

Washington County Nonpoint Source Water Quality Strategy

Version 3, Dated 2007

Earlier Versions: 1992 and 1996



Prepared by the Washington County Water Quality Coordinating Committee

Under the direction of:

- Washington County Soil & Water Conservation District
- Greater Adirondack Resource Conservation & Development Council
- Washington County Planning & Community Development
- Lake Champlain/Lake George Regional Planning Board

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INDEX OF ACRONYMS

ACC	Adirondack Community College
CCE	Cornell Cooperative Extension
CWICNY	Champlain Watershed Improvement Coalition of New York
DEC	Department of Environmental Conservation
DOH	Department of Health
EC	Executive Committee
FC	Finance Committee
FSA	USDA Farm Service Agency
LA	Lake Associations
LC LG RPB	Lake Champlain/Lake George Regional Planning Board
NRCS	Natural Resources Conservation Service
P&DC	Washington Co. Dept of Planning and Community Development
PS	Private Sector
PWL	Priority Waterbody List
RC&D	Resource Conservation & Development
SWCD	Soil & Water Conservation District
SIG	Special Interest Groups
WQCC	Water Quality Conservation Committee

Cover Photo: Washington County SWCD Chairman/Greater Adirondack RC&D Council President, John A. Rieger, and Trout Unlimited Member Bill Wellman standing on a rock vane on the Battenkill. The rock vane was funded through a cooperative WQCC effort.

INTRODUCTION AND OVERVIEW OF WATER RESOURCES

SURFACE WATER

Washington County, New York, is nestled between the Adirondacks of New York State and the Green Mountains of Vermont. Hydrologically speaking, this location puts the county in a highly diverse setting of major drainage basins and waterbodies which have both statewide and national significance.

The southern part of the county is bordered on the west by the Hudson River, which drains over half of its land mass, and nearly one-third of the entire state.

The five sub-watersheds which feed the Hudson are mainly comprised of gently rolling to sharply rising hills, with agriculture, specifically dairy farming, as the predominant land use.

The Battenkill and Hoosic Rivers, which both originate in the adjacent Vermont highlands, serve as the two major tributaries and drain considerable acreage, not only in Washington County, but also the neighboring counties of Rensselaer and Bennington (Vermont).

In the case of the Battenkill, considerable local and regional concern has traditionally focused on this nationally renowned cold water fishery and its wild trout population. During the 1990s, the focus has mushroomed into an active, broad-based, cooperative effort to evaluate and enhance the quality of this unique resource and its watershed.

The southern third of Washington County is also dotted with several small lakes which serve as homesites, public and private recreation facilities, and public water supplies. The largest, Cossayuna Lake, is intensely developed and is valued for its recreational potential and warm water fishery. The lake, however, is ever-increasingly plagued by nutrient loading and the resulting aquatic weed problems. Nearby Summit Lake also supports a good warm water fishery and serves as a secondary drinking water supply for the Village of Argyle. Increased development on this small lake has raised many water quality concerns in recent years. Although some active agriculture continues near these lakes, it is not perceived as a primary contributor to nonpoint source pollution problems.

In the Cambridge-Salem area of southern Washington County, several small lakes and ponds are found. Lake Lauderdale, which is readily visible from NY 22, provides the setting for a county-run public beach and recreation area. This use has also been curtailed in the past by aquatic weed problems traceable to upstream siltng and nutrient runoff. The smaller ponds and lakes in this vicinity are primarily private recreation areas which have also been affected to a lesser degree by nonpoint source loading and resultant aquatic growth.

At about mid-county, in the Hudson Falls-Fort Edward area, drainage patterns and stream flow take a rather abrupt shift to the north. This shift is guided by the northerly migration of the Champlain Canal just above Fort Edward, in contrast to its southerly flow from Fort Edward to the Hudson River. Agriculture in general, and dairy farming in particular, still predominate the landscape on the rolling hills and occasional basins

which characterize central Washington County. With the shift to northerly flow comes the transition from Hudson River drainage basin to Lake Champlain drainage basin.

Two of the major tributaries in mid-county include Big Creek originating from the east and Halfway Brook which flows in from Warren County. Both streams have been identified as being impacted by nonpoint sources, with agricultural runoff and streambank erosion the primary sources. Halfway Brook, however, is also affected by several urban based problems between Glens Falls and Fort Ann.

Further east the Mettawee and its tributary, the Indian River, both originate near Manchester, Vermont, and both flow through extensive agricultural lands in Washington County. Lack of riparian vegetation and streambank erosion has been identified as significantly impacting both streams which serve as viable cold water fisheries. Current efforts are underway to inventory these problem areas and initiate remedial action.

Serving as a major drainage basin for northeastern New York and western Vermont, Lake Champlain has regional significance, not only as a large cold and warm water fishery, but as an important transportation corridor for the northeast. As Washington County extends northward into the Champlain Valley, agricultural lands become less predominant and large forested areas more frequent. Above Whitehall, the northern "finger" of the county, is bordered on the east by Lake Champlain and on the west by the Queen of American Lakes, Lake George. Farms are few and far between and steep, wooded slopes are the rule. With over 30 miles of shoreline on the east side of Lake George, the "Washington County side" has the distinction of being relatively underdeveloped in comparison with the west shore or "Warren County side". In recent years, however, increased development in Putnam and Dresden (Washington County) has spurred concern about nonpoint source pollution of the lake.

As the northern tip of the county approaches neighboring Essex County near Ticonderoga, the eastern fringes of the Adirondack Mountains drain through several small watersheds toward Lake Champlain on the east, while the western slopes flow in the opposite direction to Lake George. This, however, is only a temporary "diversion" as Lake George finally empties into Lake Champlain at Ticonderoga. Because of the sparse population and relatively inactive land use which characterizes the northern tip, coupled with elevations exceeding 2000 feet, acid rain has been identified as the major nonpoint source problem in this area.

This overview of Washington County certainly confirms the abundance of unique and diverse surface water resources with equally diverse land use comprising the major drainage basins. With this combination of uniqueness and diversity comes the likelihood that waterbodies will be impacted in some way by nonpoint source pollution.

In 1989, through the initial efforts of local agencies, organizations and landowners, waterbodies and segments affected by these nonpoint sources were identified, inventoried and later verified by New York State Department of Environmental Conservation. With the formation of the Washington County Water Quality Coordinating Committee (WQCC) in 1991, impacted waterbodies and segments were prioritized by the WQCC based on local concerns, uses affected, and the perceived resolvability of problems at the county level. That prioritized list of waterbodies appears on pages 11-14.

The WQCC also identified and prioritized many of the suspected nonpoint source pollutants, possible sources of each, and a number of countywide water uses and issues which may be affected. This information is part of the comprehensive strategy that follows.

GROUND WATER

Although Washington County is fortunate enough to have many diverse surface water resources, it is apparent from the Community Water System Map that many public water supplies depend on wells and ground water. It also goes without saying that the majority of rural, private water supplies originate from wells and ground water supplies.

Although the evaluation and protection of ground water is much more complex than that of surface water, there is still a high priority placed on the detection and prevention of nonpoint sources which are a potential threat to ground water quality. Since most of these threats still originate at the surface the basic principles of management remain similar with only the complex transport process requiring more detailed assessment. Many of these principles involve the conveyance of information and education to the industry, small business and the general public on the safe disposal of hazardous and toxic substances.

A major objective of the WQCC will be to gather more data on ground water management and disseminate it to the public. This will include the identification and inventory of all municipal and other significant water supply groundwater sources. Source specific management or protection guidelines will then be established for each system.

Committee Responsibility and Accountability

In 1979 the Washington County SWCD was designated by the County Board of Supervisors as lead agency in matters of nonpoint source water quality management (see Resolution #177 in Appendix A).

In compliance with this designation the WQCC will operate under the direction of the SWCD Board of Directors, which in turn is ultimately accountable to the County Board of Supervisors.

In order to insure this direction and accountability, at least one Supervisor representative of the SWCD Board and one other member of the Washington County Board of Supervisors will sit on the WQCC.

All appointments, documents and allocations, either monetary or in-kind in nature will also be reviewed and approved by the SWCD Board.

The Chairmanship of the WQCC will also be the responsibility of the SWCD Board and sub-committee members will be appointed from a list of willing, qualified volunteers.

The WQCC will also receive direction from the New York State Soil and Water Conservation Committee, especially in matters pertaining to the procurement of state and federal funding for water quality activities.

Appendix B of this report contains a directory of the Committee and agencies involved in this cooperative effort.

GOALS AND OBJECTIVES

The overall goal of the strategy is to establish a cooperative local effort, which will identify, assess and address nonpoint source water quality problems in Washington County. This will include an ongoing effort to re-evaluate water resources and monitor the effects and benefits of implementing the strategy.

The secondary goal is to coordinate and implement multi-level information-education programs that emphasize the principles of nonpoint source pollution and the impacts it has on Washington County's water resources.

Major Objectives

- I. Maintain a cooperative effort at the local level to address concerns which affect the quality of surface water and groundwater resources in and around Washington County.
- II. Identify and prioritize all important surface and water resources in the county with particular emphasis on those impacted or threatened by nonpoint source pollution.
- III. Develop strategies needed to protect important groundwater resources, particularly those which could impact public health.
- IV. Utilize available technical expertise at the local level and support staff at the regional, state and federal levels, as well as the private sector, to plan, design and implement cost-effective solutions to water quality problems.
- V. Support a network of educational programs to increase public awareness and knowledge of water quality issues on all levels.
- VI. Support of an effective and ongoing method for the identification and monitoring of water quality problems, concerns and accomplishments
- VII. Obtain funding from public and private sources for the evaluation (monitoring) and remediation of water quality problems.
- VIII. Provide an annual report to county government and all interested parties summarizing the past year's accomplishments and reaffirming committee priorities for the future.

Item

Who

When

Follow-Up

I. Maintain a cooperative effort at the local level to address concerns which affect the quality of surface water and groundwater resources in and around Washington County.

Actions:

- Maintain a minimum 3-member Executive Committee with representation from the various agencies involved to provide general guidance and leadership.
- Maintain a well-rounded WQCC comprised of diverse individuals involved with water quality issues at various levels of local government, natural resource agencies and special interest groups.
- From WQCC membership and affiliated individuals, appoint subcommittees as needed to address key issues and responsibilities.

II. Identify and prioritize all important surface water resources in the county with particular emphasis on those potentially impacting public health.

Actions:

- Utilize the watershed-based County AEM Strategy and base funding to identify priorities at the farm level.
- From the existing Washington County PWL, and response to surveys from committee members, identify and prioritize waterbodies and stream segments for municipal water supplies.
- Maintain high priorities for all waterbodies and stream segments which have implications toward public health (i.e. public drinking water supplies, direct contact, such as public bathing areas).
- Identify waterbodies which lack significant water quality data and utilize technical expertise, such as academic resources and professional lab services, as well as special resource interest groups, to gather and analyze such data (i.e. water quality monitoring, erosion and sediment inventories, river watch groups).

- Identify and prioritize sources contributing to water quality problems in each affected watershed.
- Place particular priority on nonpoint sources which have countywide implications as water quality problems (i.e. ag nonpoint sources, stormwater runoff).

Item	Who	When	Follow-Up
I. <u>Maintain a cooperative effort at the local level to address concerns which affect the quality of surface water and groundwater resources in and around Washington County.</u>	SWCD, RPB P&CD SWCD Board	Ongoing	
<i>Actions:</i>			
<ul style="list-style-type: none"> • Maintain a minimum 3-member Executive Committee with representation from the various agencies involved to provide general guidance and leadership. • Maintain a well-rounded WQCC comprised of diverse individuals involved with water quality issues at various levels of local government, natural resource agencies and special interest groups. • From WQCC membership and affiliated individuals, appoint subcommittees as needed to address key issues and responsibilities. 	WQCC	As needed	
II. <u>Identify and prioritize all important surface water resources in the county with particular emphasis on those potentially impacting public health.</u>			
<i>Actions:</i>			
<ul style="list-style-type: none"> • Utilize the watershed-based County AEM Strategy and base funding to identify priorities at the farm level. • From the existing Washington County PWL, and response to surveys from committee members, identify and prioritize waterbodies and stream segments for municipal water supplies. • Maintain high priorities for all waterbodies and stream segments which have implications toward public health (i.e. public drinking water supplies, direct contact, such as public bathing areas). • Identify waterbodies which lack significant water quality data and utilize technical expertise, such as academic resources and professional lab services, as well as special resource interest groups, to gather and analyze such data (i.e. water quality monitoring, erosion and sediment inventories, river watch groups). 	SWCD	Ongoing	
	EC WQCC	Review Annually	
	WQCC DOH	Ongoing	
	WQCC	Ongoing	
	SWCD	Ongoing	
	WQCC	Ongoing	

Item	Who	When	Follow-Up
<p>III. <u>Develop strategies needed to protect important groundwater resources, particularly those which could impact public health.</u></p> <p><i>Actions:</i></p> <ul style="list-style-type: none"> • Work with state, regional and local agencies to identify and prioritize groundwater recharge areas for public drinking water and public bathing areas. • Identify aquifers which lack adequate water quality data and work with partners to gather and analyze appropriate technical information. • Work with the NYS Rural Water Association and other groups to develop specific management/protection strategies which address high priority groundwater resources (i.e. village of Salem public water supply). 	<p>EC, WQCC, DOH</p> <p>WQCC</p> <p>WQCC</p>	<p>1/2008</p> <p>Ongoing</p> <p>Ongoing</p>	
<p>IV. <u>Utilize available technical expertise at the local level, and support staff at the regional, state and federal levels, as well as the private sector, to plan, design and implement cost-effective solutions to water quality problems.</u></p> <p><i>Actions:</i></p> <ul style="list-style-type: none"> • Identify and maintain an inventory of available technical expertise within the county, and available support staff at various levels. • Retain directories and publications containing pertinent water quality contacts and information. • Plan remedial work and specific county-based water quality projects. <ul style="list-style-type: none"> - Continue to work with groups on a watershed basis to implement cost-effective BMPs. - Utilize the DEC PWL update process to maintain funding eligibility of waterbodies or segments identified. • Use the watershed treatment approach to plan remedial action which will benefit receiving waters determined to be impacted. • Set realistic goals for improvement based on long-term water quality data and best possible uses of the resources. 	<p>WQCC</p> <p>WQCC, SWCD</p> <p>WQCC, SWCD, NRCS</p>	<p>1/2009</p> <p>Ongoing</p> <p>Ongoing</p> <p>Ongoing</p>	

(Objective IV continued)

- Evaluate and consider the economic and sociological consequences of implementing water quality improvement plans.
- Consider the cost-effectiveness of implementation plans.
- Set Realistic time frames for the implementation and completion of projects.
- Select BMPs or Resource Management systems best suited to address the problems identified as contributing sources.
- Use the AEM tiered process to provide technical assistance in the planning, design and implementation of the appropriate BMP.
- Secure funding sources which will match or supplement local share of project costs.
- Insure the availability and commitment of local cost share.
- Insure proper installation/implementation of BMPs or Resource Management Systems.
- Insure the operation and maintenance of BMPs and watershed plan components.

V. Support educational programs to increase public awareness and knowledge of water quality issues on all levels.

Actions:

- Through regular written correspondence and participation at public meetings, the Supervisor representative will keep the County Board of Supervisors informed and updated on water quality issues, concerns and accomplishments.
- Through the use of classroom presentations and the regional Envirothon convey the water quality "message" to elementary and high school levels throughout the county.
- Use appropriate strategies to reach target audiences with water quality messages, emphasizing the role that these individuals have in protecting our water resources (i.e., fair displays, Waterfest).

RC&D, CCE, P&CD	Ongoing	
NRCS	Ongoing	
WQCC	Ongoing	
SWCD, NRCS, PS	Ongoing	
WQCC, USDA	Ongoing	
SWCD, RPB	Ongoing	
↓		
↓		
↓		
WQCC, SWCD	Annually	
WQCC, CCE, SWCD	Throughout the school year	
WQCC, SWCD, CCE	Ongoing	

Item

VI. Obtain funding (from public and private sources and grants) for the evaluation, monitoring and remediation of water quality problems.

Actions:

- Work closely with the New York State Soil and Water Conservation Committee, DEC and other agencies to utilize water quality funding programs which become available. Seek funding, appropriate diagnostic and remedial programs in both the Ag and non-Ag categories.
- Encourage landowner participation in various cost share and grant programs, for example: Ag Nonpoint Source Abatement Program, DEC Non Ag Water Quality Grants, USDA Equip funding and other federal programs.
- Work with DEC to secure funding and technical assistance available for existing programs, i.e.: NYS Clean Lakes, Phase 2 Stormwater Regulations.
- Maintain regular communications with the Lake Champlain Basin Program and CWICNY to provide guidance and assistance in water quality improvement projects benefiting the Lake Champlain Watershed.
- Pursue private funding assistance for water quality programs, i.e.: New York State Water Resource Institute (Cornell University), Trout Unlimited, Ducks Unlimited, RPI Freshwater Institute.

VII. Support effective and ongoing methods for the identification, evaluation and monitoring of water quality problems, concerns and accomplishments.

Actions:

- Update priority watersheds and surface water segments by providing local input for statewide PWL.
- Utilize public input for ongoing assessment of water quality county-wide.
- Utilize existing monitoring programs in priority watersheds for chemical and physical parameters which establish an overall water quality index, i.e.: New York State Clean Lakes Program, River Watch, SWCD water testing program, RPI Freshwater Institute, Lake Champlain Basin Program.

	WQCC, SWCD, DEC, RPB, P&CD	Ongoing	
	SWCD, NRCS	Annually	
	WQCC, RPB	Ongoing	
	SWCD, NRCS, RC&D	Ongoing	
	WQCC, SIG	Ongoing	
	WQCC, Public	State Schedule	
	WQCC, Public	Ongoing	
	SWCD, DEC, LA, TU, RC, ACC	Ongoing	

<ul style="list-style-type: none"> • Work through special interest groups, agencies and educational institutions to establish and implement biological monitoring programs on lakes, streams and rivers, i.e.: Battenkill Conservancy, Clean Lakes Program, Hudson Basin, River Watch. • Maintain and expand working relationships with laboratory and technical personnel needed to analyze chemical, physical and biological water quality data. • Prepare and distribute annual reports to appropriate local state and federal agencies and legislators, outlining goals, objectives and accomplishments of County Water Quality Strategy. 	<p>RC, LA, SWCD, TU</p> <p>WQCC, SWCD, ACC</p> <p>WQCC, SWCD, RC&D</p>	<p>Ongoing</p> <p>Ongoing</p> <p>Annually</p>	
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PWLs for Washington County

The 2000 Lake Champlain Basin Waterbody Inventory and Priority Waterbodies List

Water Index No.	WATERBODY NAME USES IMPACTED	COUNTY	SIZE	TYPE	CLASS	IMPACT
Lake Champlain, Main Lake, Watershed						
C (portion 5)	Lake Champlain, South Bay (1005-0014) Public Bathing KNOWN to be IMPAIRED Recreation KNOWN to be IMPAIRED Aesthetics KNOWN to be STRESSED	Washington	1188.4 Acres	Lake	B	Impacted Segment
Lake Champlain South - Lake George Watershed						
C-101-P367-1 thru 26	Tribs to L. George, East Shore (1006-0020) Habitat/Hydrology KNOWN to be IMPAIRED Recreation POSSIBLY STRESSED Water Supply POSSIBLY THREATENED	Washington	63.7 Miles	River	Aaspl	Impacted Segment
C-119-P398	Pine Lake (Long Pond) (1005-0025) No Use Impairment	Washington	76.8 Acres	Lake	AA	No Known Impact
C-119-P400 & P402	Lapland/Millman Lakes (1005-0059) No Use Impairment	Washington	16.1 Acres	Lake	AA(T)	No Known Impact
C-128	Mount Hope Brook & tribs No Use Impairment	Washington	52.1 Miles	River	C(T)	No Known Impact
C-128-3-P406 & P407	Greenland/Fishbrook Ponds (1005-0029) No Use Impairment	Washington	50.1 Acres	Lake	C(T)	No Known Impact
C-128-P412	Lakes Pond No Use Impairment	Washington	64.1 Acres	Lake	AA	No Known Impact
C-128-P414 & P413	Crossett/Thurber Ponds No Use Impairment	Washington	126.5 Acres	Lake	C(T)	No Known Impact
C-134	Mettawee River, Lower & minor tribs (1005-0034) Aquatic Life POSSIBLY STRESSED	Washington	33.8 Miles	River	C	Need Verification
C-134	Habitat/Hydrology POSSIBLY STRESSED Mettawee River, Upper & minor tribs (1005-0003) Aquatic Life SUSPECTED of being STRESSED	Washington	65.2 Miles	River	C(T)	Impacted Segment

C-134-1	Habitat/Hydrology SUSPECTED of being STRESSED Mud Brook & tribs (1005-0035) Aquatic Life SUSPECTED of being STRESSED Habitat/Hydrology POSSIBLY STRESSED	Sources: Agriculture, Habitat Modification, Streambank Erosion Washington 17.0 Miles Causes: Nutrients, Silt/Sediment Sources: Agriculture, Streambank Erosion	River	ID	Impacted Segment
C-134-4	Wood Cr/Champlain Canal & minor tribs (1005-0036) Recreation KNOWN to be STRESSED	Washington 128.7 Miles Causes: Silt/Sediment, Nutrients Sources: Streambank Erosion, Agriculture	Canal	C	Impacted Segment
C-134-4-17	Winchell Creek & tribs (1005-0061) Aquatic Life KNOWN to be PRECLUDED Recreation KNOWN to be IMPAIRED Aesthetics KNOWN to be STRESSED	Washington 32.9 Miles Causes: D.O./Oxygen Demand, Nutrients Sources: Agriculture	River	C	Impacted Segment
C-134-4-19	Halfway Creek, Lower & tribs (1005-0013) Aquatic life KNOWN to be STRESSED Aesthetics KNOWN to be STRESSED	Washington 46.4 Miles Causes: Silt/Sediment, Nutrients Sources: Agriculture, Streambank Erosion	River	A(T)	Impacted Segment

C-134-R-19	Halfway Creek, Upper & tribs (1005-0063) Aquatic Life KNOWN to be STRESSED Recreation SUSPECTED of being STRESSED Habitat/Hydrology SUSPECTED of being STRESSED Aesthetics KNOWN to be STRESSED	Washington 40.4 Miles Causes: Aesthetics (trash, debris), Thermal changes, Nutrients, Silt/Sediment, Metals, Oil & Grease, Pathogens, Salts Sources: CSO, Deicing, Agri, Streambank Erosion, Urban Runoff, Habitat Mod, Storm Sewers, Industrial, Failing On-Site Syst	River	AA(T)	Impacted Segment
C-134-4-19-8-P432	Hadlock Pond (1005-0040) No Use Impairment	Washington 275.3 Acres Causes: Sources:	Lake	AA(T)	No Known Impact
C-134-4-19-8-P425 thru P433	Minor Lake in Bishop Brook Watershed (1005-0042) No Use Impairment	Washington 110.3 Acres Causes: Sources:	Lake	AA(T)	No Known Impact
C-134-4-27	Big Creek & tribs (1005-0004) Habitat/Hydrology POSSIBLY STRESSED	Washington 54.9 Miles Causes: Silt/Sediment, Nutrients Sources: Agriculture, Streambank Erosion	River	C(T)	Need Verification
C-134-22	Indian River & tribs (1005-0002) Habitat/Hydrology KNOWN to be STRESSED Aquatic Life SUSPECTED of being STRESSED	Washington 32.7 Miles Causes: Silt/Sediment, Thermal Changes Sources: Agriculture, Streambank Erosion	River	C(T)	Impacted Segment
C-138	Poultney River, Lower & tribs (1005-0053) Fish Consumption SUSPECTED of being IMPAIRED Habitat/Hydrology KNOWN to be STRESSED Recreation SUSPECTED of being STRESSED	Washington 8.1 Miles Causes: Metals Sources: Atmosph. Deposition	River	C	Impacted Segment
C-138	Poultney River, Upper & tribs (1005-0054) Recreation KNOWN to be STRESSED Habitat/Hydrology SUSPECTED of being STRESSED	Washington 32.2 Miles Causes: Nutrients, Silt/Sediment Sources: Agriculture, Streambank Erosion	River	C(T)	Impacted Segment

The 2003 Upper Hudson Basin Waterbody Inventory and Priority Waterbodies List

Upper Hudson/Hoosic Watershed

H-264-20	Owl Kill & minor tribs (1102-0005) No Use Impairment	Washington	48.7 Miles	River	C	No Known Impact
		Sources:				
H-264-20-P1121 & P1122	Lake Lauderdale, Schoolhouse Lake (1102-0011) Aquatic Life POSSIBLY STRESSED Recreation POSSIBLY STRESSED	Washington	89.6 Acres	Lake	B	Need Verification
		Sources: Algal/Weed Growth, Nutrients, Pathogens, Silt/Sediment Sources: Construction, Failing On-site Syst, Urban Runoff				
Battenkill Watershed						
H-301	Batten Kill, Lower & minor tribs (1103-0010) No Use Impairment	Washington	40.7 Miles	River	C	No Known Impact
		Sources:				
H-301	Batten Kill, Middle & minor tribs (1103-0011) Habitat/Hydro SUSPECT of being IMPAIRED	Washington	49.6 Miles	River	B(T)	Impaired Segment
		Sources: Other Pollutants				
H-301	Batten Kill, Upper & tribs (1103-0012) Habitat/Hydro SUSPECT of being IMPAIRED Fish Consump SUSPECT of being STRESSED	Washington	72.5 Miles	River	C*	Impaired Segment
		Sources: Metals, Other Pollutants				
H-301-6	Fly Creek & tribs (1103-0013) No Use Impairment	Washington	27.2 Miles	River	C	No Known Impact
		Sources: Atmosph. Deposition, Habitat Modification				
		Sources:				
H-301-17-P79	Cossayuna Lake (1103-0002) Recreation KNOWN to be IMPAIRED Habitat/Hydro KNOWN to be IMPAIRED Aquatic Life POSSIBLY STRESSED	Washington	659.3 Acres	Lake	A	Impaired Segment
		Causes: Algal/Weed Growth, Nutrients, Problem Species Sources: Habitat Modification, Failing On-Site Syst				
H-301-20	Black Creek & minor tribs (1103-0017) No Use Impairment	Washington	98.5 Miles	River	C	No Known Impact
		Sources:				
H-301-20-1	White Creek & tribs (1103-0004) No Use Impairment	Washington	48.5 Miles	River	C*	No Known Impact
		Sources:				
Tribes to Upper Hudson River, Schuylerville to Hadley						
H-314	Moses Kill & tribs (1101-0077) No Use Impairment	Washington	128.7 Miles	River	C	No Known Impact
		Sources:				
Upper Hudson River, Main Stem, Watershed						
H (portion 10)	Upper Hudson, Main Stem (1104-0053) No Use Impairment	Washington	23.8 Miles	River	C	No Known Impact
		Sources:				
H (portion 11)	Upper Hudson, Upper & minor tribs (1104-0054) No Use Impairment	Washington	224.3 Miles	River	C(T)	No Known Impact
		Sources:				

* Anticipated to be in the 2008 Section 303(d) Listed Water List

RESOLUTION

Resolution No. 177 Nov. 20, 1979

Introduced by Mr. Perry

TITLE: Designation of Agency to Protect the State's Water Resources

WHEREAS, the NYS Department of Environmental Conservation has statewide responsibility for water quality planning and will need local agencies to be in charge of the program locally, and

WHEREAS, the Washington County Soil and Water Conservation District has carried on a program of erosion and sediment control and water quality management by developing and implementing plans with individuals and units of government over the past 34 years, and

WHEREAS, the recommendations of citizens and technical personnel was that the Washington County Soil and Water Conservation District be designated as the responsible agency for erosion and sediment control and water quality management on potential non-point pollution sources such as streambanks, construction, forestry, mined land, roadbanks, and agriculture; now, therefore, be it

RESOLVED, that the Washington County Board of Supervisors as the local planning, management, and implementing agency to protect the state's water resources from the above mentioned sources of non-point water pollution.

Directory

Water Quality Coordinating Committee Members

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SWCD Directory

Washington County Soil and Water Conservation District Board of Directors and Officers

Directors

John Rieger, Chairman
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Merrilyn Pulver, Vice-Chairperson
2842 County Route 46, Fort Edward, NY 12828

Richard Conklin, Treasurer
8958 State Route 40, Fort Ann, NY 12827

* John Dickinson
1399 Mattison Road, Hudson Falls, NY 12839

Steve Alexander
40 E. Main Street, Cambridge, NY 12816

Officers

* Joseph J. Driscoll, SWCD Manager
WQCC Chairman

* Laurie Deyoe, SWCD Office Manager
WQCC Secretary

* Water Quality Coordinating Committee member

2006-2007:

Continued work on implementing agricultural nonpoint source grants, including:

- Lake Champlain Water Chestnut Harvesting
- Two in the Halfway Creek Watershed
- Village of Salem/White Creek
- Poulney-Metawee Watershed

2007 to date:

County Water Quality Strategy Revision: A sub-committee to begin the revision of the Washington County Water Quality Strategy was formed. The update was completed in December, 2007.

Washington County Water Quality Coordinating Committee Accomplishments to Date

December, 1990:

The first meeting was held to coordinate agencies and organizations in the county having responsibility and concerns for water resources.

1991 - 1992:

Development and adoption of the Washington County Water Quality Strategy for nonpoint source concerns.

1993 - 1996:

Sponsored and secured funding for various information/education programs, including:

- Countywide school outreach for New York State Water Week
- Battenkill Watershed and River Corridor Inventory
- Mettawee River Stabilization Inventory
- Summit Lake Aquatic Plant Inventory
- County nonpoint source pollution control project tours
- County water resource maps
- Stormwater and storm sewer stenciling for six 4-H clubs
- Village water tasting contests
- County fair displays
- Urban Erosion & Sediment Control Workshops for highway superintendents, contractors and consultants.

1997 - 1999:

Coordinated the following events and activities:

- New York State Source Water Assessment workshops for municipal water systems
- Watershed inventory and planning for Cossayuna Lake
- Comprehensive bi-county plan for Halfway Creek Watershed
- Ranking and guidance for numerous projects submitted under the NYS Clean Air-Clean Water Bond Act and the Environmental Protection Fund
- Countywide tour of complete water quality projects, ag and non-ag.
- Secured and administered several mini-grants to fund committee activities and pilot projects.

March, 1999:

Merged WQCC with the Washington County Local Working Group. The LWG was formed to prioritize funding areas for USDA cost-share programs such as Environmental Quality Incentive Program (EQIP).

1999 - 2002:

The WQCC/LWG has focused primarily on the prioritization of county watersheds and water quality projects for the purpose of various state and federal grant applications and ongoing mini-grants, as follows:

- 2000-2001: Cossayuna Lake Shoreline and Septic Monitoring - \$5,000
- 2001-2002: Battenkill River Cleanup - \$2,500 - 3 river cleanup days held
- 2000-2001: Agricultural Pesticides "Clean Sweep I" Collection Day - \$15,000 - countywide pesticides collection day sponsored by and held at the Washington County Municipal Center.

2003:

WQCC Mini-Grants:

- Battenkill Cleanup, part 3 - 55-gallon drums put out at "hot spots" along the river in the towns of Salem and Jackson for trash collection May through November
 - Ag Pesticides Clean Sweep II Collection Day - \$15,000 - pesticides collection day held at County Municipal Center.
- Prioritized the following grant projects:
- White Creek/Salem Aquifer
 - Metawee Riparian Buffer
 - Wood Creek AEM Planning
 - Poulthney-Metawee BMP Implementation
 - Cossayuna Lake Sediment Basin
 - Halfway Creek AEM Implementation
- Activities also included:
- Special forum was held in Salem on issues and recommendations for White Creek.
 - Compiled data for NYS-DEC Hudson River Basin 2003 Priority Waterbody List update.

2004 - 2005:

- Battenkill Cleanup: During the life of this project (2000-2004) 10 truckloads of trash have been removed from the Battenkill and its shoreline.
- Washington-Warren MS-4 Stormwater Management Training: Conducted this workshop for local officials, focusing on Phase II Stormwater rules and regulations for MS-4s and construction sites, with a pictorial presentation on techniques and systems for stormwater management.
- Ninth Annual Adirondack Waterfest: This event was held in July at the Rogers Island Visitors Center in Fort Edward. Played the lead role in planning, coordinating and implementing the event, which attracted approximately 1,000 visitors and included 31 exhibitors from various water-related businesses and organizations.
- Champlain Watershed Improvement Coalition of New York Legislative Tour: WQCC members co-organized this tour with Warren County SWCD and WQCC. It included 5 stops in Washington County to look at both ag and non-ag water quality projects in the towns of Fort Ann, Granville and Whitehall.
- MS-4 Grants and Community Assistance: Co-authored a funding application with Warren County to assist MS-4 communities with DEC Phase II Stormwater compliance. In addition, several meetings were held with MS-4 communities and Washington County DPW to develop MS-4 compliance strategies.

1996 NONPOINT SOURCE ASSESSMENT
 LIST OF PROBLEM WATERBODIES AND STREAM SEGMENTS
 AS PRIORITIZED BY THE WASHINGTON COUNTY WATER QUALITY COORDINATING COMMITTEE

Segment Name	Town(s)	Id. No.	State Basin	SCS Hydro. Unit No.	Use Affected	Severity
Summit Lake	Argyle	58-003	11-01	02020003.030	Water Supply	Stressed
Cossayuna Lake	Argyle, Greenwich	58-002	11-03	02020003.080	Bathing	Impaired
Lake Lauderdale	Jackson	58-001	11-02	02020003.230	Bathing	Impaired
Metatawee River	Granville, Whitehall	58-007	10-05	02010001.120	Fish Survival	Impaired
Indian River	Granville	58-006	10-05	02010001.120	Fish Propagation	Impaired
Halfway Creek	Fort Ann	58-012	10-05	02010001.140	Fish Propagation	Stressed
White Creek	Salem	58-004	11-03	02020003.070	Fish Propagation	Threatened
Battenkill River	Greenwich, Easton, Salem Jackson			02020003.080	Fishing	Impaired
Champlain Canal	Kingsbury, Fort Edward Whitehall, Fort Ann	58-014	10-05	02010001.140	Fishing	Stressed
Owl Kill	Cambridge	58-009	11-02	02020003.230	Fishing	Impaired
Lake Champlain	Fort Ann, Whitehall,	58-011	10-05	02010001.160	Fishing	Impaired
Hudson River	Easton, Greenwich, Fort Edward	58-008	11-01	02020003.100	Fishing	Precluded
Big Creek	Kingsbury, Hartford, Granville	58-005	10-05	02010001.140	Boating	Stressed
Whipple Brook	Cambridge	58-010	11-02	02020003.230	Fish Survival	Impaired
Acid Rain Lakes	Dresden, Putnam	58-013	10-05	02010001.150	Fish Propagation	Stressed

Countywide Water Uses and Needs

As Prioritized by 2007 WQCC Members

- Public drinking water supplies – groundwater/surface water
- Private drinking water supplies – groundwater/surface water
- Agricultural consumption – irrigation, livestock water, milk processing
- Wetlands – as natural flood control, sediment basins, filter areas
- Cold water fisheries – sustainable populations of trout, salmon
- Wetlands – maintaining as unique environment, habitat
- Warm water fisheries – sustainable populations of bass, pike, panfish, etc.
- Recreation – direct contact such as swimming
- Recreation – indirect contact, such as boating, fishing
- Aesthetic effect – scenic beauty and desirability, tourism
- Transportation – navigability of certain waters, such as the Champlain Canal
- Public utilities – hydroelectric facilities
- Industrial – power source or cooling for industry
- Aquaculture – artificial impoundments for private or commercial fish & bait production

Existing and Potential Water Quality Contaminants and Sources

As Prioritized by 2007 WQCC Members

<u>Type of Contaminant</u>	<u>Possible Sources</u>
Nutrients	<ul style="list-style-type: none"> Animal production operations Septic systems Erosion from fertilized areas Cropland or pastures where manure is spread Urban runoff/combined sewer overflow Wastewater treatment plants Industrial discharges
Bacteria	<ul style="list-style-type: none"> Animal operations Septic systems Cropland or pastures where manure is spread Urban runoff Wastewater treatment plants Wildlife
Sediment	<ul style="list-style-type: none"> Construction activities Livestock operations (streambanks) Streambanks Cropland Highway maintenance activities Urban runoff Mining operation Pasture Forestry activities
Pesticides	<ul style="list-style-type: none"> All land where pesticides are used (cropland, golf courses, urban/suburban, waste disposal sites). Urban runoff Irrigation return flows
Toxic Chemicals	<ul style="list-style-type: none"> Urban runoff Industrial waste Discarded petroleum products and household chemicals Landfill leachate

Countywide Water Quantity Issues

As Prioritized by 2007 WQCC Members

<u>Issue</u>	<u>Possible Causes</u>
Stream and river flooding	Rapid runoff from land use changes/development Channel restriction/obstructions, reduced channel capacity
Excessive moisture on ag land	Runoff from adjacent lands Poorly drained soils
Urban and municipal flooding	Rapid runoff from land use changes Ineffective Stormwater management Poor siting of development Poor drainage
Deficiencies in public water supply	Obsolescence of old supply systems Poor watershed management
Moisture deficiency on ag land	Weather patterns/climate change Specialty crops with greater water needs Excessively drained soils