### WORK ON WATERSHEDS 2019 YEARBOOK

The **Hudson River Watershed Alliance** unites and empowers communities to protect their local water resources.

The Hudson River Watershed Alliance is the only organization dedicated to building a collaborative network of engaged, informed and active citizens, watershed groups, and municipalities to ensure the Hudson River watershed is healthy and resilient.

In Fall 2019, the **Hudson River Watershed Alliance** asked organizations working on watershed issues throughout the region to share one fact, one proud accomplishment from the last year, one opportunity for next year, and one challenge they are facing. This is the result.



The Hudson River Watershed

### BATTENKILL CONSERVANCY

**Fact:** Our watershed straddles Vermont & New York. Its key waterway, the Battenkill, begins near Manchester, VT and flows for roughly 60 miles ending its journey in NY's Hudson River.

Accomplishment: The popularity of our "Picky Bug Table," highlighting the connections between clean water and the presence of macroinvertebrates in the streams, has successfully increased our outreach and engagement with the community.

**Opportunity:** The State's focus on source water protection and available funding to protect larger land parcels.

Challenge: Working effectively and efficiently across two states with different sets of environmental regulations related to buffer zones, agricultural & road runoff and fish stocking procedures.







MOHAWK WATERSHED ALLIANCE

Fact: The Mohawk River makes up 25% of the Hudson River drainage area and the main trunk is everywhere affected by the Erie Canal.

Accomplishment: The new five-year Action Agenda for the watershed will prioritizes water quality, habitat, and flooding resiliency improvements.

Opportunity: "Relmagine the Canals" has focused attention on flooding, invasive species, water quality, and recreation.

Challenge: Ensuring that communities along the River recognize the importance of high-quality water for both ecosystem health and recreation.





## KROMMA KILL WATERSHED

Fact: A U.S. presidential gravesite (Chester A. Arthur) and one of the first Hudson River trading post sites (Schulyer Flatts National Historic Landmark) are located in the watershed.

Accomplishment: A Siena College student recently completed a green infrastructure feasibility and opportunity study of the Kromma Kill Watershed.

Opportunity: Students and faculty from Siena College are continuing to monitor flooding and water quality throughout the watershed.

Challenge: The Kromma Kill Watershed continues to be impacted by flooding and other water quality issues.





## PATROON CREEK WATERSHED

Fact: The creek was named after the patroon of Rensselaerswyck.

Accomplishment: The City of Albany recently completed a Patroon Creek daylighting project.

Opportunity: Students and faculty from Siena College are continuing to monitor flooding and water quality throughout the watershed.

Challenge: Despite significant improvements over the last 30 years, water quality in the Patroon Creek is greatly impacted by bacteria contamination.





#### CATSKILL CREEK

Fact: The Catskill Creek watershed comprises 927 miles of tributary streams, making it the third largest contributor of water to the Hudson River Estuary.

Accomplishment: A survey to identify priorities was developed and administered throughout this year. Input was gathered at multiple events from over 400 individuals.

Opportunity: As the Catskill Creek Watershed

Protection Plan is being written and finalized through current funding, there has been the opportunity to integrate survey feedback into the plan so that the values of the residents are represented.

Challenge: While it is helpful to learn about community values and concerns, the challenge is to act on it. Some of the priority concerns are issues that extend beyond the boundaries of the watershed, such as sea level rise.



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Photo: Larry Federman

ROE JAN WATERSHED COMMUNITY

Fact: The Roe Jan watershed encompasses most of the southern third of Columbia County.

Accomplishment: Becoming a 501(c)(3)

organization!

Opportunity: To continue our outreach to town officials, so we are better known and able to be more influential.

Challenge: It's hard for a small and new organization to work with volunteers from such a large 220 square mile area.





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## LOWER ESOPUS WATERSHED

Fact: The 60-mile creek begins in the highest peaks of the Catskill Mountains, contains the Ashokan Reservoir, continues past active agriculture lands and historic vibrant communities to the tidal marinas and the critical freshwater tidal flats on the Hudson Estuary.

Accomplishment: Town and Village of Saugerties participated in a Community Resilience Building workshop, organized by The Nature Conservancy and Hudson River Watershed Alliance, to prioritize actions to reduce flood vulnerability.

Opportunity: Building stronger collaboration between local governments, regional and county agencies to solve water quality issues effectively.

Challenge: Prioritize and create policy and programs for reducing the main sources of nutrient loading and impacts on water quality of this large basin.



SAWKILL WATERSHED

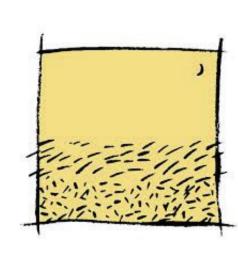
**Fact:** Woodstock Land Conservancy's service area includes Woodstock and the Eastern Catskills, including West Hurley, Town of Kingston, part of Towns of Olive, Saugerties, Shandaken, and Ulster.

Accomplishment: This summer, we convened a Technical Working Group meeting for the Sawkill Watershed to brainstorm priorities, benefiting from work done by Bard Graduate Student intern, Lindsey Drew, funded by an OSI Barnabas McHenry Grant.

Opportunity: With support from a multi-year private grant, we have the opportunity to gain much more water knowledge, work together with our local community to enhance understanding of our watershed, and engage with local municipalities for its protection.

Challenge: The Sawkill doesn't have a management plan. While many studies have been done over many years, some of them are aged. With the specter of climate change, gathering current data on water quality, turbidity, and stream conditions, areas prone to flooding... is of great importance.







# TRACING THE TANNERY BROOK

Fact: While only about 2 miles long, the Tannery Brook supported 3 tanneries in the mid-1800s.

Accomplishment: Kingston's 2019 Open Space Plan maps the Tannery Brook as an asset, and includes a

goal of restoring 2,500 linear feet of stream corridor throughout the city over the next 10 years.

Opportunity: Sharing information about buried streams and their history, and helping others trace their local forgotten waterways.

Challenge: Since so much of the Tannery Brook is fragmented and buried, it is treated more like sewer infrastructure than a stream.





Tracing the Tannery Brook

SAW KILL WATERSHED COMMUNITY

Fact: The Saw Kill is the oldest eel sampling site on the Hudson River, beginning in 2003.

Accomplishment: In September 2019, the Saw Kill Watershed Community worked with over 150 students and 3 teachers from Linden Avenue Middle School in Red Hook, NY. 7<sup>th</sup> and 8<sup>th</sup> graders participated in hands-on, place-oriented instruction on the importance of the Saw Kill.

Opportunity: Developing projects as follow-up to the report we presented to the Town of Red Hook in February, 2019: "Saw Kill Watershed Source Water Protection Scorecard Recommendations: Comprehensive Water Resources Protection."

Challenge: Aging and leaking septic systems throughout the watershed.





RONDOUT CREEK
WATERSHED ALLIANCE

**Fact:** The Rondout Creek Watershed Alliance has met every month in 2018, organizing events and engaging our growing volunteer base to improve the health of the Rondout Creek. The watershed encompasses 2,200 mi<sup>2</sup> and runs from the headwaters in Denning to the tidal portion in Kingston.

Accomplishment: The RCWA recently launched its website.

We successfully completed one Trees for Tribs project and are

about to launch a second one.

Opportunity: City of Kingston received funding from the 2018 Water Quality Improvement Program (WQIP) to construct Phase I of sewer separations in the Combined Sewer Overflow (CSO) sewershed. Project is currently in the design stage, and will reduce sewage discharged into Rondout Creek by 44 million gallons per year.

Challenge: The Rondout Creek Watershed covers tidal, lower non-tidal, and upper watershed communities. We are challenged in expanding and including the 14 municipalities in the watershed.





WALLKILL RIVER
WATERSHED ALLIANCE

**Fact:** Thousands of years ago, the Wallkill River in New Paltz flowed through a canyon as deep as the Shawangunk Mountains are tall.

Accomplishment: We hosted our first annual Great Wallkill River Race this past year, with 30+ racers.

Opportunity: The Wallkill River Watershed

Alliance has incorporated as a 501c3, allowing us to apply for grant funding.

Challenge: After several years of sampling, NYS DEC has identified phosphorus as a major pollutant in the river, leading them to install a Total Maximum Daily Load (TMDL) for the river.







TIN BROOK WATERSHED ALLIANCE

**Fact:** In 1724, Cadwallader Colden conceived of the first canal in New York State to be built on his property along the Tin Brook.

Accomplishment: The Tin Brook Watershed Alliance was formed early in 2019.

Opportunity: Both the Town of Montgomery and the Village of Walden have signaled support by joining the Wallkill River Watershed Alliance, parent to the Tin Brook Watershed Alliance.

Challenge: Orange County Planning has identified more than 40 development proposals underway in Montgomery, with several of the larger projects in the Tin Brook watershed. Most notably, the "Sailfish" warehouse is on track for approval, and will dump ~25,000 gallons of treated sewage per day into the Brook.





### FALL KILL CREEK

Fact: The Fall Kill Creek is a site of illegal dumping in the City of Poughkeepsie.

Accomplishment: Vassar College Environmental Cooperative and Scenic Hudson hosted an Aqua Blitz, an environmental education initiative, and

taught 300 students at 2 sites along the

Fall Kill in October 2019.

Opportunity: The update to Poughkeepsie's Local Waterfront Revitalization Plan encompasses the Fall Kill Creek, opening it up to funding opportunities.

Challenge: High fecal coliform counts.





## WAPPINGER CREEK WATERSHED INTERMUNICIPAL COUNCIL

**Fact:** The Wappinger Creek Watershed Intermunicipal Council (WIC) is one of only two intermunicipal councils in the Hudson River Watershed. The WIC has an intermunicipal agreement with all of its 13 municipalities.

**Accomplishment:** The WIC helped organize a Community Resilience Building workshop for the lower half of the watershed, led by The Nature Conservancy, Hudson River Watershed Alliance, and Cornell Cooperative Extension Dutchess County. The workshop brought stakeholders together to discuss planning for climate resilience.

Opportunity: The WIC connected with Twin Island Lake Association

in Pine Plains to discuss water quality and invasive plants in

their lake, at the headwaters of the Wappinger Creek.

This new connection has helped the WIC to outreach

more to upstream communities, bolstering a more connected network of watershed stakeholders.

Challenge: To present the Wappinger Creek's 9-Element Watershed Management Plan at public hearings, WIC representatives try to communicate technical data to the public to encourage a wide range of stakeholders with diverse perspectives to get involved in the solution-building process.





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### QUASSAICK CREEK WATERSHED ALLIANCE

**Fact:** The name Quassaick comes from the Munsee Delaware language. "Qua" means shallow water and "Saaic" means valley or small canyon (Evan Prichard). This clearly describes the lower Quassaick Creek.

Accomplishment: In search of nutrient loads potentially triggering algal blooms on Orange Lake in Town of Newburgh, we have monitored basic stream parameters for two seasons in the upper tributaries flowing into the lake. These data appear to indicate that there are two small sources in the Upper Bushfield Creek that are contributing an excess of Total Dissolved Solids. With

these data, we hope to appeal to the DEC for SPDES compliance.

Opportunity: To continue working with a professor and students at Marist College to establish baseline data on micro-plastic loading in Quassaick Creek, as well as micro-plastics accumulation in Chadwick Lake sediment.

Challenge: Continuing the 30-year effort to establish a mile-long section of the Quassaick Creek Trail in the City of Newburgh. Issues include land ownership acquisition or easements, brownfield sites remediation, railroad right-of-ways, trailhead sites, foot bridge construction, documentation of dam removal. This is a local partnership effort including municipal and numerous not-for-profit organizations.



# NEWBURGH CLEAN WATER PROJECT

**Fact:** The only safe level of exposure to any chemical in the PFA's family is I-2 PPT. New York State is considering a standard of I0-20 PPT of just two PFA's chemicals (I0-20 times higher than acceptable exposure). ••• Washington Lake, the City of Newburgh's main water source, is contaminated by multiple PFAs chemicals at a level of I20 PPT.

Accomplishment: Bringing high quality and engaging public education outings and events to an economic justice community that is impacted by PFAs

contamination and over-development.

**Hudson River** 

Watershed Alliance

**Opportunity:** Using the City of Newburgh's water crisis as a model of bad development outcomes to serve as a catalyst that we can use to push for more protection for watersheds in the entire state.

Challenge: Newburgh's watershed is threatened by over-development, excess nutrients, and a state superfund PFAs-contaminated air field. These threats would be better addressed at the state or federal level, but due to New York's home rule municipal laws they need to be taken up at a local level. It is extremely difficult to enact protective standards when our watershed assets are outside of our municipal boundaries.



MOODNA CREEK WATERSHED INTERMUNICIPAL COUNCIL

**Fact:** At the time of European contact, the Moodna Creek was called the Waoraneck, which is the name of the Native American tribe that inhabited the area.

Accomplishment: Erected the first of our series of educational kiosks, on wetlands. The kiosk was built with an Eagle Scout from Boy Scout Troop 4 of Woodbury, the Town of Woodbury, and Black Rock Forest. Locust logs from the forest serve as the kiosk's three support posts.

Opportunity: Received a grant from the Hudson River Estuary Program to install 6 stream gages. All will show stream depths online in real time. Gages on Moodna Creek in Washingtonville and Satterly Creek in Blooming Grove will warn local leaders when water level is nearing flood stage.

Challenge: Water quality is an ongoing concern. PFAS, including PFOS, entered the watershed from the fire fighting foam used at Stewart Airport. PFAS have been found in wells along Silver Stream and in wells near Beaver Dam Lake, both tributary to the Moodna Creek. Further downstream, PFAS was found in the Town of New Windsor wells along the Moodna Creek.







## FRIENDS OF THE GREAT SWAMP

Fact: We are in two watersheds, not just one.

Accomplishment: We completed our second North American Wetlands Conservation Act grant, with the acquisition of 194 acres along the Swamp River.

Opportunity: Work with Housatonic Valley Association and other groups on a Watershed Plan.

Challenge: Now that the economy is supporting development again, defending our two rivers and their tributaries from "the solution to pollution is dilution" — which is a concept that has returned to every town and in every site plan.





## MINISCEONGO CREEK WATERSHED ALLIANCE

Fact: The Minisceongo Creek flows from its headwaters at Lake Welch in Harriman State Park and spans II miles until it meets the Hudson River Estuary within Haverstraw Bay, a nursery ground for many resident and migratory fish species. The watershed contains areas of Harriman State Park and historic sections of the Haverstraw brickyard and textile industries.

Accomplishment: The first annual MCWA Cleanup and Waterway Explorations

event was on October 6, 2019 at GARNER Historic District.

75 adults and youth learned about history, health, and wildlife of the Creek. 640 lbs of trash and 195 lbs of

recyclables were removed across the watershed.

Opportunity: Continue partnerships for educational opportunities with The Nature Conservancy, Rockland County Soil & Water Conservation District, and Strawtown Studio.

Challenge: Multiple municipal jurisdictions throughout the watershed make coordination an ongoing difficulty, as well as increased erosion concerns for residents.



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### SING SING KILL

Fact: Sing Sing Kill gorge walkway bridge construction is nearly completed, opening a gorgeous streamside walkway with new interpretive signage by Hudson Valley Arts & Sciences on the stream's fish, ecology and history.

Accomplishment: Installed a long-term monitoring station, in collaboration with Cary Institute of Ecosystem Studies and Ossining High School research program. Stream gauge, salinity,

temperature.

Opportunity: The Town of Ossining is willing to rewrite and strengthen watershed buffer regulations to close loopholes.

Challenge: Very high bacterial levels persist, despite recent infrastructure work.





SPARKILL CREEK
WATERSHED ALLIANCE

**Fact:** The Sparkill Creek Watershed Alliance has been sampling our creek for 9 years, with over 1,000 samples for enterrococcus, phosphate, nitrate, E. coli, etc. We've formed partnerships with Riverkeeper, St. Thomas Aquinas College, Dominican College, EPA & DEC, Town of Orangetown, Village of Piermont, and others.

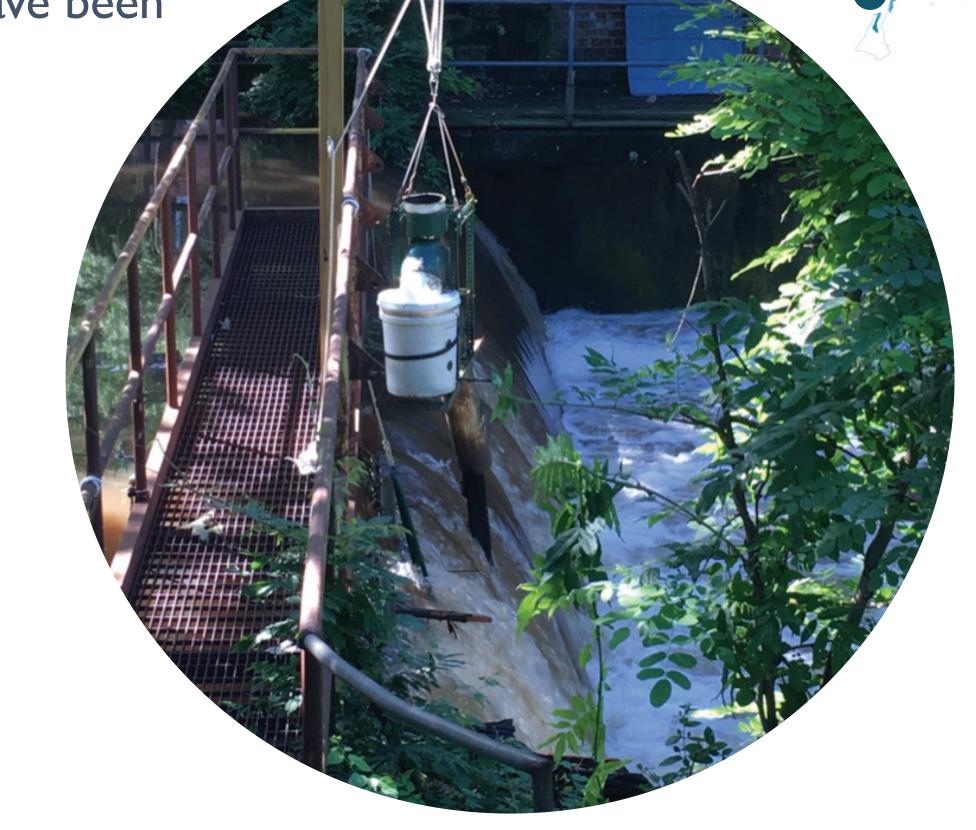
Accomplishments: We received a \$5,000 grant from Orange & Rockland Utilities to do Microbial Source Tracking, and have been offered to work with the EPA again in 2020.

Opportunity: This October, we will present to the Orangetown Governing Council on the history of the SCWA and what we have accomplished. This will lead to a closer partnership with our local elected officials and open the way for dialogue with county representatives.

**Challenge:** To find a point source of bacteria contamination, if possible, and work with the town for a solution. To increase participation in our endeavor to promote the health of the creek.







## SAW MILL RIVER COALITION

**Fact:** The Saw Mill River in Downtown Yonkers is the first major waterway in New York State to be daylighted.

Accomplishment: We completed and published a State of the Watershed report this summer, marking a major step towards developing a watershed management plan.

Opportunity: With help and direction from the Saw Mill River Coalition, Westchester County applied for a grant to develop a comprehensive watershed management plan. Fingers crossed!

Challenge: A major section of the river in Yonkers was channelized by the Army Corps of Engineers to prevent flooding. This unnatural 20 foot wide channel creates a major challenge for American eel migration up the Saw Mill River.





Oded Holzinger | Groundwork Hudson Valley | sawmillrivercoalition.org

BRONX RIVERALLIANCE

**Fact:** Flowing 23 miles from the Kensico Reservoir in Westchester County through the borough of the Bronx into the East River and Long Island Sound, the Bronx River is the only freshwater river in New York City and accessible by public transit.

**Accomplishment:** Project WASTE (Waterway And Street Trash Elimination), our community science program, focused on reducing the floatable trash in the Bronx River, recently surpassed a major milestone: recording and removing our 200,000<sup>th</sup> trash item!

Opportunity: We were selected to take part in the NYC Service Enterprise program in 2019 to evaluate and enhance our volunteer program to better serve our watershed communities.

Challenge: Heavy rains result in exceedingly high levels of fecal bacteria throughout the Bronx River irrespective of sewer infrastructure (MS4 areas more chronic than combined sewer areas), which is concerning now and into the future as climate change further affects weather patterns.



