

## BIOASSESSMENT OF INTERSTATE STREAMS

Summaries of all stations include WQI scores, parameters that exceeded water quality standards, and parameters that exceeded the 90<sup>th</sup> percentile at each station. RBP III biological and habitat data also are provided, along with graphs depicting historical water quality and biological conditions over the past five years. A white bar indicates fiscal year 2005 WQI scores, and black bars in all WQI graphs indicate previous WQI scores. Abbreviations for water quality standards are provided below.

<b>Abbreviation</b>	<b>Parameter</b>	<b>Abbreviation</b>	<b>Parameter</b>
ALK	Alkalinity	TNO3	Total Nitrate
COND	Conductivity	TN	Total Nitrogen
TAl	Total Aluminum	DO	Dissolved Oxygen
TCa	Total Calcium	TP	Total Phosphorus
TCl	Total Chloride	TPO4	Total Orthophosphate
TFe	Total Iron	TS	Total Solids
TMg	Total Magnesium	TSO4	Total Sulfate
TMn	Total Manganese	TOC	Total Organic Carbon
TNH3	Total Ammonia	TURB	Turbidity
TNO2	Total Nitrite	WQI	Water Quality Index
TCln	Total Chlorine	RBP	Rapid Bioassessment Protocol
SS	Suspended Sediment	TEMP	Water Temperature

**New York-Pennsylvania Border Streams**

**Apalachin Creek at Little Meadows, Pa. (APAL 6.9)**



**Water Quality:** Aluminum, iron and dissolved oxygen exceeded water quality parameters.

**Biological Condition:** Slightly Impaired

**Habitat Assessment:** Supporting

**Trends:** Water quality and biological condition declined from last year, and the physical habitat remained at supporting.

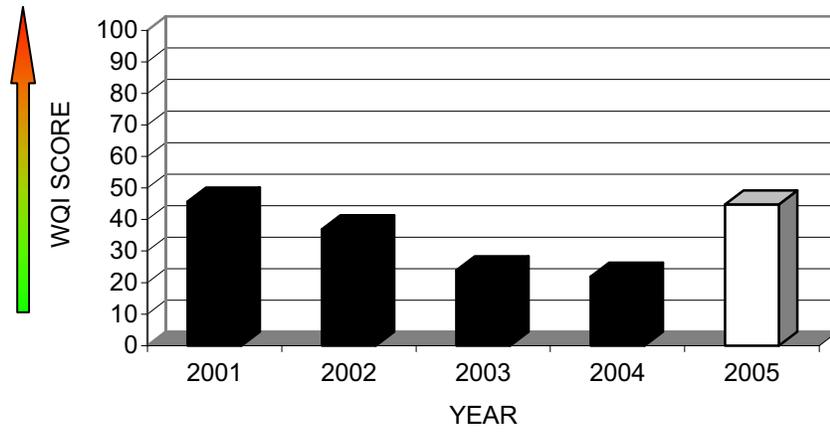
**Other notes:** Staff noted an oil slick in the creek upstream of the sampling site in August 2006.

Parameters Exceeding Standards				
Parameter	Date	Value	Standard	State
TFe	08/02/2005	325 ug/l	300 ug/l	N.Y. aquatic life (chronic)
TAI	08/02/2005	1201 ug/l	100 ug/l	N.Y. aquatic life (chronic)
DO	08/02/2005	4.69 mg/l	5.0 mg/l	Pa. aquatic life

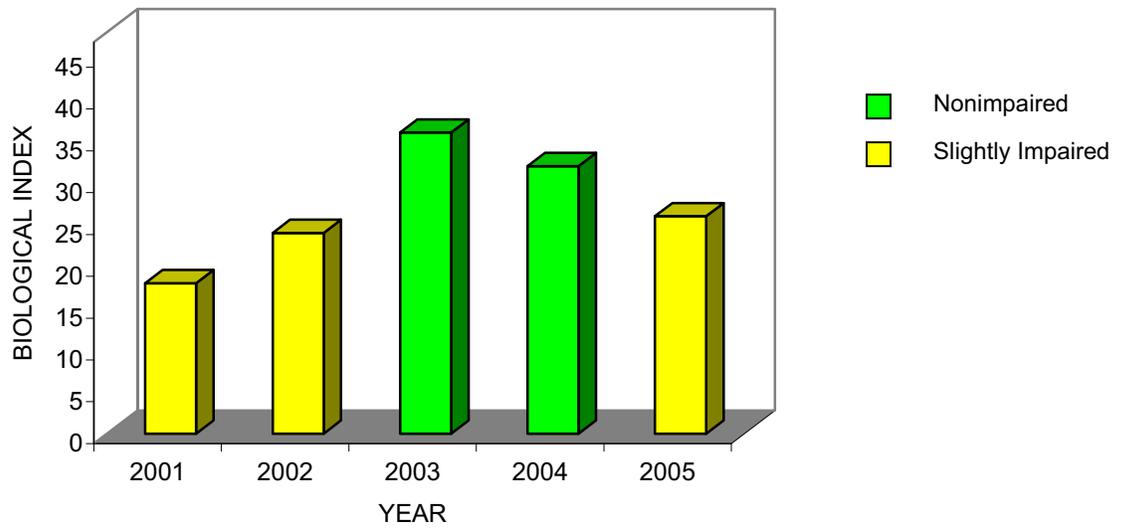
Date	WQI	Parameters Exceeding 90 <sup>th</sup> Percentile						
08/02/05	44.8	TFe	Tal	TMn	DO			

Biological and Habitat Summary	
Number of Taxa	22
Diversity Index	1.85
Biological Score	26
Biological Condition	Slightly Impaired
Total Habitat Score	101
Habitat Condition Category	Supporting

### Water Quality Index



### Biological Index



**Bentley Creek at Wellsburg, N.Y. (BNTY 0.9)**



**Water Quality:** Aluminum exceeded water quality standards.

**Biological Condition:** Slightly Impaired

**Habitat Assessment:** Supporting

**Trends:** Water quality and biologic condition both showed some decline from last year, while habitat assessment remained supporting.

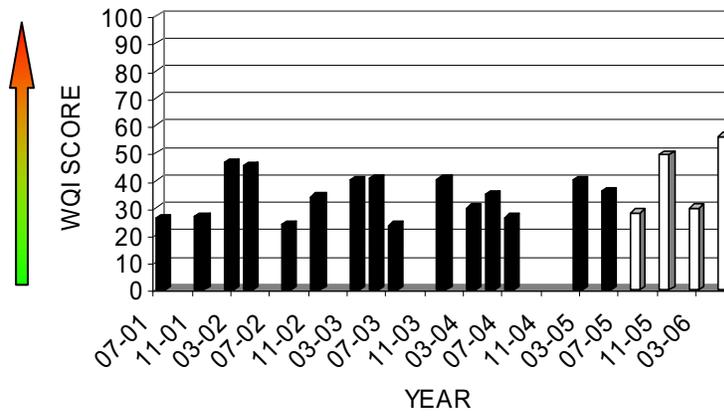
**Other Notes:** The Bradford County Conservation District in Pennsylvania and the U.S. Fish and Wildlife Service conducted a stream stabilization project on this stream. Rock structures, such as cross vanes and single rock vanes, have been constructed in portions of the stream to redirect the force of the flow.

Parameters Exceeding Standards				
Parameter	Date	Value	Standard	State
TAI	08/02/2005	1092 ug/l	100 ug/l	N.Y. aquatic (chronic)
TAI	11/02/2005	301 ug/l	100 ug/l	N.Y. aquatic (chronic)
TAI	02/22/2006	1312 ug/l	100 ug/l	N.Y. aquatic (chronic)
TAI	05/17/2006	1487 ug/l	100 ug/l	N.Y. aquatic (chronic)

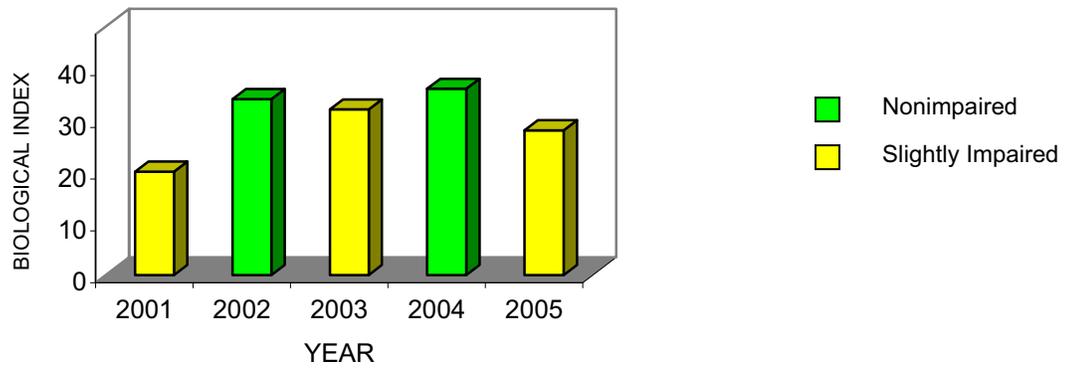
Date	WQI	Parameters Exceeding 90 <sup>th</sup> Percentile							
08/02/2005	28.2	TEMP							
11/02/2005	49.3	TEMP							
02/22/2006	30.0	DO							
05/17/2006	56.2	TP	TPO4	TAI	DO				

Biological and Habitat Summary	
Number of Taxa	19
Diversity Index	1.80
RBP III Score	28
RBP III Condition	Slightly Impaired
Total Habitat Score	103
Habitat Condition Category	Supporting

### Water Quality Index



### Biological Index



**Cascade Creek at Lanesboro, Pa. (CASC 1.6)**



**Water Quality:** Aluminum, iron, alkalinity, and pH all exceeded water quality standards.

**Biological Condition:** NA

**Habitat Assessment:** NA

**Trend:** Water quality showed some decline over the past year.

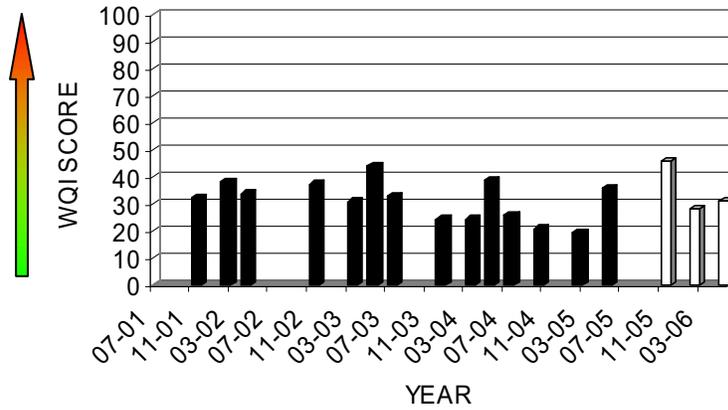
**Other Notes:** Cascade Creek was dry during the summer sampling event so no macroinvertebrates were collected and no habitat assessment was done.

Parameters Exceeding Standards				
Parameter	Date	Value	Standard	State
TFe	11/03/2005	407 ug/l	300 ug/l	N.Y. aquatic (chronic)
TAI	11/03/2005	550 ug/l	100 ug/l	N.Y. aquatic (chronic)
ALK	11/03/2005	8 mg/l	20 mg/l	Pa. aquatic life
pH	11/03/2005	6.3	6.5-8.5	N.Y. general
TAI	02/23/2006	1769 ug/l	100 ug/l	N.Y. aquatic (chronic)
TAI	05/16/2006	1280 ug/l	100 ug/l	N.Y. aquatic (chronic)

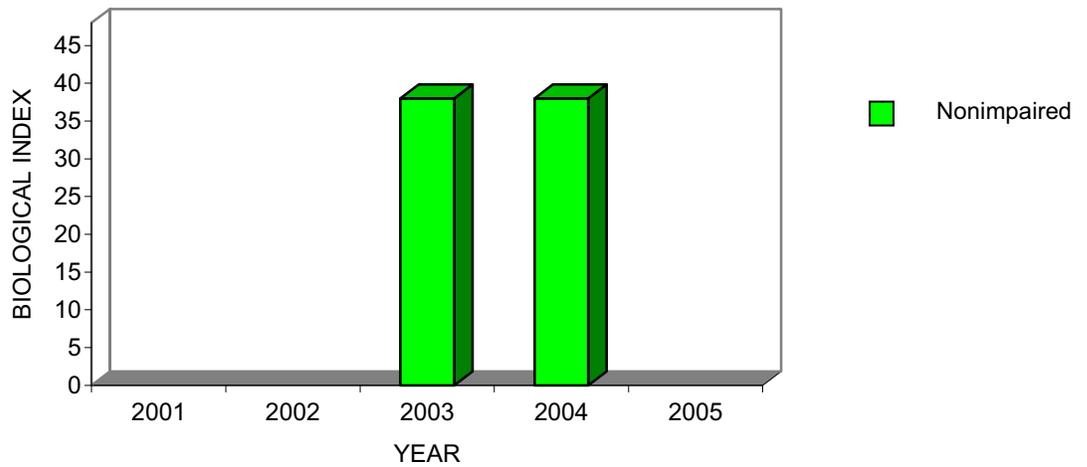
Date	WQI	Parameters Exceeding 90 <sup>th</sup> Percentile						
11/03/2005	46.0	None						
02/23/2006	28.1	None						
05/16/2006	31.1	DO						

Biological and Habitat Summary	
Number of Taxa	NA
Diversity Index	NA
RBP III Score	NA
RBP III Condition	NA
Total Habitat Score	NA
Habitat Condition Category	NA

### Water Quality Index



### Biological Index



**Cayuta Creek at Waverly, N.Y. (CAYT 1.7)**



**Water Quality:** Aluminum, chlorine, and pH all exceeded water quality standards.

**Biological Condition:** Nonimpaired

**Habitat Assessment:** Excellent

**Trends:** Water quality showed a slight decline, biological community remained nonimpaired and the physical habitat showed some improvement.

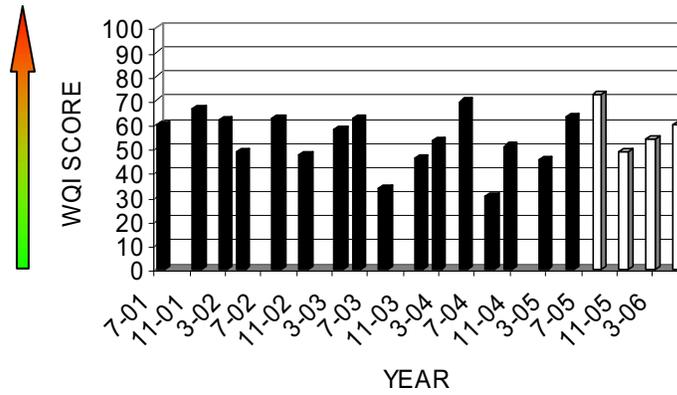
**Other Notes:** This site is downstream of wastewater discharges from the Waverly sewage treatment facility.

Parameters Exceeding Standards				
Parameter	Date	Value	Standard	State
TCIn	08/02/2005	0.04 mg/l	0.019 mg/l	N.Y. aquatic (acute)
TAI	08/02/2005	1137 ug/l	100 ug/l	N.Y. aquatic (chronic)
TAI	11/03/2005	268 ug/l	100 ug/l	N.Y. aquatic (chronic)
pH	11/03/2005	6.1	6.5-8.5	N.Y. general
TAI	02/22/2006	1178 ug/l	100 ug/l	N.Y. aquatic (chronic)
TAI	05/16/2006	1310 ug/l	100 ug/l	N.Y. aquatic (chronic)
TCIn	05/16/2006	0.08 mg/l	0.019 mg/l	N.Y. aquatic (acute)

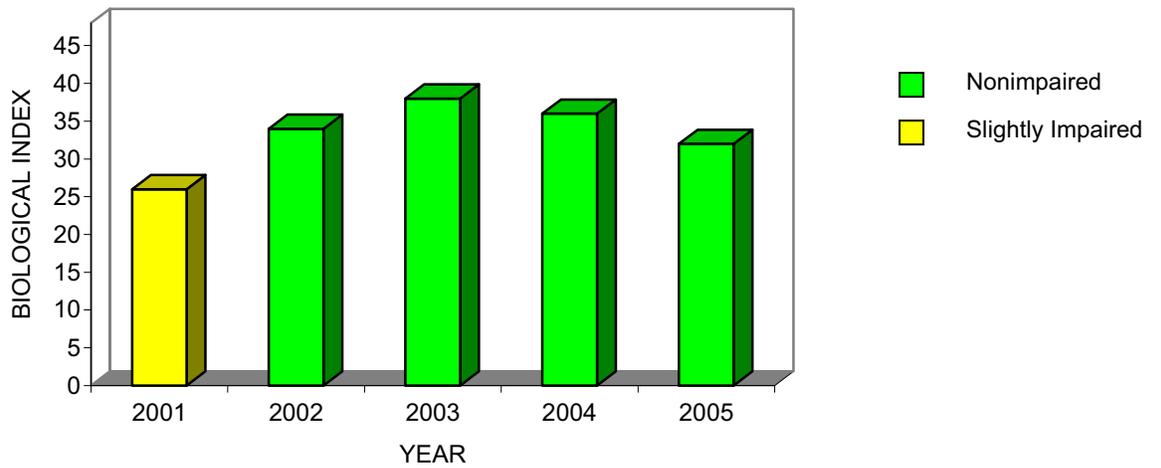
Date	WQI	Parameters Exceeding 90 <sup>th</sup> Percentile								
		TS	TNO3	TP	TPO4	TNH3	TN	TCI	COND	
08/02/2005	72.3	TS	TNO3	TP	TPO4	TNH3	TN	TCI	COND	
11/03/2005	48.5	None								
02/22/2006	53.8	TP	TPO4	DO						
05/16/2006	60.1	DO								

Biological and Habitat Summary	
Number of Taxa	22
Diversity Index	2.28
RBP Score	32
RBP Condition	Nonimpaired
Total Habitat Score	128
Habitat Condition Category	Excellent

### Water Quality Index



### Biological Index



**Choconut Creek at Vestal Center, N.Y. (CHOC 9.1)**



**Water Quality:** Aluminum, iron, dissolved oxygen, and pH all exceeded water quality standards.

**Biological Condition:** Slightly Impaired

**Habitat Assessment:** Supporting

**Trends:** Water quality, biological condition, and habitat rating all declined from 2004-2005.

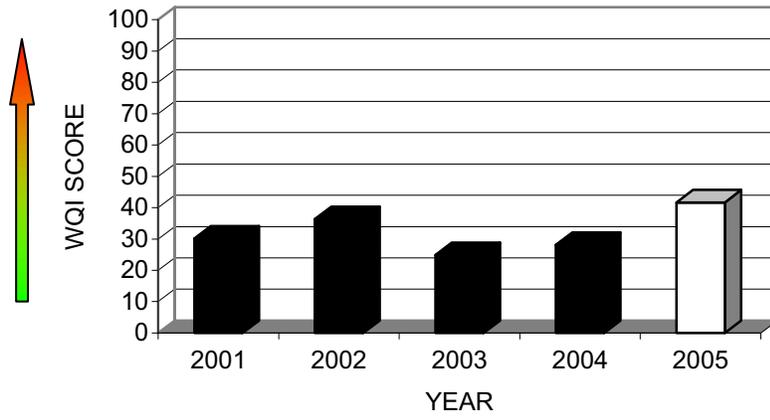
**Other Notes:** Riparian buffer zone was very poor and there is a lot of rip rap along Choconut Creek at this site.

Parameters Exceeding Standards				
Parameter	Date	Value	Standard	State
TAI	08/02/2005	1286 ug/l	100 ug/l	N.Y. aquatic (chronic)
TFe	08/02/2005	304 ug/l	300 ug/l	N.Y. aquatic (chronic)
DO	0/02/2005	4.92 mg/l	5.0 mg/l	Pa. aquatic life
pH	08/02/2005	6.4	6.5-8.5	N.Y. general

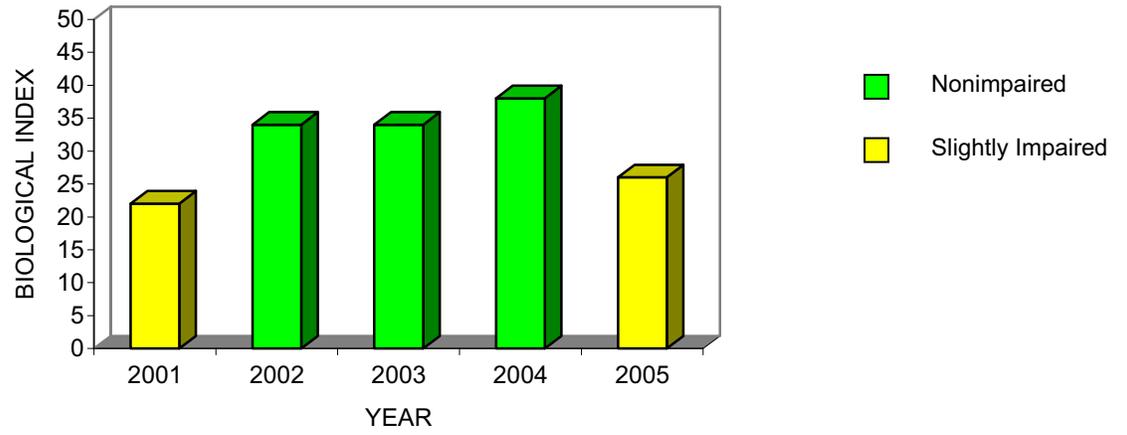
Date	WQI	Parameters Exceeding 90 <sup>th</sup> Percentile						
08/02/2005	41.7	TFe	TAI	DO	SS			

Biological and Habitat Summary	
Number of Taxa	27
Diversity Index	2.07
RBP Score	26
RBP Condition	Slightly Impaired
Total Habitat Score	108
Habitat Condition Category	Supporting

### Water Quality Index



### Biological Index



**Cowanesque River at Lawrenceville, Pa. (COWN 1.0)**



**Water Quality:** Aluminum and iron exceeded water quality standards.

**Biological Condition:** Moderately Impaired

**Habitat Assessment:** Supporting

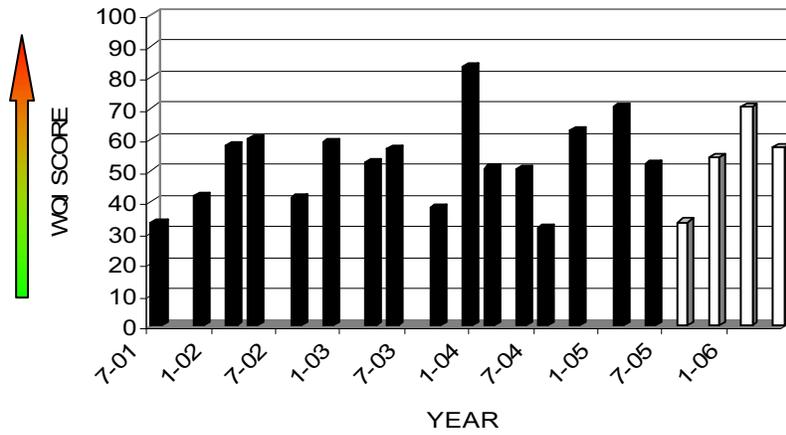
**Trend:** Water quality declining slightly since 2004-2005; biological condition declining from last year; physical habitat remains the same.

**Other Notes:** This site is a little more than a mile downstream of the Cowanesque Reservoir.

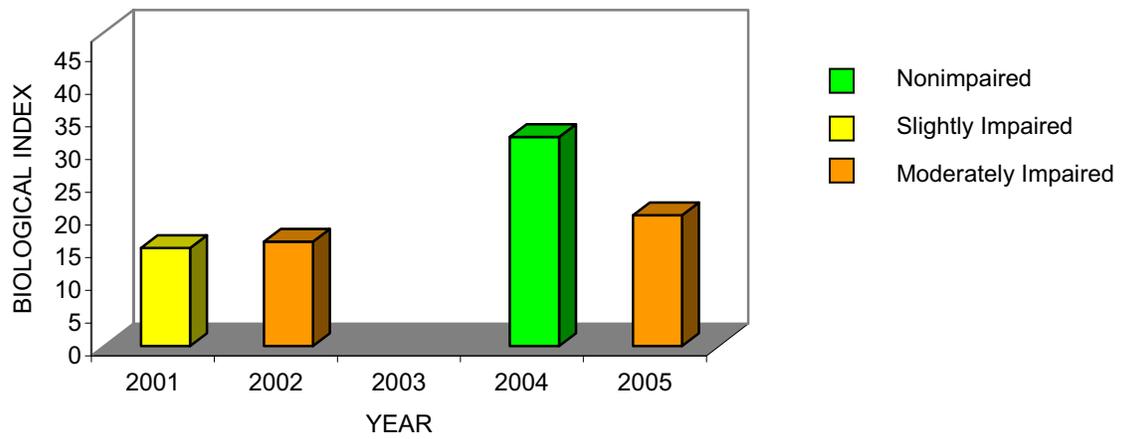
Parameters Exceeding Standards				
Parameter	Date	Value	Standard	State
TAI	08/03/2005	1200 ug/l	100 ug/l	N.Y. aquatic (chronic)
TAI	11/02/2005	297 ug/l	100 ug/l	N.Y. aquatic (chronic)
TFe	02/21/2006	1202 ug/l	300 ug/l	N.Y. aquatic (chronic)
TAI	02/21/2006	3133 ug/l	100 ug/l	N.Y. aquatic (chronic)
TAI	05/17/2006	1408 ug/l	100 ug/l	N.Y. aquatic (chronic)

Date	WQI	Parameters Exceeding 90 <sup>th</sup> Percentile							
08/03/2005	33.5	TAI	TEMP						
11/02/2005	54.1	TOC	TEMP						
02/21/2006	70.5	TFe	TURB	TNH3	TAI	TOC	SS	TEMP	
05/17/2006	57.7	DO							

Biological and Habitat Summary	
Number of Taxa	15
Diversity Index	2.01
RBP Score	20
RBP Condition	Moderately Impaired
Total Habitat Score	137
Habitat Condition Category	Supporting



Water Quality Index



Biological Index

**Cowanesque River at Lawrenceville, Pa. (COWN 2.2)**



**Water Quality:** Aluminum and iron exceeded water quality standards.

**Biological Condition:** Moderately Impaired

**Habitat Assessment:** Supporting

**Trends:** Water quality declining since 2004-2005, biological index remains moderately impaired, and habitat showed some improvement.

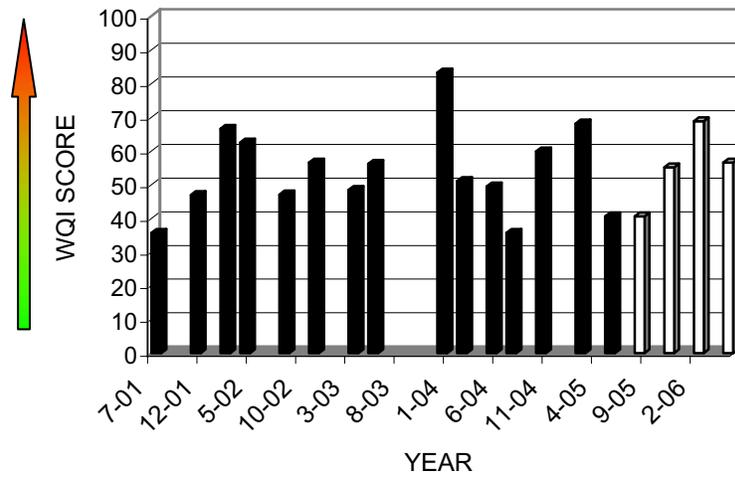
**Other Notes:** Sampling site located directly downstream of the Cowanesque Reservoir.

Parameters Exceeding Standards				
Parameter	Date	Value	Standard	State
TAI	08/03/2005	1220 ug/l	100 ug/l	N.Y. aquatic (chronic)
TAI	11/02/2005	306 ug/l	100 ug/l	N.Y. aquatic (chronic)
TFe	02/21/2006	1102 ug/l	300 ug/l	N.Y. aquatic (chronic)
TAI	02/21/2006	2582 ug/l	100 ug/l	N.Y. aquatic (chronic)
TAI	05/17/2006	1448 ug/l	100 ug/l	N.Y. aquatic (chronic)

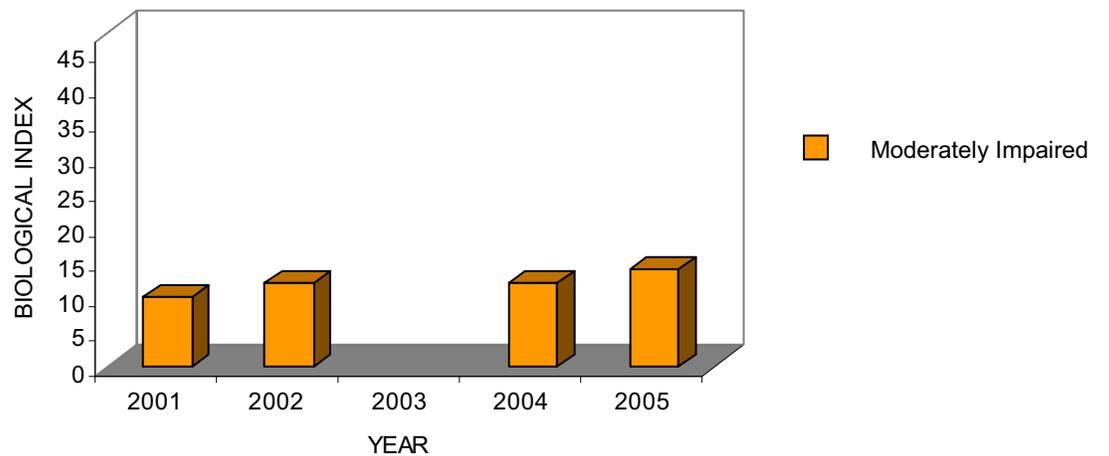
Date	WQI	Parameters Exceeding 90 <sup>th</sup> Percentile						
08/03/2005	40.6	TAI	TEMP					
11/02/2005	55.2	TOC	TEMP					
02/21/2006	68.8	TFe	TURB	TOC	SS			
05/17/2006	56.6	DO						

Biological and Habitat Summary	
Number of Taxa	15
Diversity Index	1.68
RBP Score	14
RBP Condition	Moderately Impaired
Total Habitat Score	130
Habitat Condition Category	Supporting

### Water Quality Index



### Biological Index



**Holden Creek at Woodhull, N.Y. (HLDN 3.5)**

**Water Quality:** NA

**Biological Condition:** NA

**Habitat Assessment:** NA

**Trend:** Water quality and biological condition have been fairly consistent when there is water in the stream channel; however, the site has been dry two of the past five years.

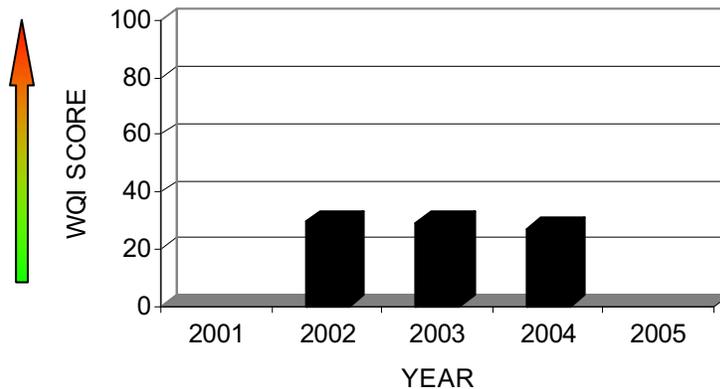
**Other Notes:** Holden Creek was mostly dry on 8/3/05 when it was visited for sampling. Staff noted the construction of a new bridge in progress that had caused a lot of disturbance in the stream channel. No water quality, macroinvertebrate, or habitat data was obtained for Holden Creek for FY06.

Parameters Exceeding Standards				
Parameter	Date	Value	Standard	State
DRY				

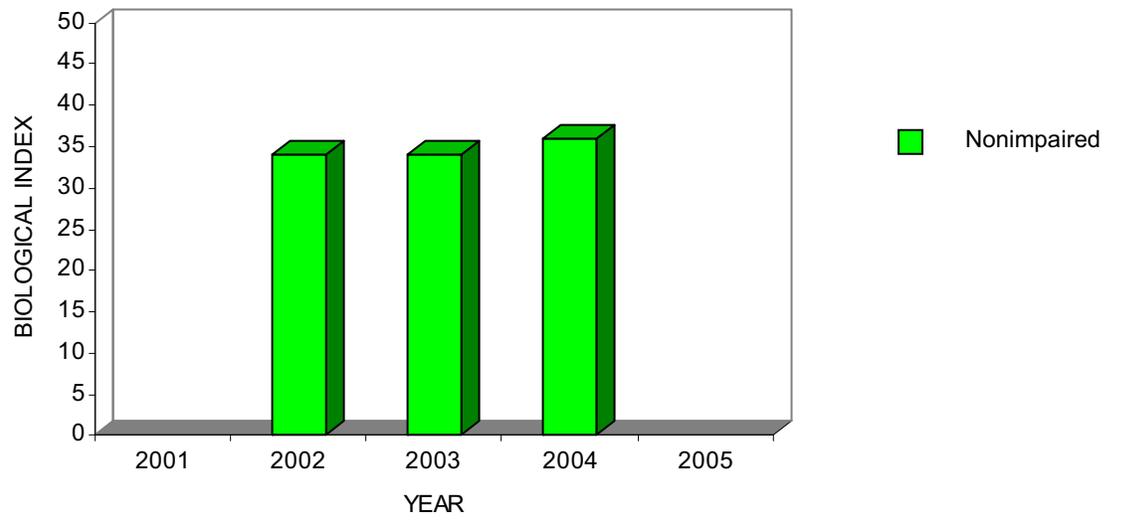
Date	WQI	Parameters Exceeding 90 <sup>th</sup> Percentile						
DRY								

Biological and Habitat Summary	
Number of Taxa	NA
Diversity Index	NA
RBP III Score	NA
RBP III Condition	NA
Total Habitat Score	NA
Habitat Condition Category	NA

**Water Quality Index**



### Biological Index



**Little Snake Creek at Brackney, Pa. (LSNK 7.6)**



**Water Quality:** Aluminum, alkalinity, and iron all exceeded water quality standards.

**Biological Condition:** NA

**Habitat Assessment:** NA

**Trend:** Water quality has been improving slightly over the last five years, and biological condition and habitat have remained consistent when there was enough water in the stream to sample in the summer.

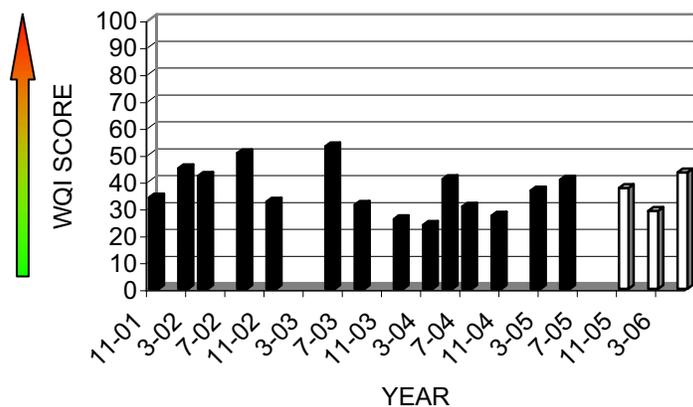
**Other Notes:** Little Snake Creek was dry when site was visited on 8/01/05. No water quality, macroinvertebrate, or habitat data was taken.

Parameters Exceeding Standards				
Parameter	Date	Value	Standard	State
TAI	11/03/2005	283 ug/l	100 ug/l	NY aquatic (chronic)
ALK	11/03/2005	14 mg/l	20 mg/l	PA aquatic life
TAI	02/23/2006	1361 ug/l	100 ug/l	NY aquatic (chronic)
ALK	02/23/2006	14 mg/l	20 mg/l	PA aquatic life
TAI	05/16/2006	1305 ug/l	100 ug/l	NY aquatic (chronic)
TFe	05/16/2006	345 ug/l	300 ug/l	NY aquatic (chronic)

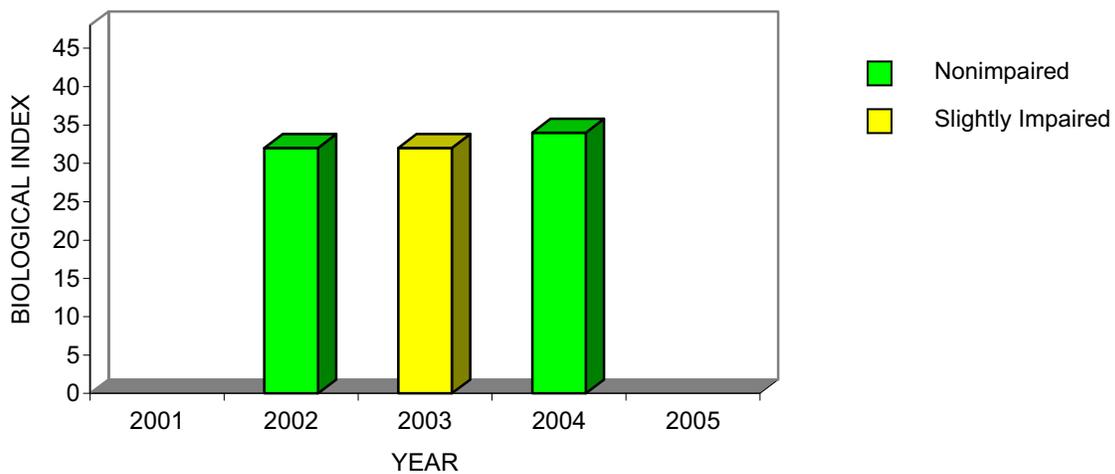
Date	WQI	Parameters Exceeding 90 <sup>th</sup> Percentile						
11/03/2005	37.5	TEMP						
02/23/2006	29.0	DO						
05/16/2006	43.3	TFe						

Biological and Habitat Summary	
Number of Taxa	NA
Diversity Index	NA
RBP III Score	NA
RBP III Condition	NA
Total Habitat Score	NA
Habitat Condition Category	NA

### Water Quality Index



### Biological Index



**North Fork Cowanesque River at North Fork, PA (NFCR 7.6)**

Water Quality: NA  
 Biological Condition: NA  
 Habitat Assessment: NA

**Trend:** Water quality and biological condition have been fairly consistent, but there have been dry conditions at this site 2 of the past 5 years.

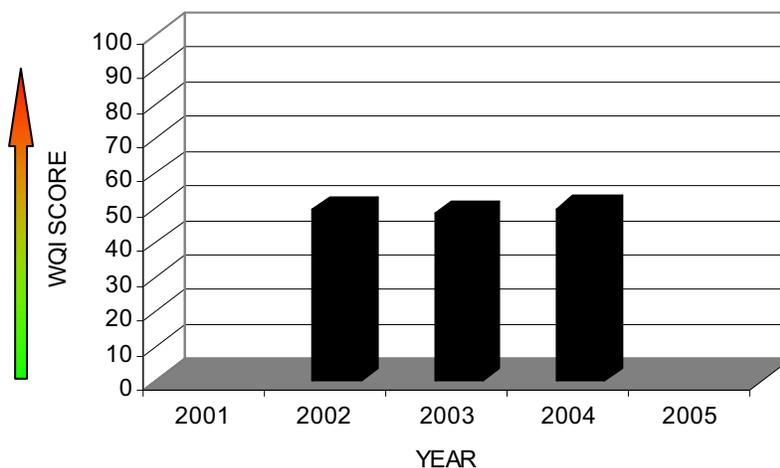
**Other Notes:** North Fork Cowanesque River had no flow when site was visited on 08/04/05, so no water quality, macroinvertebrate, or habitat data was taken.

Parameters Exceeding Standards				
Parameter	Date	Value	Standard	State
DRY				

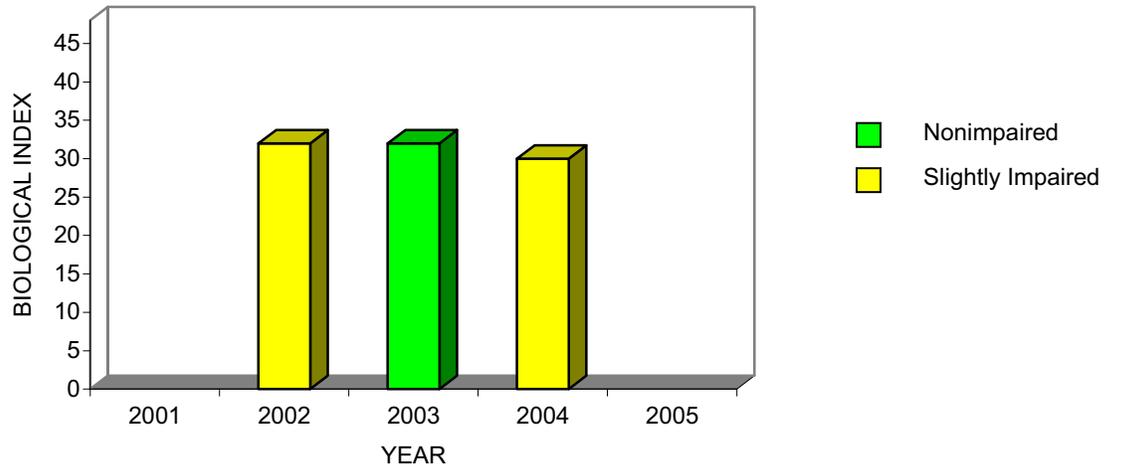
Date	WQI	Parameters Exceeding 90 <sup>th</sup> Percentile						
DRY								

Biological and Habitat Summary	
Number of Taxa	NA
Diversity Index	NA
RBP III Score	NA
RBP III Condition	NA
Total Habitat Score	NA
Habitat Condition Category	NA

**Water Quality Index**



**Biological Index**



**Seeley Creek at Seeley Creek, N.Y. (SEEL 10.3)**

**Water Quality:** Aluminum exceeded water quality parameters.

**Biological Condition:** Moderately Impaired

**Habitat Assessment:** Excellent

**Trends:** Water quality and biological condition both showed a decline from last year, but physical habitat was slightly improved.

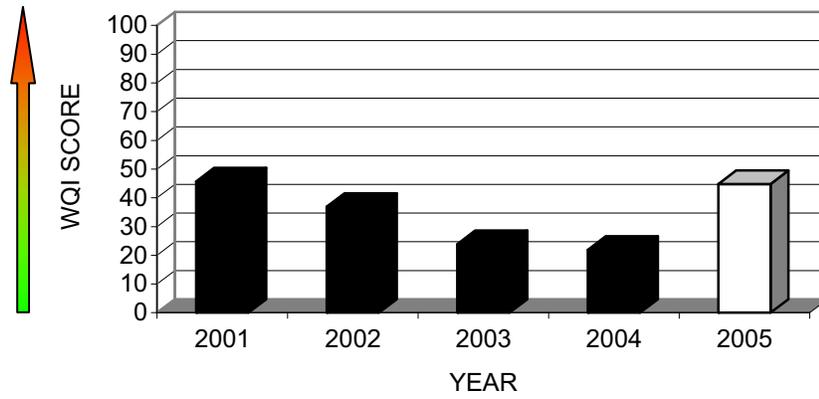
**Other Notes:** New York State Department of Conservation (NYSDEC) listed Seeley Creek as “threatened” in its publication, The 1998 Chemung River Basin Waterbody Inventory and Priority Waterbodies List (NYSDEC, 1998). According to this publication, the stream is threatened by habitat alteration, streambank erosion, and instability of the stream channel.

Parameters Exceeding Standards				
Parameter	Date	Value	Standard	State
TAI	08/03/2005	1220 ug/l	100 ug/l	N.Y. aquatic (chronic)
TAI	11/02/2005	257 ug/l	100 ug/l	N.Y. aquatic (chronic)
TAI	02/21/2006	1285 ug/l	100 ug/l	N.Y. aquatic (chronic)
TAI	05/17/2006	1467 ug/l	100 ug/l	N.Y. aquatic (chronic)

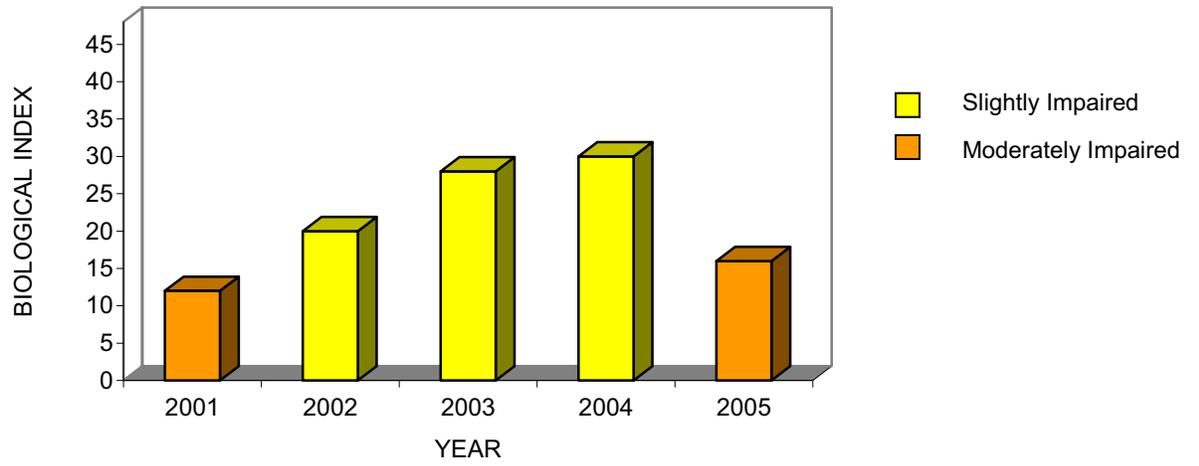
Date	WQI	Parameters Exceeding 90 <sup>th</sup> Percentile							
08/03/2005	27.8	TAI							
11/02/2005	55.8	TNH3	DO	COND	TEMP				
02/21/2006	37.3	DO							
05/17/2006	47.2	TAI	TOC	DO					

Biological and Habitat Summary	
Number of Taxa	13
Diversity Index	1.66
RBP III Score	16
RBP III Condition	Moderately Impaired
Total Habitat Score	130
Habitat Condition Category	Excellent

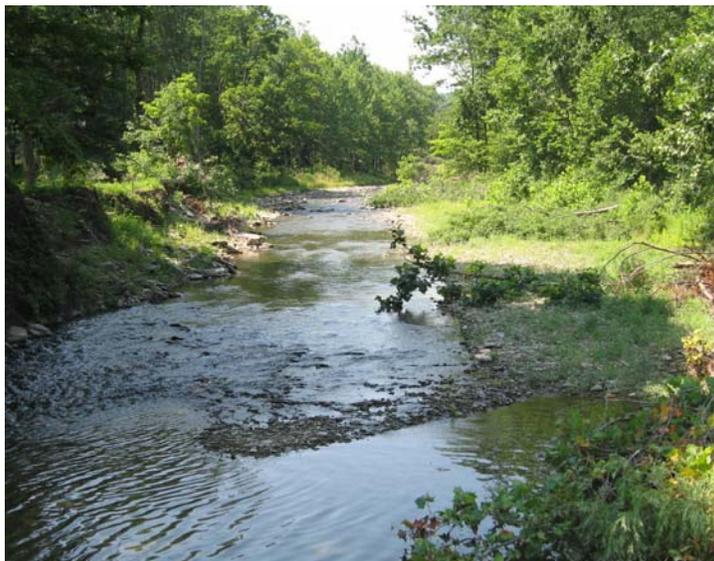
### Water Quality Index



### Biological Index



**Snake Creek at Brookdale, Pa. (SNAK 2.3)**



**Water Quality:** Aluminum exceeded water quality standards.

**Biological Condition:** Nonimpaired

**Habitat Assessment:** Excellent

**Trends:** Water quality remained about the same and biological condition and habitat rating both kept their nonimpaired and excellent ratings, respectively.

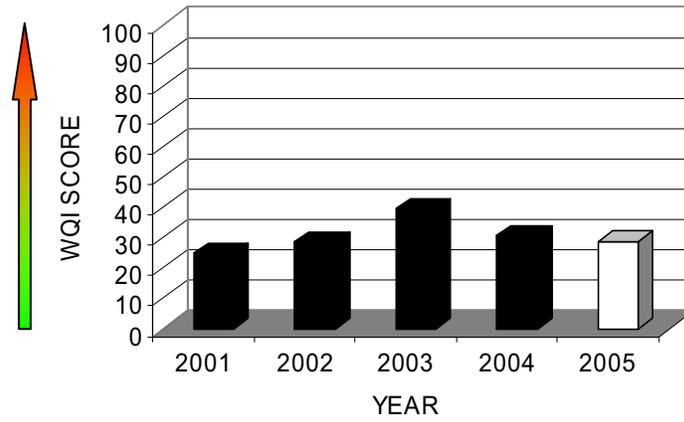
**Other Notes:** In 2000, SRBC staff conducted a small watershed study on the Snake Creek Watershed during the second year of the Upper Susquehanna Subbasin Survey (Diehl and Sitlinger, 2001). The study concluded that the Snake Creek Watershed was healthy and recommended that this watershed be protected.

Parameters Exceeding Standards				
Parameter	Date	Value	Standard	State
TAI	08/01/2005	1210 ug/l	100 ug/l	N.Y. aquatic (chronic)

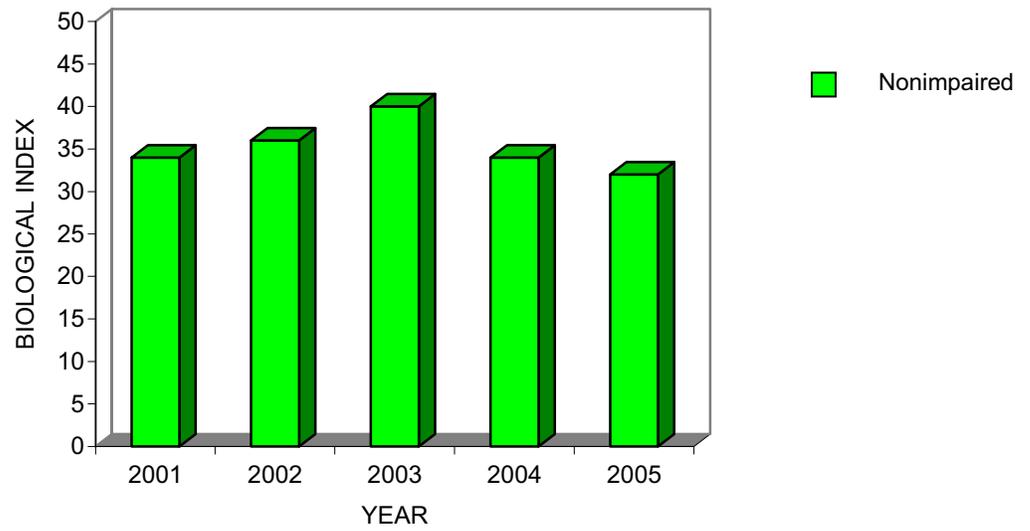
Date	WQI	Parameters Exceeding 90 <sup>th</sup> Percentile						
08/01/2005	28.6	TAI	TEMP					

Biological and Habitat Summary	
Number of Taxa	21
Diversity Index	2.31
RBP III Score	32
RBP III Condition	Nonimpaired
Total Habitat Score	117
Habitat Condition Category	Excellent

**Water Quality Index**



**Biological Index**



**South Creek at Fassett, Pa. (SOUT 7.8)**

**Water Quality:** Aluminum exceeded water quality standards.

**Biological Condition:** Reference (Nonimpaired)

**Habitat Assessment:** Reference (Excellent)

**Trends:** Water quality remained about the same, but biological condition and habitat both showed improvement to move to the highest ranking in each category.

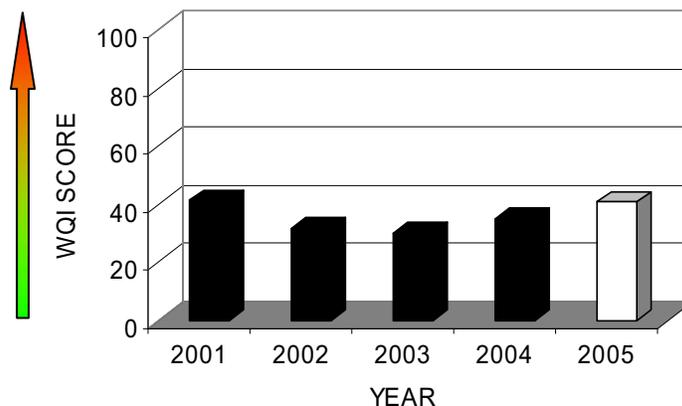
**Other Notes:** South Creek was used as the reference site for all the New York-Pennsylvania border streams because it had the best combination of results for water quality, macroinvertebrates, and physical habitat.

Parameters Exceeding Standards				
Parameter	Date	Value	Standard	State
TAl	08/03/2005	1300 ug/l	100 ug/l	N.Y. aquatic (chronic)

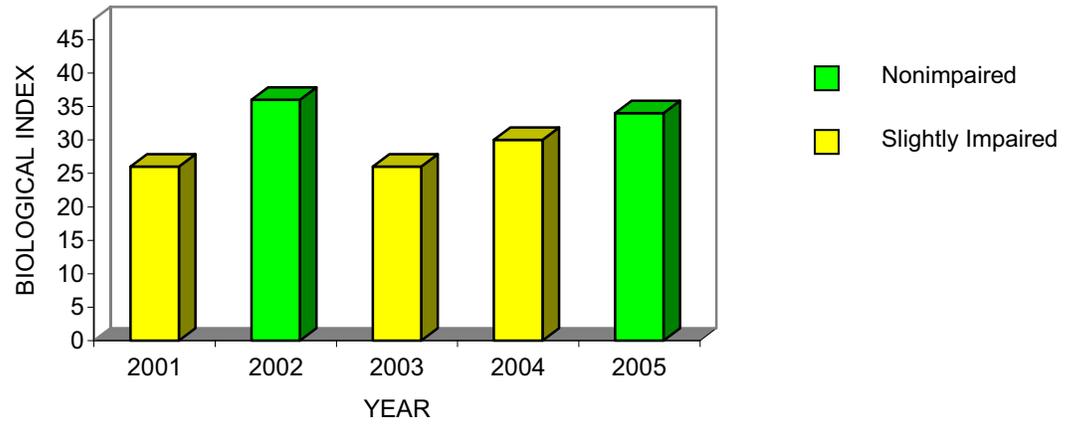
Date	WQI	Parameters Exceeding 90 <sup>th</sup> Percentile						
08/03/2005	40.7	TAL	TOC	DO				

Biological and Habitat Summary	
Number of Taxa	22
Diversity Index	2.45
RBP III Score	34
RBP III Condition	Reference
Total Habitat Score	129
Habitat Condition Category	Reference

**Water Quality Index**



**Biological Index**



**Troups Creek at Austinburg, Pa. (TRUP 4.5)**

**Water Quality:** Aluminum and iron exceeded water quality standards.

**Biological Condition:** Nonimpaired

**Habitat Assessment:** Supporting

**Trends:** Water quality showed a slight improvement; biological index also improved and habitat remained supporting.

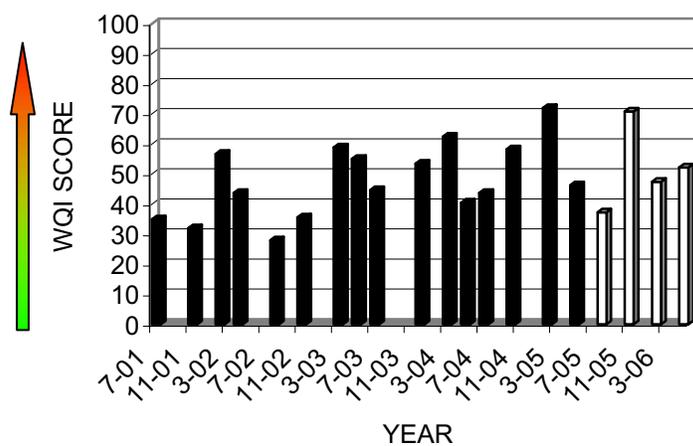
**Other Notes:** Staff noted a very poor riparian buffer zone at Troups Creek at this sampling location.

<b>Parameters Exceeding Standards</b>				
<b>Parameter</b>	<b>Date</b>	<b>Value</b>	<b>Standard</b>	<b>State</b>
TAI	08/04/2005	1255 ug/l	100 ug/l	NY aquatic (chronic)
TFe	11/02/2005	410 ug/l	300 ug/l	NY aquatic (chronic)
TAI	11/02/2005	508 ug/l	100 ug/l	NY aquatic (chronic)
TFe	02/21/2006	306 ug/l	300 ug/l	NY aquatic (chronic)
TAI	02/20/2006	1931 ug/l	100 ug/l	NY aquatic (chronic)
TAI	05/17/2006	1280 ug/l	100 ug/l	NY aquatic (chronic)

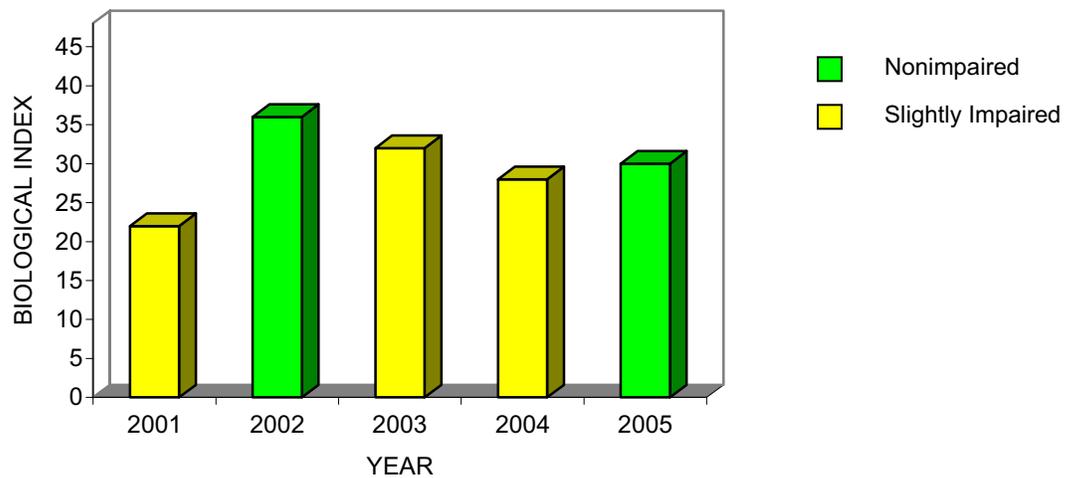
<b>Date</b>	<b>WQI</b>	<b>Parameters Exceeding 90<sup>th</sup> Percentile</b>							
08/04/2005	37.3	TAI							
11/02/2005	70.8	TPO4	TURB	TN	TOC				
02/20/2006	47.4	DO							
05/17/2006	52.2	TURB	TAI	DO					

<b>Biological and Habitat Summary</b>	
Number of Taxa	22
Diversity Index	2.13
RBP Score	30
RBP Condition	Nonimpaired
Total Habitat Score	107
Habitat Condition Category	Supporting

### Water Quality Index



### Biological Index



**Trowbridge Creek at Great Bend, Pa. (TROW 1.8)**



**Water Quality:** NA

**Biological Condition:** NA

**Habitat Assessment:** NA

**Trend:** Water quality has remained fairly consistent over the past five years and biological condition has shown some improvement. However, this site has been dry two of the last five years.

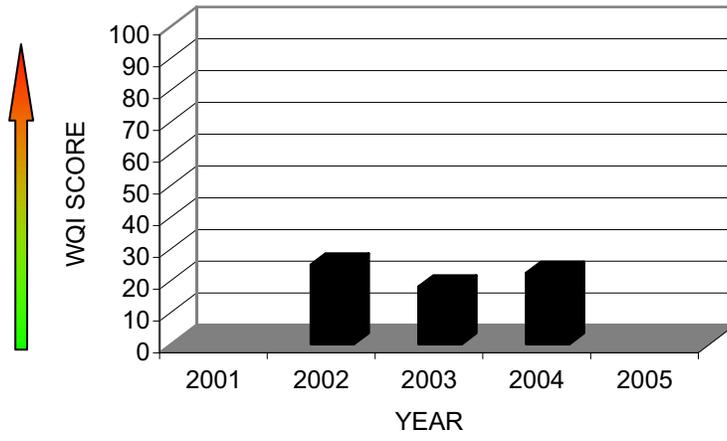
**Other Notes:** There was no flow at Trowbridge Creek during sampling visit on August 1, 2005. No water quality, macroinvertebrate, or habitat data was taken.

Parameters Exceeding Standards				
Parameter	Date	Value	Standard	State
DRY				

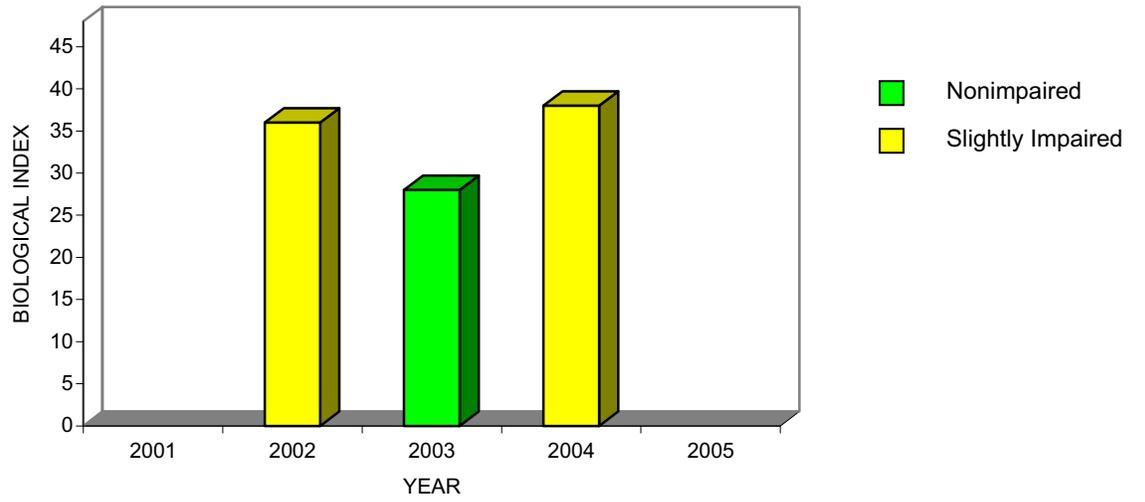
Date	WQI	Parameters Exceeding 90 <sup>th</sup> Percentile						
DRY								

Biological and Habitat Summary	
Number of Taxa	NA
Diversity Index	NA
RBP III Score	NA
RBP III Condition	NA
Total Habitat Score	NA
Habitat Condition Category	NA

**Water Quality Index**



**Biological Index**



**Wappasening Creek at Nichols, N.Y. (WAPP 2.6)**



**Water Quality:** NA

**Biological Condition:** NA

**Habitat Assessment:** NA

**Trend:** Water quality and biological condition have been steadily improving over the past five years. This is the first time in five years that the stream has been dry during a sampling event.

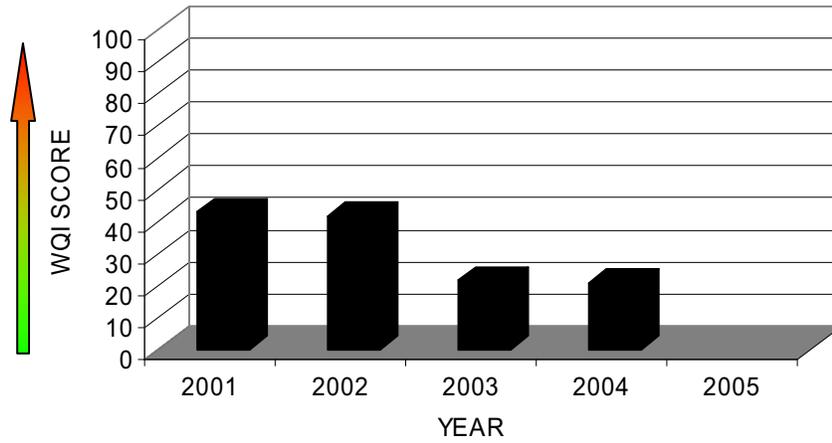
**Other Notes:** There was insufficient flow for any sampling during the annual sampling visit on August 2, 2005 at Wappasening Creek.

Parameters Exceeding Standards				
Parameter	Date	Value	Standard	State
DRY				

Date	WQI	Parameters Exceeding 90 <sup>th</sup> Percentile						
DRY								

Biological and Habitat Summary	
Number of Taxa	NA
Diversity Index	NA
RBP Score	NA
RBP Condition	NA
Total Habitat Score	NA
Habitat Condition Category	NA

**Water Quality Index**



**Biological Index**

