
Water Odors Note						
Stream Width	5	5.79		1		3.96
Non-Wadable			yes			
Stream Width Note			flood stage			
Stream Depth	0.3	0.127		0.076		0.23
Non-Wadable			yes			
Stream depth note						
Surface Velocity	0.71	0.9		0.66		1
Surface Velocity Note						
Stream Flow Volume or Discharge	0.852	0.4572		0.3696		0.552
USGS Gaging						
Air Temperature C	9	18	12	21	5	24
Air Temperature F						
Water Temperature C	6	18	10	17	5	20
Water Temperature F						
pH	6.4	6.7	6.5	6.2	6.2	7
Dissolved Oxygen	10	9	10	8	12	8
Specific Conductance	130	150	120	280	155	300
Nitrate	4.4	4.4	4.4	4.4	3.1	0.4
Total Phosphate Result	1	0.1	1	0.5	0.3	0.2
Sulfate	<50	<50	<50	65	>50	<50
Total Alkalinity	35	50	25	105	45	30
Other observations comments				stream very low		

NOTE: An explanation of the stream habitat assessment can be found in the "Water Quality Monitoring Field Manual For The Pennsylvania Senior Environment Corps", page 72