

TOMPKINS COUNTY WATER RESOURCES COUNCIL

June 27, 2022 Zoom meeting

Final Minutes

Attendance

Member		Seat	Member		Seat
Annie Bastoni	P	At-Large	Holly Payne	P	At-Large
Fay Benson	A	Agriculture	Frank Proto	P	At-Large
Cynthia Brock	P	Municipal	Brian Rahm	A	Environment
Liz Cameron	P	Co. Environmental Health	Stephanie Redmond	P	At-Large
Amanda Champion	E	County Government	Steve Riddle	A	Water Purveyor
Jenna DeRario	P	Cooperative Extension	Elizabeth Thomas	P	Recreation
Michelle Henry	E	EMC Representative	Linda Wagenet	A	At-Large
Kristen Hychka	P	Municipal Government	Chris Bordlemay Padilla	A	Associate
Emelia "Mia" Jumbo	P	At-Large	Roxy Johnston	P	Associate
Darby Kiley	P	County Planning & Sustain.	Cedric Mason	A	Associate
Patrick King	P	Business & Industry	Steve Penningroth	P	Associate
Liz Kreitinger	P	Watershed Organization	Elaine Quaroni	P	Associate
Lynn Leopold	P	Municipal Government	Tom Vawter	A	Associate
Jon Negley	E	Soil & Water Cons. District			

Guests: Abigail Conner, Hailley Delisle, Grace Haynes, Grascen Shidemantle

Call to Order/Agenda Review – Cynthia Brock called the meeting to order at 4:17pm. No changes to the agenda.

Privilege of the Floor – New DPS and CSI staff members were introduced to group.

Presentation: Long-term Data Sets and Nutrient Management: Bootstrapping Estimates of Phosphorus and Nitrogen Loading to Cayuga Lake, Steven Penningroth, Community Science Institute (CSI)

Steve explained how CSI provides certified measurements of phosphorus and nitrogen concentrations in streams under diverse flow conditions. Nutrient loading can be estimated based on concentration measurements and flows. Analyses distinguish between dissolved (bioavailable) and soil-bound (less bioavailable) nutrient fractions, and also between anthropogenic and natural sources of nutrients. As best management practices (BMPs) are implemented, monitoring can be used to track nutrient reduction.

Steve explained the bootstrapping parts and provided guidance:

- Bootstrap Part 1: Nutrient transport in gauged streams monitored with volunteers over multiple years. Estimates agree with Cayuga Lake Modeling Project/ draft total daily maximum load (TMDL).
- Bootstrap Part 2: Nutrient transport in monitored, ungauged streams pro-rated from Part 1 streams
- Bootstrap Part 3: Nutrient loads in unmonitored, ungauged drainages based on approximated yields
- Guidance 1: Correct total phosphorus (TP) and soluble reactive phosphorus (SRP) loading estimates in draft Cayuga Lake TMDL
- Guidance 2: Allocating nutrient loading in counties bordering Cayuga Lake; loading correlated with land cover

Summary and conclusions:

- Stream monitoring partnerships with volunteer groups have generated long-term nutrient data sets in drainages comprising 65% of the Cayuga Lake watershed.

- These comprehensive, long-term data sets make it possible to obtain credible, useful estimates of phosphorus and nitrogen loading to Cayuga Lake, including SRP, TP, and nitrogen constituents.
- Agriculture contributes to nutrient loading in two ways: the total number of acres and the fraction of drainage in agriculture.
- The Draft TMDL underestimates SRP loading three times and overestimates TP loading two times based on CSI's results and two published reports for the Cayuga Lake watershed.

General recommendations:

- In Tompkins County, prioritize erosion control to manage soil-bound nutrients.
- In Cayuga and Seneca counties, reduce fertilizer and manure runoff to manage dissolved nutrients.
- Investigate “hot spots” of soil erosion and nutrient runoff using CSI's public online database to guide additional sampling by volunteers.
- When BMPS are considered, include funding for monitoring nutrient levels before and after implementation. Avoid using BMP in the future if monitoring shows nutrient levels are not reduced.

Kristen Hychka asked about watersheds with more than 65% agriculture and how the nutrient to land use relationship changes from linear to nonlinear. Steve responded that he is sharing empirical data and how they estimate loading in unmonitored streams. He is not assessing mechanism. Also, the land use is derived from the national land cover database, which is not great image resolution for assessing mechanisms.

Action: Approval of Draft Minutes – The May 16, 2022, meeting minutes were approved (moved by Patrick King, seconded by Frank Proto) as submitted.

Committee Reports

Monitoring Partnership – members provided updates.

Watershed Rules & Regulations – Roxy reported on the City's Drinking Water Source Protection Plan efforts, which include engaging with Town of Caroline on a zoning update, as well as a municipal regulations project completed by a student group from Cornell.

Municipal Training – Kristen Hychka reported that the group is planning to hold a fall event on watershed and stream dynamics with Tom Mallory and Mike Lovegreen. Target audience will be highway departments and municipal staff.

Regional Coordination – Michele Wunderlich from the Cayuga County Water Quality Management Agency attended the last meeting and spoke about their three working groups: Communication and Outreach, Invasive Species, and Nutrient and Sediment. They do seasonal communications (summer – LED flares, fall – leaves in waterways, etc.) to get word out (via email, social media, county website, CLWN, new homeowner packets, magnets with branding). Michele also shared a [ditch resource guide](#).

Cayuga Lake Watershed Intermunicipal Organization – will announce new watershed manager soon.

Chair and Staff Reports – WRC will present at the July 12 Environmental Leaders Cayuga Lake Summit.

Member Announcements – Group discussed possible future guest presentations: Steve Lynch (Cayuga County) on Owasco Lake Watershed Rules & Regulations, Andy Zepp (Finger Lakes Land Trust) on Bell Station, and Rick Manning (Friends of Stewart Park) on park improvements.

Adjournment – The meeting adjourned at 5:31 pm.