Rotating Integrated Basin Studies
Water Quality Assessment Program
New York Statewide Waters Monitoring Program

Mohawk River Drainage Basin

Sampling years 2005 - 2006

New York State
Department of Environmental Conservation
Division of Water
Bureau of Water Assessment and Management

Report Prepared by the Statewide Waters Monitoring Section

2010

Acknowledgments

The success of the Rotating Integrated Basin Studies (RIBS) sampling program is attributed to the hard work and dedication of many New York State Department of Environmental Conservation staff in both the Central and Regional offices. Their cooperation and professionalism have been instrumental in all aspects of the program from the physical sampling to the preparation of this report.

Table of Contents

Page

Rotating Integrated Basin Studies 1

Assessment Criteria 5

Mohawk River Drainage Basin 11

Mohawk River Basin Sampling Sites 2005-2006 13

Mohawk River Basin Unassessed Screening Sites - 2005 16

Mohawk River Watershed Map 17

Schoharie Creek Watershed Map 17

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The Rotating Integrated Basin Studies Sampling Program

In 2005 and 2006, rivers and streams of the Mohawk River drainage basin were sampled as part of the Rotating Integrated Basin Studies (RIBS) portion of the Statewide Waters Monitoring Program. The results of this water quality monitoring effort are contained in this report. The objectives of the RIBS program are to assess the water quality of the rivers of the state by means of a comprehensive and integrated multi-media sampling program; analyze long-term water quality trends; characterize naturally occurring or background conditions; and establish baseline conditions for measuring the effectiveness of site-specific restoration and protection activities.

The RIBS sampling program uses a rotating strategy in which all major drainage basins in the state are monitored once during a five year period. Quantitative concentrations of chemical and physical constituents in the water column, sediment, and biological tissue are compared to assessment criteria to determine if designated uses of a waterbody are supported by its water quality. Water column sampling provides a snapshot of conditions at the time of sample collection, while sediment and tissue results provide a view of conditions over a longer period of time. The viability of aquatic communities and of an ecosystem's overall health is determined by assessing the composition of resident benthic macroinvertebrate communities and by laboratory bioassays to identify toxicity in target waters.

In order to address the various monitoring objectives and the rotating cycle, the program is designed around three (3) separate but interdependent monitoring schemes:

The Screening Network provides a narrative assessment of water quality at a large number of sampling sites with minimal resource (staff and analytical) expense. Biological (macroinvertebrate) sampling provides assessments of a large number of representative and varied sites within targeted basins.

The Intensive Monitoring Network employs more frequent, comprehensive and integrated multi-media sampling (water chemistry, bottom sediment chemistry, toxicity testing, macroinvertebrates, fish, and habitat assessments) to provide more detailed water quality data and information for a smaller number of waterbodies in a selected drainage basin.

The Routine Trend Monitoring Network provides long-term trends and basic water quality characteristics, and establishes baseline conditions by continuous (annual) sampling of water quality and conditions at fixed sites across the State.

RIBS program water quality data and information are used to support many monitoring and assessment functions in NYSDEC Division of Water (DOW). Specifically, RIBS information and data are used in the compilation of the Waterbody Inventory/Priority Waterbody List (WI/PWL), New York State's Clean Water Act Section 305(b) Water Quality Report, and Section 303(d) List of Impaired Waters of the state.

Development and implementation of the water quality management component of the RIBS program completes a continuous five-year cycle of water quality monitoring, assessment, and management. Activities of the five-year cycle are outlined below.

Five-year Cycle of Water Quality Monitoring, Assessment and Management				
Year 1	Year 2	Year 3	Year 4	Year 5 +
Monitoring Activities		**Assessment Activities**	**Management Activities**	
W.Q. Issue Identification & Screening	Intensive Monitoring and Data Collection	Review and Update of the Waterbody Inventory and Priority Waterbodies List	Strategy Development	Strategy Implementation

Descriptions of the strategies and methodologies for the RIBS Sampling Program can be found in the Section 305(b) and 303(d) Consolidated Assessment and Listing Methodology (CALM), contained in each 305(b) report prepared for EPA every two years.

Specific sample collection procedures vary for the three networks and for the specific type of sampling being conducted. The details of the sampling strategies and methodologies for the three networks comprising the RIBS program are outlined in the following publicly available documents:

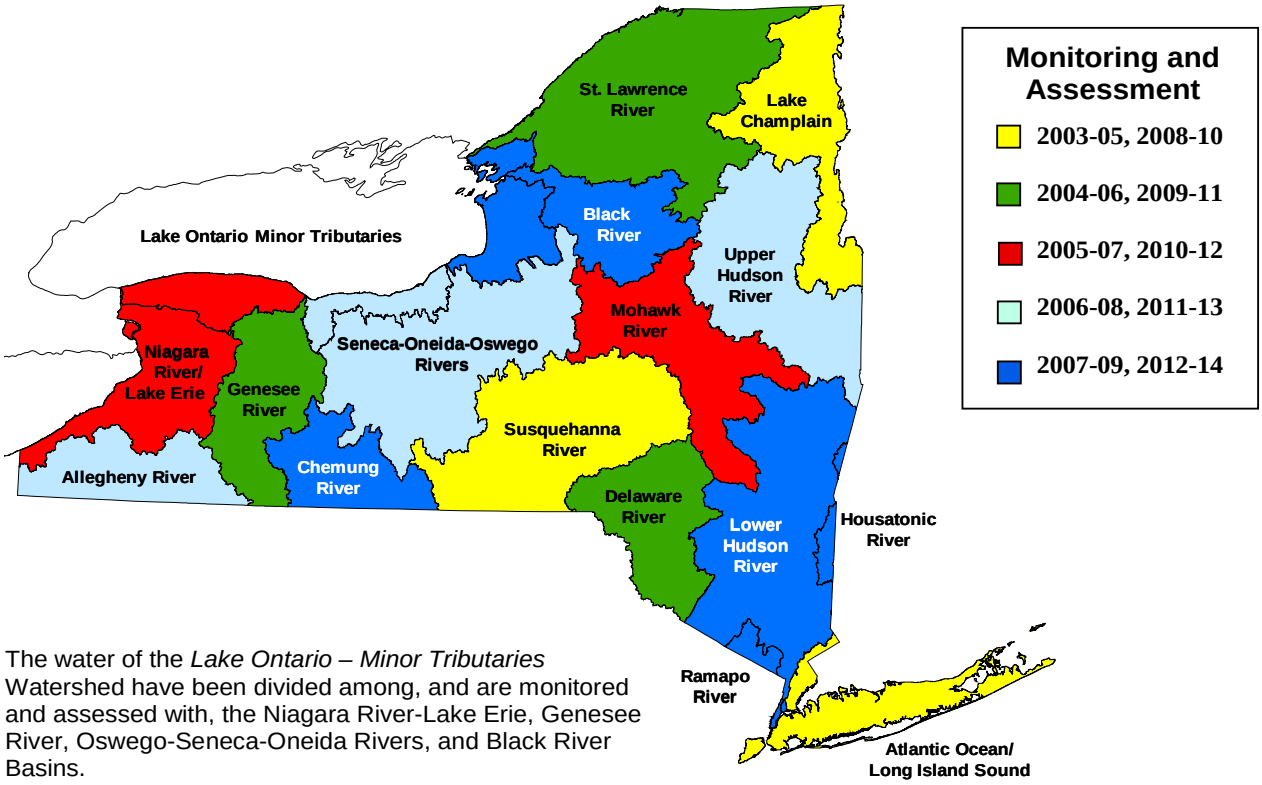
New York State Department of Environmental Conservation, Division of Water, Bureau of Water Assessment and Management:

- Quality Assurance Plan for Rotating Integrated Basin Studies Monitoring Program
- Quality Assurance Work Plan for Biological Stream Monitoring in New York State

Specific sampling techniques can be found in the following Standard Operating Procedures (SOPs):

- NYSDEC - DOW - SOP 201-05 Collection of Ambient Water Quality Samples
- NYSDEC- DOW- SOP 101-04 Sample Handling, Transport and Chain Of Custody
- DOW-SOP 207-04 Collection of Sediment Samples
- DOW- SOP Microtox WET Test for Porewater, Sediments and Effluents DOW-SOP *Ceriodaphnia dubia* SevenDay Chronic Screening Test for Toxicity of Ambient Water Samples.

Rotating Integrated Basin Studies
Drainage Basin Map



The water of the *Lake Ontario – Minor Tributaries* Watershed have been divided among, and are monitored and assessed with, the Niagara River-Lake Erie, Genesee River, Oswego-Seneca-Oneida Rivers, and Black River Basins.

The Ramapo River and *Housatonic River Basin* waters are included in the Lower Hudson River Report.

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Assessment Criteria

The Rotating Integrated Basin Studies (RIBS) Sampling Program applies parameter-specific criteria and surrogate water quality indicators in its assessment methodology. Assessment criteria for each of the media, i.e., water chemistry, tissue, and sediment, are based upon evaluation and comparison of statewide sampling data, analytical minimum reporting levels, parameter characteristics, and consensus of potential environmental impact. RIBS assessment criteria were developed to evaluate the ability of the state's waters to support designated uses. Therefore, exceeding a RIBS assessment criterion does not necessarily represent a water quality standards violation, but indicates a location that should be investigated for sources of the parameter of concern and as such is protective of the waterbody's designated uses .

For **water column chemistry**, parameters that exceed assessment criteria are identified. Maximum and median values for the parameter, the ratio of the median value to the assessment criterion, and the frequency of exceedance are reported.

Consensus-based sediment quality guidelines (SQG) for freshwater ecosystems, developed by MacDonald *et al* (2000), are used to assess **bottom sediment** quality of RIBS intensive monitoring network sites. The two SQGs for each contaminant are: the threshold effect concentration (TEC), below which adverse effects on sediment-dwelling organisms are not expected to occur, and the probable effect concentration (PEC), above which adverse effects to sediment-dwelling organisms are expected to occur more often than not. Since it has been determined that the use of mean SQG quotients improves the ability of SQGs to predict effects in the laboratory and the field compared to evaluations based on exceeding a single SQG alone, mean PEC quotients (PEC-Q) are used to determine whether the sediment at RIBS intensive monitoring network sites is likely to cause chronic toxicity in sediment-dwelling organisms. A PEC-Q less than 0.12 indicates a low likelihood of toxicity; between 0.12 and 0.63 is of concern; 0.63 to 1.5 suggests that toxicity is more likely than not, and a PEC-Q greater than 1.5 indicates a high likelihood of toxicity.

Assessment of overall stream water quality based on macroinvertebrate community metrics uses a four-tiered system of classification, ranging from non- to severely impacted. Level of impact is assessed for each individual metric, and then combined for all metrics to form the Biological Assessment Profile (BAP), representing an overall assessment. Individual metrics used in the assessment of water quality and in forming the BAP score differ based on sampling method, river type and dominant habitat. The full set of possible metrics includes: species richness, EPT richness, biotic index, percent model affinity, species diversity, percent of dominant three taxa, and non-chironomid and oligochaete richness. A breakdown of the combination of metrics used in formulating the BAP scores for various river/habitat types is as follows:

- *Kick samples from wadeable stream riffle habitats*: species richness, biotic index, EPT richness, and percent model affinity.
- *Multiplate samples from navigable and/or non-navigable rivers*: species richness, biotic index, EPT richness, and species diversity.
- *Ponar samples from soft bottom river*s: species richness, species diversity, biotic index, dominant three taxa, and percent model affinity.
- *Net jab samples from low gradient, sand bottom wadeable stream*s: species richness, biotic index, EPT richness, and non-chironomid and oligochaete richness.

Values from these metrics are converted to a common 0-10 scale and the mean value of these determines

the overall assessment.

The assessment of stream and river trophic state as well as the degree of eutrophication is determined based on the Nutrient Biotic Index Scores for both total phosphorus (NBI-P) and nitrate (NBI-N) (Smith et al., 2007). The NBIs are a diagnostic measure of stream nutrient enrichment identified by macroinvertebrate taxa. Nutrient tolerance values assigned to individual taxa are used in a weighted average to reduce macroinvertebrate community data to a linear scale of eutrophication from oligotrophic to eutrophic.

Impact Source Determination (ISD) is used to identify types of impacts in streams based on macroinvertebrate communities. ISD uses community models to ascertain the primary factor influencing the fauna. Sixty-one model communities are currently used, grouped into the following general categories: nonpoint nutrient additions, toxics, sewage effluent or animal wastes, municipal/industrial, siltation, impoundment, and natural. The model that exhibits the highest similarity to the test data denotes the likely impact source type, or may indicate "natural", lacking an impact.

Levels of concern (LOC) for substances in invertebrate tissues have been developed for metals, polycyclic aromatic hydrocarbons (PAH), polychlorinated biphenyls (PCB), and some pesticides. LOCs were determined by examining frequency distributions of contaminant concentrations in tissues compiled from samples collected statewide, representing a wide range of water quality. Provisional LOCs are initially set at the level of the mean plus 2.57 standard deviations from the mean, representing the 99th percentile. LOCs are compared to assessed impacts to determine correlations with adverse effects. LOCs are reviewed approximately every 5 years for possible adjustment as new data are obtained."

Toxicity testing measures the chronic toxicity of ambient water to *Ceriodaphnia dubia* by determining if survival and reproductive rates of the test organisms differ from a control group of organisms. Data analyses for comparisons of reproductive rates employ analysis of variance tests (ANOVA) followed by Dunnett’s test when indicated, to determine which sites have reproductive rates that are statistically significantly different from the control (p=0.05). Differences in survival from the control are determined by use of Fisher's Exact Test (p=0.05).

The **Microtox® rapid bioassay** is used to screen ambient sediment and porewater samples for acute toxicity using the naturally occurring bioluminescent marine bacteria *Vibrio fischeri*. This species produces light as a natural by-product of its cellular respiration, and is sensitive to a broad range of chemicals. Any inhibition of cellular activity and corresponding decrease in luminescence is used as a direct measure of toxicity, and indicated as an EC50 (the effective concentration of sample expressed as a percent volume that inhibits fluorescence to 50% of the exposed test organisms under specified test conditions). For sediments, EC50s are ranked and used to make individual site assessments using a four-tiered system of classification, ranging from non-toxic to severely toxic. Porewaters are handled similarly, except only a two-tiered system of classification is applied, including toxic or non-toxic.

More details on assessment criteria and their application in the RIBS program are contained in the Quality Assurance Program Plans and Standard Operating Procedures for each of the sampling media. These documents are available from NYSDEC on request.

Table1. Freshwater Sediment Quality Guidelines Used for Assessing Contaminant Levels

CHEMICAL	TEC*	PEC*	Units

Metals			
Arsenic, Total**	9.79	33	ppm
Cadmium, Total**	0.99	4.98	ppm
Chromium, Total**	43.4	111	ppm
Copper , Total**	31.6	149	ppm
Lead, Total**	35.8	128	ppm
Mercury, Total	0.18	1.06	ppm
Nickel, Total**	22.7	48.6	ppm
Zinc, Total**	121	459	ppm
Polycyclic Aromatic Hydrocarbons			
Anthracene	57.2	845	ppb
Benz(a)anthracene**	108	1050	ppb
Benzo(a)pyrene (3,4-Benzpyrene)**	150	1450	ppb
Chrysene (= 1,2-Benzphenanthrene)**	166	1290	ppb
Dibenz(a,h)anthracene	33		ppb
Fluoranthene (=1,2-Benzacenapthene)	423	2230	ppb
Fluorene (= 2,3-Benzindene)	77.4	536	ppb
Napthalene**	176	561	ppb
Phenanthrene**	204	1170	ppb
Pyrene (= Benzo[d,e,f]phenanthrene)**	195	1520	ppb
PAH, Total**	1610	22800	ppb
Organochlorine Pesticides			
Chlordane	3.24	17.6	ppb
Dieldrin	1.9	61.8	ppb
DDD, Sum	4.88	28	ppb
DDE, Sum**	3.16	31.3	ppb
DDT, Sum	4.16	62.9	ppb
DDT, Total	5.28	572	ppb
Endrin	2.22	207	ppb
Heptachlor epoxide	2.47	16	ppb
Lindane (= gamma-BHC)	2.37	4.99	ppb
Polychlorinated Biphenyls			
PCB, Total**	59.8	676	ppb

* Values used are taken from sediment quality guidelines (SQG) developed by MacDonald, *et al*. (MacDonald, DD; Ingersoll, CG; Berger, TA. 2000. Development and Evaluation of Consensus-Based Sediment Quality Guidelines for Freshwater Ecosystems. Archives of Environmental Contamination and Toxicology, 39:20-31) The two SQGs for each contaminant for which guidelines have been developed are: the threshold effect concentration (TEC), below which adverse effects on sediment-dwelling organisms are not expected to occur, and the probable effect concentration (PEC), above which adverse effects are expected to occur more often than not. For RIBS evaluations, levels falling between the TEC and PEC are considered to be of concern.
** Indicates chemicals with most reliable PECs.

TABLE 2. Levels of Concern for Contaminants in Tissues of Selected Macroinvertebrates

	A. Levels of Concern for Metals in Invertebrates Concentrations in µg/g (ppm) Dry Weight				
	Crayfish	Caddisflies	Hellgrammites and Odonata	Stoneflies	Mollusks
Arsenic	3	4	4	4	7
Cadmium	2	5	2	2	2
Chromium	4	20	4	4	20
Copper	200	45	45	45	45
Lead	4	10	4	4	7
Mercury	0.3	0.3	0.3	0.3	0.3
Nickel	2	10	6	6	10
Selenium	4	5	5	5	4
Titanium	10	40	30	30	30
Zinc	100	200	150	400	200

	B. Levels of Concern for PAHs in Invertebrates Concentrations in µg/kg (ppb) Dry Weight			
	Crayfish	Caddisflies	Hellgrammites Stoneflies, and Odonata	Mollusks
Chrysene	400	500	800	100
Fluoranthene	150	500	200	100
Phenanthrene	200	500	300	100
Pyrene	400	1000	600	100
Benzo [A] Anthracene	400	1000	600	100

TABLE 2 (continued). Levels of Concern for Contaminants in Tissues of Selected Macroinvertebrates

	C. Levels of Concern for PCBs in Invertebrates Concentrations in mg/kg (ppm) Dry Weight				
	Crayfish	Caddisflies	Hellgrammites	Stoneflies	Mollusks
Total PCBs	0.5	1.0	0.5	1.0	0.5

	D. Levels of Concern for Selected Pesticides in Invertebrates Concentrations in ng/g (ppb) Dry Weight			
	Crayfish	Caddisflies	Hellgrammites	Mollusks
DDT (4,4')	10	5	5	10
DDD (4,4')	5	5	5	10
DDE (4,4')	50	75	75	75

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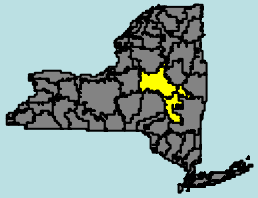
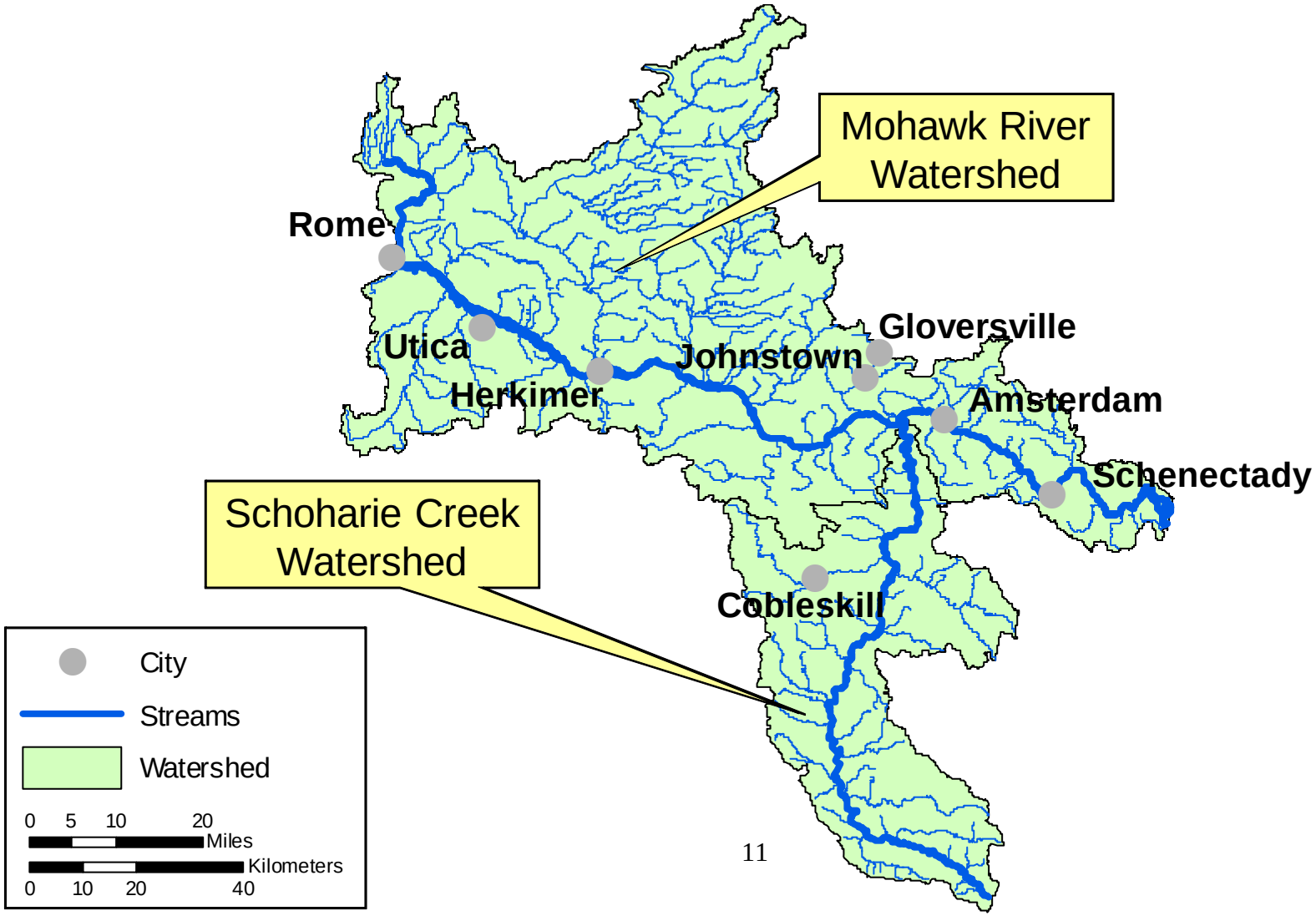
Mohawk River Drainage Basin





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Mohawk River Basin Sampling Sites
2005 - 2006

Water Index Number	Stream/Location	Site Type
	Mohawk River Watershed	
H - 240	Mohawk River - Cohoes	**Routine**
H - 240	Mohawk River - Fort Plain	**Intensive**
H - 240	Mohawk River - North Western	**Intensive**
H - 240	Mohawk River - Rome	Screening
H - 240	Mohawk River - Utica	**Intensive**
H - 240	Mohawk River - West Schuyler	**Routine**
H - 240	Mohawk River - Little Falls	Screening
H - 240	Mohawk River - Fonda	Screening
H - 240 - 11	Shakers Creek - Colonie	Screening
H - 240 - 13	Lisha Kill - Niskayuna	Screening
H - 240 - 29	Plotter Kill - Lower Rotterdam Junction	Screening
H - 240 - 45	Sandsea Kill - Pattersonville	Screening
H - 240 - 61	Cranes Hollow Creek - Cranesville	Screening
H - 240 - 63	Terwilliger Creek - South Amsterdam	Screening
H - 240 - 69	North Chuctanunda Creek - Amsterdam	**Intensive**
H - 240 - 69	North Chuctanunda Creek - Galway	Screening
H - 240 - 69 - 1	Bunn Creek - Amsterdam	Screening
H - 240 - 69 - 8	Healy Kill - Perth	Screening
H - 240 - 70	South Chuctanunda Cr. - South Amsterdam	**Intensive**
H - 240 - 76	McQueen Creek - Fort. Johnson	Screening
H - 240 - 89	Cayadutta Creek - Sammonsville	Screening
H - 240 - 89 - 10	Hall Creek - Johnstown	Screening
H - 240 - 89 - 10 - 1	Mathew Creek - Johnstown	Screening
H - 240 - 98	Knauderack Creek - Above Sprakers	Screening
H - 240 - P1059..267	Stringer Brook - North Western	Screening
H - 240 - 112	Canajoharie Creek - Canajoharie	Screening
H - 240 - 119	Otsquago Creek - East of Starkville	**Intensive**
H - 240 - 127	Caroga Creek - Ephratah	Screening
H - 240 - 127	Caroga Creek - Palatine	**Intensive**
H - 240 - 127 - 13	North Creek - Lassellsville	Screening
H - 240 - 127 - 15	Sprite Creek - Ephratah	Screening
H - 240 - 127 - 15	Sprite Creek - Ephratah	Screening
H - 240 - 14	Stony Creek - Vischer Ferry	Screening
H - 240 - 144	East Canada Creek - East Creek	Screening

Mohawk River Basin Sampling Sites
2005 - 2006(continued)

Water Index Number	Stream/Location	Site Type
H - 240 - 144 - 11 - 1	Little Sprite Creek - Oppenheim	Screening
H - 240 - 144 - 13	Middle Sprite Creek - Oppenheim	**Intensive**
H - 240 - 144 - 133	Sprite Creek - Oppenheim	Screening
H - 240 - 144 - 21	Ayers Creek - Straford	Screening
H - 240 - 144 - 28	North Creek - Knappville	Screening
H - 240 - 144 - 44	West Branch East Canada Creek - Arietta	Screening
H - 240 - 144 - 5	Ransom Creek - South of Dolgeville	Screening
H - 240 - 144 - 9	Spruce Creek - Salisbury Center	**Intensive**
H - 240 - 144 - 9 - 5	Beaver Creek - East of Fairfield	Screening
H - 240 - 148	Nowadaga Creek - Newville	Screening
H - 240 - 172	Beaver Brook - Little Falls	Screening
H - 240 - 180 - 31 - 5	Factory/Big Bills Brook - Norway	Screening
H - 240 - 180 - 32	Shed Brook - South of Newport	Screening
H - 240 - 180 - 59	Cincinnati Creek - Mapledale	**Intensive**
H - 240 - 180 - 59	Steuben Creek - Above Barneveld	Screening
H - 240 - 180 - 74	S. Br. W. Canada Creek - E. of Morehouseville	Screening
H - 240 - 180 - 84	Honnedaga Brook - Morehouse	Screening
H - 240 - 180 - P799 - 5	Kreskern Brook - Northwood	Screening
H - 240 - 180 - P799-19-10	Mounts Creek - Above Gray	Screening
H - 240 - 180 - P799-19-11	Mill Creek - Above Gray	Screening
H - 240 - 180 - P799-19-11	North Branch Mill Ck - Above Gray	Screening
H - 240 - 185	Fulmer Creek - Mohawk	**Intensive**
H - 240 - 187	Steele Creek - Ilion	Screening
H - 240 - 190	Moyer Creek - Frankfort	Screening
H - 240 - 195	Bonny Brook - Frankfort	Screening
H - 240 - 197	Sterling Creek - East Schuyler	Screening
H - 240 - 201	Wood Creek - Schuyler	Screening
H - 240 - 202	Ferguson Creek - West Frankfort	Screening
H - 240 - 207	Starch Factory Creek - Utica	Screening
H - 240 - 211	Ballou Creek - Utica	Screening
H - 240 - 212	Reall Creek - Deerfield	Screening
H - 240 - 214	Nail Creek - Utica	Screening
H - 240 - 219	Sauquoit Creek - Whitesboro	**Intensive**
H - 240 - 223	Oriskany Creek - Kirkland	Screening
H - 240 - 223	Oriskany Creek - Oriskany	**Intensive**
H - 240 - 223 - 24	White Creek - Franklin Springs	Screening
H - 240 - 223 - 34	Big Creek - Deansboro	Screening
H - 240 - 227	Ninemile Creek - Marcy	Screening

Mohawk River Basin Sampling Sites
2005 – 2006(continued)

Water Index Number	Stream/Location	Site Type
H - 240 - 227 - 21 - 1	Beaver Creek - Holland Patent	Screening
H - 240 - 231	Sixmile Creek - Rome	Screening
H - 240 - 231 - 3	Slate Creek - Rome	Screening
H - 240 - 234	Threemile Creek - Rome	Screening
H - 240 - 240	Wheelers Creek - South of Rome	Screening
H - 240 - 244	Hurlburt Glen Brook - Canterbury Hill	Screening
H - 240 - 248	Potash Creek - Stokes Corner	Screening
H - 240 - 288	East Branch Mohawk River - Ava	Screening

Schoharie Creek Watershed

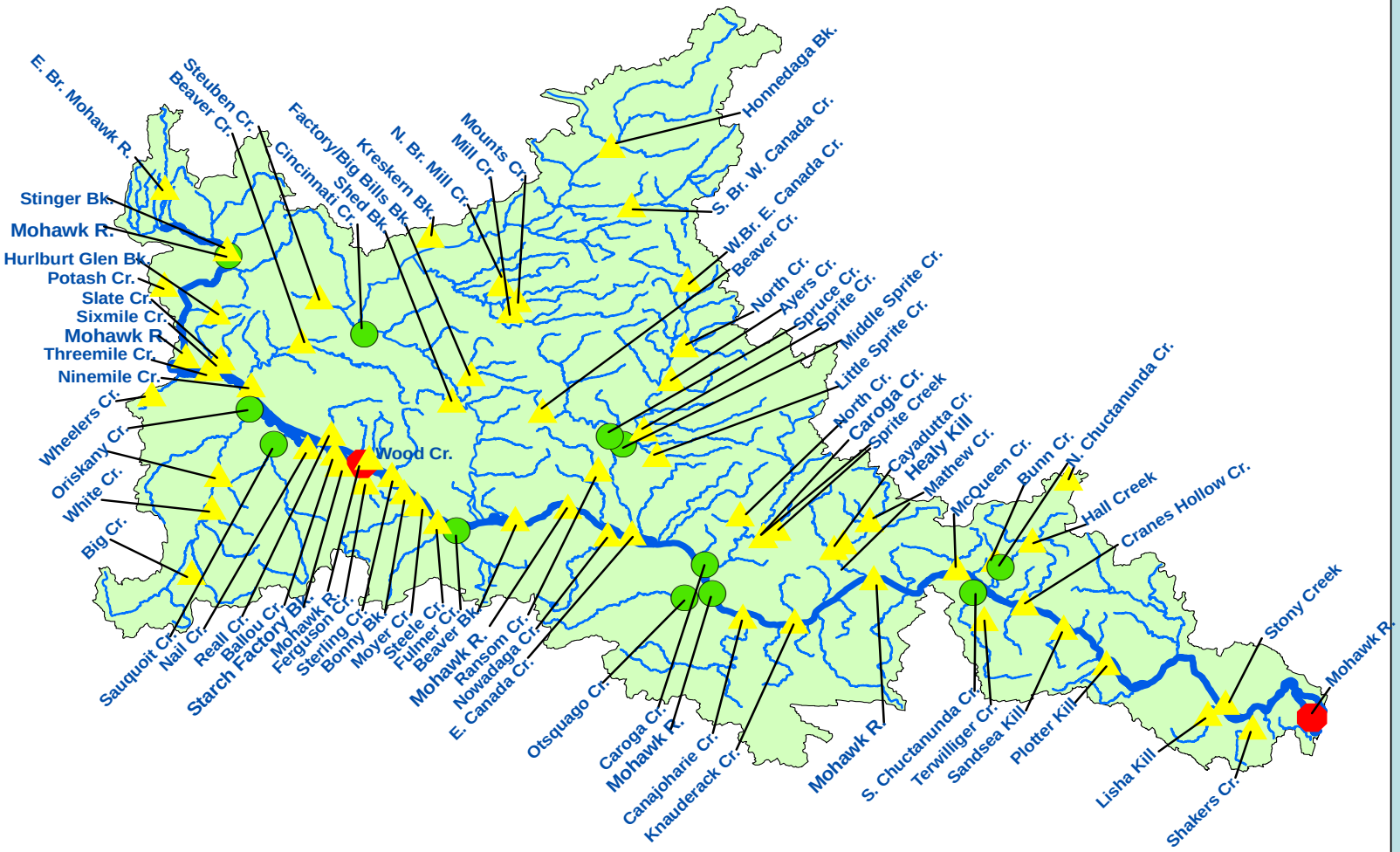
H - 240 - 82	Schoharie Creek - Burtonsville	Screening
H - 240 - 82	Schoharie Creek - Fort Hunter	**Intensive**
H - 240 - 82	Schoharie Creek - Jewett	**Intensive**
H - 240 - 82 - P638a-113	Bear Kill - Below Brand Gorge	Screening
H - 240 - 82 - 33	Wilsey Creek - Above Burtonsville	Screening
H - 240 - 82 - 63	Cobleskill Creek - Central Bridge	Screening
H - 240 - 82 - 63 - 10	Panther Creek - Cobleskill	Screening
H - 240 - 82 - 63 - 13	West Creek - Seward	Screening
H - 240 - 82 - 67	Fox Creek - West Berne	Screening
H - 240 - 82 - 67 - 26	Beaverdam Creek - Berne	Screening
H - 240 - 82 - 89	Little Schoharie Creek - Middleburg	**Intensive**
H - 240 - 82 - 104	West Kill - North Blenheim	Screening
H - 240 - 82 - 104 - 1	Mill Creek - North Blenheim	Screening
H - 240 - 82 - 108	Platter Kill - Bilboa	Screening
H - 240 - 82 - 116	Huntersfield Creek - Prattsville	Screening
H - 240 - 82 - 117	Batavia Kill - Below Windham	Screening
H - 240 - 82 - 123	Little West Kill - Above Mosquito Point	Screening
H - 240 - 82 - 133	East Kill - Jewett Center	**Intensive**
H - 240 - 82 - 141	Shanty Hollow Brook - Hunter	Screening
H - 240 - 82 - 145	Stony Grove Creek - Below Hunter	Screening
H - 240 - 82 - 147b	Gooseberry Creek - Below Tannersville	Screening

Mohawk River Basin Unassessed Screening Sites - 2005

Water Index Number	Stream/ Location	Reason
	Mohawk River Watershed	
H-240-38	Washout Creek - West of Rectors	No Sample possible
H-240-93	Van Wie Creek - Stone Ridge	Dry
H-240-112-24	Salt Spring Brook - Below Salt Springville	Reason not recorded
H- 240-119-5	Otstungo Creek - Brookman Corners	Dry
H-240-180-20	Stony Creek - Fairfield	Dry
H-240-180-87	Indian River - Morehouse	Private property
H- 240-180-P799-5	Lower Dry Creek - Northwood	No Sample
H-240-180-P799-19	Black Creek - Below Bull Hill	No available access
H-240-194	Bridenbecker Creek - Johnson Corners	Dry
H-240-198	Burch Creek - Schuyler	No Sample possible
H-240-199	Knapp Brook - Schuyler	No Sample possible
H- 240-219-4	Mud Creek - Whitesboro	Construction
	Schoharie Creek Watershed	
H-240-82-58	Cripplebush Creek - Becker Corners	Dry
H-240-82-87	Line Creek - West Middleburgh	Not enough water

These sites were visited by sampling staff but were not sampled because flow, substrate, or accessibility conditions did not meet the required protocols for biological (macroinvertebrate) screening.

Mohawk River Watershed



Mohawk River Basin

HUC:02020004

Streams

Watershed

Sampling Sites

Routine

Intensive

Screening

N

0 4 8 16 Miles

0 5 10 20 Kilometers

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Routine Site Monitoring Summary | Mohawk River Watershed

Station ID: 12010001

Mohawk River in Cohoes
at State Route 32

LOCATION DATA

Latitude:	42° 46' 42"	Topo Map Name:	Troy North
Longitude:	73° 41' 48"	SBU ID:	MOHK 29A
County:	Albany	PWL Segment:	1201-0042

HYDROLOGIC BASIN DATA

Water Index Number:	(H-) 240	Station Period of Record:	1987 – present
Stream Classification:	C		

SAMPLING LOCATION

ASSESSMENT SUMMARY

The Mohawk River in Cohoes, Albany County, was sampled at the State Route 32 bridge. This location is approximately 1.5 miles above the river's confluence with the Hudson River. The site was chosen to monitor the total discharge of the river into the Hudson River. The surrounding land is urban residential with businesses serving the immediate community. There is also a small commercial/industrial area nearby. Upstream trees line the streambanks. This sampling site is just above a power dam. This segment of stream is designated Class C, with fishing and other secondary recreation as best designated uses. The stream at this point is approximately 40-50 meters wide and 2-5 meters deep, depending on the season. The current is moderate to slow and uniform across the stream bed. Both streambanks are moderately stable, with only small areas of erosion. There is a high rocky ridge along the north bank just upstream of the bridge. Upstream along the south shore, the bank slopes gradually to the water, but in most places, the banks are steep. The banks are well vegetated with grass, shrubs, and trees; the trees create canopy along the shore. The riparian zone is narrow due to the urban setting, but widens upstream of the sampling location. This sampling location is in Mohawk River Basin Waterbody Inventory segment #1201-0085, in which aquatic life and recreational uses are considered stressed by silt and sediment loads, elevated nutrient concentrations, and pathogens from urban runoff and municipal CSOs. This location is part of the Routine Sampling Network and has been sampled since 1964.

Water Column Chemistry

The parameters of concern in the water column are iron, mercury, and phenol.

Macroinvertebrates

Based on the macroinvertebrate community results from 3 collections of artificial substrate samplers suspended in the river at this site for 5 weeks, water quality is assessed as slightly impacted. Biological (macroinvertebrate) sampling using multiple plate artificial substrate samplers indicated an average assessment of non-impacted water quality conditions.

Sediments

The PEC-Q for this site is 0.52, indicating that the sediment quality, while not likely to cause chronic toxicity to sediment-dwelling organisms, is of concern. Several PAHs are at levels exceeding the PEC. Copper, lead, and zinc exceed the TEC. DDD, DDE, DDT, dieldrin, heptachlor epoxide and PCB Aroclor 1254 levels fall between the Method Reporting Limit (MRL) and Method Detection Limit (MDL) and are, therefore, considered to be estimated; these estimated concentrations are at levels exceeding the TEC. Detection limits exceed the PEC for alpha-chlordane and lindane and the TEC for endrin and all Aroclors but 1254. Since these chemicals were not detected, their effect on sediment quality cannot be assessed.

Toxicity Testing

Chronic toxicity testing using water from this location detected no significant reproductive or mortality effects on the test organism *Ceriodaphnia dubia*. Screening for acute toxicity using Microtox® indicated slight sediment toxicity, but no porewater toxicity. The observed sediment toxicity may be overestimated due to potential sulfur interference.

Mohawk River in Cohoes

2002-2006 Water Column Chemistry

Parameter of Concern	Number of Samples	Assessment Criterion	% > RIBS Criterion	Maximum Value	Median Value	Median to Criterion Ratio
Iron	30	1,000µg/l	17	4,440µg/l	527µg/l	0.53
Mercury	30	*	23	0.034µg/l	**	**
Phenol	29	1.0µg/l	28	3.2µg/l	<2.0µg/l	N/A

* Any concentration above the instrument detection limit is treated as a parameter of concern.
** No median or ratio calculated because of the large percentage of results that are below detection limits.

2006 Bacteriological Results

DATE	TOTAL COLIFORM colonies/100ml	FECAL COLIFORM colonies/100ml
4/25/2006	1,940	740
5/17/2006	520	240
7/5/2006	880	40
8/8/2006	720	220
9/19/2006	280	100
10/12/2006	140	20

2005 Multiplate Sampler Results

Date	Species Richness	Biotic Index	EPT Richness	Diversity	BAP	Assessment
7/21/2005	20	6	5	2.6	7.33	slightly impacted
8/22/2005	21	6.27	6	3.16	8.22	non-impacted
9/27/2005	22	6.15	6	2.96	8.23	non-impacted

Mohawk River in Cohoes

2006 Toxicity Testing Results

Collection/Test Start Date	Reproductive Rate Young/♀/7days (% Control)	% Survival (7-days)
04-25/04-28	31.4 (111)	100
***07-05/07-07	13.8 (68)	100
09-19/09-22	20.5 (106)	100

***Samples collected after severe June 26-29 flooding along the Mohawk River. Results should be interpreted with caution as they are not representative of ambient conditions.

2006 Microtox® Results

Collection/Test Date	Sediment EC50 (%)	Porewater EC50 (%)
08-04/11-29 & 30	30.29	>100

2006 Detected Sediment contaminant levels relative to respective MacDonald SQGs

CATEGORY	Analytes > TEC	Analytes > PEC
METALS	copper, lead, zinc	No exceedances
PAHS	Dibenzo(a,h)anthracene and Naphthalene	Anthracene*, Benzo(a)anthracene, Benzo(a)pyrene, Chrysene, Fluoranthene, Fluorene*, Phenanthrene, and Pyrene
PESTICIDES	DDD*, DDE*, DDT*, Dieldrin* and Heptachlor Epoxide*	No exceedances
PCBS	PCB Aroclor-1254*	No exceedances

* Concentration is between the Method Reporting Limit (MRL) and Method Detection Limit (MDL) and is, therefore, considered estimated.

Routine Site Monitoring Summary | Mohawk River Watershed

Station ID: 12010101

Mohawk River in West Schuyler
at Upper Dyke Road

LOCATION DATA

Latitude:	43° 05' 27"	Topo Map Name:	Utica East
Longitude:	75° 09' 25"	SBU ID:	MOHK 06
County:	Herkimer	PWL Segment:	1201-0093

HYDROLOGIC BASIN DATA

Water Index Number:	(H-) 240	Station Period of Record:	1964 - present
Stream Classification:	C		

SAMPLING LOCATION

ASSESMENT SUMMARY

The Mohawk River in West Schuyler, Herkimer County was sampled at Upper Dyke Road. This sampling location is approximately 100 miles above the river's confluence with the Hudson River. The site was chosen to monitor water quality downstream of the city of Utica; however, the land immediately surrounding the sampling site is agricultural pastureland. This river segment is designated Class C, with fishing and other secondary recreation as best designated uses. The river at this point is approximately 22-30 meters wide. During high flows, it often overflows its banks onto the surrounding grazing land. Low flows result in channelization of the stream, exposing a portion of the stream bottom. Depth of the water varies from less than one meter along the south shore to 2-3 meters along the north shore where flow is rapid throughout the year. The stream bottom is composed of rock, cobble, gravel, sand, and silt. The north streambank has a steep gradient, showing little evidence of erosion, while the south shore slopes more gradually with accompanying runoff from the surrounding land. Trees line the north shore while pasture, as well as trees, are found along the south shore. The riparian zone is wide along both banks. This sampling location is in Mohawk River Basin Waterbody Inventory segment #1201-0093, and fish consumption, aquatic life, recreational uses, and aesthetics are considered precluded or impaired by contaminated sediments, land disposal, combined sewer overflows, various industrial point sources, and continuing urban nonpoint runoff. This site has been part of the water quality sampling network since 1964.

Water Column Chemistry

The parameters of concern in the water column are iron, phenol, mercury, and chloroform.

Macroinvertebrates

Based on multiple plate artificial substrate samplers deployed in 2005, biological (macroinvertebrate) community assessment indicated moderately impacted water quality, with municipal and industrial discharges identified as the primary source of the impacts.

Sediments

The PEC-Q for this site is 0.21 indicating that the sediment quality, while not likely to cause chronic toxicity to sediment-dwelling organisms, is of concern. Arsenic, Copper, Nickel and Zinc exceed the TEC. Several PAHs, DDE, Dieldrin, Endrin, Lindane and Aroclor-1254 levels fall between the Method Reporting Limit (MRL) and Method Detection Limit (MDL) and are, therefore, considered to be estimated; these estimated concentrations are at levels exceeding the TEC. Detection limits exceed the PEC for alpha-Chlordane, Fuorene and Naphthalene and the TEC for 4',4'-DDT, several PAHs and all Aroclors but 1254. Since these chemicals were not detected, their effect on sediment quality cannot be assessed.

Toxicity Testing

Chronic toxicity testing using water from this location detected no significant reproductive or mortality effects on the test organism *Ceriodaphnia dubia*. Screening for acute toxicity using Microtox® indicated moderate sediment toxicity, but no porewater toxicity. The observed sediment toxicity may be overestimated due to potential sulfur interference.

Mohawk River in West Schuyler

2002-2006 Water Column Chemistry

Parameter of Concern	Number of Samples	Assessment Criteria	% > RIBS Criterion	Maximum Value	Median Value	Median to Criterion Ratio
Iron	27	1,000 µg/l	22	4240 µg/l	880 µg/l	0.88
Phenol	25	1.0μg/l	20	3.5μg/l	<2.0μg/l	
Chloroform	26	1.0 µg/l	35	2.8 µg/l	0.25 µg/l	0.25
Mercury	27	*	44	0.036µg/l	*	*

* Any concentration above the instrument detection limit is treated as a parameter of concern.
** No median or ratio calculated because of the large percentage of results that are below detection limits.

2006 Bacteriological Results

DATE	TOTAL COLIFORM colonies/100ml	FECAL COLIFORM colonies/100ml
4/27/2006	4,200	1,000
5/16/2006	7,200	6,000
7/5/2206	11,000	10,000
8/9/2006	3,700	2,200
10/11/2006	2,100	460

2005 Multiplate Sampler Results

Date	Species Richness	Biotic Index	EPT Richness	Diversity	BAP	Assessment
7/21/2005	7	5.39	2	1.88	3.06	moderately impacted
8/22/2005	7	5.61	2	2.01	3.16	moderately impacted
9/27/2005	15	5.6	3	2.45	4.62	moderately impacted

Mohawk River in West Schuyler

2006 Toxicity Testing Results

Collection/Test Start Date	Reproductive Rate Young/♀/7days (% Control)	% Survival (7-days)
04-27/04-28	29.9 (105)	100
***07-05/07-07	15.5 (76)	90
09-19/09-22	19.9 (103)	100

***Samples collected after severe flooding on June 26-29 along the Mohawk River. Results should be interpreted with caution as they are not representative of ambient conditions.

2006 Microtox® Results

Collection/Test Date	Sediment EC50 (%)	Porewater EC50 (%)
08-02/11-29 & 30	17.10	>100

2006 Detected sediment contaminant levels relative to respective MacDonald SQGs

CATEGORY	Analytes > TEC	Analytes > PEC
METALS	Arsenic, Copper, Nickel and Zinc	No exceedances
PAHS	Anthracene*, Benzo(a)anthracene*, Benzo(a)pyrene*, Chrysene*, Fluoranthene*, Phenanthrene*, and Pyrene*	No exceedances
PESTICIDES	DDE*, Dieldrin*, Endrin* and Lindane*	No exceedances
PCBS	Aroclor-1254*	No exceedances

* Concentration is between the Method Reporting Limit (MRL) and Method Detection Limit (MDL) and is, therefore, considered estimated.

Station ID: 12010142

Mohawk River in North Western
at River Road

LOCATION DATA

Latitude:	43° 20' 22"	Topo Map Name:	North Western
Longitude:	75° 21' 57"	SBU ID:	MOHK A
County:	Oneida	PWL Segment:	1201-0068

HYDROLOGIC BASIN DATA

Water Index Number:	(H-) 240	Station Period of Record:	1989-90, 95-96, 2001
Stream Classification:	A		2006

SAMPLING LOCATION

ASSESSMENT SUMMARY

The Mohawk River in North Western, Oneida County, was sampled at River Road. This sampling location is the background site for the Mohawk River, located approximately 140 miles above the river's mouth at the Hudson River. The surrounding land is rural residential with pasture and crops both upstream and downstream of the sampling site. This segment of stream is designated Class A, with drinking water supply, culinary or food processing purposes, primary and secondary contact recreation, and fishing as best designated uses. The river at this point is approximately 12-15 meters wide. Velocity varies across the stream bed; the water is faster and deeper along the eastern shore. Upstream of the sampling site, portions of the stream bed are exposed during low flows. There is a well developed riffle upstream of the bridge. At the bridge the water is deeper and slower moving. The stream bottom is composed of rocks, cobble, gravel, and sand. The streambanks are moderately stable, with some bank erosion upstream of the bridge along the east shore, where people access the stream for swimming or fishing. Along the east shore upstream of the bridge the bank slopes gradually to the water; the west shore is much steeper. Both banks are covered with grass, shrubs, and trees that provide canopy along the shore. The riparian zone is narrow along both banks at the bridge, but much wider upstream and.downstream. This sampling location is in Mohawk River Basin Waterbody Inventory segment #1201-0068. This site was also sampled during the 1989-90, 1995-96, and 2001 RIBS cycles in the Mohawk River Basin.

Water Column Chemistry

The parameters of concern in the water column are iron and mercury.

Macroinvertebrates

Macroinvertebrate sampling indicated non-impacted water quality conditions. The samples were dominated by clean-water species and were most similar to natural aquatic communities with minimal human impact.

Sediments

The PEC-Q for this site is 0.07 indicating that the sediments at this site are unlikely to cause adverse biological effects to sediment-dwelling organisms. Nickel levels are slightly above the TEC. Detection limits exceed the TEC for all Aroclors, several PAHs and 4,4'-DDD. Since these chemicals were not detected, it cannot be determined whether they are of concern.

Toxicity Testing

Chronic toxicity testing using water from this location detected no significant reproductive or mortality effects on the test organism *Ceriodaphnia dubia*. Screening for acute toxicity using Microtox® indicated no sediment or porewater toxicity.

Mohawk River in North Western

2006 Water Column Chemistry

Parameter of Concern	Number of Samples	Assessment Criteria	% > RIBS Criterion	Maximum Value	Median Value	Median to Criterion Ratio
Iron	10	1,000 µg/l	30	2,860µg/l	285 µg/l	0.29
Mercury	10	*	50	0.033µg/l	*	*

* Any concentration above the instrument detection limit is treated as a parameter of concern.

2006 Bacteriological Results

DATE	TOTAL COLIFORM colonies/100ml	FECAL COLIFORM colonies/100ml
4/4/2006	880	160
4/25/2006	780	160
5/16/2006	220	220
6/6/2006	460	160
7/5/2006	2,400	1,000
8/9/2006	420	40
8/29/2006	2,900	1,600
10/11/2006	600	40
10/31/2006	2,000	40

2006 Kick Sample Results

Date	Species Richness	Biotic Index	EPT Richness	% Model Affinity	BAP	Assessment
8/1/2006	37	4.64	14	69	8.7	non-impacted

Mohawk River in North Western

2006 Toxicity Testing Results

Collection/Test Start Date	Reproductive Rate Young/♀/7days (% Control)	% Survival (7-days)
04-25/04-28	28.2 (99)	100
***07-05/07-07	19.1 (94)	100
09-19/09-22	19.8 (102)	100

***Samples collected after severe flooding on June 26-29 along the Mohawk River. Results should be interpreted with caution as they are not representative of ambient conditions.

2006 Microtox® Results

Collection/Test Date	Sediment EC50 (%)	Porewater EC50 (%)
08-02/11-29 & 30	42.07	>100

2006 Detected Sediment contaminant levels relative to respective MacDonald SQGs

CATEGORY	**Analytes > TEC**	**Analytes > PEC**
METALS	Nickel	No exceedances
PAHS	No exceedances	No exceedances
PESTICIDES	No exceedances	No exceedances
PCBS	No exceedances	No exceedances

Intensive Site Monitoring Summary | Mohawk River Watershed

Station ID: 12032103

Cincinnati Creek in Barneveld
at Park Street

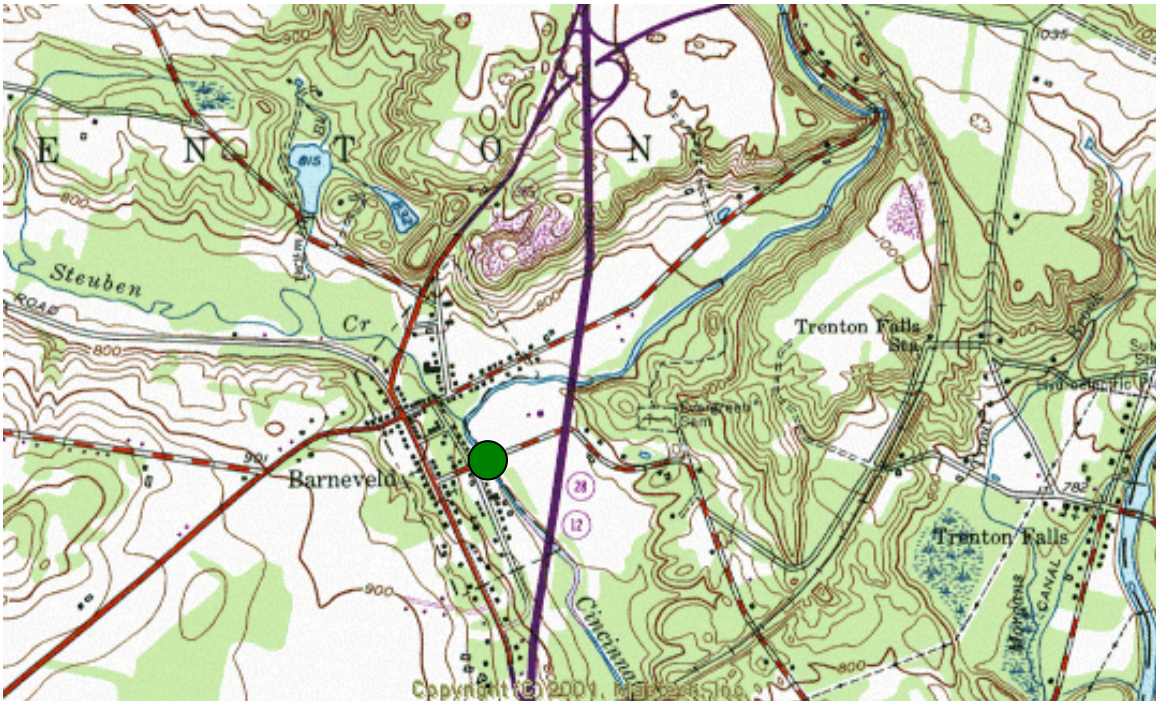
LOCATION DATA

Latitude:	43° 16' 22"	Topo Map Name:	Remsen
Longitude:	75° 11' 14"	SBU ID:	CINC 01A
County:	Herkimer	PWL Segment:	1203-0010

HYDROLOGIC BASIN DATA

Water Index Number:	(H-) 240 - 180 - 59	Station Period of Record:	2001, 2006
Stream Classification:	CT		

SAMPLING LOCATION



ASSESSMENT SUMMARY

Cincinnati Creek was sampled in Barneveld, Herkimer County at Park Street, approximately 3 miles above the stream's confluence with West Canada Creek. The site is in the village of Barneveld. This segment of the stream is designated Class C(T), with protection of aquatic life, trout fishing, fish consumption, and recreation, as designated uses. The stream at this point is 6-8 meters wide. Current speed is moderate to fast; a well-developed riffle is present across the channel. The bottom substrate is composed of rock, cobble, gravel, sand, and silt. The rocks and cobble are covered with diatoms making them very slippery. The streambanks are moderately stable and show little evidence of erosion. There is a gradual gradient to the water along the east shore, but a much steeper slope along the opposite shore. Both banks are covered with grass, shrubs, and trees that create canopy along the shore. The riparian zone is narrow along the west shore where backyards line the bank, but it is much wider along the east shore and upstream. This sampling location is in Mohawk River Basin Waterbody Inventory segment #1203-0010. This location was also sampled during the 2001 RIBS cycle in the Mohawk River Basin.

Water Column Chemistry

Mercury was the only parameter of concern in the water column.

Macroinvertebrates

Macroinvertebrate sampling results indicated non-impacted conditions. The samples were diverse and dominated by clean-water species; the community was natural, indicating minimal human impacts.

Sediments

The PEC-Q for this site is 0.02 indicating that the sediments at this site are unlikely to cause adverse biological effects to sediment-dwelling organisms. No contaminants were detected at levels above the TEC at this site. However, detection limits exceed the PEC for alpha-Chlordane and Lindane and the TEC for Endrin, all Aroclors and several PAHs. Since these chemicals were not detected, their effect on sediment quality cannot be assessed.

Toxicity Testing

Chronic toxicity testing using water from this location detected no significant reproductive or mortality effects on the test organism *Ceriodaphnia dubia*. Screening for acute toxicity using Microtox® indicated no sediment or porewater toxicity.

Cincinnati Creek in Barneveld

2006 Water Column Chemistry

Parameter of Concern	Number of Samples	Assessment Criteria	% > RIBS Criterion	Maximum Value	Median Value	Median to Criterion Ratio
Mercury	10	*	30	0.041µg/l	*	*

* Any concentration above the instrument detection limit is treated as a parameter of concern.

2006 Bacteriological Results

DATE	TOTAL COLIFORM colonies/100ml	FECAL COLIFORM colonies/100ml
4/4/2006	4,900	4,800
4/25/2006	1,000	1,600
5/16/2006	1,260	1,000
6/6/2006	2,700	1,000
7/5/2006	4,100	2,600
8/9/2006	3,100	600
8/29/2006	3,900	3,400
10/11/2006	1,600	80
10/31/2006	3,500	1,000

2006 Kick Sample Results

Date	Species Richness	Biotic Index	EPT Richness	% Model Affinity	BAP	Assessment
8/1/2006	33	4.45	10	71	8.11	non-impacted

Cincinnati Creek in Barneveld

2006 Toxicity Testing Results

Collection/Test Start Date	Reproductive Rate Young/♀/7days (% Control)	% Survival (7-days)
04-25/04-28	31.7 (112)	100
***07-05/07-07	17.0 (83)	100
09-19/09-22	28.1 (145)	100

***Samples collected after severe flooding on June 26-29 along the Mohawk River. Results should be interpreted with caution as they are not representative of ambient conditions.

2006 Microtox® Results

Collection/Test Date	Sediment EC50 (%)	Porewater EC50 (%)
08-02/11-29 & 30	54.48	>100

2006 Detected Sediment contaminant levels relative to respective MacDonald SQGs

CATEGORY	**Analytes > TEC**	**Analytes > PEC**
METALS	No exceedances	No exceedances
PAHS	No exceedances	No exceedances
PESTICIDES	No exceedances	No exceedances
PCBS	No exceedances	No exceedances

Intensive Site Monitoring Summary | Mohawk River Watershed

Station ID: 12041001

Oriskany Creek in Oriskany
at Utica Street

LOCATION DATA

Latitude:	43° 09' 21"	Topo Map Name:	Oriskany
Longitude:	75° 19' 50"	SBU ID:	ORSK 06
County:	Oneida	PWL Segment:	1204-0008

HYDROLOGIC BASIN DATA

Water Index Number:	(H-) 240 - 223	Station Period of Record:	1995-96, 2001, 2006
Stream Classification:	B		

SAMPLING LOCATION

ASSESSMENT SUMMARY

Oriskany Creek in the Village of Oriskany was sampled at Utica Street. This sampling location is approximately 1 mile above the stream's confluence with the Mohawk River. The surrounding land is a village setting with small businesses serving the immediate community, but upstream of the site is wooded. This stream segment is designated Class B, with protection of aquatic life, fish consumption, and recreation, including swimming, as designated uses. The stream at this point is approximately 3-4 meters wide. The current is fast to moderate and uniform across the stream bed, with a small riffle area present. The stream bottom is composed of rock, cobble, gravel, sand, and silt. The streambanks are moderately stable, with only small areas of erosion, and slope steeply to the water. The banks are well-vegetated, covered with grass, shrubs, and a few trees, that create canopy along the shore. The riparian zone at the sampling site is narrow along both banks because of the village setting, but widens upstream. This sampling location is in Mohawk River Basin Waterbody Inventory segment #1204-0008. This location was also sampled during the 1995-96, and 2001 RIBS cycle in the Mohawk River Basin.

Water Column Chemistry
The only parameter of concern in the water column is mercury.

Macroinvertebrates
Macroinvertebrate sampling indicated slightly impacted water quality conditions at this site. The community composition and nutrient biotic index suggested high nutrient enrichment. Impact source determination found the fauna to be most similar to communities influenced by nonpoint sources.

Sediments
The PEC-Q for this site is 0.14 indicating that the sediment quality, while not likely to cause chronic toxicity to sediment-dwelling organisms, is of concern. Phenanthrene levels exceed the PEC. Several PAHs exceed the TEC. DDD, DDE, DDT and Endrin levels fall between the Method Reporting Limit (MRL) and Method Detection Limit (MDL) and are, therefore, considered to be estimated; these estimated concentrations are at levels exceeding the TEC. Detection limits exceed the PEC for alpha-Chlordane, Dieldrin, Lindane and Heptachlor Epoxide and the TEC for Naphthalene and all Aroclors. Since these chemicals were not detected, their effect on sediment quality cannot be assessed.

Toxicity Testing
Chronic toxicity testing using water from this location detected no significant reproductive or mortality effects on the test organism *Ceriodaphnia dubia*. Screening for acute toxicity using Microtox® indicated slight sediment toxicity, but no porewater toxicity. The observed sediment toxicity may be overestimated due to potential sulfur interference.

Oriskany Creek in Oriskany

2006 Water Column Chemistry

Parameter of Concern	Number of Samples	Assessment Criteria	% > RIBS Criterion	Maximum Value	Median Value	Median to Criterion Ratio
Mercury	10	*	40	0.043µg/l	*	*

* Any concentration above the instrument detection limit is treated as a parameter of concern.

2006 Bacteriological Results

DATE	TOTAL COLIFORM colonies/100ml	FECAL COLIFORM colonies/100ml
4/5/2006	1,680	220
4/25/2006	2,960	2,600
5/17/2006	500	260
6/7/2006	2,700	1,000
7/6/2006	2,300	1,400
8/10/2006	6,000	4,800
8/30/2006	20,000	18,000
10/12/2006	3,900	1,400
11/1/2006	3,100	1,000

2006 Kick Sample Results

Date	Species Richness	Biotic Index	EPT Richness	% Model Affinity	BAP	Assessment
8/1/2006	22	4.69	5	51	5.87	slightly impacted

Oriskany Creek in Oriskany

2006 Toxicity Testing Results

Collection/Test Start Date	Reproductive Rate Young/♀/7days (% Control)	% Survival (7-days)
04-25/04-28	31.6 (111)	100
***07-06/07-07	15.8 (78)	100
09-19/09-22	23.4 (121)	90

***Samples collected after severe flooding on the Mohawk River from June 26-29. Results should be interpreted with caution as they are not representative of ambient conditions.

2006 Microtox® Results

Collection/Test Date	Sediment EC50 (%)	Porewater EC50 (%)
08-02/11-29 & 30	23.18	>100

2006 Detected Sediment contaminant levels relative to respective MacDonald SQGs

CATEGORY	Analytes > TEC	Analytes > PEC
METALS	No exceedances	No exceedances
PAHS	Anthracene*, Benzo(a)anthracene, Benzo(a)pyrene, Chrysene, Dibenzo(a,h)anthracene*, Fluoranthene, Fluorene*, and Pyrene	Phenanthrene
PESTICIDES	DDD*, DDE*, DDT* and Endrin*	No exceedances
PCBS	No exceedances	No exceedances

* Concentration is between the Method Reporting Limit (MRL) and Method Detection Limit (MDL) and is, therefore, considered estimated.

Station ID: 12010108

Mohawk River in Utica
at Barnes Avenue

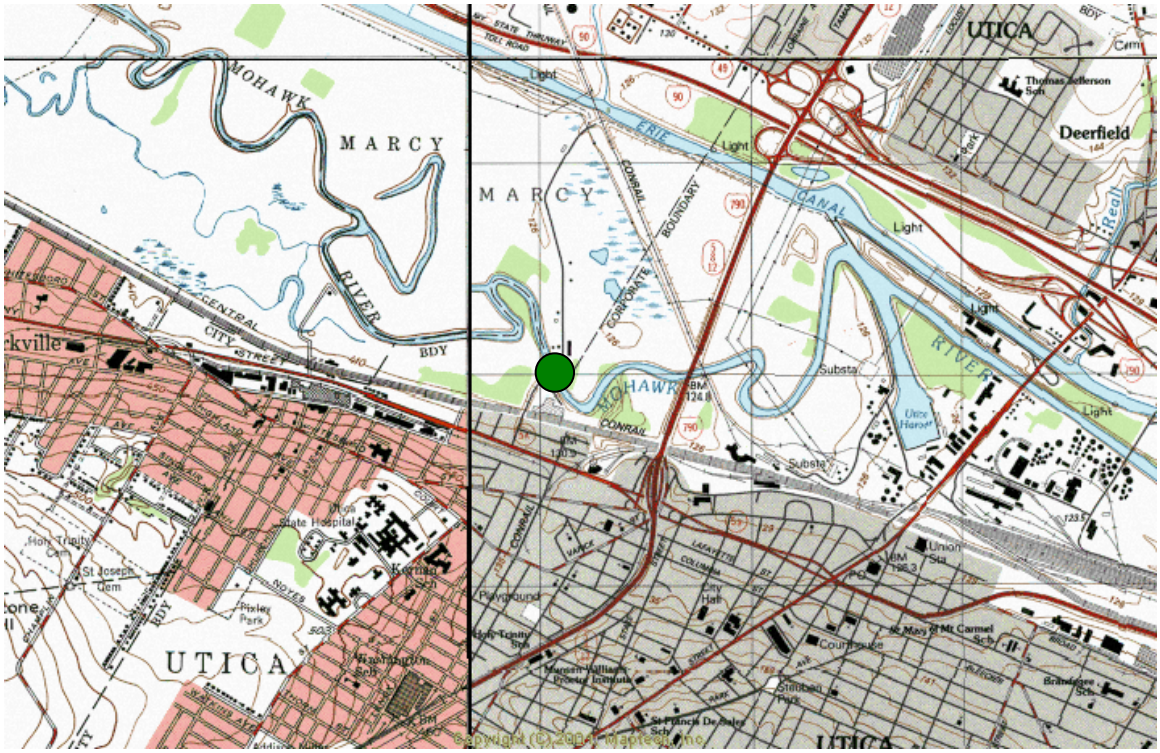
LOCATION DATA

Latitude:	43° 06' 42"	Topo Map Name:	Utica West
Longitude:	75° 14' 41"	SBU ID:	MOHK 05
County:	Oneida	PWL Segment:	1201-0093

HYDROLOGIC BASIN DATA

Water Index Number:	H-240	Station Period of Record:	2006
Stream Classification:	C		

SAMPLING LOCATION



ASSESSMENT SUMMARY

The Mohawk River was sampled in the City of Utica, Oneida County at the Barnes Avenue bridge. This sampling location is approximately 7 miles upstream of the routine sampling site in West Schuyler. The surrounding land is urban, commercial, and industrial, although trees line the stream at the site. This river segment is designated Class C, with fishing and other secondary recreation as best designated uses. The stream at this point is approximately 12-15 meters wide. The current is slow and deep across the stream bed, and no riffle area is present. The streambanks are moderately stable, and show little evidence of erosion. They slope steeply to the water and are covered with tall grass, shrubs, and trees that create canopy along the shore. Although the setting is urban, at the sampling location the riparian zone is wide along both banks. This sampling location is in Mohawk River Basin Waterbody Inventory segment #1201-0093. This segment is on the 303d list of impaired waters due to a fish consumption advisory and impairment of aquatic life, recreational uses and aesthetics by contaminated sediments, land disposal, combined sewer overflows, various industrial point sources, and continuing urban nonpoint runoff.

Water Column Chemistry

The only parameter of concern in the water column is mercury.

Macroinvertebrates

No macroinvertebrate samples were collected at this location.

Sediments

The PEC-Q for this site is 0.09 indicating that the sediments at this site are unlikely to cause adverse biological effects to sediment-dwelling organisms. Copper and Nickel levels exceed the TEC while 4,4'-DDT levels fall between the Method Reporting Limit (MRL) and Method Detection Limit (MDL) and are, therefore, considered to be estimated; these estimated concentrations are at levels exceeding the TEC. Detection limits exceed the PEC for alpha-Chlordane, and Lindane and the TEC for several PAHs and all Aroclors. Since these chemicals were not detected, their effect on sediment quality cannot be assessed.

Toxicity Testing

Chronic toxicity testing using water from this location detected no significant reproductive or mortality effects on the test organism *Ceriodaphnia dubia*. Screening for acute toxicity using Microtox® indicated moderate sediment toxicity, but no porewater toxicity. The observed sediment toxicity may be overestimated due to potential sulfur interference.

Mohawk River in Utica

2006 Water Column Chemistry

Parameter of Concern	Number of Samples	Assessment Criteria	% > RIBS Criterion	Maximum Value	Median Value	Median to Criterion Ratio
Mercury	9	*	66	0.038 µg/l	*	*

* Any concentration above the instrument detection limit is treated as a parameter of concern.

2006 Bacteriological Samples

DATE	TOTAL COLIFORM colonies/100ml	FECAL COLIFORM colonies/100ml
4/4/2006	420	220
4/27/2006	2,320	1,000
5/16/2006	820	600
6/6/2006	2,100	1,600
7/5/2006	3,300	1,600
8/9/2006	4,100	2,600
8/29/2006	3,700	1,000
10/11/2006	3,100	1,600
10/31/2006	2,100	460

Macroinvertebrate Sample Results

Macroinvertebrates were not collected at this site.

Mohawk River in Utica

2006 Toxicity Testing Results

Collection/Test Start Date	Reproductive Rate Young/♀/7days (% Control)	% Survival (7-days)
04-27/04-28	30.9 (109)	100
***07-05/07-07	16.7 (82)	90
09-19/09-22	22.1 (114)	90

***Samples collected after severe June 26-29 flooding along the Mohawk River. Results should be interpreted with caution as they are not representative of ambient conditions.

2006 Microtox® Results

Collection/Test Date	Sediment EC50 (%)	Porewater EC50 (%)
08-02/11-29 & 30	12.51	>100

2006 Detected Sediment contaminant levels relative to respective MacDonald SQGs

CATEGORY	Analytes > TEC	Analytes > PEC
METALS	Copper and Nickel	No exceedances
PAHS	No exceedances	No exceedances
PESTICIDES	4,4'-DDT*	No exceedances
PCBS	No exceedances	No exceedances

* Concentration is between the Method Reporting Limit (MRL) and Method Detection Limit (MDL) and is, therefore, considered estimated.

Station ID: 12011001

Fulmer Creek in Mohawk
at State Route 5S

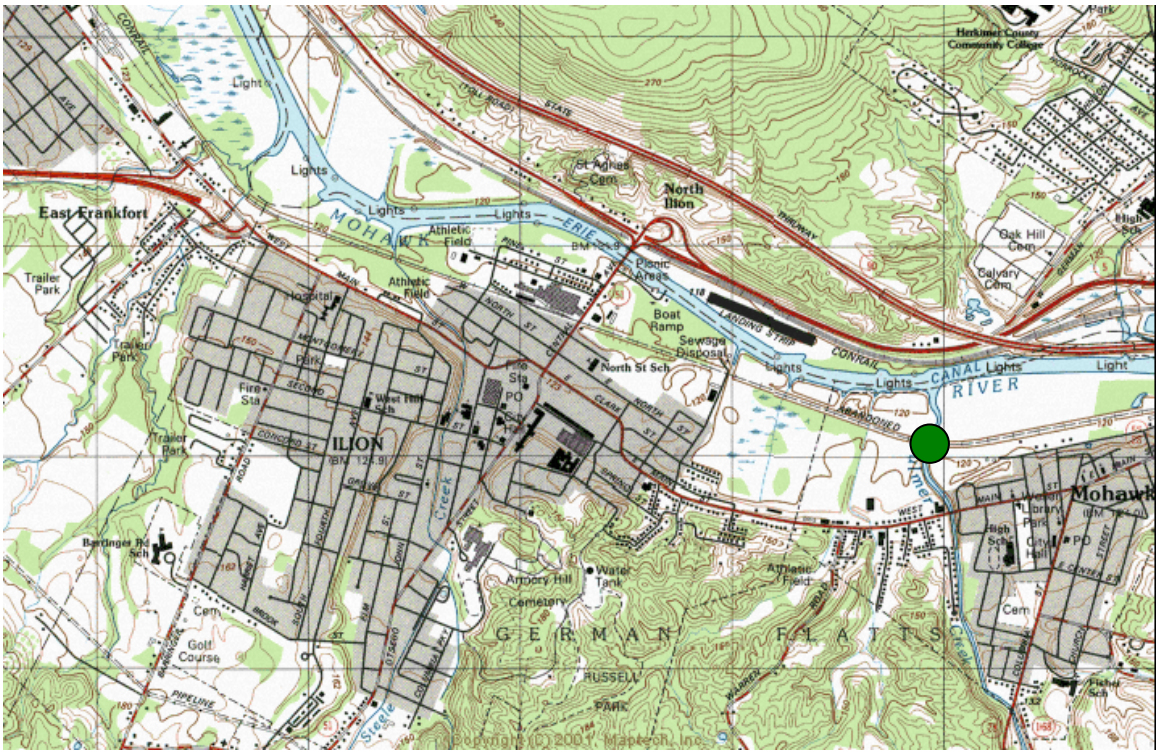
LOCATION DATA

Latitude:	43°00'34"	Topo Map Name:	Ilion
Longitude:	75°00'41"	SBU ID:	FULM 02
County:	Herkimer	PWL Segment:	1201-0012

HYDROLOGIC BASIN DATA

Water Index Number:	H-240-185	Station Period of Record:	2006
Stream Classification:	CT		

SAMPLING LOCATION



ASSESSMENT SUMMAY

Fulmer Creek in the Village of Mohawk, Herkimer County was sampled at the State Route 5S bridge, approximately one-half mile above the stream's confluence with the Mohawk River. The surrounding land is a village setting with small businesses serving the immediate community. A high concrete wall lines the east bank of the stream for 60 meters upstream and downstream of the bridge, which functions to control streambank erosion. This segment of the stream is designated Class C(T), with protection of aquatic life, trout fishing, fish consumption, and recreation, as designated uses. The stream at this point is 6-10 meters wide. The current is fast to moderate and uniform across the stream bed; a riffle is present across the stream bed but it is not well developed. Portions of the stream bed are exposed and dry during low flows. The bottom substrate is composed of rock, cobble, gravel, and sand. The bank on the west side of the stream is moderately stable, with only small areas of erosion, and slopes gradually to the water. Trees and other vegetation on this shore create canopy over the stream. The riparian zone is narrow at the sampling site but wider upstream. This sampling location is in Mohawk River Basin Waterbody Inventory segment #1201-0012, and is listed as stressed because habitat and hydrology are affected by channelization of the stream near the mouth, done to address flooding issues.

Water Column Chemistry
The only parameter of concern in the water column is mercury.

Macroinvertebrates
No macroinvertebrate sample was collected at this location because the stream was bulldozed after heavy flooding approximately one month before sampling.

Sediments
The PEC-Q for this site is 0.07 indicating that the sediments at this site are unlikely to cause adverse biological effects to sediment-dwelling organisms. However, Arsenic levels exceed the TEC and detection limits exceed the PEC for alpha-Chlordane and Lindane and the TEC for Dieldrin, several PAHs and all Aroclors. Since these chemicals were not detected, their effect on sediment quality cannot be assessed.

Toxicity Testing
Chronic toxicity testing using water from this location detected no significant reproductive or mortality effects on the test organism *Ceriodaphnia dubia*. Screening for acute toxicity using Microtox® indicated no sediment or porewater toxicity.

Fulmer Creek in Mohawk

2006 Water Column Chemistry

Parameter of Concern	Number of Samples	Assessment Criteria	% > RIBS Criterion	Maximum Value	Median Value	Median to Criterion Ratio
Mercury	10	*	40	0.06 µg/l	*	*

* Any concentration above the instrument detection limit is treated as a parameter of concern.

2006 Bacteriological Results

DATE	TOTAL COLIFORM colonies/100ml	FECAL COLIFORM colonies/100ml
4/5/2006	240	40
4/27/2006	320	40
5/17/2006	280	160
6/6/2006	620	340
7/6/2006	1,200	600
8/10/2006	2,100	600
8/30/2006	3,100	1,600
10/12/2006	4,800	4,400
11/1/2006	1,900	40

Kick Sample Results

Date	Species Richness	Biotic Index	EPT Richness	% Model Affinity	BAP	Assessment
8/18/2005	25	5.57	7	50	6.07	slightly impacted
8/1/2006	22	4.69	5	51	5.87	slightly impacted

Fulmer Creek in Mohawk

2006 Toxicity Testing Results

Collection/Test Start Date	Reproductive Rate Young/♀/7days (% Control)	% Survival (7-days)
04-27/04-28	28.9 (102)	100
***07-06/07-07	13.9 (68)	90
09-19/09-22	19.4 (100)	100

***Samples collected after severe flooding along the Mohawk River from June 26-29. Results should be interpreted with caution as they are not representative of ambient conditions.

2006 Microtox ® Results

Collection/Test Date	Sediment EC50 (%)	Porewater EC50 (%)
08-02/11-29 & 30	54.36	>100

2006 Detected Sediment contaminant levels relative to respective MacDonald SQGs

CATEGORY	Analytes > TEC	Analytes > PEC
METALS	Arsenic	No exceedances
PAHS	No exceedances	No exceedances
PESTICIDES	No exceedances	No exceedances
PCBS	No exceedances	No exceedances

Station ID: 12012002

Sauquoit Creek in Whitesboro
at Main Street

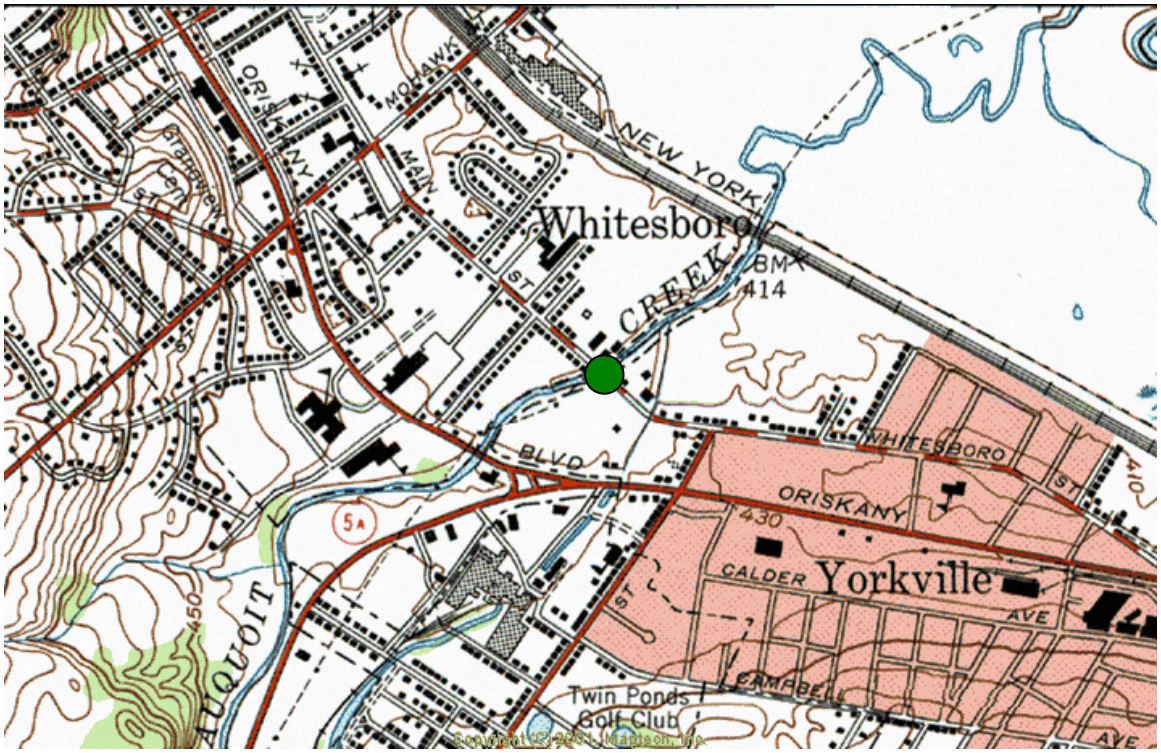
LOCATION DATA

Latitude:	43°07'02"	Topo Map Name:	Utica West
Longitude:	75°17'05"	SBU ID:	SAUQ 06
County:	Oneida	PWL Segment:	1201-0069

HYDROLOGIC BASIN DATA

Water Index Number:	H-240-219	Station Period of Record:	2006
Stream Classification:	CT		

SAMPLING LOCATION



ASSESSMENT SUMMARY

Sauquoit Creek in Whitesboro, Oneida County was sampled at Main Street, approximately 1.5 miles above the stream's confluence with the Mohawk River. The surrounding land is a village setting with small businesses serving the immediate community. This segment of the stream is designated Class C(T), with protection of aquatic life, trout fishing, fish consumption, and recreation, as designated uses. The stream at this point is 6-10 meters wide. The current is fast to moderate and uniform across the stream. Upstream of the bridge the stream bed is partially exposed during low flows. A riffle is present across the stream at the site, but it is not well developed. The bottom substrate is composed of rocks, cobble, gravel, and sand. The bank on the west side of the stream is moderately stable, with only small areas of erosion, but upstream along the east shore, there is a large area of erosion that has been rip-rapped for stability. This sampling location is in Mohawk River Basin Waterbody Inventory segment #1201-0069, and is listed as impaired because of a fish consumption advisory due to PCB contamination. Recreational uses and aquatic life are also considered stressed.

Water Column Chemistry

The parameters of concern in the water column are mercury and total dissolved solids.

Macroinvertebrates

Macroinvertebrate sampling indicated slightly impacted water quality conditions. The community was altered from natural conditions; however, the effects on the fauna appeared to be relatively minor and water quality was considered to be good. The nutrient biotic index and impact source determination indicate high enrichment in the 2005 sampling, but low nutrient levels in 2006. Analysis of invertebrate tissues found one parameter to exceed levels of concern; the concentration of Aroclor 1254 was measured to be 1.6 ppm, which exceeds the total PCB level of concern of 0.5 ppm.

Sediments

The PEC-Q for this site is 0.21 indicating that the sediment quality, while not likely to cause chronic toxicity to sediment-dwelling organisms, is of concern. Fluoranthene levels exceed the PEC while Phenanthrene and Pyrene levels fall between the Method Reporting Limit (MRL) and Method Detection Limit (MDL) and are, therefore, considered to be estimated; these estimated concentrations are at levels exceeding the PEC. Several PAHs, alpha-Chlordane, DDD, DDE, DDT, Endrin and Heptachlor Epoxide are considered to be estimated at levels exceeding the TEC. Detection limits exceed the PEC for Fluorene, Naphthalene, Dieldrin and Lindane and the TEC for 2-Methylnaphthalene, Acenaphthene and all Aroclors but 1254. Since these chemicals were not detected, their effect on sediment quality cannot be assessed.

Toxicity Testing

Chronic toxicity testing using water from this location detected no significant reproductive or mortality effects on the test organism *Ceriodaphnia dubia*. Screening for acute toxicity using Microtox® indicated slight sediment toxicity, but no porewater toxicity. The observed sediment toxicity may be overestimated due to potential sulfur interference.

Sauquoit Creek in Whitesboro

2006 Water Column Chemistry

Parameter of Concern	Number of Samples	Assessment Criteria	% > RIBS Criterion	Maximum Value	Median Value	Median to Criterion Ratio
TDS	10	500mg/l	20	574mg/l	447mg/l	0.9
Mercury	10	*	50	0.043µg/l	*	*

* Any concentration above the instrument detection limit is treated as a parameter of concern.

2006 Bacteriological Results

DATE	TOTAL COLIFORM colonies/100ml	FECAL COLIFORM colonies/100ml
4/4/2006	780	600
4/27/2006	500	160
5/16/2006	720	80
6/6/2006	1,800	1,000
7/5/2006	2,600	1,400
8/9/2006	2,100	1,400
8/29/2006	18,000	18,000
10/11/2006	520	80
10/31/2006	1,700	340

Kick Sample Results

Date	Species Richness	Biotic Index	EPT Richness	% Model Affinity	BAP	Assessment
8/17/2005	24	4.7	10	63	7.14	slightly impacted
8/1/2006	24	5.81	7	73	6.72	slightly impacted

Sauquoit Creek in Whitesboro

2006 Toxicity Testing Results

Collection/Test Start Date	Reproductive Rate Young/♀/7days (% Control)	% Survival (7-days)
04-27/04-28	29.2 (103)	100
***07-05/07-07	13.3 (65)	90
09-19/09-22	26.8 (138)	100

***Samples collected after severe flooding along the Mohawk River from June 26-29. Results should be interpreted with caution as they are not representative of ambient conditions.

2006 Microtox® Results

Collection/Test Date	Sediment EC50 (%)	Porewater EC50 (%)
08-02/11-29 & 30	33.27	>100

2006 Detected Sediment contaminant levels relative to respective MacDonald SQGs

CATEGORY	Analytes > TEC	Analytes > PEC
METALS	No exceedances	No exceedances
PAHS	Anthracene*enzo(a)anthracene *, Benzo(a)pyrene*, Chrysene*, and Dibenzo(a,h)anthracene*	Fluoranthene, Phenanthrene**, Pyrene**
PESTICIDES	Chlordane*, DDD*, DDE*, , DDT*, Endrin* and Heptachlor Epoxide*	No exceedances
PCBS	No exceedances	No exceedances

* Concentration is between the Method Reporting Limit (MRL) and Method Detection Limit (MDL) and is, therefore, considered estimated.

Station ID: 12042103

Deans Creek in Westmoreland
at East Main Street

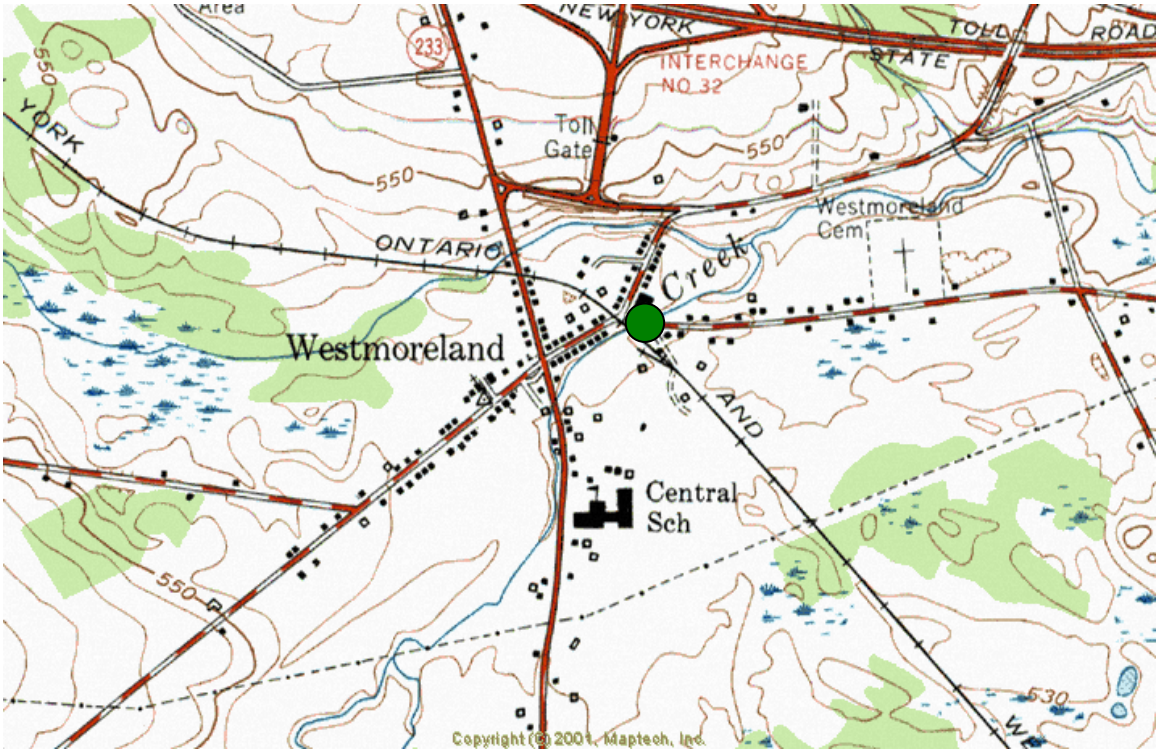
LOCATION DATA

Latitude:	43° 07' 01"	Topo Map Name:	Clinton
Longitude:	75° 24' 02"	SBU ID:	DEAN 01
County:	Oneida	PWL Segment:	1204-0001

HYDROLOGIC BASIN DATA

Water Index Number:	H-240-223-10	Station Period of Record:	2006
Stream Classification:	C		

SAMPLING LOCATION



ASSESSMENT SUMMARY

Deans Creek was sampled in Westmoreland, Oneida County was sampled at East Main Street, approximately 3 miles above the stream's confluence with Oriskany Creek. The surrounding land is a suburban setting with small businesses serving the immediate community. This river segment is designated Class C, with fishing and other secondary recreation as best designated uses. The stream at this point is 4-7 meters wide. The current is moderate to slow and uniform across the stream bed; a narrow but well developed riffle is present. There is some exposure and drying of the stream bed during low flows. The bottom substrate is composed of rocks, cobble, gravel, and sand. The streambanks are moderately stable, with only small areas of erosion. The bank on the north side of the stream slopes gradually to the water, but it is steeper along the south shore where a road parallels the stream. At the sampling site, the banks are covered with grass and shrubs, but there is no canopy. Both upstream and downstream of the sampling site are forested areas that produce canopy over the stream and a wide riparian zone, which is narrow at the sampling site. This sampling location is in Mohawk River Basin Waterbody Inventory segment #1204-0001.

Water Column Chemistry

The only parameter of concern in the water column is mercury.

Macroinvertebrates

Macroinvertebrate sampling indicated slightly impacted water quality conditions at this site. The community composition and nutrient biotic index suggested conditions of nutrient enrichment. Impact source determination found the fauna to be most similar to communities influenced by organic loads and low dissolved oxygen from sewage or animal wastes.

Sediments

The PEC-Q for this site is 0.23 indicating that the sediment quality, while not likely to cause chronic toxicity to sediment-dwelling organisms, is of concern. Fluoranthene and Pyrene levels exceed the PEC while Benzo(a)anthracene, Chrysene and Phenanthrene levels fall between the Method Reporting Limit (MRL) and Method Detection Limit (MDL) and are, therefore, considered to be estimated at levels exceeding the PEC. Copper and Benzo(b)fluoranthene exceed the TEC. DDD, DDE, DDT, a few PAHs and Heptachlor Epoxide are considered to be estimated at levels exceeding the TEC. Detection limits exceed the PEC for Fluorene, Naphthalene, alpha-Chlordane, Dieldrin and Lindane and the TEC for Endrin, 2-Methylnaphthalene, Acenaphthene and all Aroclors. Since these chemicals were not detected, their effect on sediment quality cannot be assessed.

Toxicity Testing

Chronic toxicity testing using water from this location detected no significant reproductive or mortality effects on the test organism *Ceriodaphnia dubia*. Screening for acute toxicity using Microtox® indicated moderate sediment toxicity, but no porewater toxicity. The observed sediment toxicity may be overestimated due to potential sulfur interference.

Deans Creek in Westmoreland

2006 Water Column Chemistry

Parameter of Concern	Number of Samples	Assessment Criteria	% > RIBS Criterion	Maximum Value	Median Value	Median to Criterion Ratio
Mercury	10	*	20	0.042µg/l	*	*

* Any concentration above the instrument detection limit is treated as a parameter of concern.

2006 Bacteriological Results

DATE	TOTAL COLIFORM colonies/100ml	FECAL COLIFORM colonies/100ml
4/5/2006	1,660	260
4/25/2006	2,120	1,400
5/17/2006	3,000	1,000
6/7/2006	1,300	260
7/6/2006	3,500	1,800
8/10/2006	4,200	440
8/30/2006	5,000	4,800
10/12/2006	3,300	1,600
11/1/2006	860	80

2006 Kick Sample Results

Date	Species Richness	Biotic Index	EPT Richness	% Model Affinity	BAP	Assessment
8/1/2006	28	5.08	5	49	6.12	Slightly impacted

Deans Creek in Westmoreland

2006 Toxicity Testing Results

Collection/Test Start Date	Reproductive Rate Young/♀/7days (% Control)	% Survival (7-days)
04-25/04-28	28.7 (101)	100
***07-06/07-07	17.2 (84)	90
09-19/09-22	26.5 (137)	100

***Samples collected after severe flooding along the Mohawk River from June 26-29. Results should be interpreted with caution as they are not representative of ambient conditions.

2006 Microtox® Results

Collection/Test Date	Sediment EC50 (%)	Porewater EC50 (%)
08-02/11-29 & 30	16.56	>100

2006 Detected Sediment contaminant levels relative to respective MacDonald SQGs

CATEGORY	Analytes > TEC	Analytes > PEC
METALS	Copper	No exceedances
PAHS	Anthracene*, Benzo(a)pyrene*, Benzo(b)fluoranthene and Dibenzo(a,h)anthracene*	Benzo(a)anthracene*, Chrysene*, Fluoranthene, Phenanthrene* and Pyrene
PESTICIDES	DDD*,DDE*, DDT* and Heptachlor Epoxide*	No exceedances
PCBS	No exceedances	No exceedances

* Concentration is between the Method Reporting Limit (MRL) and Method Detection Limit (MDL) and is, therefore, considered estimated.

Intensive Site Monitoring Summary | Mohawk River Watershed

Station ID: 12010065

Mohawk River in Ft. Plain
at State Route 80

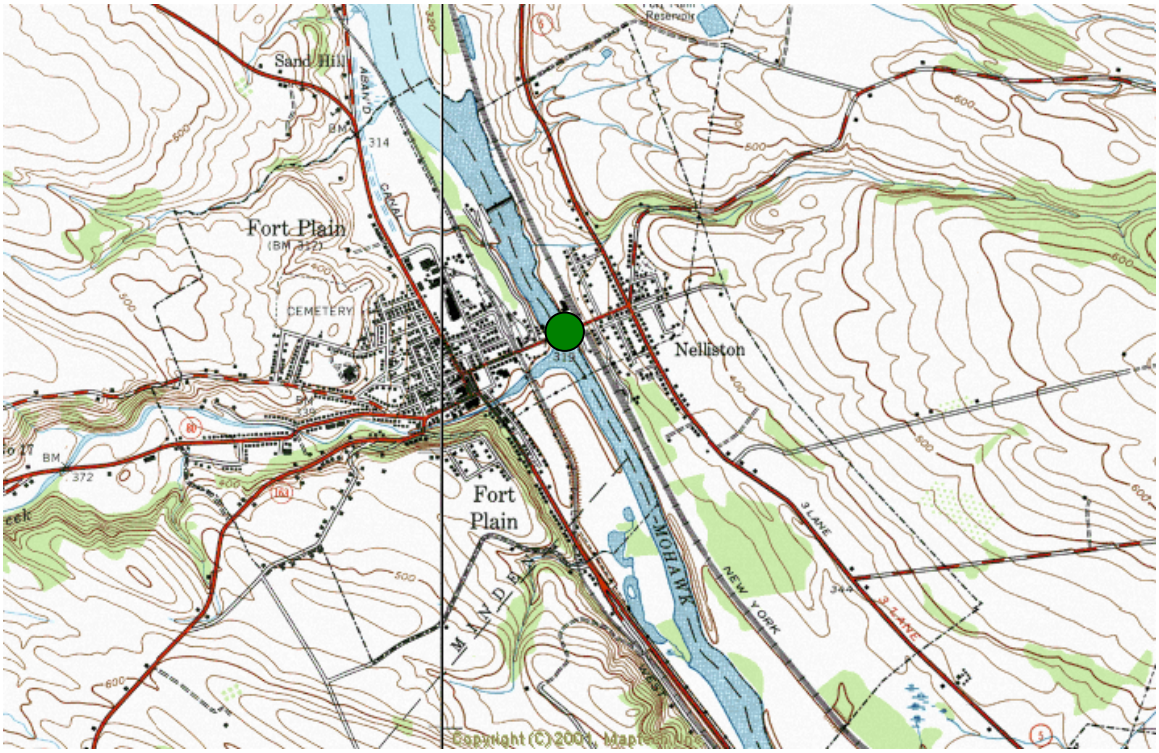
LOCATION DATA

Latitude:	42° 56' 02"	Topo Map Name:	Canajoharie
Longitude:	74° 37' 04"	SBU ID:	MOHK 13 and 19A
County:	Montgomery	PWL Segment:	1201-0090

HYDROLOGIC BASIN DATA

Water Index Number:	H-240	Station Period of Record	2006
Stream Classification:	B		

SAMPLING LOCATION



ASSESSMENT SUMMARY

Mohawk River in Fort Plain, Montgomery County was sampled at the State Route 80 bridge, approximately 65 miles above the river's confluence with the Hudson River. The surrounding land is a village setting with small businesses and industries serving the community, as well as a small park downstream of the bridge. One-quarter mile upstream, Lock 15 regulates the flow of the river. This stream segment is designated Class B, with protection of aquatic life, fish consumption, and recreation, including swimming, as designated uses. The stream at this point is 65-80 meters wide. The stream current is moderate to slow and uniform across the stream bed. The stream bottom is composed of rock, cobble, gravel, sand, and silt. Both streambanks are moderately stable and have a steep gradient to the water. Along the south bank, the streambank is covered with grass, shrubs, and trees. There is a small canopy cover along the shore where the trees line the streambanks. Upstream, the north bank is covered with rock and stones where the river is bordered by a NYS DOT facility. This sampling location is in Mohawk River Basin Waterbody Inventory segment # 1201-0090 due to aquatic life and recreational uses may be stressed by agricultural runoff and nonpoint sources.

Water Column Chemistry

The parameters of concern in the water column are iron and mercury.

Macroinvertebrates

Artificial substrate samplers, were used to sample the macroinvertebrate community in Little Falls (at Lock 17) and in Fonda (at Route 30A), just above and just below Fort Plain. These locations are considered to be representative of water quality conditions in this reach of the river. Results at both sites indicated slightly impacted water quality conditions. Aquatic life is considered to be fully supported; however the community composition suggests conditions that cause stress to aquatic life.

Sediments

No sediments were collected at this location.

Toxicity Testing

Chronic toxicity testing using water from this location detected no significant reproductive or mortality effects on the test organism *Ceriodaphnia dubia*. No sediment sample was collected for Microtox® acute toxicity testing.

Mohawk River in Fort Plain

2006 Water Column Chemistry

Parameter of Concern	Number of Samples	Assessment Criteria	% > RIBS Criterion	Maximum Value	Median Value	Median to Criterion Ratio
Iron	10	1,000µg/l	30	1,900µg/l	335µg/l	0.34
Mercury	10	*	30	0.027µg/l	*	*

* Any concentration above the instrument detection limit is treated as a parameter of concern.

2006 Bacteriological Results

DATE	TOTAL COLIFORM colonies/100ml	FECAL COLIFORM colonies/100ml
4/3/2006	2,960	20
4/24/2006	2,120	440
5/15/2006	640	40
6/5/2006	840	220
7/3/2006	2,760	380
8/9/2006	240	20
8/30/2006	1,160	520
9/20/2006	300	20
10/10/2006	940	<20
10/30/2206	2,440	1,020

Macroinvertebrate Samples

No macroinvertebrates were collected at this site.

Mohawk River in Fort Plain

2006 Toxicity Testing Results

Collection/Test Start Date	Reproductive Rate Young/♀/7days (% Control)	% Survival (7-days)
04-24/04-28	31.9 (112)	100
***07-03/07-07	20.4 (100)	100
09-20/09-22	17.8 (92)	100

***Samples collected after severe flooding along the Mohawk River from June 26-29. Results should be interpreted with caution as they are not representative of ambient conditions.

2006 Microtox® Results

Collection/Test Date	Sediment EC50 (%)	Porewater EC50 (%)
N/A	N/A	N/A

2006 Detected Sediment contaminant levels relative to respective MacDonald SQGs

No sediments were collected at this site

Intensive Site Monitoring Summary | Mohawk River Watershed

Station ID: 12011701

North Chuctanunda Creek in Amsterdam at Willow Road

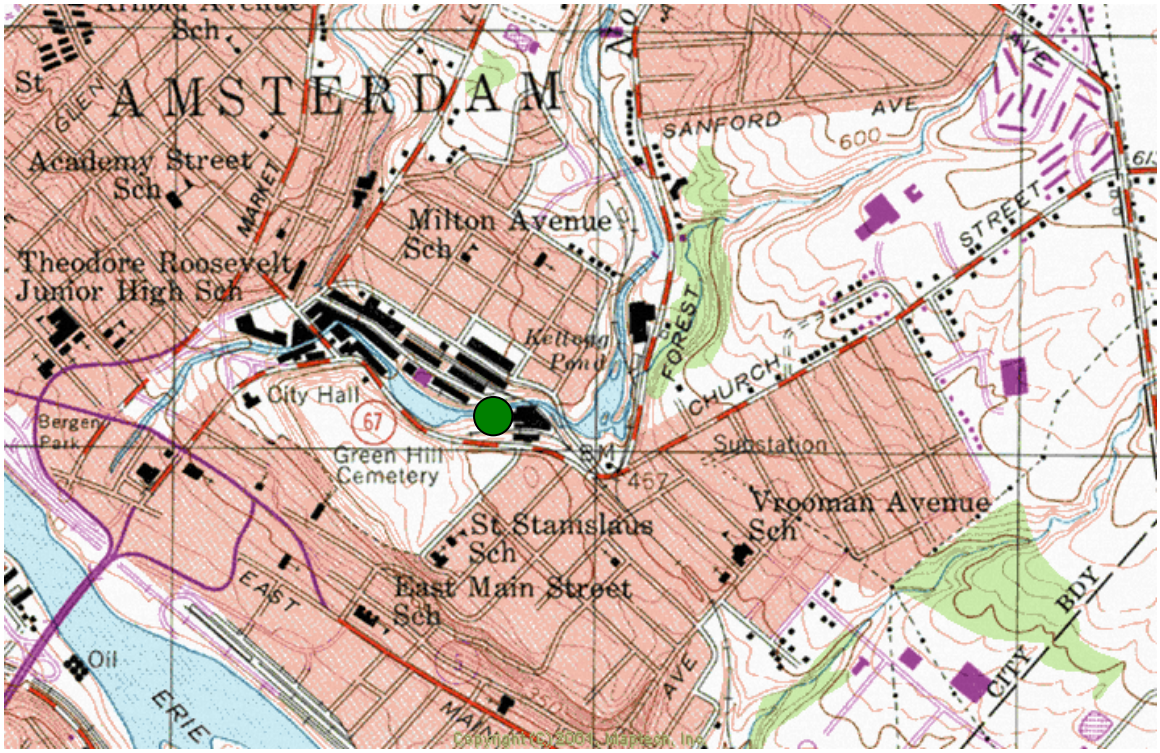
LOCATION DATA

Latitude:	42° 56' 19"	Topo Map Name:	Amsterdam
Longitude:	74° 10' 57"	SBU ID:	NCHU 02A
County:	Montgomery	PWL Segment:	1201-0031

HYDROLOGIC BASIN DATA

Water Index Number:	H-240-69	Station Period of Record:	2006
Stream Classification:	C		

SAMPLING LOCATION



ASSESSMENT SUMMARY

North Chuctanunda Creek in Amsterdam, Montgomery County was sampled at the Willow Street bridge, approximately 1 mile above the stream's confluence with the Mohawk River. The surrounding land is urban, a commercial/industrial area with small businesses serving the surrounding community. This river segment is designated Class C, with fishing and other secondary recreation as best designated uses. The stream is 6-8 meters wide. The current varies across the channel, with faster velocities along the south shore. During low flows, there is some exposure and drying of the stream bottom. A well-developed riffle is present across the stream. The bottom substrate is composed of rock, cobble, gravel, sand, and silt. Upstream approximately 30 meters, the stream cascades over rocks forming a waterfall. Bedrock covers the stream bottom in this stretch of stream. The banks are moderately stable along both shores, covered with rocks, grass, shrubs, and trees, with some areas of erosion exposing tree roots. They slope steeply to the water and there is canopy over the stream created by the trees. The riparian zone is narrow along both banks due to the urban setting. This sampling location is in Mohawk River Basin Waterbody Inventory segment # 1201-0031.

Water Column Chemistry

The only parameter of concern in the water column was mercury.

Macroinvertebrates

Biological (macroinvertebrate) sampling indicated slightly impacted water quality conditions. The community was slightly altered from natural conditions, but the effects on the fauna appear to be relatively minor and overall water quality is considered good. However, the nutrient biotic index and impact source determination indicate some enrichment in the stream and fauna that is most similar to communities influenced by nonpoint nutrients and agricultural sources. Analysis of invertebrate tissues found one parameter to exceed levels of concern; dieldrin was measured at 0.014 ppm which is well above the level of concern of 0.004 ppm.

Sediments

The PEC-Q for this site is 0.34 indicating that the sediment quality, while not likely to cause chronic toxicity to sediment-dwelling organisms, is of concern. Lead levels exceed the PEC while Arsenic, Chromium, Copper, and Zinc exceed the TEC. Several PAH levels fall between the Method Reporting Limit (MRL) and Method Detection Limit (MDL) and are, therefore, considered to be estimated at levels exceeding the PEC. Several Pesticides and a few other PAHs are considered estimated at levels exceeding the TEC. Detection limits exceed the PEC for Fluorene, Naphthalene and Lindane and the TEC for Acenaphthylene, 2-Methylnaphthalene, Acenaphthene and all Aroclors. Since these chemicals were not detected, their effect on sediment quality cannot be assessed.

Toxicity Testing

Chronic toxicity testing using water from this location detected no significant reproductive or mortality effects on the test organism *Ceriodaphnia dubia*. Screening for acute toxicity using Microtox® indicated moderate sediment toxicity, but no porewater toxicity. The observed sediment toxicity may be overestimated due to a potential sulfur interference.

North Chuctanunda Creek in Amsterdam

2006 Water Column Chemistry

Parameter of Concern	Number of Samples	Assessment Criteria	% > RIBS Criterion	Maximum Value	Median Value	Median to Criterion Ratio
Mercury	10	*	60	0.037µg/l	*	*

* Any concentration above the instrument detection limit is treated as a parameter of concern.

2006 Bacteriological Results

DATE	TOTAL COLIFORM colonies/100ml	FECAL COLIFORM colonies/100ml
4/5/2006	2,280	880
4/25/2006	2,780	1,200
5/17/2006	3,600	2,580
6/6/2006	2,680	1,560
7/5/2006	680	140
8/8/2006	>4,000	1,700
8/29/2006	>4,000	2,200
9/19/2006	>4,000	1,700
10/12/2006	>4,000	1,380
11/1/2006	1,840	760

Kick Sample Results

Date	Species Richness	Biotic Index	EPT Richness	% Model Affinity	BAP	Assessment
7/31/2006	21	4.45	10	49	6.41	Slightly impacted

North Chuctanunda Creek in Amsterdam

2006 Toxicity Testing Results

Collection/Test Start Date	Reproductive Rate Young/♀/7days (% Control)	% Survival (7-days)
04-25/04-28	33.1 (117)	100
***07-05/07-07	17.6 (86)	100
09-19/09-22	25.6 (132)	100

***Samples collected after severe flooding along the Mohawk River from June 26-29. Results should be interpreted with caution as they are not representative of ambient conditions.

2006 Microtox® Results

Collection/Test Date	Sediment EC50 (%)	Porewater EC50 (%)
08-03/11-29 & 30	2.61	>100

2006 Detected Sediment contaminant levels relative to respective MacDonald SQGs

CATEGORY	Analytes > TEC	Analytes > PEC
METALS	Arsenic, Chromium, Copper, and Zinc	Lead
PAHS	Anthracene*, Benzo(b)fluoranthene*, and Dibenzo(a,h)anthracene*	Benzo(a)anthracene*, Benzo(a)pyrene*, Chrysene*, Fluoranthene*, Phenanthrene* and Pyrene*
PESTICIDES	Chlordane*, DDD*, DDE*, DDT*, Dieldrin*, Endrin* and Heptachlor Epoxide*	No exceedances
PCBS	No exceedances	No exceedances

* Concentration is between the Method Reporting Limit (MRL) and Method Detection Limit (MDL) and is, therefore, considered estimated.

Intensive Site Monitoring Summary | Mohawk River Watershed

Station ID: 12011801

South Chuctanunda Creek in South Amsterdam at Florida Street

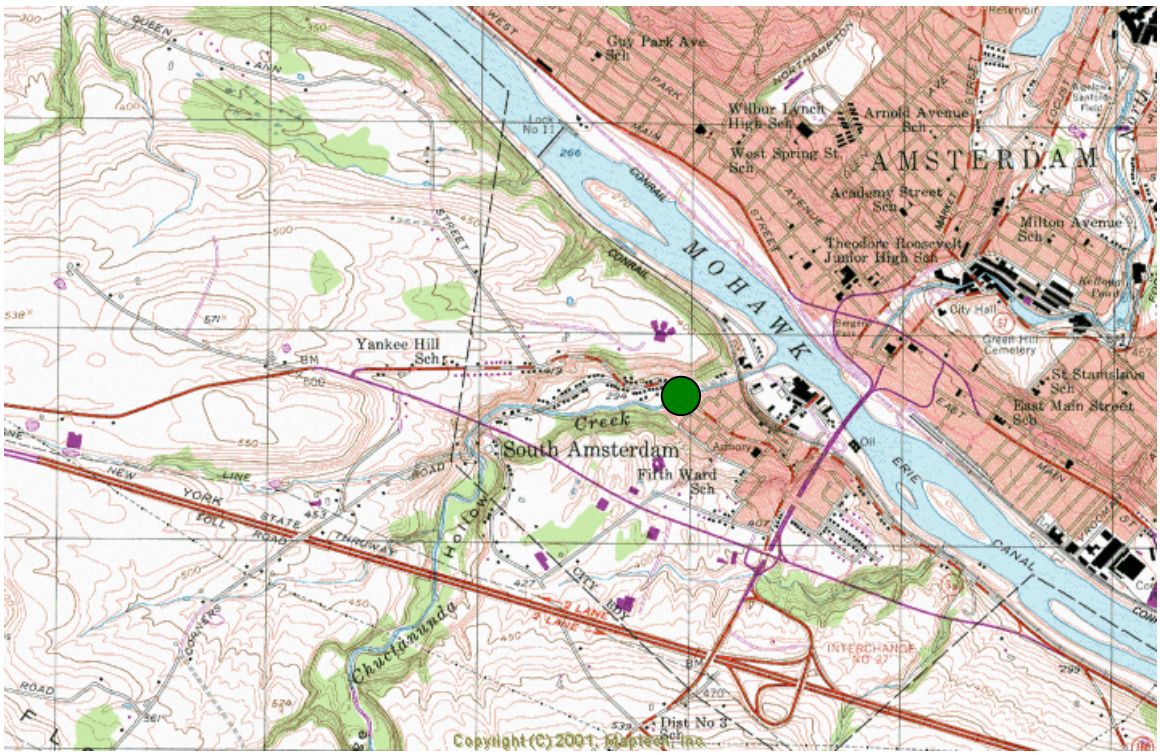
LOCATION DATA

Latitude:	42° 56' 07"	Topo Map Name:	Amsterdam
Longitude:	74° 12' 12"	SBU ID:	SCHU 01A
County:	Montgomery	PWL Segment:	1201-0082

HYDROLOGIC BASIN DATA

Water Index Number:	H-240-70	Station Period of Record:	2006
Stream Classification:	C		

SAMPLING LOCATION



ASSESSMENT SUMMARY

South Chuctanunda Creek in South Amsterdam, Montgomery County was sampled at Florida Street less than one-half mile above the stream's confluence with the Mohawk River. The surrounding land is a village setting with small businesses serving the community, although forested land is present upstream of the site. This river segment is designated Class C, with fishing and other secondary recreation as best designated uses. The stream at this point is 7-10 meters wide, but during low flows a large portion of the stream bottom is exposed and dry. Current varies across the stream bed; velocities are faster along the west bank. A well-developed riffle is present across the stream. Bottom substrate is composed of rocks, cobble, gravel, sand, and silt. During low flows, there is an abundant amount of algae covering the stream bottom. The stream banks are moderately stable along both shores, having only small areas of erosion, and slope steeply to the water. Portions of the east bank above and below the bridge are stabilized with a concrete wall. The riparian zone is narrow along both banks. This sampling location is in Mohawk River Basin Waterbody Inventory segment # 1201-0082.

Water Column Chemistry

The parameters of concern in the water column are iron and mercury.

Macroinvertebrates

Biological (macroinvertebrate) sampling indicated the upper range of slightly impacted conditions. In such samples the community is slightly altered from natural conditions. Some sensitive species are not present and the overall abundance of macroinvertebrates is lower. However, the effects on the fauna appear to be relatively minor and overall water quality is considered to be good. The nutrient biotic index and impact source determination indicate low enrichment in the stream and fauna that is most similar to natural communities.

Sediments

The PEC-Q for this site is 0.04 indicating that the sediments at this site are unlikely to cause adverse biological effects to sediment-dwelling organisms. No contaminants were detected at levels above the TEC at this site. However, it should be noted that detection limits exceed the TEC for a number of PAHs, all Aroclors and Dieldrin. These chemicals were not detected, so it cannot be determined whether they have an effect on sediment-dwelling organisms.

Toxicity Testing

Chronic toxicity testing using water from this location detected no significant reproductive or mortality effects on the test organism *Ceriodaphnia dubia*. Screening for acute toxicity using Microtox® indicated no sediment or porewater toxicity.

South Chuctanunda Creek in South Amsterdam

2006 Water Column Chemistry

Parameter of Concern	Number of Samples	Assessment Criteria	% > RIBS Criterion	Maximum Value	Median Value	Median to Criterion Ratio
Mercury	10	*	50	0.0.35µg/l	*	*
Iron	10	1,000µg/l	20	1,320µg/l	273µg/l	0.27

* Any concentration above the instrument detection limit is treated as a parameter of concern.

2006 Bacteriological Results

DATE	TOTAL COLIFORM colonies/100ml	FECAL COLIFORM colonies/100ml
4/5/2006	1,160	180
4/25/2006	1,780	300
5/17/2006	1,920	1,320
6/6/2006	1,280	220
7/5/2006	3,500	2,860
8/8/2006	880	100
8/29/2006	1,600	1,520
9/19/2006	540	100
10/12/2006	380	300
11/1/2006	760	80

Kick Sample Results

Date	Species Richness	Biotic Index	EPT Richness	% Model Affinity	BAP	Assessment
8/16/2005 (SCHU-01)	20	4.67	12	67	7.29	Slightly impacted
7/31/2006 (SCHU-01A)	16	4.14	12	55	6.65	Slightly impacted

South Chuctanunda Creek in South Amsterdam

2006 Toxicity Testing Results

Collection/Test Start Date	Reproductive Rate Young/♀/7days (% Control)	% Survival (7-days)
04-25/04-28	34.9 (123)	100
***07-06/07-07	17.1 (84)	100
09-19/09-22	22.5 (116)	100

***Samples collected after severe flooding along the Mohawk River from June 26-29. Results should be interpreted with caution as they are not representative of ambient conditions.

2006 Microtox® Results

Collection/Test Date	Sediment EC50 (%)	Porewater EC50 (%)
08-03/11-29 & 30	42.73	>100

2006 Detected Sediment contaminant levels relative to respective MacDonald SQGs

CATEGORY	**Analytes > TEC**	**Analytes > PEC**
METALS	No exceedances	No exceedances
PAHS	No exceedances	No exceedances
PESTICIDES	No exceedances	No exceedances
PCBS	No exceedances	No exceedances

Intensive Site Monitoring Summary | Mohawk River Watershed

Station ID: 12011610

Otsquago Creek in Starkville
at Moyer Road

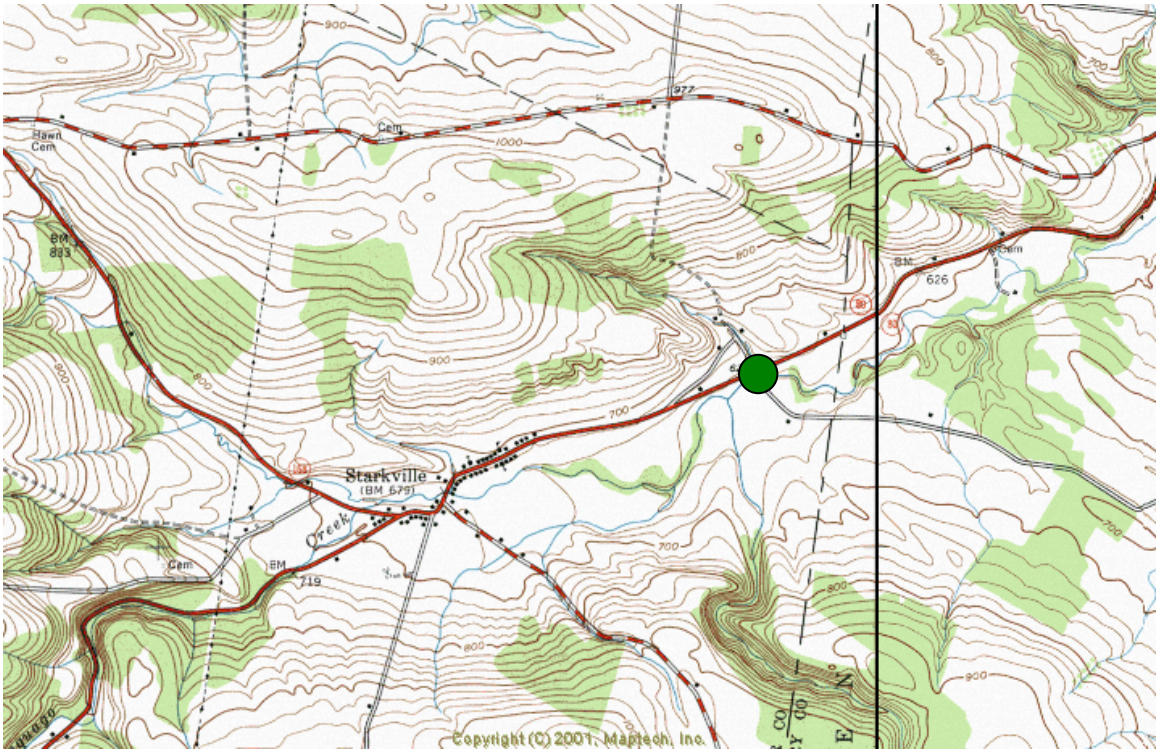
LOCATION DATA

Latitude:	42° 55' 27"	Topo Map Name:	Van Hornesville
Longitude:	74° 45' 23"	SBU ID:	OTSQ 00
County:	Herkimer	PWL Segment:	1201-0078

HYDROLOGIC BASIN DATA

Water Index Number:	H-240-119	Station Period of Record:	2006
Stream Classification:	CT		

SAMPLING LOCATION



ASSESSMENT SUMMARY

Otsquago Creek in the Town of Starkville was sampled at Moyer Road, approximately 10 miles above the stream's confluence with the Mohawk River. The surrounding land is rural agricultural. This segment of the stream is designated Class C(T), with protection of aquatic life, trout fishing, fish consumption, and recreation, as designated uses. The stream at this point is approximately 5 meters wide. Current varies across the stream bed; velocity is faster and the water is deeper along the north shore and upstream of bridge, but during low flows, some portions of the stream bed are exposed. Downstream of the sampling site a well-developed riffle area spans the stream. At the bridge, there is a pooled area of deeper, slower moving water. The bottom substrate is composed of rocks, cobble, gravel, sand, and silt. The stream banks are moderately stable along both shores, with only small areas of erosion; along the north shore above the bridge, rip-rapp lines the stream. At the sampling site the banks are covered with tall grass and shrubs. The riparian zone is narrow at the sampling site because of a road that runs parallel to the stream along the north shore and nearby fields along the south shore. It is much wider both downstream and upstream of the sampling site. This sampling location is in Mohawk River Basin Waterbody Inventory segment # 1201-0078. An Intensive Network Site on this stream was sampled during the 2001 RIBS cycle near its mouth in the Village of Fort Plain.

Water Column Chemistry

The parameters of concern in the water column are total dissolved solids and mercury.

Macroinvertebrates

Macroinvertebrate sampling indicated non- to slightly impacted water quality conditions. The community was slightly altered from natural conditions, some sensitive species were not present and the overall abundance of macroinvertebrates was lower than was expected. However, the effects on the fauna appeared to be relatively minor and water quality was considered to be good.

Sediments

The PEC-Q for this site is 0.10 indicating that the sediments at this site are unlikely to cause adverse biological effects to sediment-dwelling organisms. Nickel levels exceed the TEC while Dieldrin and Benzo(a)anthacene levels fall between the Method Reporting Limit (MRL) and Method Detection Limit (MDL) and are, therefore, considered to be estimated at levels exceeding the TEC. The detection limits for Fluorene, Naphthalene, all Aroclors, Endrin and Heptachlor Epoxide exceed the TEC and since these chemicals were not detected it is unknown whether they are at levels of concern.

Toxicity Testing

Chronic toxicity testing using water from this location detected a reduction in reproductive rate for the September event as compared to the Control. No significant mortality effects were detected. Screening for acute toxicity using Microtox® indicated no sediment or porewater toxicity.

Otsquago Creek in Starkville

2006 Water Column Chemistry

Parameter of Concern	Number of Samples	Assessment Criteria	% > RIBS Criterion	Maximum Value	Median Value	Median to Criterion Ratio
Mercury	9	*	55	0.031µg/l	*	*
TDS	9	500mg/l	44	1,020mg/l	471mg/l	0.94

* Any concentration above the instrument detection limit is treated as a parameter of concern.

2006 Bacteriological Results

DATE	TOTAL COLIFORM colonies/100ml	FECAL COLIFORM colonies/100ml
4/3/2006	100	80
4/24/2006	980	140
5/15/2006	1,180	120
6/5/2006	1,100	460
7/3/2006	1,320	140
8/9/2006	860	100
8/30/2006	1,700	860
9/20/2006	1,000	<20
10/10/2006	600	<20
10/30/2206	1,360	140

Kick Sample Results

Date	Species Richness	Biotic Index	EPT Richness	% Model Affinity	BAP	Assessment
8/16/2005	27	4.62	91	56	7.02	Slightly impacted
7/31/2006	22	4.23	12	72	7.68	Non-Impacted

Otsquago Creek in Starkville

2006 Toxicity Testing Results

Collection/Test Start Date	Reproductive Rate Young/♀/7days (% Control)	% Survival (7-days)
04-24/04-28	29.3 (103)	100
***07-03/07-07	14.8 (73)	90
09-20/09-22	**10.9 (56)	70

** Statistically significant difference in reproductive rate from the control.
***Samples collected after severe flooding along the Mohawk River from June 26-29. Results should be interpreted with caution as they are not representative of ambient conditions.

2006 Microtox® Results

Collection/Test Date	Sediment EC50 (%)	Porewater EC50 (%)
08-03/11-29 & 30	42.67	>100

2006 Detected Sediment contaminant levels relative to respective MacDonald SQGs

CATEGORY	Analytes > TEC	Analytes > PEC
METALS	Nickel	No exceedances
PAHS	Benzo(a)anthracene*	No exceedances
PESTICIDES	Dieldrin*	No exceedances
PCBS	No exceedances	No exceedances

* Concentration is between the Method Reporting Limit (MRL) and Method Detection Limit (MDL) and is, therefore, considered estimated.

Intensive Site Monitoring Summary | Mohawk River Watershed

Station ID: 12011901

Caroga Creek in Palatine
at State Route 5

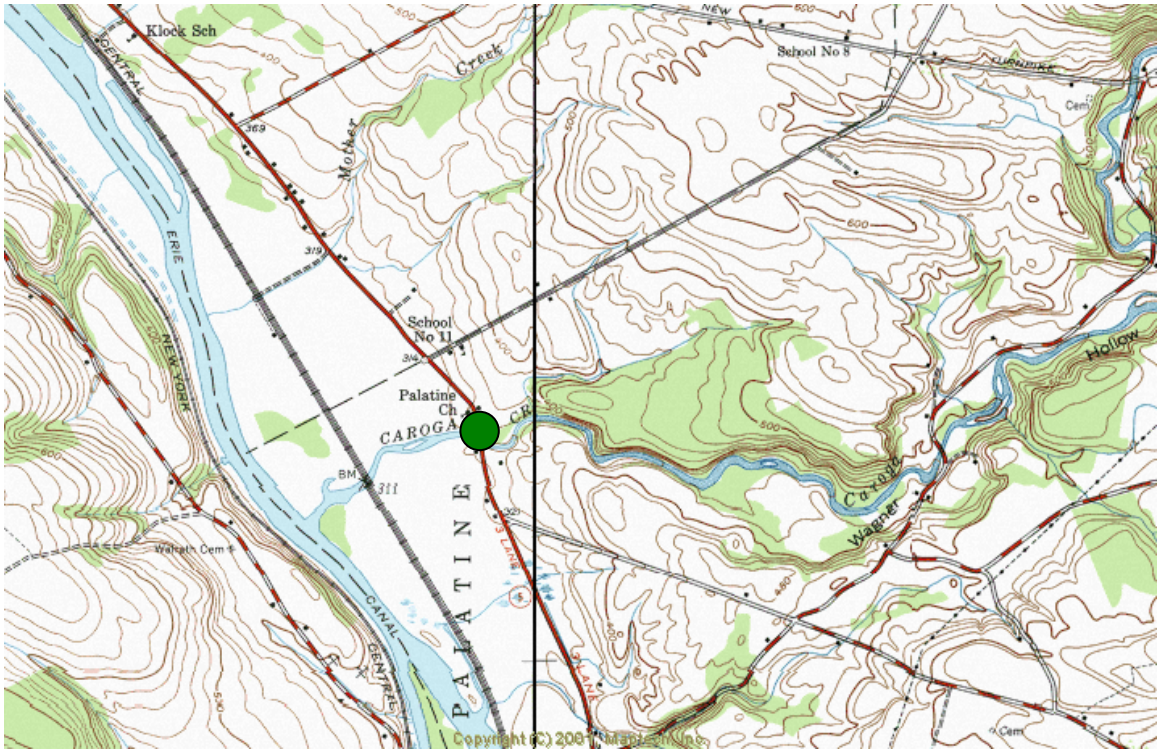
LOCATION DATA

Latitude:	42° 58' 05"	Topo Map Name:	Ft. Plain
Longitude:	74° 37' 42"	SBU ID:	CARO 01
County:	Montgomery	PWL Segment:	1201-0076

HYDROLOGIC BASIN DATA

Water Index Number:	H-240-127	Station Period of Record:	2006
Stream Classification:	C		

SAMPLING LOCATION



ASSESSMENT SUMMARY

Caroga Cree**k** in the Town of Palatine, Montgomery County was sampled at State Route 5, less than one mile above its confluence with the Mohawk River. The surrounding land is rural and land use is agricultural. This river segment is designated Class C, with fishing and other secondary recreation as best designated uses. The stream at this point is 4 – 5 meters wide. Current speed is fast to moderate and uniform across the stream bed. A well-developed riffle is present across the stream. Downstream of the bridge is an area of deeper, slower moving water. The bottom substrate is composed of rock, cobble, gravel, sand, and silt. The stream banks are stable, and show little evidence of erosion, being covered with tall grass, and shrubs. There is no canopy over the stream at the sampling site, but upstream trees line the banks and create canopy cover. The riparian zone is narrow at the site and downstream; it is wider upstream. This sampling location is in Mohawk River Basin Waterbody Inventory segment # 1201-0076.

Water Column Chemistry
The parameters of concern in the water column are iron and mercury.

Macroinvertebrates
Macroinvertebrate sampling indicated non-impacted conditions. The samples were dominated by clean-water species, reflecting a natural community with minimal human impacts.

Sediments
The PEC-Q for this site is 0.04 indicating that the sediments at this site are unlikely to cause adverse biological effects to sediment-dwelling organisms. Dieldrin levels fall between the Method Reporting Limit (MRL) and Method Detection Limit (MDL) and are considered to be estimated at a level slightly above the TEC. The detection limits for Endrin, several PAHs and all Aroclors exceed the TEC and these chemicals were not detected; therefore, it cannot be determined whether their levels are of concern.

Toxicity Testing
Chronic toxicity testing using water from this location detected no significant reproductive or mortality effects on the test organism *Ceriodaphnia dubia*. Screening for acute toxicity using Microtox® indicated moderate sediment toxicity, but no porewater toxicity. The observed sediment toxicity may be overestimated due to a potential sulfur interference.

Caroga Creek in Palatine

2006 Water Column Chemistry

Parameter of Concern	Number of Samples	Assessment Criteria	% > RIBS Criterion	Maximum Value	Median Value	Median to Criterion Ratio
Iron	10	1,000µg/l	40	1,180µg/l	337µg/l	0.34
Mercury	10	*	40	0.035µg/l	*	*

* Any concentration above the instrument detection limit is treated as a parameter of concern.

2006 Bacteriological Results

DATE	TOTAL COLIFORM colonies/100ml	FECAL COLIFORM colonies/100ml
4/3/2006	280	40
4/24/2006	860	160
5/15/2006	1,500	60
6/5/2006	420	100
7/3/2006	1,280	100
8/9/2006	480	140
8/30/2006	1,240	360
9/20/2006	320	40
10/10/2006	240	<20
10/30/2206	760	60

Kick Sample Results

Date	Species Richness	Biotic Index	EPT Richness	% Model Affinity	BAP	Assessment
8/16/2005	26	3.68	13	72	8.24	Non-impacted
7/31/2006	36	4.24	18	80	9.2	Non-impacted

Caroga Creek in Palatine

2006 Toxicity Testing Results

Collection/Test Start Date	Reproductive Rate Young/♀/7days (% Control)	% Survival (7-days)
04-24/04-28	34.5 (122)	100
***07-03/07-07	19.1 (94)	100
09-20/09-22	23.8 (123)	100

***Samples collected after severe flooding along the Mohawk River from June 26-29. Results should be interpreted with caution as they are not representative of ambient conditions.

2006 Microtox® Results

Collection/Test Date	Sediment EC50 (%)	Porewater EC50 (%)
08-03/11-29 & 30	3.42	>100

2006 Detected Sediment contaminant levels relative to respective MacDonald SQGs

CATEGORY	Analytes > TEC	Analytes > PEC
METALS	No exceedances	No exceedances
PAHS	No exceedances	No exceedances
PESTICIDES	Dieldrin*	No exceedances
PCBS	No exceedances	No exceedances

* Concentration is between the Method Reporting Limit (MRL) and Method Detection Limit (MDL) and is, therefore, considered estimated.

Station ID: 12012203

Spruce Creek in Salisbury Center
at Kingsley Road

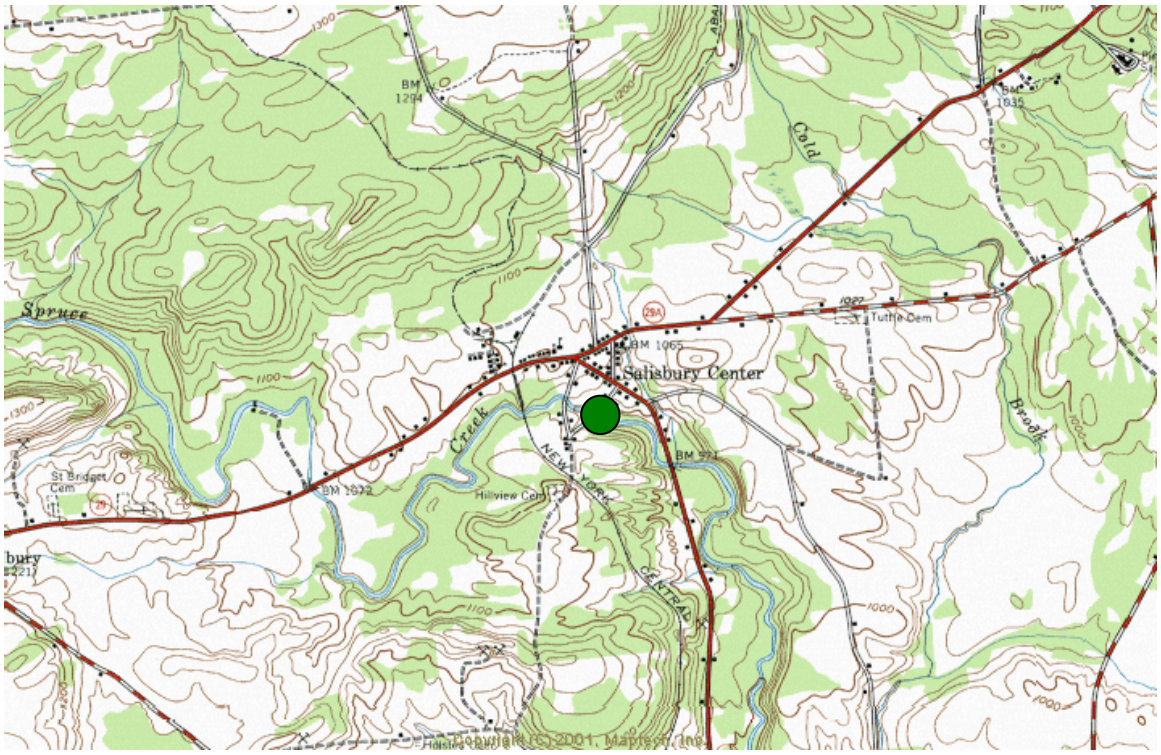
LOCATION DATA

Latitude:	43° 08' 25"	Topo Map Name:	Salisbury
Longitude:	74° 47' 10"	SBU ID:	SPRC 01
County:	Herkimer	PWL Segment:	1201-0156

HYDROLOGIC BASIN DATA

Water Index Number:	H-240-144-9	Station Period of Record:	2006
Stream Classification:	CTS		

SAMPLING LOCATION



ASSESSMENT SUMMARY

Spruce Creek in Salisbury Center, Herkimer County was sampled at Kingsley Road, approximately 3 miles above its confluence with East Canada Creek. The surrounding land is a village setting with small businesses serving the community, as well as a small park upstream of the sampling site and a densely forested area downstream. The surrounding land is rural agricultural. This segment of the stream is designated Class C(TS), with protection of aquatic life, trout fishing, fish consumption, and recreation, as designated uses. This segment of stream also supports trout spawning. The stream at this point is approximately 7 meters wide. A very steep gradient exists in this area, and a high waterfall is present just below the bridge. At the sampling site itself, current velocity varies across the stream bed, and is faster along the north shore. Portions of the stream bed are exposed and dry during low flows. A well-developed riffle is present across the stream. Downstream of the bridge along the south shore is a pooled area of slower/deeper water. The bottom substrate is composed primarily of bedrock with rock, cobble, gravel, and sand present in some areas. The stream banks are moderately stable along both shores and show little evidence of erosion. They slope gradually to the water at the site, but are steeper downstream. Some canopy exists along the shore. The riparian is narrow at the sampling site, but it is wider downstream. . This sampling location is in Mohawk River Basin Waterbody Inventory segment # 1201-0156.

Water Column Chemistry

The parameters of concern in the water column are dissolved aluminum and mercury.

Macroinvertebrates

Macroinvertebrate sampling results indicated non-impacted conditions. The samples were diverse and dominated by clean-water species; the community was natural, indicating minimal human impacts.

Sediments

The PEC-Q for this site is 0.14 indicating that the sediment quality, while not likely to cause chronic toxicity to sediment-dwelling organisms, is of concern. Phenanthrene levels exceed the PEC. Lead and several PAHs exceed the TEC. Anthracene, Dibenzo(a,h)anthracene and Fluorene levels fall between the Method Reporting Limit (MRL) and Method Detection Limit (MDL) and are, therefore, considered to be estimated at levels above the TEC. Detection limits for Naphthalene, all Aroclors, Dieldrin and Heptachlor Epoxide exceed the TEC while that for alpha-Chlordane exceeds the PEC. Since these chemicals were not detected, the affect they might have on sediment-dwelling organisms cannot be assessed.

Toxicity Testing

Chronic toxicity testing using water from this location detected no significant reproductive or mortality effects on the test organism *Ceriodaphnia dubia*. Screening for acute toxicity using Microtox® indicated no sediment or porewater toxicity.

Spruce Creek in Salisbury Center

2006 Water Column Chemistry

Parameter of Concern	Number of Samples	Assessment Criteria	% > RIBS Criterion	Maximum Value	Median Value	Median to Criterion Ratio
Mercury	10	*	50	0.037µg/l	*	*
Diss. Al	10	100µg/l	50	190µg/l	103µg/l	1.0

* Any concentration above the instrument detection limit is treated as a parameter of concern.

2006 Bacteriological Results

DATE	TOTAL COLIFORM colonies/100ml	FECAL COLIFORM colonies/100ml
4/3/2006	640	<20
4/24/2006	960	540
5/15/2006	1,480	260
6/5/2006	560	80
7/3/2006	540	100
8/9/2006	680	20
8/30/2006	640	80
9/20/2006	160	20
10/10/2006	280	<20
10/30/2206	500	<20

Kick Sample Results

Date	Species Richness	Biotic Index	EPT Richness	% Model Affinity	BAP	Assessment
8/16/2005	27	3.64	17	63	8.35	Non-impacted
7/31/2006	26	3.46	15	78	8.68	Non-impacted

Spruce Creek in Salisbury Center

2006 Toxicity Testing Results

Collection/Test Start Date	Reproductive Rate Young/♀/7days (% Control)	% Survival (7-days)
04-24/04-28	30.1 (106)	100
***07-03/07-07	18.4 (90)	100
09-20/09-22	20.5 (106)	100

***Samples collected after severe flooding along the Mohawk River from June 26-29. Results should be interpreted with caution as they are not representative of ambient conditions.

2006 Microtox® Results

Collection/Test Date	Sediment EC50 (%)	Porewater EC50 (%)
08-03/11-29 & 30	56.93	>100

2006 Detected Sediment contaminant levels relative to respective MacDonald SQGs

CATEGORY	Analytes > TEC	Analytes > PEC
METALS	Lead	No exceedances
PAHS	Anthracene*, Benzo(a)anthracene, Benzo(a)pyrene, Chrysene, Dibenzo(a,h)anthracene*, Fluoranthene, Fluorene*, and Pyrene	Phenanthrene
PESTICIDES	No exceedances	No exceedances
PCBS	No exceedances	No exceedances

* Concentration is between the Method Reporting Limit (MRL) and Method Detection Limit (MDL) and is, therefore, considered estimated.

Station ID: 12012302

Middle Sprite Creek in Oppenheim
at Lottville Road

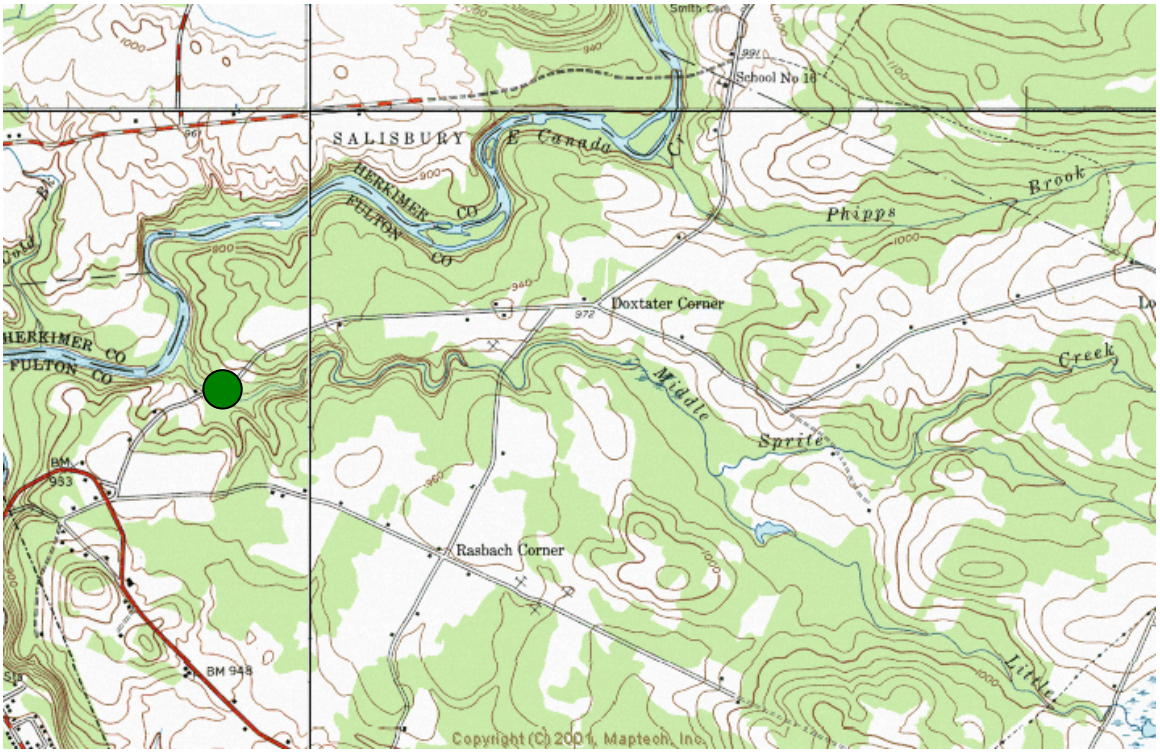
LOCATION DATA

Latitude:	43° 06' 48"	Topo Map Name:	Oppenheim
Longitude:	74° 45' 18"	SBU ID:	SPRT 01
County:	Fulton	PWL Segment:	1201-0163

HYDROLOGIC BASIN DATA

Water Index Number:	H-240-144-11	Station Period of Record:	2006
Stream Classification:	CT		

SAMPLING LOCATION



ASSESSMENT SUMMARY

Middle Sprite Creek was sampled in the Town of Oppenheim, Herkimer County at Lottville Road, less than one-half mile above its confluence with East Canada Creek. The surrounding land is rural and densely forested. This segment of the stream is designated Class C(T), with protection of aquatic life, trout fishing, fish consumption, and recreation, as designated uses. The stream at this point is approximately 10 meters wide. Current speeds are moderate to slow, and uniform across the stream bed. Upstream portions of the stream bed are exposed and dry during low flows. A well-developed riffle area is present. The bottom substrate has large areas of bedrock, but areas of rock, cobble, gravel, sand, and silt are also present. Upstream the stream banks are stable, having only small areas of erosion, but downstream along the west shore, the bank is more unstable and has large eroded areas The riparian zone is wide along both stream banks. This sampling location is in Mohawk River Basin Waterbody Inventory segment # 1201-0163.

Water Column Chemistry

The parameters of concern in the water column are dissolved aluminum and mercury.

Macroinvertebrates

Macroinvertebrate sampling results indicated non-impacted water qualities conditions. The samples were dominated by clean-water species and most similar to natural communities with minimal human impacts.

Sediments

The PEC-Q for this site is 0.03 indicating that the sediments at this site are unlikely to cause adverse biological effects to sediment-dwelling organisms. No contaminants were detected at levels above the TEC at this site. However, the detection limit for alpha-Chlordane exceeds the PEC while those for several PAHs, all Aroclors, DDD and Dieldrin exceed respective TECs. Since these chemicals were not detected, an assessment based on their effect on sediment quality cannot be determined.

Toxicity Testing

Chronic toxicity testing using water from this location detected no significant reproductive or mortality effects on the test organism *Ceriodaphnia dubia*. Screening for acute toxicity using Microtox® indicated no sediment or porewater toxicity.

Middle Sprite Creek in Oppenheim

2006 Water Column Chemistry

Parameter of Concern	Number of Samples	Assessment Criteria	% > RIBS Criterion	Maximum Value	Median Value	Median to Criterion Ratio
Dissolved Aluminum	10	100µg/l	60	287µg/l	146µg/l	1.5
Mercury	10	*	50	0.037µg/l	*	*

* Any concentration above the instrument detection limit is treated as a parameter of concern.

2006 Bacteriological Results

DATE	TOTAL COLIFORM colonies/100ml	FECAL COLIFORM colonies/100ml
4/3/2006	100	<20
4/24/2006	580	80
5/15/2006	940	<20
6/5/2006	680	60
7/3/2006	600	80
8/9/2006	360	<20
8/30/2006	680	140
9/20/2006	400	<20
10/10/2006	220	<20
10/30/2206	240	60

Kick Sample Results

Date	Species Richness	Biotic Index	EPT Richness	% Model Affinity	BAP	Assessment
8/16/2005	30	4.02	13	56	7.93	Non-impacted
7/31/2006	20	3.8	11	74	7.56	Non-impacted

Middle Sprite Creek in Oppenheim

2006 Toxicity Testing Results

Collection/Test Start Date	Reproductive Rate Young/♀/7days (% Control)	% Survival (7-days)
04-24/04-28	26.2 (92)	100
***07-03/07-07	20.1 (99)	100
09-20/09-22	17.9 (92)	100

***Samples collected after severe flooding along the Mohawk River from June 26-29. Results should be interpreted with caution as they are not representative of ambient conditions.

2006 Microtox® Results

Collection/Test Date	Sediment EC50 (%)	Porewater EC50 (%)
08-03/11-29 & 30	64.42	>100

2006 Detected Sediment contaminant levels relative to respective MacDonald SQGs

CATEGORY	**Analytes > TEC**	**Analytes > PEC**
METALS	No exceedances	No exceedances
PAHS	No exceedances	No exceedances
PESTICIDES	No exceedances	No exceedances
PCBS	No exceedances	No exceedances

Mohawk River Watershed Screening Sites (HUC: 02020004)
August 16-18, 2005

Name/ID	Sampling Location	PWL Segment	Stream Class.	BAP	Macroinvertebrate Assessment	Microtox® Toxicity
Ayers Creek AYER 01	Straford, Fulton County Piseco Road culvert 43.190556; -74.680556	1201-0174	C(TS)	7.36	slightly impacted	Not sampled
Ballou Creek BALU 01	Utica, Oneida County Downstream of CSO outlet 43.101389; -75.200833	1201-0203	C	0.98	severely impacted	Not sampled
Beaver Brook BEVB 01	Little Falls, Herkimer County Rt. 5 43.022778; -74.922222	1201-0192	C(T)	7.22	slightly impacted	Sediment: Moderate Porewater: Non-Toxic
Beaver Creek BEVK 01	East of Fairfield, Herkimer County Beaver Road 43.153056; -74.879444	1201-0159	AA(T)	8.08	non-impacted	Not sampled
Beaver Brook BVCK 01	Holland Patent, Oneida County 40m above Fox Road 43.236389; -75.252778	1201-0014	B(T)	7.4	slightly impacted	Not sampled
Big Creek BICK 01	Deansboro, Oneida County California Road 42.957778; -75.420556	1204-0010	C	6.3	slightly impacted	Not sampled
Bonny Creek BONN 01	Frankfort, Herkimer County Old CR 5S 43.055556; -75.093611	1201-0056	C	7.12	slightly impacted	Not sampled
Bunn Creek BUNN 01	Amsterdam, Montgomery County CR 15 42.971389; -74.181667	1201-0108	A(T)	5.59	slightly impacted	Not sampled
Canajoharie Creek CAJO 05	Canajoharie, Montgomery County 200 m above Montgomery Road bridge 42.905000; -74.571667	1201-0027	C	7.57	non-impacted	Not sampled

Mohawk River Watershed Screening Sites (HUC: 02020004)
August 16-18, 2005

Name/ID	Sampling Location	PWL Segment	Stream Class.	BAP	Macroinvertebrate Assessment	Microtox® Toxicity
Caroga Creek CARO 00	Ephratah, Fulton County SR. 10 43.001944; -74.539167	1201-0076	C(T)	8.24	non-impacted	Not sampled
Cayadutta Creek CAYA 02	Sammonsville, Fulton County 40 m above Rt. 334 bridge, 1.9 mi. below STP 42.986667; -74.430278	1201-0001	C	5.76	slightly impacted	Sediment: Slight Porewater: Non-Toxic
Cincinnati Creek CINC 02	Mapledale, Oneida County 30 m above Rt. 28 bridge 43.24611, -75.154722	1203-0010	C(T)	8.34	Non-impacted	Not sampled
Cranes Hollow Creek CRAH 01	Craneville, Montgomery County CR. 2 42.918333; -74.136667	1201-0105	C	9.24	non-impacted	Not sampled
Mohawk River, East Branch MHKE 01	Ava, Oneida County 50 m below CR. 67 bridge 43.420000; -75.465278	1201-0222	A(T)	7.42	slightly impacted	Not sampled
East Canada Creek CANE 05	East Creek, Herkimer County 20 m above Rt. 5 bridge 43.005833; -74.741667	1201-0081	C(T)	8.41	non-impacted	Not sampled
Factory/Big Bills Brook BILB 01	Norway, Herkimer County CR. 11 43.197222; -74.99	1203-0030	C	8.29	non-impacted	Not sampled
Ferguson Creek FERG 01	Frankfort Ctr., Herkimer County Welbush Road bridge (CR. 13) 43.066944; -75.153889	1201-0025	C(T)	6.55	slightly impacted	Not sampled

Mohawk River Watershed Screening Sites (HUC: 02020004)
August 16-18, 2005

Name/ID	Sampling Location	PWL Segment	Stream Class.	BAP	Macroinvertebrate Assessment	Microtox® Toxicity
Hall Creek HALL 02	Johnstown, Fulton County 30 m above Pleasant Avenue bridge 43.010556; -74.3775	1201-0106	C	5.17	slightly impacted	Sediment: Moderate Porewater: Non-Toxic
Healy Kill HEAL 01	Perth, Fulton County CR 132/Fowler Road 42.993889; -74.124722	1201-0001	C	6.12	slightly impacted	Sediment: Slight Porewater: Non-Toxic
Honnedaga Brook HONN 01	Morehouse, Hamilton County Haskell Road at above confluence with West Canada Creek 43.470833; -74.771944	1203-0025	C(T)	7.37	slightly impacted	Not sampled
Hurlburt Glen Brook HBUT 01	Canterbury Hill, Oneida County Smith Road bridge 43.2704745477; -75.3840163867	1201-0214	C	4.33	moderately impacted	Sediment: Moderate Porewater: Non-Toxic
Knauderack Creek KNAU 01	Palantine, Montgomery County below SR. 5 42.898889; -74.492222	1201-0126	C(T)	7.64	non-impacted	Not sampled
Kreskern Brook KRES 01	Northwoods, Herkimer County Pardee Road bridge 43.363333; -75.053333	1203-0037	AA(T)	6.86	slightly impacted	Not sampled
Lisha Kill LISH 03	Niskayuna, Schenectady County 30 m above Rt. 7 42.783333; -73.857778	1201-0074	B(T)	6.48	slightly impacted	Not sampled
Little Sprite Creek LSPR 01	Oppenheim, Fulton County Belden Corners Road 43.099444; -74.702778	1201-0163	C(T)	5.86	slightly impacted	Sediment: Slight Porewater: Non-Toxic

Mohawk River Watershed Screening Sites (HUC: 02020004)
August 16-18, 2005

Name/ID	Sampling Location	PWL Segment	Stream Class.	BAP	Macroinvertebrate Assessment	Microtox® Toxicity
Matthew Creek MATT 01	Johnstown, Fulton County 20 m above O'Neil Road bridge 43.020278; -74.375278	1201-0225	C(T)	5.4	slightly impacted	Not sampled
Kayaderosseras/ McQueen Creek MCQU 01	Fort Johnson, Montgomery County Rt. 67 bridge 42.961389; -74.241111	1201-0115	C(T)	6.47	slightly impacted	Not sampled
Mill Creek MLLC 01	North Blenheim, Schoharie County CR. 2 42.469444; -74.467222	1203-0045	A(T)	8.04	non-impacted	Not sampled
Mohawk River MOHK 19A (multiplate)	Fonda, Montgomery County green buoy 277, below Rt. 30A bridge 42.950278; -74.369722	1201-0089	C	3.95 2.74 6.19	moderately impacted moderately impacted slightly impacted	Not sampled
Mohawk River HOHK 13 (multiplate)	Little Falls, Herkimer County Green buoy 459, below lock 17 43.037778; -74.840556	1201-0091	C	4.85 5.62 7.88	moderately impacted slightly impacted non-impacted	Not sampled
Mounts Creek MOUN 01	Above Gray, Herkimer County CR. 4 43.305278; -74.942778	1203-0043	A(T)	6.86	slightly impacted	Not sampled
Moyer Creek MOYR 01	Frankfort, Herkimer County Main Street 43.041111; -75.072778	1201-0057	B(T)	7.62	non-impacted	Not sampled
Nail Creek NAIL 01	Utica, Oneida County Haak Road 43.108889; -75.2425	1201-0093	C	1.16	severely impacted	Not sampled

Mohawk River Watershed Screening Sites (HUC: 02020004)
August 16-18, 2005

Name/ID	Sampling Location	PWL Segment	Stream Class.	BAP	Macroinvertebrate Assessment	Microtox® Toxicity
Ninemile Creek NMIL 01	Marcy, Oneida County 200 m above River Road bridge 43.183333; -75.330278	1201-0014	B(T)	8.25	non-impacted	Not sampled
North Branch Mill Creek MLLK N	Above Gray, County Teacup Road 42.285833; -74.918333	1203-0045	A(T)	6.07	slightly impacted	Not sampled
North Chuctanunda Creek NCHU 01	Galway, Saratoga County Greens Corner Road 43.068056; -74.067222	1201-0107	C	5.28	slightly impacted	Not sampled
North Creek NORT 01	Lasselville/Ephratah, Fulton County above Fort Plain Reservoir 43.027778; -74.574722	1201-0047	AA(T)	6.93	slightly impacted	Sediment: Slight Porewater: Non-Toxic
North Creek NRCK 01	Knappville, Fulton County Piseco Road 43.231389; -74.659722	1201-0179	C	5.9	slightly impacted	Not sampled
Nowadaga Creek NOWA 01	Indian Castle, Herkimer County 10m below Rt. 5S bridge 43.00444; -74.779444	1201-0193	C	6.02	slightly impacted	Sediment: Moderate Porewater: Non-Toxic
Oriskany Creek ORSK 04	Kirkland, Oneida County 200 m above Rt. 5 bridge 43.075556; -75.38	1204-0010	B(TS)	7.05	slightly impacted	Not sampled
Plotter Kill PLOT 01	Lower Rotterdam Junction, Schenectady County Rt. 5S bridge 42.845833; -74.0125	1201-0102	C	6.23	slightly impacted	Sediment: Slight Porewater: Non-Toxic

Mohawk River Watershed Screening Sites (HUC: 02020004)
August 16-18, 2005

Name/ID	Sampling Location	PWL Segment	Stream Class.	BAP	Macroinvertebrate Assessment	Microtox® Toxicity
Potash Creek POTS 01	Stokes Corners, Oneida County CR. 53 bridge 43.303611; -75.465556	1201-0215	A(T)	6.84	slightly impacted	Not sampled
Ransom/Gillette Creek GILT 01	South of Dolgeville, Herkimer County CR. 167 43.082222; -74.793889	1201-0155	C	7.48	slightly impacted	Not sampled
Reall Creek REAL 01	Deerfield, Oneida County 100 m above Firehouse Road bridge 43.125556; -75.205556	1201-0205	C	4.82	moderately impacted	Sediment: Slight Porewater: Non-Toxic
West Canada Creek-South Branch CANS 01	East of Morehouseville, Hamilton County Mountain Home Road 43.399444; -74.740556	1203-0059	C(T)	7.65	non-impacted	Not sampled
Sandsea Kill SANS 01	Pattersonville, Schenectady County Rt. 5S bridge 42.888889; -74.077778	1201-0103	C	7.65	non-impacted	Not sampled
Shakers Creek SHAK 03	Latham, Albany County 50 m above Mill Road bridge 42.766389; -73.789167	1201-0079	C	4.59	moderately impacted	Not sampled
Six Mile Creek SIXM 01	Rome, Oneida County 10 m below Rickmyer Road bridge 43.211389; -75.3825	1201-0212	C(TS)	3.5	moderately impacted	Not sampled
Slate Creek SLAT 01	Floyd, Oneida County Rickmeyer Road bridge 43.215833; -75.376944	1201-0212	C(TS)	7.55	non-impacted	Not sampled

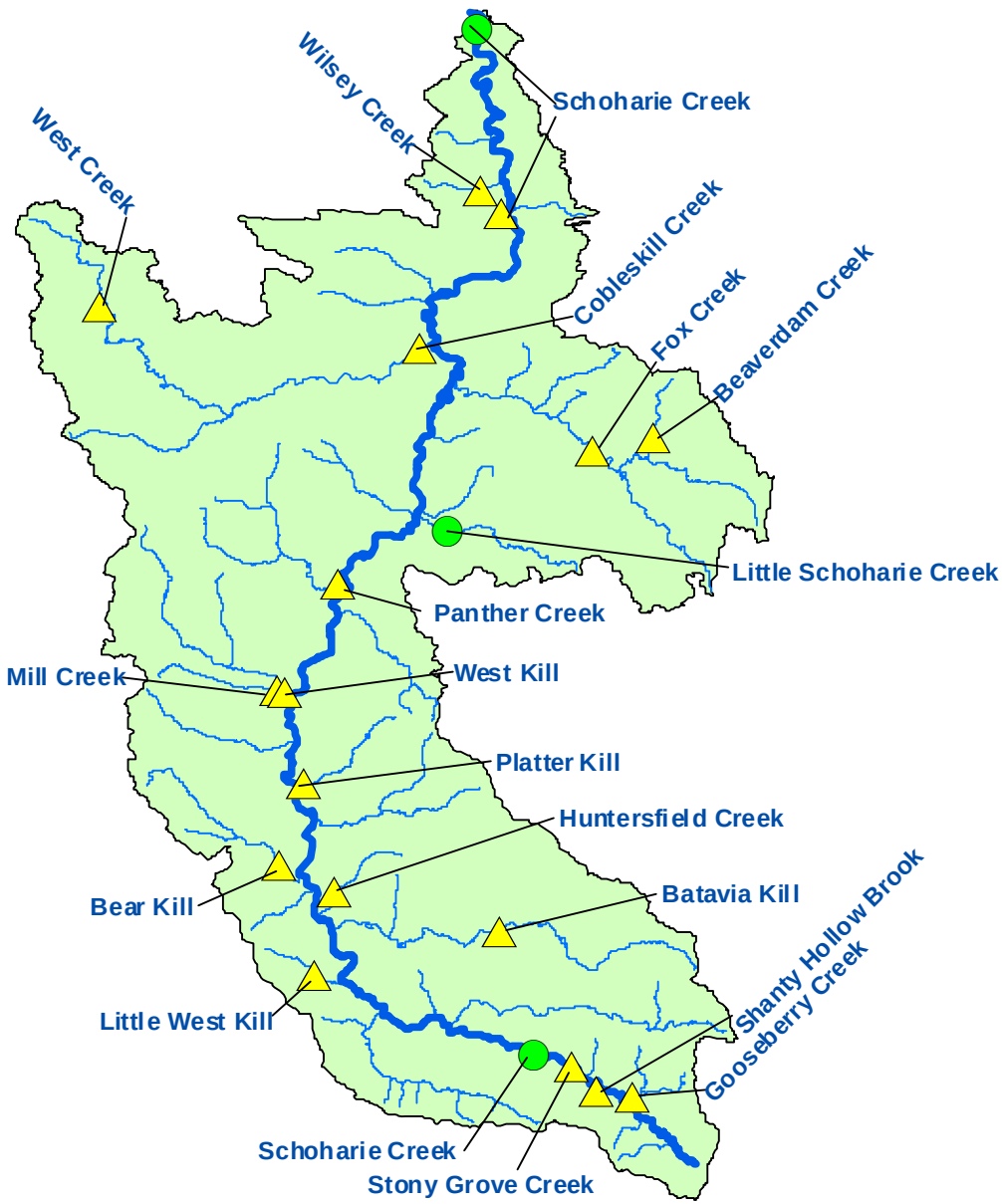
Mohawk River Watershed Screening Sites (HUC: 02020004)
August 16-18, 2005

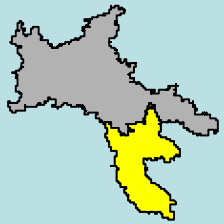
Name/ID	Sampling Location	PWL Segment	Stream Class.	BAP	Macroinvertebrate Assessment	Microtox® Toxicity
Sprite Creek SPRK 01	Oppenheim, Fulton County Voorhees Road 43.130556; -74.723056	1201-0165	C(T)	8.01	non-impacted	Not sampled
Sprite Creek SPIT 00	Ephratah, Fulton County Mud Road 43.010278; -74.518333	1201-0134	C(T)	4.33	moderately impacted	Not sampled
Sprite Creek SPIT 01	Ephratah, County SR. 10/67 43.001667; -74.539444	1201-0134	C(T)	6.26	slightly impacted	Not sampled
Starch Factory Brook STCH 01	Utica, Oneida County Off Broad Street, behind Post Office 43.095278; -75.185278	1201-0067	B	6.06	slightly impacted	Not sampled
Steele Creek STLE 01	Ilion, Herkimer County Clark Street at dead end & Power station 43.019722; -75.041667	1201-0011	C(TS)	6.72	slightly impacted	Not sampled
Sterling Creek STER 01	East Schuyler, Herkimer County Rt. 5 bridge 43.076111; -75.112222	1201-0013	C	5.36	slightly impacted	Not sampled
Steuben Creek STEU 01	Above Barneveld, Oneida County 30 m above McDonald Road bridge 43.289167; -75.225	1203-0013	C(T)	6.12	slightly impacted	Not sampled
Stony Creek STCR 01	Vischers Ferry, Saratoga County 15 yds below Riverview Road bridge (firehouse) 42.796667; -73.830278	1201-0097	C(T)	5.39	slightly impacted	Not sampled

Mohawk River Watershed Screening Sites (HUC: 02020004)
August 16-18, 2005

Name/ID	Sampling Location	PWL Segment	Stream Class.	BAP	Macroinvertebrate Assessment	Microtox® Toxicity
Stringer Brook STRI 01	Northwestern, Oneida County Rt. 46 bridge 43.346389; -75.368333	1201-0219	A(T)	7.65	non-impacted	Not sampled
Terwilliger Creek TERW 01	South Amsterdam, Montgomery County SR. 5S bridge 42.900000; -74.2	1201-0104	C	4.61	moderately impacted	Not sampled
Three Mile Creek THRE 01	Rome, Oneida County 40 m below Rt. 365 43.202500; -75.396111	1201-0223	C	4.01	moderately impacted	Sediment: Slight Porewater: Non-Toxic
West Branch of East Canada Creek CANE W	Arietta, Hamilton County Powley Road 43.309722; -74.654167	1201-0154	C(T)	6.65	slightly impacted	Not sampled
Wheelers Creek WHEE 01	Rome, Oneida County Rt. 26 bridge, near Rome/Westmoreland line 43.171944; -75.483611	1201-0213	C	5.44	slightly impacted	Not sampled
White Creek WITE 01	Franklin Springs, Oneida County Grant Road bridge 43.035833; -75.390278	1204-0010	C(T)	7.15	slightly impacted	Not sampled
Wood Creek WOCK 01	West Schuyler, Herkimer County Rt. 5 bridge 43.096667; -75.147222	1201-0025	C	2.32	severely impacted	Sediment: Moderate Porewater: Non-Toxic

Schoharie Creek Watershed





Mohawk River Basin

HUC:02020005

Streams

Watershed

Sampling Sites

Intensive

Screening

N

0 2.5 5 10 Miles

0 3.5 7 14 Kilometers

Intensive Site Monitoring Summary | Schoharie Creek Watershed

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Station ID: 12021001

Schoharie Creek in Ft. Hunter
at State Route 5S

LOCATION DATA

Latitude: 42° 56' 14"
Longitude: 74° 16' 50"
County: Montgomery

Topo Map Name: Tribes Hill
SBU ID: SCHO 18
PWL Segment: 1202-0003

HYDROLOGIC BASIN DATA

Water Index Number: (H-) 240 - 82
Stream Classification: C

Station Period of Record: 2001, 2006

SAMPLING LOCATION

ASSESMENT SUMMARY

Schoharie Creek in Ft. Hunter, Montgomery County was sampled at a foot path bridge just downstream of State Route 5S. This sampling location is 1 mile above the stream's confluence with the Mohawk River. The surrounding land is rural and agricultural. This river segment is designated Class C, with fishing and other secondary recreation as best designated uses. The stream at this point is 60-75 meters wide. Current speed is moderate to slow and uniform across the stream bed. The bottom substrate is composed of rocks, cobble, gravel, sand, and silt. During low flows portions of the stream bottom are exposed and dry. The stream banks are moderately stable along both shores, showing little evidence of erosion. They slop steeply to the water and are covered with grass, shrubs, and trees. The trees create canopy along the shore. The riparian zone is wide along both banks. This sampling location is in Mohawk River Basin Waterbody Inventory segment # 1202-0003. This Intensive Network Site was also sampled during the 2001 RIBS cycle in the Mohawk River Basin.

Water Column Chemistry

The parameters of concern in the water column are iron and mercury.

Macroinvertebrates

Macroinvertebrate sampling results indicated slightly impacted water quality conditions in 2005 and 2006. The community was slightly altered from its natural state. However, the effects on the fauna appear to be small and water quality was considered to be good. The nutrient biotic index and impact source determination indicated little nutrient enrichment in the stream and a fauna that is most similar to natural communities.

Sediments

The PEC-Q for this site is 0.08 indicating that the sediments at this site are unlikely to cause adverse biological effects to sediment-dwelling organisms. However, Nickel levels exceed the TEC while Dieldrin levels fall between the Method Reporting Limit (MRL) and Method Detection Limit (MDL) and are, therefore, considered to be estimated at levels exceeding the TEC. The detection limits for DDD, DDE, DDT, alpha-Chlordane, Lindane, Heptachlor Epoxide, Fluorene and Naphthalene exceed the PEC while those for Anthracene, Dibenzo(a,h)anthracene, Endrin and all the Aroclors exceed the TEC. Since these chemicals were not detected, their effect on sediment-dwelling organisms cannot be determined.

Toxicity Testing

Chronic toxicity testing using water from this location detected no significant reproductive or mortality effects on the test organism *Ceriodaphnia dubia*. Screening for acute toxicity using Microtox® indicated slight sediment toxicity, but no porewater toxicity. The observed sediment toxicity may be overestimated due to potential sulfur interference.

Schoharie Creek in Fort Hunter

2006 Water Column Water Chemistry

Parameter of Concern	Number of Samples	Assessment Criteria	% > RIBS Criterion	Maximum Value	Median Value	Median to Criterion Ratio
Mercury	10	*	50	0.039µg/l	*	*
Iron	10	1,000µg/l	30	2,000µg/l	159µg/l	0.16

* Any concentration above the instrument detection limit is treated as a parameter of concern.

2006 Bacteriological Results

DATE	TOTAL COLIFORM colonies/100ml	FECAL COLIFORM colonies/100ml
4/3/2006	20	<20
4/25/2006	1,280	140
5/17/2006	1,600	580
6/6/2006	1,120	180
7/5/2006	1,820	320
8/8/2006	120	<20
8/29/2006	1,200	820
9/19/2006	380	60
10/12/2006	560	100
11/1/2006	560	<20

Kick Sample Results

Date	Species Richness	Biotic Index	EPT Richness	% Model Affinity	BAP	Assessment
7/31/2006	15	2.77	9	58	6.62	Slightly impacted

Schoharie Creek in Fort Hunter

2006 Toxicity Testing Results

Collection/Test Start Date	Reproductive Rate Young/♀/7days (% Control)	% Survival (7-days)
04-25/04-28	32.3 (114)	100
***07-05/07-07	20.6 (101)	100
09-19/09-22	19.5 (101)	100

***Samples collected after severe flooding along the Mohawk River from June 26-29. Results should be interpreted with caution as they are not representative of ambient conditions.

2006 Microtox® Results

Collection/Test Date	Sediment EC50 (%)	Porewater EC50 (%)
08-03/11-29 & 30	22.68	>100

2006 Detected Sediment contaminant levels relative to respective MacDonald SQGs

CATEGORY	Analytes > TEC	Analytes > PEC
METALS	Nickel	No exceedances
PAHS	No exceedances	No exceedances
PESTICIDES	Dieldrin*	No exceedances
PCBS	No exceedances	No exceedances

* Concentration is between the Method Reporting Limit (MRL) and Method Detection Limit (MDL) and is, therefore, considered estimated.

Intensive Site Monitoring Summary | Schoharie Creek Watershed

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Station ID: 12011081

Schoharie Creek in Jewett
at Deming Road

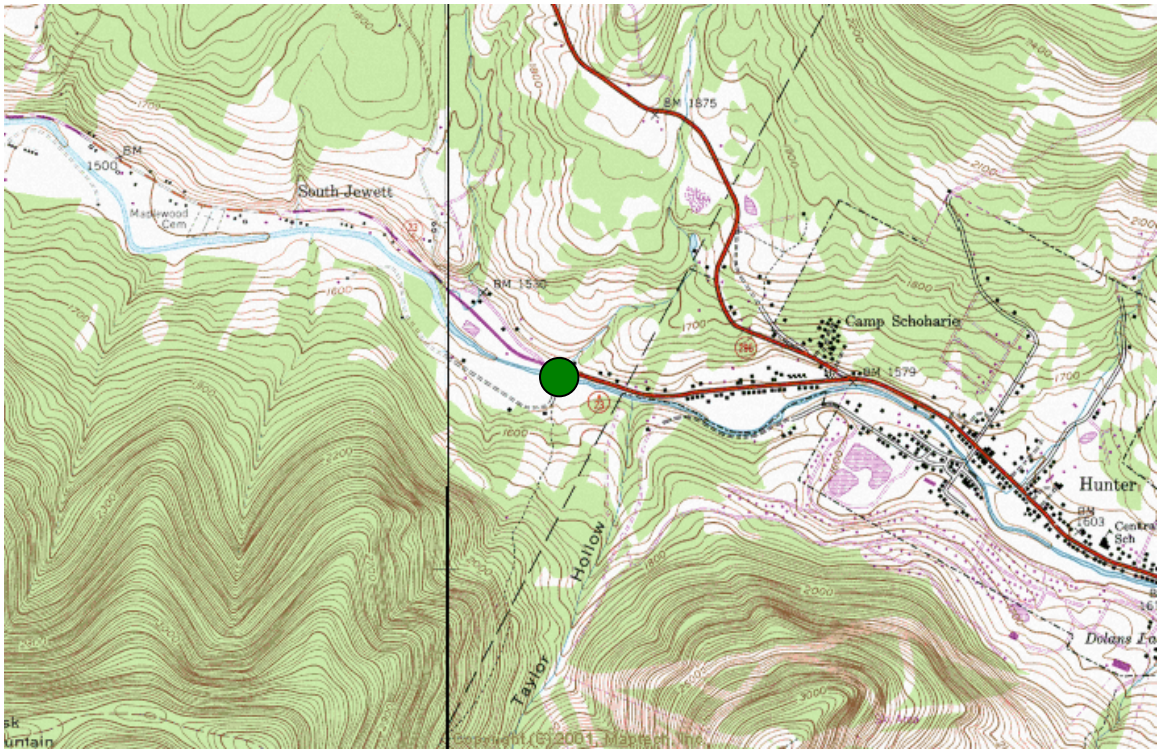
LOCATION DATA

Latitude:	42° 12' 59"	Topo Map Name:	Hunter
Longitude:	74° 14' 36"	SBU ID:	SCHO 10
County:	Greene	PWL Segment:	1201-0021

HYDROLOGIC BASIN DATA

Water Index Number:	H-240-82	Station Period of Record:	2006
Stream Classification:	BTS		

SAMPLING LOCATION



ASSESSMENT SUMMARY

Schoharie Creek in the Town of Jewett, Greene County was sampled at Deming Road, approximately 81 miles above its confluence with the Mohawk River. The surrounding land is rural and agricultural. This segment of stream is designated Class BTS. The best usages of Class B waters are primary and secondary contact recreation and fishing, including trout fishing and trout spawning. The stream at this point is 15-18 meters wide. Current speed is moderate to slow, and uniform across the stream bed. The bottom substrate is composed of rubble, gravel, sand, and silt. The stream banks are stable along both shores and show little evidence of erosion. They slope steeply to the water and are covered with grass, shrubs, and trees. The trees create canopy along the shore. The riparian zone is narrow along the north bank where a road parallels the stream, but wider along the south shore where fields line the stream. This sampling location is in Mohawk River Basin Waterbody Inventory segment # 1202-0021.

Water Column Chemistry

The parameters of concern in the water column are mercury and dissolved copper.

Macroinvertebrates

Macroinvertebrate sampling indicated non- to slightly impacted water quality conditions. The community was altered from natural conditions; however, the effects on the fauna appeared to be relatively minor and water quality was considered to be good.

Sediments

The PEC-Q for this site is 0.05 indicating that the sediments at this site are unlikely to cause adverse biological effects to sediment-dwelling organisms. No contaminants were detected at levels above the TEC at this site. However, detection limits for alpha-Chlordane and Lindane exceed respective PECs while those for several PAHs, all Aroclors, DDD and Dieldrin exceed the TEC. These chemicals were not detected so a determination cannot be made as to their effect on sediment-dwelling organisms.

Toxicity Testing

Chronic toxicity testing using water from this location detected no significant reproductive or mortality effects on the test organism *Ceriodaphnia dubia*. Screening for acute toxicity using Microtox® indicated no sediment or porewater toxicity.

Schoharie Creek in Jewett

2006 Water Column Water Chemistry

Parameter of Concern	Number of Samples	Assessment Criteria	% > RIBS Criterion	Maximum Value	Median Value	Median to Criterion Ratio
Mercury	10	*	40	0.039µg/l	*	*
Diss. Cu	10	2.3µg/l	20	3.2µg/l	1.53µg/l	0.75

* Any concentration above the instrument detection limit is treated as a parameter of concern.

2006 Bacteriological Results

DATE	TOTAL COLIFORM colonies/100ml	FECAL COLIFORM colonies/100ml
4/4/2006	200	40
4/26/2006	120	<20
5/16/2006	300	<20
6/7/2006	820	80
7/6/2006	360	<20
8/10/2006	220	40
8/28/2006	280	100
9/20/2006	240	<20
10/11/2006	140	<20
10/30/2006	220	<20

Kick Sample Results

Date	Species Richness	Biotic Index	EPT Richness	% Model Affinity	BAP	Assessment
8/17/2005	22	4.02	9	78	7.46	Slightly impacted
8/1/2006	34	3.52	21	80	9.31	Non-impacted

Schoharie Creek in Jewett

2006 Toxicity Testing Results

Collection/Test Start Date	Reproductive Rate Young/♀/7days (% Control)	% Survival (7-days)
04-26/04-28	28.6 (101)	100
***07-06/07-07	13.4 (66)	100
09-20/09-22	20.5 (106)	100

***Samples collected after severe flooding along the Mohawk River from June 26-29. Results should be interpreted with caution as they are not representative of ambient conditions.

2006 Microtox® Results

Collection/Test Date	Sediment EC50 (%)	Porewater EC50 (%)
08-04/11-29 & 30	53.67	>100

2006 Detected Sediment contaminant levels relative to respective MacDonald SQGs

CATEGORY	**Analytes > TEC**	**Analytes > PEC**
METALS	No exceedances	No exceedances
PAHS	No exceedances	No exceedances
PESTICIDES	No exceedances	No exceedances
PCBS	No exceedances	No exceedances

Intensive Site Monitoring Summary | Schoharie Creek Watershed

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Station ID: 12022401

Little Schoharie Creek in Middleburgh
at County Route 36

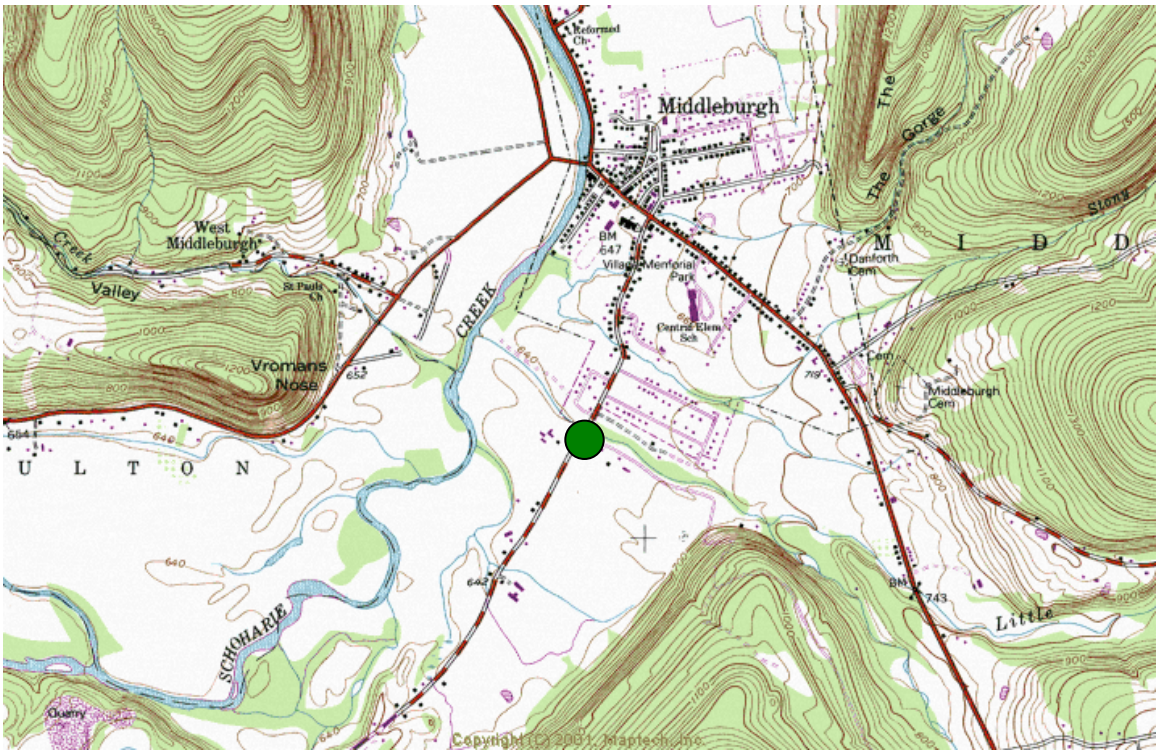
LOCATION DATA

Latitude:	42° 35' 16"	Topo Map Name:	Middleburg
Longitude:	74° 20' 11"	SBU ID:	LSCH 01
County:	Schoharie	PWL Segment:	1202-0046

HYDROLOGIC BASIN DATA

Water Index Number:	H-240-82-89	Station Period of Record:	2006
Stream Classification:	CTS		

SAMPLING LOCATION



ASSESSMENT SUMMARY

Little Schoharie Creek was sampled in the village of Middleburg at the County Route 36 bridge, one-half mile above its confluence with Schoharie Creek. The surrounding land is rural and agricultural. Downstream of the bridge is a dairy farm where cows have access to the stream. This reach is designated Class C(TS), with protection of aquatic life, trout fishing, fish consumption, and recreation, as designated uses. This segment also supports trout spawning. The stream at this point is 6-10 meters wide. Current velocity varies across the stream channel; flow is faster and deeper along the north shore. During low flows portions of the stream bed are exposed and dry. There is an abundant amount of algae along the stream bottom during low flow. A well-developed riffle is present across the stream. Bottom substrate is composed of rocks, cobble, gravel, sand, and silt. At the sampling site, the banks slope steeply to the water and are covered with rock for erosion control. There are small amounts of grass and shrubs on the banks. Upstream and downstream more vegetation covers the banks. There is canopy along the shore where trees line the stream. The riparian zone is narrow at the sampling location, but it is much wider both upstream and downstream. This sampling location is in Mohawk River Basin Waterbody Inventory segment #1202-0046.

Water Column Chemistry

The only parameter of concern in the water column is mercury.

Macroinvertebrates

Macroinvertebrate sampling results indicated non-impacted to slightly impacted water quality conditions to be present at this location.

Sediments

No sediments were collected at this site.

Toxicity Testing

Chronic toxicity testing using water from this location detected no significant reproductive or mortality effects on the test organism *Ceriodaphnia dubia*. No sediment sample was collected for Microtox® acute toxicity testing.

Little Schoharie Creek in Middleburgh

2006 Water Column Water Chemistry

Parameter of Concern	Number of Samples	Assessment Criteria	% > RIBS Criterion	Maximum Value	Median Value	Median to Criterion Ratio
Mercury	10	*	60	0.035µg/l	*	*

* Any concentration above the instrument detection limit is treated as a parameter of concern.

2006 Bacteriological Results

DATE	TOTAL COLIFORM colonies/100ml	FECAL COLIFORM colonies/100ml
4/4/2006	660	1,080
4/26/2006	100	40
5/16/2006	1,180	180
6/7/2006	580	20
7/6/2006	580	260
8/10/2006	1,160	40
8/28/2006	220	<20
9/20/2006	460	140
10/11/2006	180	<20
10/30/2006	640	<20

Kick Sample Results

Date	Species Richness	Biotic Index	EPT Richness	% Model Affinity	BAP	Assessment
8/11/2005	29	4.66	12	78	8.24	Non-impacted
8/1/2006	19	4.28	10	65	6.97	Slightly impacted

Little Schoharie Creek in Middleburgh

2006 Toxicity Testing Results

Collection/Test Start Date	Reproductive Rate Young/♀/7days (% Control)	% Survival (7-days)
04-26/04-28	29.7 (105)	100
***07-06/07-07	14.8 (73)	100
09-20/09-22	16.5 (85)	90

***Samples collected after severe flooding along the Mohawk River from June 26-29. Results should be interpreted with caution as they are not representative of ambient conditions.

2006 Microtox® Results

Collection/Test Date	Sediment EC50 (%)	Porewater EC50 (%)
N/A	N/A	N/A

2006 Detected Sediment contaminant levels relative to respective MacDonald SQGs

No sediments were collected at this site.

Station ID: 12022501

East Kill in Jewett Center
at State Route 23A

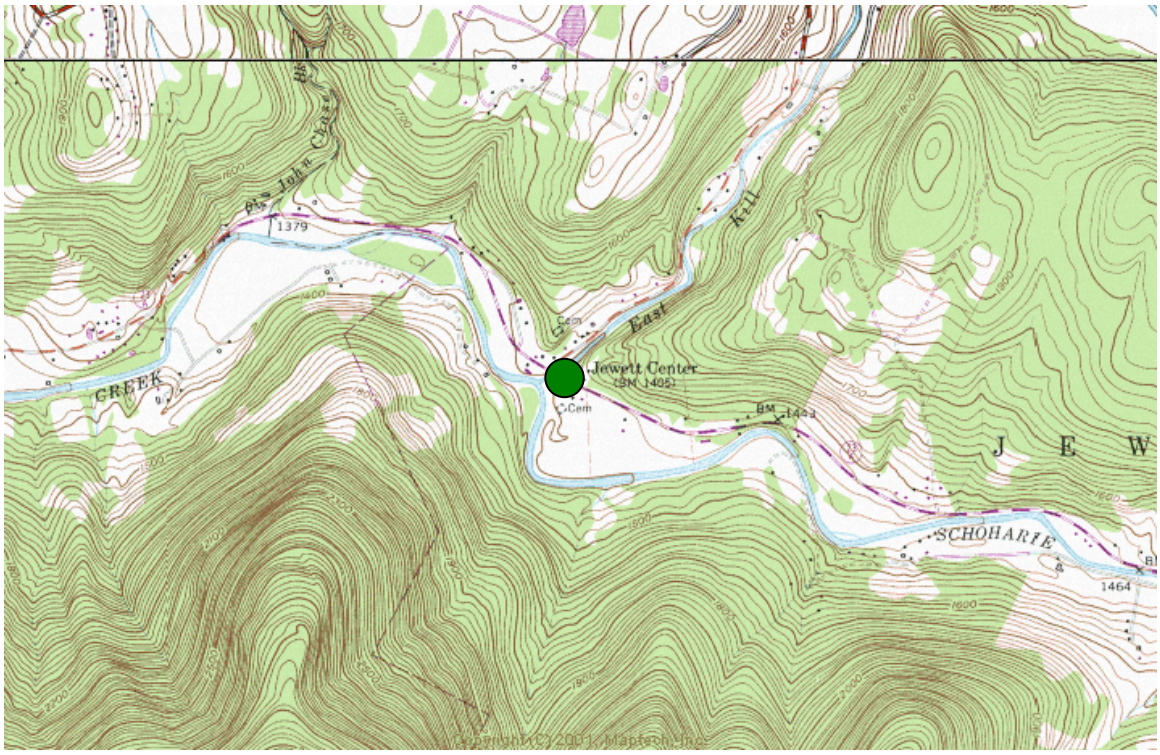
LOCATION DATA

Latitude:	42° 14' 12"	Topo Map Name:	Lexington
Longitude:	74° 19' 04"	SBU ID:	EAST 01
County:	Greene	PWL Segment:	1202-0063

HYDROLOGIC BASIN DATA

Water Index Number:	H-240-82-133	Station Period of Record:	2006
Stream Classification:	CTS		

SAMPLING LOCATION



ASSESSMENT SUMMARY

The East Kill was sampled in Jewett Center, Greene County, at State Route 23A, less than one-half mile above its confluence with Schoharie Creek. The surrounding land is rural and forested. This reach is designated Class C(TS), with protection of aquatic life, trout fishing, fish consumption, and recreation, as designated uses. This segment also supports trout spawning. The stream at this point is 10-12 meters wide. Current speed varies, with higher velocity along the east shore where the stream is deeper. There is some channelization of the stream bed during low flows exposing a portion of the stream bottom. A well developed riffle is present across the stream. Bottom substrate is composed of large rock, cobble, gravel, sand, and silt. The stream banks are stable along both shores, showing little evidence of erosion. The banks slope steeply to the water and are covered with rocks, grass, shrubs, and trees. The trees create canopy along the shore. The riparian zone is wide along both banks. This sampling location is in Mohawk River Basin Waterbody Inventory segment # 1202-0063.

Water Column Chemistry

The parameters of concern in the water column are dissolved copper and mercury.

Macroinvertebrates

Macroinvertebrate sampling indicated non-impacted conditions. The samples were dominated by clean-water species, reflecting a natural community with minimal human impacts.

Sediments

The PEC-Q for this site is 0.05 indicating that the sediments at this site are unlikely to cause adverse biological effects to sediment-dwelling organisms. No contaminants were detected at levels above the TEC at this site. However, detection limits for alpha-Chlordane and Lindane exceed respective PECs while those for several PAHs, all Aroclors, DDD and Dieldrin exceed the TEC. These chemicals were not detected so a determination cannot be made as to their effect on sediment-dwelling organisms.

Toxicity Testing

Chronic toxicity testing using water from this location detected a reduction in reproductive rate for the July event compared to the Control, but because an adequate number of young per female were still produced (>10) by the test organism *Ceriodaphnia dubia*, this was not considered significant and is likely due to low water hardness. No significant mortality effects were detected. Screening for acute toxicity using Microtox® indicated no sediment or porewater toxicity.

East Kill in Jewett Center

2006 Water Column Water Chemistry

Parameter of Concern	Number of Samples	Assessment Criteria	% > RIBS Criterion	Maximum Value	Median Value	Median to Criterion Ratio
Mercury	10	*	50	0.038µg/l	*	*
Dissolved Copper	10	1.6µg/l**	30	2.8µg/l	1.4µg/l	0.88

* Any concentration above the instrument detection limit is treated as a parameter of concern.
** Based on hardness value of 13mg/l

2006 Bacteriological Results

DATE	TOTAL COLIFORM colonies/100ml	FECAL COLIFORM colonies/100ml
4/4/2006	180	<20
4/26/2006	60	<20
5/16/2006	500	<20
6/7/2006	300	<20
7/6/2006	680	<20
8/10/2006	360	100
8/28/2006	280	20
9/20/2006	280	20
10/11/2006	60	20
10/30/2006	440	20

Kick Sample Results

Date	Species Richness	Biotic Index	EPT Richness	% Model Affinity	BAP	Assessment
8/1/2006	23	3.81	15	68	8.14	Non-impacted

East Kill in Jewett Center

2006 Toxicity Testing Results

Collection/Test Start Date	Reproductive Rate Young/♀/7days (% Control)	% Survival (7-days)
04-26/04-28	23.2 (82)	100
***07-06/07-07	11.4 (56)	90
09-20/09-22	16.5 (85)	100

***Samples collected after severe flooding along the Mohawk River from June 26-29. Results should be interpreted with caution as they are not representative of ambient conditions.

2006 Microtox® Results

Collection/Test Date	Sediment EC50 (%)	Porewater EC50 (%)
08-04/11-29 & 30	66.67	>100

2006 Detected Sediment contaminant levels relative to respective MacDonald SQGs

CATEGORY	**Analytes > TEC**	**Analytes > PEC**
METALS	No exceedances	No exceedances
PAHS	No exceedances	No exceedances
PESTICIDES	No exceedances	No exceedances
PCBS	No exceedances	No exceedances

Schoharie Creek Watershed Screening Sites (HUC: 02020005)
August 16-18, 2005

Name/ID	Sampling Location	PWL Segment	Stream Class.	BAP	Macroinvertebrate Assessment	Microtox® Toxicity
Batavia Kill BATV 10	Below Windham, Greene County 10 m below CR. 12 bridge, South Street 42.302778; -74.2725	1202-0001	C(T)	7.88	non-impacted	Not sampled
Bear Kill BEAR 02	Below Grand Gorge, Delaware County 0.1 miles below Cottone Road, off Rt. 23 42.348611; -74.465278	1202--0054	C	7.91	non-impacted	Not sampled
Beaverdam Creek BVRC 01	Berne, Albany County 40 m above Rt. 254 bridge 42.643611; -74.131944	1202-0043	C	7.24	slightly impacted	Sediment: Moderate Porewater: Non-Toxic
Cobleskill Creek COBL 07	Central Bridge, Schoharie County 20 m above Rt. 30A bridge 42.707222; -74.338333	1202-0019	C	6.93	slightly impacted	Not sampled
Fox Creek FOX 08	West Berne, Albany County 50 m below Rt. 443 bridge 42.635000; -74.185278	1202-0041	C	7.83	non-impacted	Not sampled
Gooseberry Creek SCHO 02A	Below Tannersville, Greene County 10 m above Bloomer Road bridge 42.185833; -74.156667	1202-0066	C(TS)	7.64	non-impacted	Not sampled
Huntersfield Creek HUNF 01	Prattsville, Greene County CR. 10 42.331111; -74.418056	1202-0056	A	7.87	non-impacted	Not sampled
Little West Kill LWES 01	Above Mosquito Pt., Greene County at address 896 on CR. 2 42.271389; -74.433889	1202-0057	C(TS)	8.15	non-impacted	Not sampled
Mill Creek MLLK 01	Above Gray, Herkimer County Teacup Road 43.272778; -74.928889	1202-0050	C(TS)	5.71	slightly impacted	Not sampled

Schoharie Creek Watershed Screening Sites (HUC: 02020005)
August 16-18, 2005

Name/ID	Sampling Location	PWL Segment	Stream Class.	BAP	Macroinvertebrate Assessment	Microtox® Toxicity
Panther Creek PANH 01	Cobleskill, Schoharie County Rt. 10/145 bridge 42.681389; -74.489444	1202-0048	C(TS)	7.26	slightly impacted	Not sampled
Platterkill PLTR 01	Gilboa, Schoharie County 50 m from CR. 17 crossing 42.405000; -74.443333	1202-0053	C(TS)	7.67	non-impacted	Sediment: Moderate Porewater: Non-Toxic
Schoharie Creek SCHO 16	Burtonsville, Montgomery County above Braman Corners Road. bridge 42.800000; -74.263333	1202-0003	C	6.9	slightly impacted	Not sampled
Shanty Hollow Brook SHAN 04	Hunter, Greene County 30 m above confluence with Schoharie Creek 42.207500; -74.209722	1202-0023	B(TS)	7.32	slightly impacted	Not sampled
Stony Grove Creek STGR 01	Hunter, Greene County CR. 214 42.190278; -74.188056	1202-0066	C(TS)	7.77	non-impacted	Not sampled
West Creek WESC 01	Seward, Schoharie County West Creek Road 42.737778; -74.619722	1202-0035	C	6.88	slightly impacted	Not sampled
West Kill WESK 01	North Blenheim, Schoharie County SR. 30 42.468889; -74.459722	1202-0050	C(T)	7.25	slightly impacted	Not sampled
Wilsey Creek WILE 01	Above Burtonsville, Montgomery County CR. 127/Burtonsville Road 42.816667; -74.2825	1202-0027	C	6.73	slightly impacted	Not sampled