



2018 Annual Report

Tompkins County Water Resources Council

121 E. Court Street, Ithaca NY 14850

607.274.5560

<http://www.tompkinscounty.ny.gov/committees/wrc>



YOU'RE INVITED!

The Water Resources Council meets the **third Monday of each month, 4:15-6:00 PM, at the Transit Center, 737 Willow Avenue, Ithaca.** For more information, contact the Tompkins County Planning and Sustainability Department at planning@tompkins-co.org or 607-274-5560.

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Introduction

The Tompkins County Water Resources Council (WRC) advises the Tompkins County Legislature on matters related to water resources management and planning. The Council is also charged with identifying problems, proposing priorities, and promoting the coordination of activities in the management and protection of the County's water resources.

The WRC provides a public forum for local communities and stakeholder groups to address and discuss their concerns regarding water resources. It is the intent of the group to coordinate the water resources-related efforts of local governments, public and private institutions, and agencies and organizations throughout Tompkins County.

FAQ

The public is welcome to attend WRC meetings, and Tompkins County residents are invited to apply to become voting members.

WRC membership consists of 21 voting members appointed by the Tompkins County Legislature. These members represent various water-related interests and serve on a number of standing and special committees. There are also seats for non-voting ex-officio and associate members.

To receive agendas and meeting minutes, contact the County Planning and Sustainability Department by phone at (607) 274-5560 or via email at planning@tompkins-co.org.

Past agendas and meeting minutes can be found on the WRC website.



Photo credit: Emelia "Mia" Jumbo

2018 Members List

Chair

Darby Kiley, Municipal Govt (Jan-April)
Cynthia Brock, Municipal Govt (May-Dec)

1st and 2nd Vice Chairs

Frank Proto, At-Large
Liz Cameron, TC Division of
Environmental Health

Voting Members

Sharon Anderson, CCETC
John Andersson, At-Large
A. Fay Benson, Agriculture
Chris Bordlemay Padilla, Water Purveyor
Amanda Champion, Co. Government
George Fowler, At-Large
Barry Goodrich, Watershed Organization
Ed Gottlieb, At-Large
Michelle Henry, EMC Representative
Kristen Hychka, Municipal Government
Emelia "Mia" Jumbo, At-Large
Joan Jurkowich, TCDPS (Jan-April)
Darby Kiley, TCDPS (May-Dec)
Lynn Leopold, Municipal Government
Jon Negley, TCSWCD
Marjory Rinaldo-Lee, Environment
Linda Wagenet, At-Large

Associate Members

Mara Alper
William George
Marina Howarth
Roxanna Johnston
Joan Jurkowich (May-Dec)
Dooley Kiefer
Jose Lozano
John Mawdsley
Todd Miller
Niamh O'Leary
Steve Penningroth
Elaine Quaroni
Joanne Trutko
Tom Vawter



Photo credit: Ithaca/Tompkins Co. CVB

2018 Presentations

Water Resources Council meetings often include presentations by guest speakers, as well as by WRC members. The following talks were given in 2018:

- Feb. 26th – **Water Issues in India: Their Impacts and Way Forward**
– Fawzia Tarannum, Cornell University
- March 19th – **Report from Central New York Harmful Algal Blooms (HABs) Regional Summit**
– Roxanna Johnston, City of Ithaca Water Treatment Plant, and Jon Negley, Tompkins County Soil and Water Conservation District (TCSWCD)
- April 16th – **Anatomy of the 2016 Drought in New York State: Implications for Agriculture and Water Resources** – Shannan Sweet, Cornell University
- May 21st – **SPDES MS4 Permit Annual Report**
– Angel Hinickle, TCSWCD
- June 18th – **HABs Action Plan for Cayuga Lake, HABs Monitoring Network**
– Hilary Lambert, Cayuga Lake Watershed Network
- Nov. 19th – **Department of Health and Public Drinking Water Systems**
– Liz Cameron, Tompkins Co. Health Department, Environmental Health Division
- Dec. 17th – **HABs: Together We Can Protect Our Lake; Divided We All Lose**
– Karl Czymmek, Cornell U. (CALs: Pro-DAIRY Program, Dept. of Animal Science)

Nominating/Membership Committee

Members: Marjory Rinaldo-Lee (Chair), Chris Bordlemay Padilla, Jon Negley, and Linda Wagenet

In 2018, the Nominating/Membership Committee reviewed applications for seven of the eight expiring voting seats on the WRC and for one voting seat from a member who resigned. (The County Legislature voting seat was not among those considered.) Five of the applications were from people currently on the WRC, and the committee recommended that they renew their terms. Four people who were not currently voting members applied for voting seats, and the committee recommended that two fill voting seats. The committee initially recommended that the other two become associate members; however, an additional voting seat subsequently became open (following the resignation of a member) and the committee recommended filling the additional open voting seats with one of these applicants. The recommendations for filling the voting seats went to the WRC, followed by the appropriate legislative committee, and finally to the full Tompkins County Legislature for consideration and approval. (Two of the recommendations for voting seats occurred at the January 2019 WRC meeting.) The Recreation and Business and Industry seats remain vacant.

The Nominating/Membership Committee also reviewed applications for associate membership, recommending two new people and five continuing members as associates. In addition, the committee solicited nominations for the positions of WRC chair and vice chairs for 2018 and presented a slate for consideration by the Council.





Water Withdrawal Committee

Members: Mara Alper (Chair),
Liz Cameron, Roxy Johnston,
John Mawdsley

The Water Withdrawal Committee formed in early 2018 to highlight the importance of safeguarding water quantity, along with water quality, for Tompkins County. Our community's abundance of water is an asset to protect and preserve, rather than take for granted. The drought in the summer of 2016 and changing climate patterns served to draw attention to water quantity.

The committee's first initiative was to define its purpose and goals.

PURPOSE

To have water withdrawal guidelines or restrictions in place in advance of future water quantity concerns, with the goal of preserving sufficient surface water and groundwater for the public and local ecology before water is withdrawn for use in other watersheds or for non-public use.

GOALS

1) Determine base line information for private water usage: current DEC, private industry, and agriculture water withdrawal permits for surface water and groundwater; aquifer study highlights; water usage.

- a) Canvas local municipalities, for example the Towns of Caroline and Dryden, to learn how they are using their aquifer studies.
- 2) Gather and compare information on water withdrawal policies and regulations that affect Tompkins County.
 - a) Include existing local, DEC, Great Lakes Basin Compact Council, and Susquehanna River Basin Commission water withdrawal requirements.
- 3) Review, compare, and summarize current water withdrawal perspectives for private industry and agriculture to assess potential future water withdrawal scenarios.
- 4) Recommend guidelines to the WRC for additional water withdrawal restrictions of both surface water and groundwater in local watersheds as necessary.
- 5) Present final WRC water withdrawal recommendations to the County Legislature.

The next step was to research several areas, including water usage data for Tompkins County and large area farms; municipal drinking water withdrawal data; aquifer studies and data; data on smaller water users in addition to larger permitted ones; DEC water withdrawal permitting procedures; and FOIL requests for water withdrawal permits.

Accomplished in 2018

- Water quantity will be considered for inclusion in the next Tompkins County Comprehensive Plan.
- FOIL request response received for TC municipal and private entities that withdraw from surface water and groundwater.
- Consulted with Eric Schmidt of DEC about NYS water withdrawal permit process.
- Presentation made to committee by Todd Miller and Dan Karig on aquifer studies of upper and lower Six Mile Creek.
- Presentation made to WRC on potential water withdrawal issues and pressures.
- Consulted with environmental lawyers with expertise in water withdrawal issues: James Olsen (MI) and Rachel Treichler (NY). They discussed measures to help towns and municipalities protect and preserve local water resources and preclude water issues.
- Town of Caroline councilwoman Irene Weiser joined in this discussion. She is active on the town's Aquifer Protection Committee

Water Quality Strategy Committee

Members: Joan Jurkowich, Frank Proto

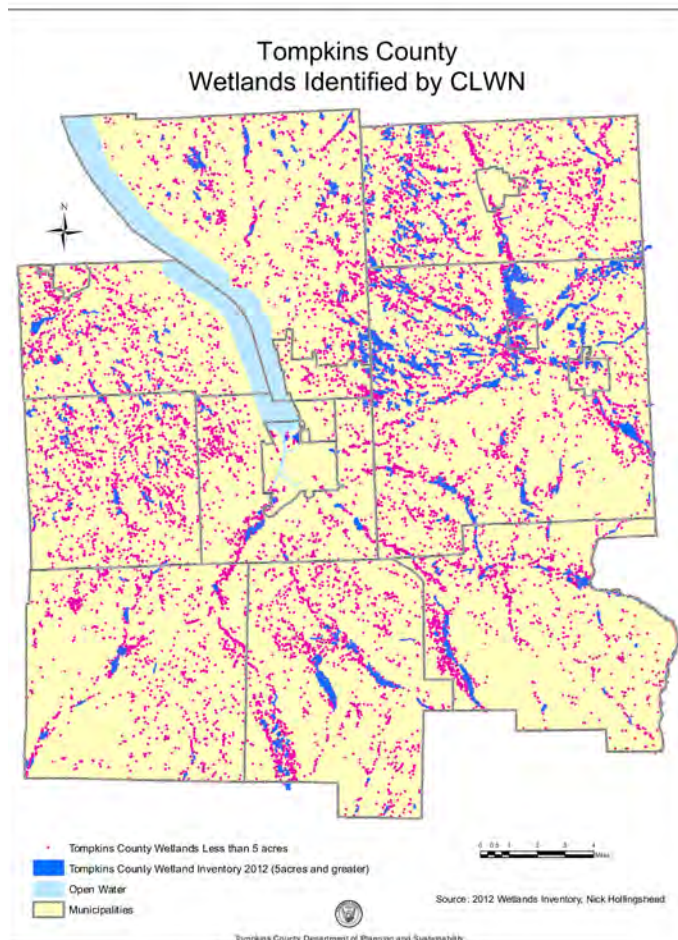
The Water Quality Strategy (WQS) Committee was charged with updating the *Tompkins County Water Quality Strategy: 2016-2018*, which was adopted on October 19, 2015. The committee was asked to have a draft in place by summer 2018 to allow the WRC to adopt the final document by October 2018.

Given the relatively recent preparation of a completely re-written strategy in 2015 and the short timeline for providing a draft to the full WRC, the WQS Committee focused on updating the priority action items and revising the text to reflect emerging issues and new data since 2015.

In July, the committee submitted a draft strategy to the WRC that included the following substantive changes:

- A description of the wetlands mapping project completed by the Cayuga Lake Watershed Network
- Information on the water quality model of Cayuga Lake and its watershed completed by Cornell University as part of its requirements for a discharge permit for the Lake Source Cooling Facility.
- A description of the Owasco Lake Watershed Management Plan, completed in 2016.
- A description of the Cayuga Lake Watershed Restoration and Protection Plan, updated in 2017.
- Information on HABs focusing on the action plans for Cayuga Lake and Owasco Lake.
- A brief update on the Cayuga Lake Total Maximum Daily Load (TMDL) report by DEC.

The committee added a new section in the plan that provided a status report on priority action items from the 2016-18 WQS. The committee proposed adding three new priority action items for the WRC:



- Establish a regular meeting among groups implementing various portions of the HABS action plans in the County.
- Develop and disseminate educational materials on the importance of soil health to the protection and enhancement of water quality.
- Anticipate the availability of water supply in public water systems during potential drought conditions.

Other changes were made to the WQS based on feedback received by members of the WRC by the Aug. 1 deadline for final comments. The committee shared its final report at the September meeting of the WRC.



Monitoring Partnership Committee

Members: Roxy Johnston (chair), Joan Jurkowich, Darby Kiley, Jose Lozano, John Mawdsley, Steve Penningroth, Elaine Quaroni, Tom Vawter, and Linda Wagenet

The Monitoring Partnership (MP) was formed to create a monitoring plan for the southern end of Cayuga Lake instead of using Cornell's Lake Source Cooling (LSC) permit as a surrogate for those needs. A monitoring plan was developed in 2008 but not endorsed by DEC. In the spring of 2013, DEC approved a revised permit for the LSC facility that included a one-time monitoring and modeling effort to lay the groundwork for a TMDL regulation. That revised permit included many of the components of the 2008 MP monitoring plan. Conditions of the 2013 permit were met in December 2016 when the final report was submitted to DEC. This included a watershed model, a lake model, a variety of monitoring data, and an outfall re-design study. The MP continued to meet with the DEC and newly formed Finger Lakes Hub (Hub) as the TMDL was drafted. The TMDL was not released in 2018 and is still under review at DEC as of this writing.

The MP is an active stakeholder in monitoring and water quality initiatives led and implemented by DEC, Finger Lakes Hub, Cayuga Lake Watershed Network, Community Science Institute, and Discover Cayuga (formerly the Floating Classroom). Lake monitoring (via the Citizen Statewide Lake Assessment Program) is happening at five locations on Cayuga Lake. This helps fill the void left after the LSC permit requirements changed by providing continued, long-term collection of water quality data. It will also help determine the effectiveness of a future TMDL. Additionally, a volunteer HABs monitoring project was started in 2017 and continued in 2018 to address the recent increase in occurrence and severity of HABs.

Finally, the MP formed a subcommittee to review nearly a half century of monitoring data collected by Dave Bouldin, Ph.D. professor emeritus, Cornell University. A manuscript is expected to be submitted in 2019.



Soil Health committee

Members: Fay Benson (Chair), Barry Goodrich, Mia Jumbo, Jon Negley
(Minutes taken by Abbie Teeter)

During 2018 the Soil Health Committee worked on creating an educational flyer for the County's agriculture community. The flyer will provide resources for farmers concerned about how their management of soils relates to:

- Losing nutrients to rainfall
- Neighbor relations
- Upcoming Cayuga Lake TMDL
- Harmful algae blooms

The flyer is being reviewed by a Cornell Cooperative Extension-Tompkins County (CCETC) agronomist for pertinent details and other resources. Once the flyer is complete, the committee will share it

with colleagues at CCETC, TCSWCD, Natural Resources Conservation Service, New York Soil Health Institute, and other entities working to improve soil health.

Next, the committee plans to develop a flyer geared toward rural and urban landowners to explain the concepts of soil health and how it relates to water quality and carbon sequestration.

The areas of the 2016-2018 "Tompkins County Water Quality Strategy" that frame our work are as follows:

Goal A: Protect and enhance surface water quality.

General or County-wide Issues

- Discuss soil erosion and how it ties into potential issues for Cayuga Lake.
- Review regulations on current pesticide use on golf courses, residential, agriculture, and municipal lands.
- Learn about runoff and possible ways to educate the public.

Urban and City Soils

- Calculate soil covered by infrastructure to prevent water percolation as percentage of total.

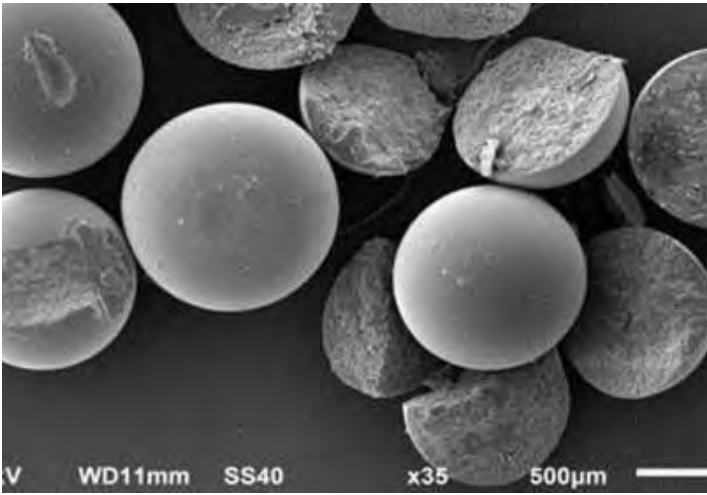
Rural and Agricultural Soils

- Learn more about the nutrient composition of soil for agriculture purposes in order to educate others (meet with Cornell expert).

Goal B: Protect and enhance groundwater quality and quantity.

General or County-wide Issues

Urban and City Soils



Emerging Contaminants Committee

Members: Jose Lozano (chair), George Fowler, Steve Penningroth

Guided by long-term research and fieldwork undertaken by eco-toxicologist Susan Allen-Gil, a professor at Ithaca College, and WRC member Jose Lozano, director of the Ithaca Area Wastewater Treatment Plant (IAWWTP), the Emerging Contaminants Committee focuses its efforts on analyzing the presence of microplastics, pharmaceuticals, microfibers, hormones, and other emerging pollutants in samples collected at drinking water sites, Cayuga Lake, and untreated and treated wastewater in the southern Cayuga Lake watershed.

Nearly 200 compounds were analyzed in water samples and approximately 70 compounds in biosolids. Comparison of untreated and treated wastewater samples showed that hormone, plant/animal biochemical, and caffeine/nicotine compounds were generally much better removed than other compound types, with

median removals of these compounds generally greater than 95%. By contrast, removals of pharmaceuticals were generally less than 25%. For many pharmaceuticals, median removals reported in the literature are generally greater than the median removals reported in this study. This suggests that there is opportunity for improving the degree of removal for many compounds in the IAWWTP.

Moving forward, the committee plans to collaborate with the WRC Education and Outreach Committee to design two informational flyers. The first would describe the “top 10” emerging contaminants (e.g. those with the highest concentration, greatest frequency, and most resistance to removal by the wastewater treatment process) found in the southern Cayuga Lake watershed.

The second would cover the hundreds of billions of microfiber and microplastic particles passing through settling and filtration processes at IAWWTP and into Cayuga Lake every year. Also, this flyer would include information on research indicating that microfibers and microplastics are toxic to aquatic life, can travel up the food chain, and are inadequately addressed under the federal ban on microbeads.

Public outreach would include posting electronic versions to the Tompkins County website and paper copies at the County Health Department and other County offices.



Watershed Rules and Regulations Committee

Members:

Chris Bordlemay Padilla (Chair), Liz Cameron, Roxanna Johnston, Joan Jurkovich, and Elaine Quaroni

The Watershed Rules and Regulations (WRR) Committee met on an as needed basis in 2018. Our efforts revolved around revising and re-drafting the existing WRR for Six Mile Creek and Fall Creek watersheds, which originate from the early 1900s. We have researched examples of other watersheds' rules and have been closely watching the development of Owasco Lake's WRR, which are expected to be finalized and approved by NYS agencies soon. The Owasco WRR will serve as a great model from which we can fine-tune our drafts for Six Mile and Fall Creek.

An application for a grant from the Drinking Water Source Protection Program (DWSP2) Initiative was completed for the City of Ithaca/Six Mile Creek watershed. If approved for funding, it will be a great help in creating meaningful management for the watershed and is very much in line with the goals of WRR: <https://www.dec.ny.gov/chemical/115250.html>.

The County Planning and Sustainability Department provided land use/land cover information to help with the creation of a cyanotoxin management plan for Six Mile Creek. Finally, Gov. Cuomo's staff has been interested in WRR and watershed-based governance in light of increasing HABs occurrences. Related conversations are starting between New York State and the Cayuga Lake Intermunicipal Organization. The committee has established a regularly scheduled meeting date for 2019 as the third Tuesday of each month, 4:00-5:00pm in the City of Ithaca Water Treatment Plant's conference room.



Education and Outreach Committee

Members: Lynn Leopold (chair),
Cynthia Brock, Bill George, Michelle
Henry, Todd Miller, Joanne Trutko,
Tom Vawter

The WRC Education and Outreach Committee continues its work on developing a clean boating brochure-style map that is both visually attractive and an educational resource for boaters and visitors to Cayuga Lake.

A full color wall map when completely unfolded, it will serve as a reference guide for boaters

on water-based recreational, tourism, and clean boating needs and include information on such items of interest as road access to points on the lake, surrounding hillside topography, accurate bathymetry, and proper clean boating/waste management/maintenance techniques.

Ideally, boaters and visitors will pick up the map as a resource or memento and through it be exposed to best boating practices for the environmental protection of Cayuga Lake. The committee hopes to finish this project in mid-2019.



Municipal Training Workshop Committee

Members: Kristen Hychka (Chair), Sharon Anderson, John Andersson, Michelle Henry, Marjory Rinaldo-Lee

The Municipal Training Workshop Committee organized and hosted a training on best practices for roadside ditch management in October 2018.

Members of the committee identified municipal needs for water-related trainings by presenting and gathering feedback at meetings of the Tompkins County Council of Governments and the Stormwater Coalition. Roadside ditch management was identified as a critical training need by all three groups. The committee then received feedback on the content and format of the training at meetings of the County Highway Supervisors and the Stormwater Coalition.

On October 4, 2018, the committee hosted a hands-on training workshop on best practices for ditch maintenance for roadways and water quality. The session was organized by the WRC, in partnership with the Syracuse University Environmental Finance Center (EFC), CCETC, Cornell Local Roads Program, and TCSWCD. The audience primarily targeted for attendance included highway crew leaders, superintendents, and road crews; municipal supervisors, mayors, and engineering departments were also invited and attended.

The classroom portion of the training was held at CCETC in the morning. Sixteen people, primarily road crews and supervisors, attended the training including representatives from five towns (Newfield, Danby, Caroline, Groton, and Dryden), the Village of Dryden, the City of Ithaca, NYS Department of Transportation, and EFC. A presentation on best practices for ditch management by Geoff Scott and David Orr of the Cornell Local Roads Program covered topics such as the purpose of ditches;

Municipal Training (cont.)

ditches and the environment; ditch shape, size, and lining issues; maintenance best management practices; and alternative designs and practices.

Angel Hinickle of TCSWCD presented on stormwater mapping efforts in the County and on the connection of ditches to streams. The classroom portion of the training finished with a panel discussion on issues of concern to the municipalities with the three presenters and Dondi Harner from T.G. Miller.

After lunch, the field portion of the training was held at two sites on Dubois Road (County Road 140). The first site was a project north of Perry City Road. There the group discussed proper depth and scraping, erosion control measures, and an innovative ditch design that can improve infiltration from roadside ditches. The second site was close to the intersection with



water and reduce erosion. The informal feedback from participants was very positive.

Several municipalities were interested in attending the training but had scheduling conflicts. As a result, the same workshop may be held again at a future date. Also, much of the content of this training will be used in municipal trainings statewide by the Cornell Local Roads Program with funding from DEC.

