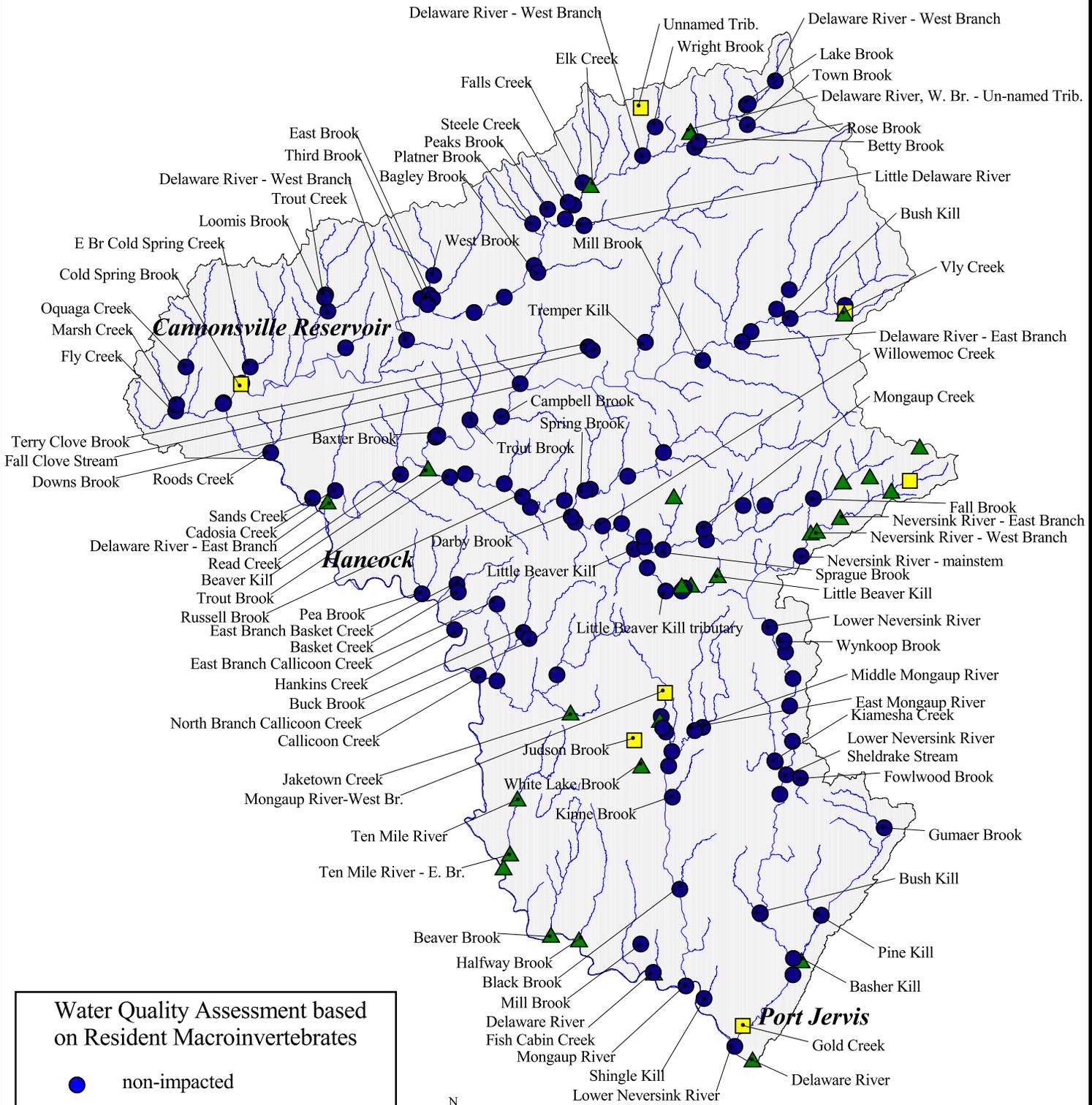
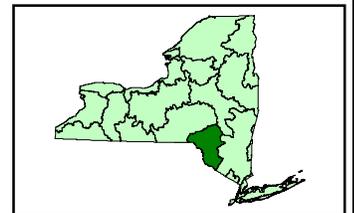


Delaware River Drainage Basin



Water Quality Assessment based on Resident Macroinvertebrates

- non-impacted
- ▲ slightly impacted
- moderately impacted
- ◆ severely impacted



DELAWARE RIVER DRAINAGE BASIN SAMPLING SITES, 1972-2002

<u>STATION</u>	<u>LOCATION</u>	<u>YEAR SAMPLED</u>
BAGLEY BROOK (BAGL)		
01	De Lancey, Bagley Brook Rd. bridge	99
BASHER KILL (BSHR)		
01	Cuddebackville, below Galley Hill Rd. bridge	93 99
BASKET CREEK (BASK)		
02	Above Basket, Rte 134	99
BASKET CREEK, EAST BRANCH (BASK)		
01	Below Fernwood, above Basket Rd.	99
BAXTER BROOK (BAXT)		
01	Harvard, above Rte 30 bridge	99
BEAVER BROOK (BEBR)		
01	Minisink Ford, above Rt. 97 bridge	99
BEAVER KILL (BEAV)		
01	Lewbeach, at bridge	93 99
02	Beaverkill, covered bridge	93
03	Delaware/Sullivan County line, below Craigie Clair	93
04	Roscoe, Rte 179A bridge	93 99
05	Below Roscoe, off Old Rte 17	93
06	Cooks Falls, above bridge	88 93 94 99
07	Horton, Horton Brook Rd. bridge	93
08	Above Peakville, Rte 17 bridge	93
09	East Branch, below Bridge Rd. bridge	99 00
BENTON HOLLOW CREEK (LBEV)		
03A	below Parksville, above Benton Hollow Rd. bridge	94
BETTY BROOK (BETT)		
01	South Kortright, below Rte 10 bridge	99
BISCUIT BROOK (UNVR)		
NW-06	Biscuit Brook, Frost Valley	87
BLACK BROOK (BLAB)		
01	below Fowlerville/Forestburg, Plank Rd; at last bridge	99
BUCK BROOK (BUCB)		
01	North Branch, Rte 95 bridge	99
BUSH KILL (BKIL) (Sullivan County)		
01	Oakland Valley, off Rte 49, above Burns Rd bridge	99
BUSH KILL (BUSH) (Delaware County)		
01	Arkville, Rte 28, above village	00

DELAWARE RIVER DRAINAGE BASIN SAMPLING SITES, 1972-2002

<u>STATION</u>	<u>LOCATION</u>		<u>YEAR SAMPLED</u>	
CADOSIA CREEK (CDOS)				
01	Cadosia, above Rte 17 bridge		94	99
CALKINS CREEK (CALK)				
01	Milanville, PA, below River Rd			99
CALLICOON CREEK (CALL)				
05	Hortonville, off Rte 17B, below inters. of Rte 121	87		
06	Callicoon, at Rte 97 bridge		93 94	99 00
CALLICOON CREEK, EAST BRANCH (CALL)				
03	Kohlertown, above Miller Rd bridge			99
04	Hortonville, above Viaduct Rd bridge			99
CALLICOON CREEK, NORTH BRANCH (CALL)				
01	North Branch, below Poley Rd. bridge at DEC fishing access			99
02	Hortonville, above Hortonville Rd bridge		93 94	99
CAMPBELL BROOK (CBEL)				
01	Corbett, above River Rd. bridge			99
CLOVE BROOK (CLVE)				
01	Duttonville, NJ, above Rte 23 bridge			99
COLD SPRING BROOK (COLD)				
03	Stilesville, above Cold Spring Br.mouth; near Rt.10 crossing of creek			99
COLD SPRING BROOK, EAST BRANCH (COLD)				
01	Hambletville, above Rte 8 bridge			99
DARBY BROOK (DARB)				
01	Roscoe, above confluence; Co Rte 179A			00
DELAWARE RIVER (DELA)				
05	Buckingham Public Access Area	74 81		
06	Hankins at Kellams Bridge	74 81		
07	Callicoon above Callicoon Creek	74 81		
08	Cochecton, below Rte 371 bridge, PA side	74 81	93 94	99
09	Narrowsburg	74 81	88	
10	Tusten	74 81		
11	Minisink Ford, Roebling's bridge	74 81		99
12	Pond Eddy, opp. Whitewater Willies Motel	74 81		99
13	Port Jervis, above Rte 6/209 bridge, PA side	81	87 88 93 94	99 00
16	near Milford, PA	74 81		

DELAWARE RIVER DRAINAGE BASIN SAMPLING SITES, 1972-2002

<u>STATION</u>	<u>LOCATION</u>	<u>YEAR SAMPLED</u>			
DELAWARE RIVER, EAST BRANCH (EDEL)					
01	Roxbury, Briggs Rd. bridge				
03	Kelly Corners, E. Hubbell Rd bridge				99
03A	Arkville, 50 m above Rt. 38 bridge			93 94	00
04	Margaretville, opposite STP				98 99
04B	Margaretville, off Rt. 28; below Margaretville STP			94	
08	Harvard, below Harvard Rd bridge				99
10	Fish's Eddy			88	
12	Hancock, below Route 97 bridge	74 81	87	93 94	99 00
DELAWARE RIVER, WEST BRANCH (WDEL)					
00	Stamford, 10 m below School St bridge				00
01	Hobart, off Cornell Ave; 1mi. along old road bed				99 00
02	Below Bloomville, @ Rte. 10 DEC fishing access				99 00
03	Delhi, below Bridge St. bridge		88		99
03A	Delhi, above Arbor Hill Rd. bridge				99 00
04	Delancy, above Bagley Rd. bridge		87 88		99 00
05C	Hawleys, below Rte. 26 bridge			93	99 00
05D	Hawleys, below landfill			94	98 00
06	Walton, below Rte 206 bridge				99 00
07	Beerston, at Rte. 10 bridge				99 00
08	Stilesville, above Cold Spring Br.mouth	74 81	86		99
09	Deposit, above Deposit STP		86		
10	below Deposit, below Deposit STP		86		
11	above Hale Eddy, above Co. Rt. 18 bridge		86		
12	Hale Eddy	74 81	86		
13	Hancock, 100 m above Rt. 191 bridge	74 81	86 87		99 00
DOWNS BROOK (DOWN)					
01	Downsville, above Rt. 30 bridge				99
DRYDEN BROOK (DRYD)					
01	Finch Hollow, above Dryden Brook Rd bridge				99
EAST BROOK (EAST)					
01	Walton, above East St bridge				99
ELK CREEK (ELK)					
01	East Delhi, below Rte 10 bridge				99
FALL BROOK (FALB)					
01	above Claryville, above Co. Rte 47 bridge				99
FALL CLOVE STREAM (FCLV)					
01	Fall Clove, above BWS Rd #6 bridge				99

DELAWARE RIVER DRAINAGE BASIN SAMPLING SITES, 1972-2002

<u>STATION</u>	<u>LOCATION</u>	<u>YEAR SAMPLED</u>
FALLS CREEK (FALS)		
01	Delhi, above Rte 10 bridge	99
FISH CABIN CREEK (FCAB)		
01	Pond Eddy, Off Rte 97	99
FLY CREEK (FLYC)		
01	McClure, below Rte 41 bridge	99
FOWLWOOD BROOK (FOWL)		
01	Glen Wild, above Glen Wild Rd bridge	99
GOLD CREEK (GOLD)		
01	Port Jervis, Rt. 209 bridge	99
GUMAER BROOK (GUMR)		
01	above Wurtsboro, above Rte 209 bridge	99
HALFWAY BROOK (HAFY)		
01	Barryville, above Rt. 97 bridge	99
HANKINS CREEK (HANK)		
01	Hankins, below Rte 97 bridge (opp. Co Rt 94)	99
HIGH FALLS BROOK (UNVR)		
	NW-07 High Falls Brook, Frost Valley	87
JAKETOWN CREEK (JAKE)		
01	Kenoza Lake, above Burr Rd bridge	99
JUDSON BROOK (JUDS)		
01	Kauneoga Lake, below Rte 55 bridge	99
KIAMESHA CREEK (KIAM)		
02	Thompsonville, above Thompsonville Rd bridge	99
KINNE BROOK (KINN)		
01	Mongaup Valley, Starlight Rd bridge	99
LACKAWAXEN RIVER (WAXN)		
01	Lackawaxen, below PA-Rt. 590 bridge	99
LAKE BROOK (LAKE)		
01	Hobart, below Rte 10 bridge	99
LILY POND OUTLET (LBEV)		
01A	Cooley, Lily Pond Outlet, above Fishman Rd. bridge	94

DELAWARE RIVER DRAINAGE BASIN SAMPLING SITES, 1972-2002

<u>STATION</u>	<u>LOCATION</u>	<u>YEAR SAMPLED</u>	
LITTLE BEAVER KILL (LBEV)			
01	Cooley, above Rt. 85 bridge	94	
02	Parksville, above Lily Pond Rd. bridge	94	
03	below Parksville, off old Rt. 17; behind Sunoco station	94	
04	Morsston, DEC Fishing Access	93	94
05	Livingston Manor, Route 149 bridge	93	94
LITTLE DELAWARE RIVER (LDEL)			
01	Delhi, Thompson Cross Rd. bridge	93	
01A	Delhi, at college golf course	93	
LOOMIS BROOK (LOOM)			
01	Loomis, off Loomis Brook Rd.		98 99
MARSH CREEK (MRSH)			
01	McClure, above Rte 41 bridge		99
MELBERN LAKE OUTLET (LBEV)			
02A	Parksville, below Main St. bridge	94	
MILL BROOK (MILP) (Sullivan County)			
01	Pond Eddy, below Rte 97 bridge		99
MILL BROOK (MLBR) (Delaware County)			
01	Arena, Mill Brook Rd. @ USGS gage		98 99
MONGAUP CREEK (GAUP)			
01	DeBruce, above Willowemoc Rd bridge		99
MONGAUP RIVER (MONG)			
00	Mongaup Valley, above Rte 17B bridge		99 00
01	Mongaup, above Route 97 bridge	87	93
MONGAUP RIVER, EAST BRANCH (MONG)			
E	Harris, above Rte 174 bridge		99
M	Bushville, above Rte 75 bridge		99
MONGAUP RIVER, WEST BRANCH (WMON)			
01	below Swan Lake, off Rte 55		00
02	btw Swan Lake & Mongaup Valley, below unnamed trib that runs by landfill		00
03	Bethel, above Blum Rd bridge @inter w/Creamery Rd		00
04	Bethel, Creamery Rd at trib		00
05	Mongaup Valley, above Gail Rd bridge		99 00
NEVERSINK RIVER, UPPER (UNVR)			
NE-01	Upper Neversink R., East Br., Denning, above Tison estate	87	
NE-05	Upper Neversink R., East Br., Denning, opposite Tison estate	87	99

DELAWARE RIVER DRAINAGE BASIN SAMPLING SITES, 1972-2002

<u>STATION</u>	<u>LOCATION</u>	<u>YEAR SAMPLED</u>			
NEVERSINK RIVER, UPPER (UNVR), cont.					
NE-07	Upper Neversink R., East Br., below bridge at Strauss estate	87	90		
NE-08	Upper Neversink R., East Br., New Hill Road		90		
NE-09	Upper Neversink R., East Br., Ladleton		90		
NE-10	Upper Neversink R., East Br., below Ladleton	87	90		99
NE-11	Upper Neversink R., East Br., Claryville	87	90	98	99
NW-01	Upper Neversink R., West Br., near Winisook Lake	87			
NW-02	Upper Neversink R., West Br., DEC parking lot site		90		
NW-03	Upper Neversink R., West Br., West Branch Road		90		
NW-04	Upper Neversink R., West Br., near Frost Valley YMCA	87	90		99
NW-08	Upper Neversink R., West Br., mouth of High Falls Brook		87		
NW-11	Upper Neversink R., West Br., near Claryville		87		
N-12	Upper Neversink R., near Claryville below confluence	87		94	99 00
NEVERSINK RIVER, LOWER (NEVR)					
01	Neversink River, below reservoir, above Route 105 bridge		87		
02	Neversink River, Hasbrouck, above bridge		87		
03	Neversink River, Woodbourne, below Rte 52 bridge		87	93 94	99
04	Neversink River, Fallsburg, below Rte 53 bridge		87		
07	Neversink River, South Fallsburg, Avon Lodge Rd		87		
09	Neversink River, below Thompsonville, opposite confluence with Sheldrake Stream		87		
12	Neversink River, Bridgeville, above Rte. 173 bridge		87		99
13	Neversink River, Oakland Valley, above bridge		87		99
14	Neversink River, Westbrookville, above Rte 209	74	87		
14A	Neversink River, Godeffroy, Graham Road bridge		87	93 94	99
15	Neversink River, Port Jervis, below Rte 6 bridge	74	87		99 00
OQUAGA CREEK (OQUA)					
01	Sanford, Loomis Hill Road			94	00
02	Deposit, below Mill Street bridge				99 00
PEA BROOK (PEA)					
01	Long Eddy, above Acid Factory Rd bridge				99
PEAKS BROOK (PEAK)					
01	Fraser, Peaks Brook Rd; above 2 nd bridge				99
PINE KILL (PINE)					
01	Westbrookville, above Rt. 209 bridge				99
PLATNER BROOK (PLTN)					
01	Fraser, Treadwell Rd				99

DELAWARE RIVER DRAINAGE BASIN SAMPLING SITES, 1972-2002

<u>STATION</u>	<u>LOCATION</u>	<u>YEAR SAMPLED</u>
READ CREEK (READ)		
01	near Fish's Eddy, above Co. Rt. 17 bridge	99
ROODS CREEK (ROOD)		
01	east of Hale Eddy, above Roods Creek Rd bridge	99
ROSE BROOK (ROSE)		
01	South Kortright, below Co. Rte 18 bridge	99
RUSSELL BROOK (RSLL)		
01	Butternut Grove, above Co. Rte 17 bridge	99
SANDS CREEK (SNDS)		
01	Hancock, above Co. Rte 17 bridge	99
SHELDRAKE STREAM (SHEL)		
01	Thompsonville, above Ranch Rd bridge	99
02	Thompsonville, above mouth	87
SHINGLE KILL (SHNG)		
01	above Sparrow Bush, above Rt. 42 bridge	99
SHOHOLA CREEK (HOLA)		
01	Shohola, PA, below Twins Lake Rd	99
SPRAGUE BROOK (SPRA)		
01	west of Parkston, above Co. Rte 82 bridge	99
SPRING BROOK (SPRB)		
01	near Rockland, above Beaverkill/Berry Bk Rd bridge	99
STEELE CREEK (STEL)		
01	Delhi, above Woolerton St bridge	99
TEN MILE RIVER (TENR)		
01	near Lava, below Hoffman Rd. bridge	99
02	East Branch, in Tusten, above Brooks Rd. bridge	99
03	Tusten, above Tusten Rd bridge	99
TERRY CLOVE BROOK (TCLV)		
01	Coles Clove, above BWS Rd 1, inter w/Coles Clove Rd	99
THIRD BROOK (THRD)		
01	Walton, below Ogden St bridge	99
TOWN BROOK (TOWN)		
01	Hobart, below Clove Rd bridge	99

DELAWARE RIVER DRAINAGE BASIN SAMPLING SITES, 1972-2002

<u>STATION</u>	<u>LOCATION</u>	<u>YEAR SAMPLED</u>
TREMPER KILL (TRMP)		
01	Bussey Hollow, Co. Rte. 1, below bridge	99
TROUT BROOK (TRBR)		
01	Peakville, above Peakville Rd. bridge	99
TROUT BROOK (TROT)		
01	Shinhopple, above Rt. 30 bridge	99
TROUT CREEK (TRUT)		
01	Trout Creek, above Rte 206 bridge	98
02	Trout Creek, above Bullock Hill Rd bridge @ new gage	98 99
VLY CREEK (VLY)		
01	Fleischmanns, Halcott Rd.; 0.1 mi. above Lake Switzerland	95
02	Fleischmanns, 50 m below Lake Switzerland dam	95
03	Fleischmanns, 200 m below Lake Switzerland dam	95
04	Fleischmanns, above Mill St. bridge	95
WEST BROOK (WSTB)		
01	above Walton, Rte 23 bridge, just abv Kerrs Ck	99
02	Walton, below Austin Lincoln Park Rd	99
WHITE LAKE BROOK (WLAK)		
01	Smallwood, below Mattison Rd bridge	99
WILLOWEMOC CREEK (WILL)		
01	Above Willowemoc, above Flugertown Road bridge	93
02	Willowemoc, below bridge	93
03	DeBruce, above Hunter Lake Road	93 94
04	Above Livingston Manor, DeBruce Rd., at closed USGS gaging station	93 94
05	Below Livingston Manor, above covered bridge	93 94
06	Below Livingston Manor, @NYSG&E substation	93 94
07	Hazel, above Hazel Road bridge	93 94
08	Roscoe, above Main Street bridge	93 94
WRIGHT BROOK (WRIT)		
01	Bloomville, below Co. Rte 33 bridge	99
WYNKOOP BROOK (WYNK)		
01	Hasbrouck, above Hasbrouck Rd bridge	99
UNNAMED DELAWARE RIVER, WEST BRANCH, TRIBUTARY (SHAW)		
02	South Kortright, below Shaw Road	96 97 98 99 00
UNNAMED WRIGHT BROOK TRIBUTARY (ROBT)		
01	Bloomville, Crowe Rd., below Robertson farm	96 97 98 99 00

ASSESSMENTS OF WATER QUALITY OF STREAMS IN THE DELAWARE RIVER DRAINAGE BASIN,
BASED ON MACROINVERTEBRATE COMMUNITIES

<u>Site/Reach</u>	<u>Water Quality Assessment</u>	<u>Change from 1992</u>
Bagley Brook, De Lancey	non-impacted	no prior data
Basher Kill, Cuddebackville	slightly impacted	no prior data
Basket Creek, above Basket	non-impacted	no prior data
Basket Creek, East Branch	non-impacted	no prior data
Baxter Brook, Harvard	non-impacted	no prior data
Beaver Brook, Minisink Ford	slightly impacted	no prior data
Beaver Kill, Lewbeach	non-impacted	no prior data
Beaver Kill, Beaverkill	non-impacted	no prior data
Beaver Kill, at Delaware/ Sullivan County line	non-impacted	no prior data
Beaver Kill, Roscoe	non-impacted	no prior data
Beaver Kill, below Roscoe	non-impacted	no prior data
Beaver Kill, Cooks Falls	non-impacted	no change
Beaver Kill, Horton	non-impacted	no prior data
Beaver Kill, above Peakville	non-impacted	no prior data
Beaver Kill, East Branch	slightly impacted	no prior data
Benton Hollow Creek, Parksville	non-impacted	no prior data
Betty Brook, South Kortright	non-impacted	no prior data
Black Brook, below Fowlerville/Forestburg	non-impacted	no prior data
Buck Brook, North Branch	non-impacted	no prior data
Bush Kill, Oakland Valley	non-impacted	no prior data
Bush Kill, Arkville	non-impacted	no prior data
Cadosia Creek, Cadosia	non-impacted	no prior data
Calkins Creek, Milanville, PA	non-impacted	no prior data
Callicoon Creek , Callicoon	non-impacted	no prior data
Callicoon Creek, East Branch, Kohlertown	non-impacted	no prior data
Callicoon Creek, East Branch, Hortonville	non-impacted	no prior data
Callicoon Creek, North Branch, North Branch	non-impacted	no prior data
Callicoon Creek, North Branch, Hortonville	non-impacted	no prior data
Campbell Brook, Corbett	non-impacted	no prior data
Clove Brook, Duttonville, NJ	slightly impacted	no prior data
Cold Spring Brook, Stilesville	non-impacted	no prior data
Cold Spring Brook, E. Br. Hambletville	non-impacted	no prior data

ASSESSMENTS OF WATER QUALITY OF STREAMS IN THE DELAWARE RIVER DRAINAGE BASIN,
 BASED ON MACROINVERTEBRATE COMMUNITIES

<u>Site/Reach</u>	<u>Water Quality Assessment</u>	<u>Change from 1992</u>
Darby Brook, Roscoe	non-impacted	no prior data
Delaware River, Cochecton	non-impacted	no change
Delaware River, Minisink Ford	non-impacted	IMPROVED
Delaware River, Pond Eddy	slightly impacted	no change
Delaware River, Port Jervis	slightly impacted	DECLINED
Delaware River, East Branch, Kelly Corners	non-impacted	no prior data
Delaware River, East Branch, Arkville	non-impacted	no prior data
Delaware River, East Branch, Margaretville, opposite STP	non-impacted	no prior data
Delaware River, East Branch, Margaretville, off Rt. 28	non-impacted	no prior data
Delaware River, East Branch, Harvard	non-impacted	no prior data
Delaware R., East Branch, Hancock	slightly impacted	DECLINED
Delaware River, West Branch, Stamford	non-impacted	no prior data
Delaware River, West Branch, Hobart	non-impacted	no prior data
Delaware River, West Branch, below Bloomville	non-impacted	no prior data
Delaware River, West Branch, Delhi, below Bridge St.	non-impacted	no change
Delaware River, West Branch, Delhi, above Arbor Hill Rd.	non-impacted	no prior data
Delaware River, West Branch, Delancy	non-impacted	no change
Delaware River, West Branch, Hawleys, below Rte. 26	non-impacted	no prior data
Delaware River, West Branch, Hawleys, below landfill	non-impacted	no prior data
Delaware River, West Branch, Walton	non-impacted	no prior data
Delaware River, West Branch, Beerston	non-impacted	no prior data
Delaware River, West Branch, Stilesville	moderately impacted	IMPROVED
Delaware River, West Branch, Hancock	non-impacted	no change
Downs Brook, Downsville	non-impacted	no prior data
Dryden Brook, Finch Hollow	non-impacted	no prior data
East Brook, Walton	non-impacted	no prior data
Elk Creek, East Delhi	slightly impacted	no prior data

ASSESSMENTS OF WATER QUALITY OF STREAMS IN THE DELAWARE RIVER DRAINAGE BASIN,
BASED ON MACROINVERTEBRATE COMMUNITIES

<u>Site/Reach</u>	<u>Water Quality Assessment</u>	<u>Change from 1992</u>
Fall Brook, above Claryville	non-impacted	no prior data
Fall Clove Stream, Fall Clove	non-impacted	no prior data
Falls Creek, Delhi	non-impacted	no prior data
Fish Cabin Creek, Pond Eddy	non-impacted	no prior data
Fly Creek, McClure	non-impacted	no prior data
Fowlwood Brook, Glen Wild	non-impacted	no prior data
Gold Creek, Port Jervis	moderately impacted	no prior data
Gumaer Brook, above Wurtsboro	non-impacted	no prior data
Halfway Brook, Barryville	slightly impacted	no prior data
Hankins Creek, Hankins	non-impacted	no prior data
Jaketown Creek, Kenoza Lake	slightly impacted	no prior data
Judson Brook, Kauneoga Lake	moderately impacted	no prior data
Kiamesha Creek, Thompsonville	non-impacted	no prior data
Kinne Brook, Mongaup Valley	non-impacted	no prior data
Lackawaxen River, Lackawaxen, PA	non-impacted	no prior data
Lake Brook, Hobart	non-impacted	no prior data
Lily Pond Outlet, below Cooley	slightly impacted	no prior data
Little Beaver Kill, Cooley	slightly impacted	no prior data
Little Beaver Kill, Parksville	non-impacted	no prior data
Little Beaver Kill, below Parksville	slightly impacted	no prior data
Little Beaver Kill, Morsston	non-impacted	no prior data
Little Beaver Kill, Livingston Manor	non-impacted	no prior data
Little Delaware River, Delhi, Thompson Cross Rd.	non-impacted	no prior data
Little Delaware River, Delhi, at college golf course	non-impacted	no prior data
Loomis Brook, Loomis	non-impacted	no prior data
Marsh Creek, McClure	non-impacted	no prior data
Melbern Lake Outlet, Parksville	non-impacted	no prior data
Mill Brook, Pond Eddy	non-impacted	no prior data
Mill Brook, Arena	non-impacted	no prior data
Mongaup Creek, DeBruce	non-impacted	no prior data

ASSESSMENTS OF WATER QUALITY OF STREAMS IN THE DELAWARE RIVER DRAINAGE BASIN,
 BASED ON MACROINVERTEBRATE COMMUNITIES

<u>Site/Reach</u>	<u>Water Quality Assessment</u>	<u>Change from 1992</u>
Mongaup River, Mongaup Valley	non-impacted	no prior data
Mongaup River, Mongaup	non-impacted	no change
Mongaup River, East Branch, Harris	non-impacted	no prior data
Mongaup River, Middle Branch, Bushville	non-impacted	no prior data
Mongaup River, West Branch, below Swan Lake	moderately impacted	no prior data
Mongaup River, W. Branch, between Swan Lake & Mongaup Valley	non-impacted	no prior data
Mongaup River, West Branch, Bethel, above Blum Rd	slightly impacted	no prior data
Mongaup River, West Branch, Bethel, Creamery Rd	non-impacted	no prior data
Mongaup River, West Branch, Mongaup Valley	non-impacted	no prior data
Neversink River, Upper, East Branch, opposite Tison estate	slightly impacted	no change
Neversink River, Upper, East Branch, below Ladelton	slightly impacted	no change
Neversink River, Upper, East Branch, Claryville	slightly impacted	no change
Neversink River, Upper, West Branch, near Frost Valley YMCA camp	non-impacted	IMPROVED
Neversink River, Upper, West Branch, near Claryville	non-impacted	IMPROVED
Neversink River, Upper, Claryville	non-impacted	IMPROVED
Neversink River, Lower, Woodbourne	non-impacted	no change
Neversink River, Lower, Bridgeville	non-impacted	no change
Neversink River, Lower, Oakland Valley	non-impacted	no change
Neversink River, Lower, Godeffroy	non-impacted	no change
Neversink River, Lower, Port Jarvis	non-impacted	no change
Oquaga Creek, Sanford, below Mill St.	non-impacted	no prior data
Oquaga Creek, Deposit, Oquaga Lake Rd.	non-impacted	no prior data
Pea Brook, Long Eddy	non-impacted	no prior data
Peaks Brook, Fraser	non-impacted	no prior data
Pine Kill, Westbrookville	non-impacted	no prior data
Platner Brook, Fraser	non-impacted	no prior data
Read Creek, near Fishs Eddy	non-impacted	no prior data
Roods Creek, east of Hale Eddy	non-impacted	no prior data

ASSESSMENTS OF WATER QUALITY OF STREAMS IN THE DELAWARE RIVER DRAINAGE BASIN,
 BASED ON MACROINVERTEBRATE COMMUNITIES

<u>Site/Reach</u>	<u>Water Quality Assessment</u>	<u>Change from 1992</u>
Rose Brook, South Kortright	non-impacted	no prior data
Russell Brook, Butternut Grove	non-impacted	no prior data
Sands Creek, Hancock	non-impacted	no prior data
Sheldrake Stream, Thompsonville	non-impacted	no change
Shingle Kill, above Sparrow Bush	non-impacted	no prior data
Shohola Creek, Shohola, PA	slightly impacted	no prior data
Sprague Brook, west of Parkston	non-impacted	no prior data
Spring Brook, near Rockland	non-impacted	no prior data
Steele Creek, Delhi	non-impacted	no prior data
Ten Mile River, near Lava	slightly impacted	no prior data
Ten Mi. R., E. Br, Tusten, abv Brooks Rd.	slightly impacted	no prior data
Ten Mile River, Tusten, above Tusten Rd.	slightly impacted	no prior data
Terry Clove Brook, Coles Clove	non-impacted	no prior data
Third Brook, Walton	non-impacted	no prior data
Town Brook, Hobart	non-impacted	no prior data
Tremper Kill, Bussey Hollow	non-impacted	no prior data
Trout Brook, Peakville	non-impacted	no prior data
Trout Brook, Shinhopple	non-impacted	no prior data
Trout Creek, Trout Creek, above Rte 206	non-impacted	no prior data
Trout Creek, Trout Creek, above Bullock Hill Rd	non-impacted	no prior data
Vly Creek, Fleischmanns, Halcott Rd.	non-impacted	no prior data
Vly Creek, Fleischmanns, 50 m below Lake Switzerland dam	moderately impacted	no prior data
Vly Creek, Fleischmanns, 200 m below Lake Switzerland dam	slightly impacted	no prior data
Vly Creek, Fleischmanns, above Mill St.	non-impacted	no prior data
West Brook, above Walton	non-impacted	no prior data
West Brook, Walton	non-impacted	no prior data
White Lake Brook, Smallwood	slightly impacted	no prior data
Willowemoc Creek, above Willowemoc	non-impacted	no prior data
Willowemoc Creek, Willowemoc	non-impacted	no prior data
Willowemoc Creek, Debruce	non-impacted	no prior data
Willowemoc Creek, above Livingston Manor	non-impacted	no prior data

ASSESSMENTS OF WATER QUALITY OF STREAMS IN THE DELAWARE RIVER DRAINAGE BASIN,
 BASED ON MACROINVERTEBRATE COMMUNITIES

<u>Site/Reach</u>	<u>Water Quality Assessment</u>	<u>Change from 1992</u>
Willowemoc Creek, below Livingston Manor	non-impacted	no prior data
Willowemoc Creek, below Livingston Manor	non-impacted	no prior data
Willowemoc Creek, Hazel	non-impacted	no prior data
Willowemoc Creek, Roscoe	non-impacted	no prior data
Wright Brook, Bloomville	non-impacted	no prior data
Wynkoop Brook, Hasbrouk	non-impacted	no prior data
Unnamed tributary of Delaware River, West Branch, South Kortright, downstream of Shaw Rd.	slightly impacted	no prior data
Unnamed tributary of Wright Brook, Bloomville	moderately impacted	no prior data

REPORTS OF MACROINVERTEBRATE SURVEYS WITHIN THE DELAWARE RIVER WATERSHED

STREAM	YEAR OF SURVEY	REPORT
Beaver Creek	1974	AVON
Beaver Kill	1993	SBU,1993
Callicoon Creek	2001	SCCC
Delaware River	1974	DOH
Delaware River Basin	1974	EPA,1976
Delaware River, West Branch	1973	AVON
Delaware River, West Branch	1986	SBU,1987
Delaware River, West Branch	2000	SBU,2001
Little Beaver Kill	1994	SBU,1995
Mongaup River, West Branch	2000	SBU,2001
Neversink River	1974	AVON
Neversink River	1987	SBU,1988
Vly Creek	1995	SBU,1995
Willowemoc Creek	1974	AVON
Willowemoc Creek	1993	SBU,1993
Willowemoc Creek	1994	SBU,1995
Watershed Streams	1987-1988	RIBS,1990
Watershed Streams	1993-1994	RIBS,1996

AVON	Avon Pollution Investigations Unit, Div. of Fish & Wildlife, NYS DEC
DOH	New York State Department of Health
EPA	United States Environmental Protection Agency
RIBS	Rotating Intensive Basin System, Statewide Waters Assessment Section, NYS DEC
SBU	Stream Biomonitoring Unit, Division of Water, NYS DEC
SCCC	Sullivan County Community College, (Stephen Fleckenstein)

Bagley Brook

Non-impacted water quality is assessed for this tributary of the West Branch Delaware River, based on macroinvertebrate sampling at Delancey in 1999. All the screening criteria were met, and the sample was not processed. No prior data were available for the stream.

Basher Kill

Water quality was assessed as slightly impacted, based on 1999 invertebrate sampling at Cuddebackville. Nonpoint source nutrient enrichment was strongly indicated to be the primary source of impact. This site was similarly assessed in 1993 macroinvertebrate sampling.

Basket Creek

Non-impacted water quality is assessed for this tributary of the Delaware River, based on macroinvertebrate sampling above Basket in 1999. All the screening criteria were met, and the sample was not processed. No prior data were available for the stream. A similar sample was obtained from the East Branch of Basket Creek below Fernwood.

Baxter Brook

Water quality is assessed as non-impacted for this tributary of the East Branch Delaware River. A macroinvertebrate sample was taken in 1999 at Harvard. All the screening criteria were met, and the sample was not processed. No prior data were available for the stream.

Beaver Brook

Slightly impacted water quality is assessed for this Delaware River tributary, based on macroinvertebrate sampling at Minisink Ford in 1999. Mayflies were few, and diatoms were abundant on the rocks. A field assessment was made, and the sample was not processed. No prior data were available for the stream.

Beaver Kill

The Beaver Kill is currently assessed as non-impacted for all but the lower mile. In a 1993 macroinvertebrate survey, 8 sites were sampled from Lew Beach to Peakville, and all sites were assessed as non-impacted. The macroinvertebrate fauna was dominated by clean-water mayflies, stoneflies, and caddisflies. Four sites were re-sampled in 1999 and were similarly assessed as non-impacted. In 2000, a sample taken at East Branch just upstream of the confluence with the East Branch Delaware River yielded an assessment of slightly impacted. The fauna was dominated by clean-water species, but was unbalanced and low in diversity. ISD denoted siltation as the possible stressor. Further sampling at this site is recommended to determine if this assessment is genuine.

Benton Hollow Creek

Non-impacted water quality was assessed for this tributary of the Little Beaver Kill in a 1994 macroinvertebrate sampling near Parksville. The fauna was diverse and well-balanced. No prior data were available for the stream.

Betty Brook

Betty Brook is a tributary of the West Branch Delaware River. Non-impacted water quality was assessed for a site near South Kortright, based on 1999 invertebrate sampling. The fauna was diverse and well-balanced with many clean-water mayflies, stoneflies, and caddisflies.

Black Brook

Water quality is assessed as non-impacted for this tributary of the Mongaup River. In macroinvertebrate sampling near Fowlerville in 1999, all the screening criteria were met, and the sample was not processed. No prior data were available for the stream.

Buck Brook

Non-impacted water quality was assessed in 1999 for this tributary of North Branch Callicoon Creek. The fauna was diverse and well-balanced with many clean-water mayflies, stoneflies, and caddisflies. All the screening criteria were met, and the sample was not processed. No prior data were available for the stream.

Bush Kill (Sullivan County)

Water quality is assessed as non-impacted for this Neversink River tributary. In macroinvertebrate sampling near Oakland Valley in 1999, all the screening criteria were met, and the sample was not processed. No prior data were available for the stream.

Bush Kill (Delaware County)

Non-impacted water quality was assessed for a site sampled at Arkville in 2000. The fauna was diverse and well-balanced, and dominated by clean-water mayflies and caddisflies.

Cadosia Creek

Cadosia Creek is a tributary of the East Branch Delaware River. Water quality is assessed as non-impacted, based on macroinvertebrate sampling in Cadosia in 1994 and 1999. The 1994 sample was processed, the 1999 sample was field-assessed and not processed.

Calkins Creek

Non-impacted water quality was assessed for this Delaware River tributary, sampled at Milanville, Pennsylvania, in 1999. The fauna was diverse and well-balanced with many clean-water mayflies, stoneflies, and caddisflies. All the screening criteria were met, and the sample was not processed. No prior data were available for the stream.

Callicoon Creek

Water quality of Callicoon Creek at Callicoon has ranged from non-impacted to slightly impacted in the last ten years. The stream has been sampled at the Route 97 bridge and 0.1 mile below at County Route 133. These two locations have been considered as one site, since they are so close to one another and no discharges are known to exist between them. In 1999 and 2000, snails were the most numerous organism, but clean-water taxa such as mayflies, stoneflies, and caddisflies were also abundant. Impact Source Determination denoted siltation as a factor affecting the fauna. Effluents of two sewage treatment facilities enter Callicoon Creek upstream of both sites: Delaware (T) (Callicoon Sewer District) and Jeffersonville (V). The Delaware facility was upgraded in 1991, but it is not known if this is related to the impacts measured in 1993-94.

Non-impacted water quality was assessed for the North Branch of Callicoon Creek, based on macroinvertebrate sampling in 1999. Sites were sampled at North Branch and Hortonville. Both samples passed field screening criteria and were not laboratory-processed.

Non-impacted water quality was also assessed for the East Branch of Callicoon Creek, based on macroinvertebrate sampling in 1999. Sites were sampled at Kohlertown and Hortonville. Both

samples passed field screening criteria and were not laboratory-processed.

Campbell Brook

Campbell Brook is a tributary of the East Branch Delaware River. Water quality is assessed as non-impacted, based on 1999 invertebrate sampling in Corbett. Clean-water mayflies, stoneflies, and caddisflies were numerous.

Clove Brook

Based on 1999 invertebrate sampling in Duttonville, New Jersey, water quality for this Delaware River tributary was assessed as slightly impacted. Filter-feeding caddisflies were dominant, but mayflies, stoneflies, and hellgrammites were present. ISD denoted nonpoint source nutrient enrichment as the likely stressor. No prior data were available for the stream.

Cold Spring Brook

Non-impacted water quality was assessed for this tributary of the West Branch Delaware River in 1999. The fauna was diverse and well-balanced with many clean-water mayflies, stoneflies, and caddisflies. All the screening criteria were met, and the sample was not processed. No prior data were available for the stream. A site on the East Branch of Cold Spring Brook at Hambletville was also assessed as non-impacted in 1999.

Darby Brook

Water quality was assessed as non-impacted in a macroinvertebrate sampling near the mouth in 2000. All metrics were within the range of the non-impacted category. Much of the stream was inundated with willow saplings, and the only open riffle that could be sampled was immediately upstream of the confluence with the Beaver Kill in Roscoe. The fauna included clean-water mayflies, stoneflies, and caddisflies.

Delaware River

Numerous sites have been sampled on the East and West Branches, as well as the mainstem of the Delaware River. Both branches have been surveyed at several locations above and below the reservoir on each branch (Pepacton Reservoir on the East Branch and Cannonsville Reservoir on the West Branch), and at Hancock, New York, immediately above their confluence.

Based on macroinvertebrate communities sampled in 2000, water quality in the West Branch Delaware River is currently assessed as non-impacted water from Stamford to Beerston (Figure 14-1). Assessments based on resident diatom communities differed substantially from macroinvertebrate assessments at most sites, and the combined assessment for these sites would be slightly impacted. Nonpoint nutrient enrichment was indicated as the major source of impact. Overall, the West Branch Delaware River is considered heavily enriched by nutrients, but still supportive of a healthy, productive invertebrate fauna. Prior sampling at Hobart and Beerston in 1999 documented non-impacted water quality, but Impact Source Determination showed highest similarities to communities affected by nonpoint source nutrient enrichment.

Downstream of Cannonsville Reservoir at Stilesville, water quality was assessed as moderately impacted in 1999 macroinvertebrate sampling. The fauna was dominated by tolerant taxa such as black flies, midges, worms, and sowbugs. No mayflies, stoneflies, or caddisflies were

present. Impact Source Determination denoted impoundment effect and possible sewage inputs as the primary factors affecting the fauna. These conditions may represent a modest improvement compared to 1986 findings of severe impact at this site. The cold-water hypolimnion release from Cannonsville Reservoir has been shown to disrupt the life cycles of mayflies, stoneflies, and caddisflies for a short distance downstream of the reservoir

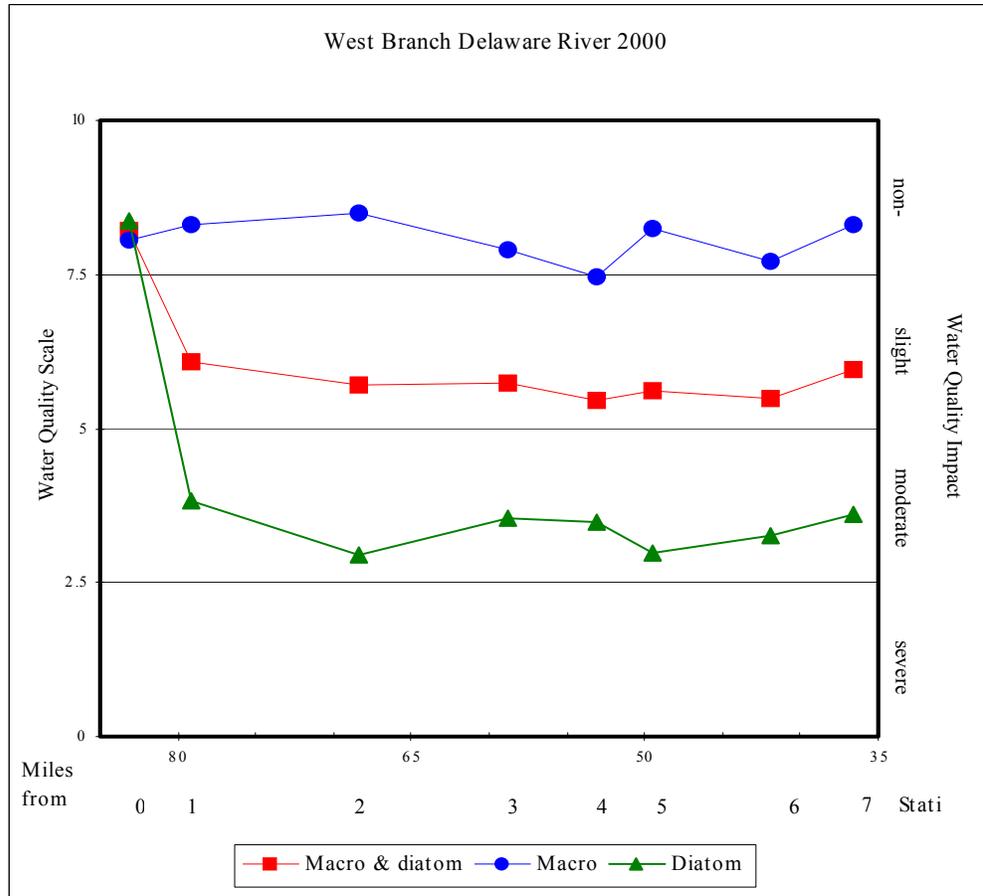


Figure 14-1. Water quality in the West Branch Delaware River, 2000, showing assessments of macroinvertebrates, diatoms, and combined assessments.

Non-impacted water quality was assessed for the West Branch Delaware River at Hancock, based on macroinvertebrate sampling in 1999 and 2000, similar to previous assessments at this site. Impact Source Determination showed highest similarities to natural communities.

Water quality in the East Branch Delaware River ranges from non-impacted to slightly impacted. Non-impacted water quality was assessed for the river at Kelly Corners, Margaretville, and Harvard, based on 1999 invertebrate sampling, and at Arkville in 2000 sampling. Nonpoint source nutrient enrichment was indicated to be a factor at the Kelly Corners site. Slight impact was documented in the East Branch Delaware River at Hancock in 2000. The fauna included tolerant worms and snails, and ISD denoted organic wastes and siltation as possible stressors. This represents an apparent decline, compared to non-impacted conditions documented for this site in 1974, 1981, and 1987, but needs to be confirmed. Sampling in 1993 and 1994 yielded ambiguous results.

In the main stem of the Delaware River, water quality ranges from non-impacted to slightly impacted. Non-impacted water quality was measured at Cocheton in macroinvertebrate samplings in 1993, 1994, and 1999. Water quality was also assessed as non-impacted at Minisink Ford in 1999 invertebrate sampling. This represents an apparent improvement compared to slightly impacted conditions documented in 1981. Effects of nonpoint source nutrient enrichment were also indicated as being present.

Slightly impacted water quality was assessed for the site at Pond Eddy, based on 1999 invertebrate sampling. The results of the Impact Source Determination analysis did not clearly

indicate the cause of impact. Water quality appears similar to that measured in 1981. Slightly impacted water quality was also assessed for the site at Port Jervis, based on macroinvertebrate sampling in 1993, 1999, and 2000, representing an apparent decline compared to the 1988 assessment. A 1994 sample showed non-impacted water quality, although a species of snail dominated the fauna. Impact Source Determination was unclear about the cause of impact; but decomposable wastes may be present. Tolerant snails dominated the fauna of the 1999 sample and facultative midges dominated the 2000 sample, although clean-water mayflies, stoneflies, and caddisflies were also present in both communities.

Downs Brook

Non-impacted water quality is assessed for this tributary of the East Branch Delaware River. A site at Downs ville was sampled for macroinvertebrates in 1999. The sample was field-assessed as passing screening criteria, and was not laboratory-processed. No prior data were available for the stream. Abundant periphyton at this site indicates likely nutrient enrichment.

Dryden Brook

Water quality in Dryden Brook is assessed as non-impacted. A site near Finch Hollow, approximately 0.1 mile above the stream's mouth at Cannonsville Reservoir, was sampled for macroinvertebrates in 1999. The sample was field-assessed as passing screening criteria, and was not laboratory-processed. No prior data were available for the stream.

East Brook

Non-impacted water quality is assessed for this tributary of the West Branch Delaware River. A site at Walton was sampled for macroinvertebrates in 2002. The sample was field-assessed as passing screening criteria, and was not laboratory-processed. No prior data were available for the stream.

Elk Creek

Elk Creek is a tributary of the West Branch Delaware River. Water quality at East Delhi was assessed as slightly impacted, based on 1999 invertebrate sampling. Impact Source Determination denoted that the fauna was most similar to natural communities, with possible nutrient enrichment.

Fall Brook

This tributary of the West Branch Neversink River is assessed as non-impacted, based on macroinvertebrate sampling in 1999. The watershed appeared entirely forested. The sample was field-assessed as passing screening criteria, and was not laboratory-processed. No prior data were available for the stream.

Fall Clove Stream

This small tributary of the Pepacton Reservoir at Fall Clove is assessed as non-impacted, based on macroinvertebrate sampling in 1999. The sample was field-assessed as passing screening criteria, and was not laboratory-processed. No prior data were available for the stream.

Falls Creek

Non-impacted water quality was assessed for this tributary of the West Branch Delaware River, based on 1999 invertebrate sampling near East Delhi. Clean-water mayflies, stoneflies, and

caddisflies were numerous.

Fish Cabin Creek

This small tributary of the Delaware River was assessed as non-impacted in macroinvertebrate sampling at Pond Eddy in 1999. The sample was field-assessed as passing screening criteria, and was not laboratory-processed. No prior data were available for the stream.

Fly Creek

Water quality is assessed as non-impacted for this tributary of Oquaga Creek, sampled at McClure in 1999. The sample was field-assessed as passing screening criteria, and was not laboratory-processed. No prior data were available for the stream.

Fowlwood Brook

Non-impacted water quality is assessed for this tributary of the Neversink River, sampled at Glen Wild in 1999. The sample was field-assessed as passing screening criteria, and was not laboratory-processed. No prior data were available for the stream.

Gold Creek

Gold Creek is a tributary of the lower Neversink River. Water quality is assessed as moderately impacted, based on 1999 invertebrate sampling near Port Jervis. Most species present were facultative or tolerant, and diversity was low. Impact Source Determination denoted complex sources, likely sewage and industrial wastes.

Gumaer Brook

Water quality is assessed as non-impacted for this tributary of the Basher Kill, sampled near Wurtsboro in 1999. The sample was field-assessed as passing screening criteria, and was not laboratory-processed. No prior data were available for the stream.

Halfway Brook

Slightly impacted water quality is assessed for this tributary of the Delaware River, sampled at Barryville in 1999. The sample was field-assessed, and was not laboratory-processed. No prior data were available for the stream. Abundant periphyton was noted at this site, indicating likely elevated nutrient levels.

Hankins Creek

Water quality is assessed as non-impacted for this tributary of the Delaware River, sampled near Hankins in 1999. The sample was field-assessed as passing screening criteria, and was not laboratory-processed. No prior data were available for the stream.

Jaketown Creek

Based on 1999 invertebrate sampling near Kenoza Lake, water quality was assessed as slightly impacted, near the low end of that category. Midges dominated the fauna. The impact may represent impoundment effects from Hunter Lake, less than one mile upstream.

Judson Creek

Moderate impact was assessed for this stream in the hamlet of Kauneoga Lake, based on 1999 invertebrate sampling. Facultative and tolerant midges dominated the fauna, and clean-water

mayflies were absent. Impact Source Determination denoted toxicity as the primary factor affecting the fauna, although the source is unknown.

Kiamesha Creek

Water quality is assessed as non-impacted for Kiamesha Creek, sampled near Thompsonville in 1999. The sample was field-assessed as passing screening criteria, and was not laboratory-processed. No prior data were available for the stream. A sample taken at an upstream site near the golf course was considered invalidated by a pond upstream.

Kinne Brook

Non-impacted water quality is assessed for this tributary of Swinging Bridge Reservoir. A site south of Mongaup Valley was sampled for macroinvertebrates in 1999. The sample was field-assessed as passing screening criteria, and was not laboratory-processed. No prior data were available for the stream.

Lackawaxen River

Water quality is assessed as non-impacted for the Lackawaxen River, sampled in 1999 near Lackawaxen, Pennsylvania, just upstream of its confluence with the Delaware River. The sample was field-assessed as passing screening criteria, and was not laboratory-processed. No prior data were available for the stream.

Lake Brook

Non-impacted water quality was assessed for this tributary of the West Branch Delaware River, based on 1999 macroinvertebrate sampling near Hobart. Clean-water mayflies and caddisflies were numerous. Impact Source Determination did, however denote slight effects of nonpoint source nutrient enrichment. No prior data were available for the stream.

Lily Pond Outlet

Slightly impacted water quality was assessed for this tributary of the Little Beaver Kill in a 1994 macroinvertebrate sampling. The fauna was diverse at this site, but was likely limited by habitat and impoundment effect.

Little Beaver Kill

Water quality in most of the Little Beaver Kill is assessed as non-impacted, based on a 1994 macroinvertebrate survey of 5 sites from Cooley to Livingston Manor. Short reaches of slight impact were indicated at Cooley (impoundment effects) and below Parksville (nutrient enrichment). All sites contained diverse communities of clean-water mayflies, stoneflies, and caddisflies.

Little Delaware River

Water quality was assessed as non-impacted for this stream, sampled at Thompson Cross Road bridge in Delhi in 1993. The fauna was dominated by clean-water mayflies. A site opposite the golf course, just upstream of the confluence with the Delaware River, was also assessed as non-impacted.

Loomis Brook

Non-impacted water quality was assessed for this tributary of Cannonsville Reservoir, based on macroinvertebrate sampling near Loomis in 1998 and 1999. The 1999 sample was field-assessed

as passing screening criteria, and was not laboratory-processed.

Marsh Creek

Water quality is assessed as non-impacted for this tributary of Oquaga Creek, sampled at McClure in 1999. The sample was field-assessed as passing screening criteria, and was not laboratory-processed. No prior data were available for the stream.

Melbern Lake Outlet

Non-impacted water quality was assessed for this tributary of the Little Beaver Kill in a 1994 macroinvertebrate sampling. The fauna was diverse and well-balanced. No prior data were available for the stream.

Mill Brook (Sullivan County)

Water quality is assessed as non-impacted for this tributary of the Delaware River, sampled at Pond Eddy in 1999. The sample was field-assessed as passing screening criteria, and was not laboratory-processed. No prior data were available for the stream.

Mill Brook (Delaware County)

This tributary of the Pepacton Reservoir was assessed as non-impacted in 1999. The watershed appeared entirely forested. The sample was field-assessed as passing screening criteria, and was not laboratory-processed. No prior data were available for the stream.

Mongaup Creek

Water quality is assessed as non-impacted for this tributary of Willowemoc Creek, sampled at Debruce in 1999. The watershed appeared entirely forested. The sample was field-assessed as passing screening criteria, and was not laboratory-processed. No prior data were available for the stream.

Mongaup River

Non-impacted water quality is assessed for the Mongaup River, based on sampling at Mongaup Valley and Mongaup. The Mongaup Valley site was sampled for macroinvertebrates in 1999 and was assessed as non-impacted.. Impact Source Determination showed high similarities to natural communities and to communities affected by nonpoint source nutrient enrichment. Excellent water quality was assessed for the Mongaup River at Mongaup, sampled above the Route 97 bridge in 1993. All metrics were within the range of non-impacted water quality.

Water quality in the West Branch Mongaup River ranges from non-impacted to moderately impacted, based on resident macroinvertebrate communities sampled at 5 sites in 2000. Upstream impact at Swan Lake apparently results from natural effects of the Swan Lake outlet, and possibly from the Liberty (T) Swan Lake wastewater treatment plant discharge. Water quality showed slight impact downstream of the Bethel Landfill, but recovered quickly downstream. The influence of the Bethel Landfill is considered to extend no more than 0.5 miles.

Non-impacted water quality is assessed for the East Branch and Middle Branch of the Mongaup River, based on sampling at Harris and Bushville in 1999. These sites had diverse faunas of clean-water mayflies, stoneflies, and caddisflies. The samples were field-assessed as passing screening criteria, and were not laboratory-processed. No prior data were available for these streams.

Neversink River

The East Branch of the Upper Neversink River is currently assessed as slightly impacted by acidity. Sites at Denning and below Ladleton were sampled in 1999, and a site at Claryville above the confluence with the West Branch was sampled in 1998 and 1999. Macroinvertebrate communities at these sites were characterized by low species richness; in particular, mayfly richness was very low. Diatom indices from the East Branch show moderate acidity effects.

The West Branch of the Upper Neversink River is currently assessed as non-impacted, based on macroinvertebrate sampling conducted near Frost Valley and at Claryville in 1999. This reach was previously assessed as slightly impacted. Further sampling is planned for 2003 to determine if this improvement is a genuine trend.

An invertebrate sample collected in 1999 from the Upper Neversink River at Claryville downstream of the confluence of the East and West branches showed non-impacted water quality. For this sample, the Percent Model Affinity was set aside as an outlier, since high numbers of *Brachycentrus* caddisflies skewed this metric. These caddisflies are clean-water organisms and are occasionally found in abundance in optimal situations. The site was sampled again in 2000, and clearly denoted non-impacted conditions.

Non-impacted water quality is assessed from Woodbourne to Port Jervis in the Lower Neversink River. The Woodbourne was sampled in 1999 and was assessed as non-impacted. Impact Source Determination showed highest similarities to natural communities. This site was previously assessed as slightly impacted in 1993-94, but had been assessed as non-impacted in 1987. Sites at Bridgeville, Oakland Valley, Godeffroy, and Port Jervis were assessed as non-impacted in 1999 sampling. These samples were field-assessed as passing screening criteria, and were not laboratory-processed. The Port Jervis site was sampled again in 2000, and the laboratory-processed sampled confirmed non-impacted water quality. The macroinvertebrate community was very diverse and well-balanced.

Oquaga Creek

Water quality is assessed as non-impacted for Oquaga Creek, based on macroinvertebrate samplings at Sanford and Deposit. Both sites were field-assessed as non-impacted in 1999, and the samples were not processed. The Deposit site was sampled in 1994 and 2000, and these laboratory-processed samples were clearly non-impacted, based on all metrics. Macroinvertebrate communities were dominated by clean-water mayflies.

Pea Brook

Non-impacted water quality is assessed for this Delaware River tributary, based on macroinvertebrate sampling at Long Eddy in 1999. The sample was field-assessed as passing screening criteria, and was not laboratory-processed. No prior data were available for the stream.

Peaks Brook

Water quality was assessed as non-impacted for this small tributary of the West Branch Delaware River, based on macroinvertebrate sampling near Fraser in 1999. The sample was field-assessed as passing screening criteria, and was not laboratory-processed. No prior data were available for the stream.

Pine Kill

This tributary of the Basher Kill is assessed as non-impacted, based on 1999 sampling at Westbrookville. The sample was field-assessed as passing screening criteria, and was not

laboratory-processed. No prior data were available for the stream.

Platner Brook

Water quality was assessed as non-impacted for this small tributary of the West Branch Delaware River, based on macroinvertebrate sampling near Fraser in 1999. The substrate was mostly bedrock, but the sample was taken in pockets of rubble. The sample was field-assessed as passing screening criteria, and was not laboratory-processed. No prior data were available for the stream.

Read Creek

Non-impacted water quality was assessed for this tributary of the East Branch Delaware River in 1999 sampling. The watershed appeared mostly forested. The sample was field-assessed as passing screening criteria, and was not laboratory-processed. No prior data were available for the stream.

Roods Creek

This small tributary of the West Branch Delaware River was assessed as non-impacted in macroinvertebrate sampling east of Hale Eddy in 1999. The sample was field-assessed as passing screening criteria, and was not laboratory-processed. No prior data were available for the stream.

Rose Brook

Non-impacted water quality was assessed for a site near South Kortright, based on 1999 macroinvertebrate sampling. Impact Source Determination showed highest similarities to natural communities, but also indicated possible siltation effects.

Russell Brook

Water quality was assessed as non-impacted for this tributary of the Beaver Kill in macroinvertebrate sampling near Butternut Grove in 1999. The sample was field-assessed as passing screening criteria, and was not laboratory-processed. No prior data were available for the stream.

Sands Creek

Non-impacted water quality is assessed for this tributary of the West Branch Delaware River. A site at Hancock was sampled for macroinvertebrates in 1999. The stream showed some signs of nutrient enrichment and siltation, but the fauna appeared diverse. The sample was field-assessed as passing screening criteria, and was not laboratory-processed. No prior data were available for the stream.

Sheldrake Stream

Non-impacted water quality was assessed for this Neversink River tributary, based on 1999 invertebrate sampling at Thompsonville. Impact Source Determination showed high similarities to natural communities but also to communities affected by nonpoint source nutrient enrichment. Caddisflies and midges were very numerous at this site.

Shingle Kill

Water quality was assessed as non-impacted for this tributary of the Delaware River in macroinvertebrate sampling near Sparrow Bush in 1999. The sample was field-assessed as passing

screening criteria, and was not laboratory-processed. No prior data were available for the stream.

Shohola Creek

Slightly impacted water quality is provisionally assessed for this Pennsylvania tributary of the West Branch Delaware River. A site at Shohola, Pennsylvania, was sampled for macroinvertebrates in 1999. The stream had abundant diatoms, but the fauna appeared diverse. The sample was field-assessed, and was not laboratory-processed. No prior data were available for the stream.

Sprague Brook

Water quality is assessed as non-impacted for this tributary of Willowemoc Creek. A site west of Parkston was sampled for macroinvertebrates in 1999. The stream showed some signs of nutrient enrichment and siltation, but the fauna appeared diverse. The sample was field-assessed as passing screening criteria, and was not laboratory-processed. No prior data were available for the stream.

Spring Brook

Non-impacted water quality was assessed for this small tributary of the Beaver Kill in 1999 sampling north of Rockland. The sample was field-assessed as passing screening criteria, and was not laboratory-processed. No prior data were available for the stream.

Steele Creek

Water quality was assessed as non-impacted for this tributary of the West Branch Delaware River, based on 1999 invertebrate sampling in Delhi. The fauna was dominated by clean-water mayflies, stoneflies, and caddisflies, and Impact Source Determination showed highest similarities to natural communities.

No prior data were available for the stream.

Ten Mile River

This stream arises from two ponds, and flows for about three miles into the Delaware River. Water quality is provisionally assessed as slightly impacted for the stream, based on macroinvertebrate sampling at 3 sites from Lava to Tusten in 1999. The watershed appeared mostly forested, but the fauna may be limited by both impoundment effects and headwater effects. The samples were field-assessed, and were not laboratory-processed. No prior data were available for the stream.

Terry Clove Brook

Non-impacted water quality was assessed for this small tributary of the Pepacton Reservoir in 1999 sampling at Coles Clove. The sample was field-assessed as passing screening criteria, and was not laboratory-processed. No prior data were available for the stream.

Third Brook

Water quality is assessed as non-impacted for this small tributary of the West Branch Delaware River, based on macroinvertebrate sampling at Walton in 1999. The sample was field-assessed as passing screening criteria, and was not laboratory-processed. No prior data were available for the stream.

Town Brook

Non-impacted water quality was assessed for this stream at Hobart, based on macroinvertebrate sampling in 1999. The stream had abundant periphyton growth, indicating nutrient enrichment, but the macroinvertebrate fauna was very diverse, with very high metric levels. No prior data were available for the stream.

Tremper Kill

Water quality is assessed as non-impacted for this tributary of the Pepacton Reservoir, based on macroinvertebrate sampling at Bussey Hollow in 1999. The sample was field-assessed as passing screening criteria, and was not laboratory-processed. No prior data were available for the stream.

Trout Brook

Water quality of this Beaver Kill tributary at Peakville was assessed as non-impacted, based on 1999 invertebrate sampling. Impact Source Determination showed highest similarities to natural communities.

Trout Brook

This tributary of the East Branch Delaware River was assessed as non-impacted in 1999 sampling at Shinhopple. The sample was field-assessed as passing screening criteria, and was not laboratory-processed. No prior data were available for the stream.

Trout Creek

Water quality of Trout Creek was assessed as non-impacted, based on macroinvertebrate sampling in the village of Trout Creek in 1998 and 1999. Impact Source Determination showed highest similarities to natural communities. However, organisms collected from this site in 1998 (stoneflies, hellgrammites, and dragonflies) carried elevated body burdens of dioxins. A site on the East Branch of Trout Creek was also assessed as non-impacted in 1998 sampling. All metrics were within the range of non-impacted water quality.

Vly Creek

Water quality in this stream ranged from non-impacted to moderately impacted, as documented in a 1995 sampling of 5 sites from above Lake Switzerland to Fleischmanns. The principal impact was impoundment effect from Lake Switzerland. Macroinvertebrate communities recovered in approximately 0.4 miles. Elevated chlorine levels were measured immediately downstream of Lake Switzerland in the 1995 study. These were considered to have no substantial impact on the resident biota. Water quality at the most downstream site above the confluence with the Bush Kill was assessed as non-impacted.

West Brook

Non-impacted water quality was assessed for two sites above and below Walton, based on 1999 invertebrate sampling. Impact Source Determination showed highest similarities to natural communities. The fauna was diverse and well-balanced, with many clean-water mayflies, stoneflies, and caddisflies.

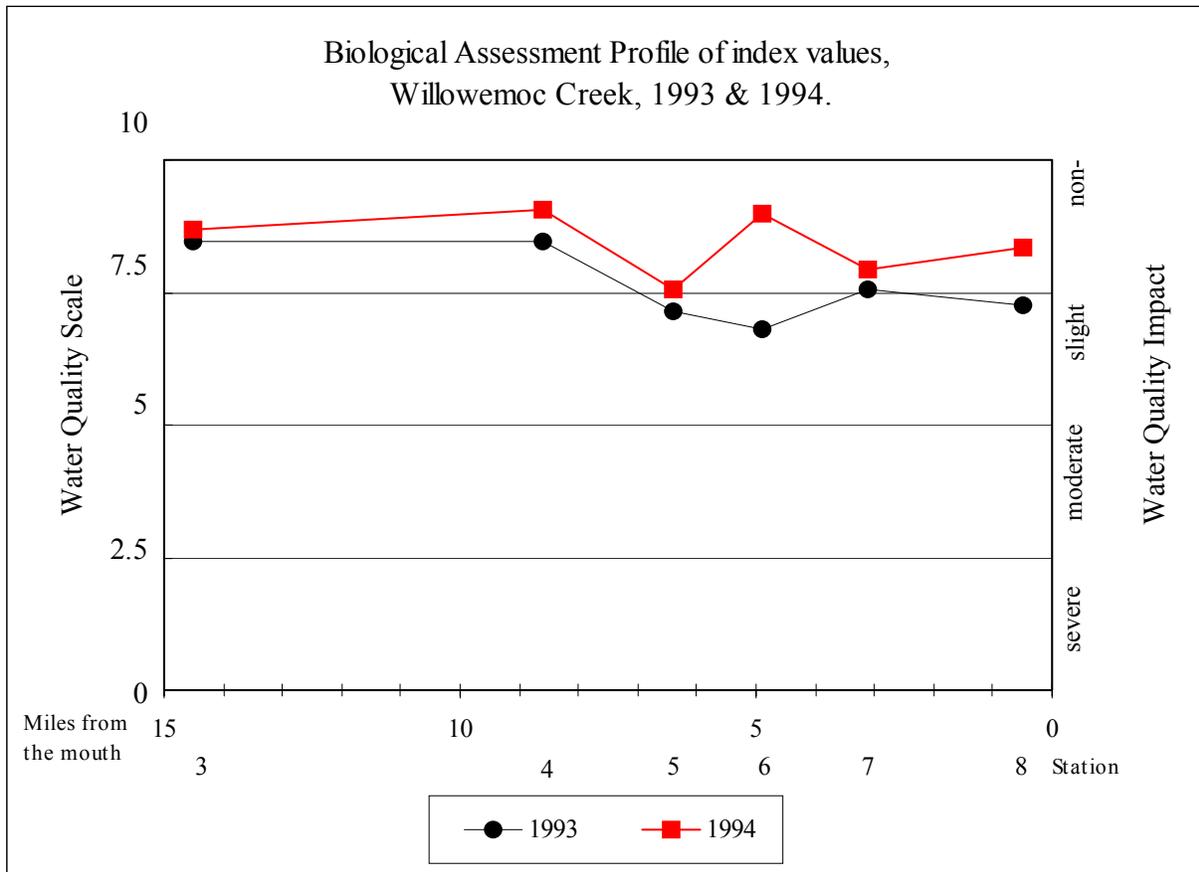


Figure 14-2. Water quality in Willowemoc Creek from Debruce to Roscoe, 1993 and 1994.

White Lake Brook

This stream is a tributary of Swinging Bridge Reservoir. Water quality at Smallwood was assessed as slightly impacted for this site, based on 1999 invertebrate sampling. Caddisflies dominated the sample, apparently reflecting impoundment effects.

Willowemoc Creek

Willowemoc Creek is currently assessed as non-impacted for its entire length, based on macroinvertebrate sampling from Debruce to Roscoe in 1993 and 1994. The 1993 sampling found a reach of slight impact downstream of Livingston Manor (Figure 14-2), apparently attributable to a lapse in treatment at the Rockland (T) Livingston Manor Wastewater Treatment Plant. Sampling below Livingston Manor in 1994 documented a faunal reduction, but indices were within the range of non-impacted conditions. It was postulated that during low-flow years the discharge could result in slight impact, but re-sampling of this site in 1999, a low-flow summer, documented non-impacted conditions.

Wright Brook

Non-impacted water quality was assessed for a site in Bloomville, based on 1999 invertebrate sampling. Impact Source Determination showed highest similarities to natural communities. The fauna was diverse and well-balanced, with many clean-water mayflies, stoneflies, and caddisflies.

Wynkoop Brook

This tributary of the Neversink River was assessed as non-impacted in 1999 sampling at Hasbrouk. The sample was field-assessed as passing screening criteria, and was not laboratory-processed. No prior data were available for the stream.

Unnamed West Branch Delaware River tributary (Shaw Road)

This small stream was sampled annually for macroinvertebrates from 1996 to 2000, serving as a control site in an ongoing nonpoint source study. Water quality was non-impacted from 1996 to 1998, but was slightly impacted in 1999 and 2000, for unknown reasons. Further sampling is planned for the site in 2003.

Unnamed Wright Brook tributary , Bloomville

This small stream, located directly downstream of the Robertson Farm, was sampled annually for macroinvertebrates from 1996 to 2000 as part of an ongoing nonpoint source study . Replicated sampling showed moderate impacts from farm runoff in 1996. As best management practices were implemented, water quality improved linearly to 1999, when it was assessed as slightly impacted. Many clean-water species of mayflies and stoneflies appeared in the stream over this time period. Sampling in 2000 documented a return to moderate impact, apparently responding to a new source of cattle wastes. Continued sampling at this site is planned to further monitor improved water quality.