

2019 Annual Report

Presented at the May Member Meeting May 14th, 2020



"Water links us to our neighbor in a way more profound and complex than any other."

-John Thorson

2020 May Member Meeting Agenda

May 14, 2020. 4:30 P.M.*

*Remote Zoom-based meeting due to COVID-19 pandemic

Review of the 2019 May Member Meeting Minutes

Board of Directors Election

Presentation of the 2019 Annual Report

Open Floor - Membership

Origin of an Alliance

The Chautauqua Lake & Watershed Management Alliance (Alliance) evolved from the Chautauqua Lake Management Commission (CLMC) in late 2014. Since its inception in 2005 and pursuant to its core mission, the CLMC was a major contributor to the development of the *Chautauqua Lake Watershed Management Plan* and initiated work on the *Chautauqua Lake Macrophyte Management Strategy (MMS)*, which sets forth specific recommendations for the proper management of our precious natural resources. The CLMC was an advisory committee to the Chautauqua County Legislature and having accomplished its core mission, it was determined that the CLMC would sunset in 2014 in order to evolve into a new Alliance.

The Alliance framework was developed through a series of stakeholder meetings, significant research, and forward-thinking innovation. The Alliance is a non-profit 501(c)3 charitable organization and was established in order to secure funding to implement the recommendations contained within Chautauqua Lake and watershed guidance documents. The Alliance also aims to strengthen existing relationships among member organizations already engaged in important lake and watershed activities, and to promote a comprehensive and coordinated effort to ensure the sustained health, ecology, and uses of Chautauqua Lake and its watershed.

Our Mission is as follows: The Chautauqua Lake & Watershed Management Alliance, working in collaboration with lake and watershed-related organizations, municipalities and other stakeholders, will promote and facilitate implementation of recommendations from the *Chautauqua Lake Watershed Management Plan* and the *Chautauqua Lake Macrophyte Management Strategy* by prioritizing projects, securing funding and allocating resources.

Summary of 2019 Achievements

The year 2019 marked the Alliance's 5th full year of operation. In those five years, the Alliance has partnered on over \$6 Million in lake and watershed projects. The year was one of change, evolution, and accomplishment. Early in 2019, the Alliance proudly signed the County of Chautauqua's Memorandum of Agreement (MOA) for the Chautauqua Lake Weed Management Consensus Strategy. We continue to actively support its framework for community cooperation and science-based lake management. This spring, in a demonstration of the power of collaboration, the Alliance helped lead a joint effort to clean up a mass of decaying vegetation and other material that accumulated in Burtis Bay in late fall 2018, which caused recreational, ecological, and

aesthetic impairments in the bay. The cleanup was truly a team effort among Chautauqua County, the Town of Ellicott, the Village of Celoron, the Alliance, and the Chautauqua Lake Association, with funding provided by the Chautauqua Region Community Foundation (CRCF), the Ralph C. Sheldon Foundation, and the County. To support the balanced and science-based lake management approach promoted by the MOA, the Alliance hired the ecological and engineering consulting firm Princeton Hydro to act as a third-party monitor for the 2019 Chautauqua Lake targeted herbicide treatments. Princeton Hydro performed pre and post-treatment monitoring and provided a written report and presentation to the Alliance, which detailed their findings and is posted in the Alliance's website. In the summer, the Alliance partnered with the Roger Tory Peterson Institute to complete the second year of the Chautauqua Lake Aquatic Invasive Species Volunteer Taskforce, which held classroom and on-thewater events aimed at early detection, rapid response, and education. The program located and removed water chestnut, an aggressive invasive species, from the Chautauqua Lake outlet, while engaging over 40 people across multiple events. The Mayville-Chautauqua Stormwater Management Engineering Study was also finalized in 2019, which recommended a suite of projects to help reduce sediment and nutrient loading in Chautauqua Lake and will be used to support future State and local grant applications. In the fall, the Alliance submitted its second annual Consolidated Foundation Funding Grant Request, which prioritized funding for 15 Alliance memberled lake and watershed projects. By early 2020, we secured \$605,000 from The Lenna Foundation, the CRCF, the Sheldon Foundation, and the Gebbie Foundation to support these projects for implementation in 2020. Many involve partnerships and unity of effort between Alliance members. Through these and its other partnered projects, the Alliance continues to promote a balanced approach aimed at a well-maintained Chautauqua Lake that supports our residents, our businesses, and our environment.

This year, we also formed two new Alliance committees, the Lake Management and Watershed Management Committees. The Lake Management Committee was formed with the purpose of coordinating in-lake maintenance, harmful algal bloom mitigation efforts, and potential future dredging efforts. This Committee is populated with local municipal leaders and executive directors and presidents of local lake managing organizations and is co-chaired by Alliance Board Members Mike Latone and Bruce Erickson. The first meeting of the Alliance Lake Management Committee brought together many of the stakeholders involved with Chautauqua Lake maintenance in order to plan 2020 in-lake maintenance. As part of the Lake Management Committee, the MMS Subcommittee was created and populated with a small group of individuals representing a variety of disciplines including Chautauqua County Watershed

Coordinator Dave McCoy who chairs this Subcommittee. The Subcommittee was tasked with providing updates to the 2017 Chautauqua Lake Macrophyte Management Strategy (MMS) as the expectations and needs of Chautauqua Lake stakeholders have adapted and changed since its inception.

The Watershed Management Committee was also formed in late 2019 with the purpose of providing guidance and feedback regarding potential Alliance partnered watershed projects and to recommend watershed project ideas for grant submission that attempt to reduce the flow of nutrients and sediments from the watershed into Chautauqua Lake. The Committee is populated with local municipal leaders, highway and department of public works superintendents, and representatives from the Chautauqua Watershed Conservancy, Soil and Water Conservation District, and County Department of Health and Human Services and is chaired by Alliance Board Member David Shepherd. The formation of these committees was one of many steps that the Alliance took in 2019 in an attempt to unify efforts and bring Chautauqua Lake stakeholders together for a better Chautauqua Lake in 2020.

In 2019, the Alliance also took on a larger role in becoming a repository for Chautauqua Lake and watershed data. We did this by creating a resources tab on our website, which houses Chautauqua Lake and Watershed studies and guidance documents, and we created a Chautauqua Lake Data/Surveys tab on our website, which currently houses recently published scientific data and surveys pertaining to Chautauqua Lake. Alliance staff will also be leading a new program in 2020, titled Chautauqua Lake Aquatic Data (CLAD) Mapping, which will efficiently collect bathymetry, sedimentation, and macrophyte biovolume data in order to assist our members with lake management and resource allocation.

The Alliance is honored to be comprised of member organizations that understand the incredible asset Chautauqua Lake and its watershed are to the County and the entire region, and we are proud to have partnered with each of the nine Lake municipalities, the County, and numerous members to develop impactful projects, secure funding, manage implementation, and ensure project completion. By working in collaboration with as many stakeholders as possible, we deepen our collective focus, strength, and leveraging capabilities, for the benefit of Chautauqua Lake, its watershed, and ultimately our Community. Additional project details can be found later in this report.

The Alliance would like to thank everyone – our Members, local Foundations, and other lake and watershed stakeholders – for their support and passion over the past 5 years, as we look forward to another great year in 2020.

2019-2020 Members

- Audubon Community Nature Center
- Chautauqua Cattaraugus Board of Realtors
- Chautauqua County Chamber of Commerce
- Chautauqua County Visitors Bureau
- Chautauqua Institution
- Chautauqua Lake Association
- Chautauqua Lake Fishing Association
- Chautauqua Lake Partnership
- Chautauqua Watershed Conservancy
- County of Chautauqua
- Holmberg Foundation
- Jamestown Board of Public Utilities

- North Chautauqua Lake Sewer District
- NYS Office of Parks, Recreation and Historic Preservation – Allegany Region
- Roger Tory Peterson Institute
- South & Center Chautauqua Lake Sewer District
- The Lenna Foundation
- Town of Busti
- Town of Chautauqua
- Town of Ellery
- Town of Ellicott
- Town of North Harmony
- Village of Bemus Point
- Village of Celoron
- Village of Lakewood
- Village of Mayville

2015-2019 Alliance-Partnered Project Summaries

Primary Partner: County of Chautauqua

Water Quality Improvement Projects (WQIP), Streambank Stabilization

Description: Work involves six (6) separate grant awards to address streambank and channel instability at eight (8) priority sites along Prendergast Creek, Bemus Creek (two sites), Goose Creek, Ball Creek, Dutch Hollow Creek (two sites), and West Dutch Hollow Creek. The purpose of the work is to improve water quality in Chautauqua Lake and its tributaries by reducing erosion and associated sediment and nutrient loading caused by streambank and channel instability. Sediment transport to the lake, from unstable banks like those being addressed by this work, is a source of nutrients, including nitrogen and phosphorus, which can impair water quality when present at excess concentrations (e.g., contributing to algae blooms and/or excessive nuisance aquatic vegetation growth). The work will also help address ongoing property loss, including imminent threats to infrastructure, caused primarily by bank erosion. Construction has been completed at seven of the eight priority sites, and grant closeout is underway for four of the six grants. The NYS DEC approved a time extension request to utilize surplus funding to address erosion issues at an additional nearby section of Dutch Hollow Creek. Coordination among the County, Alliance, Engineer, and Owners is in progress with implementation anticipated in 2020 to 2021.

Projected budget for all six (6) projects:

Total: ~ \$1.43 Million | State: ~ \$1.07 Million | Local: ~ \$358,000

Grantee: County of Chautauqua

Alliance Role: Grant writing and administration; project management/coordination

Other Involved Member Partners: Chautauqua County Soil & Water Conservation District (technical services); Chautauqua Watershed Conservancy (education & outreach)

Funding Overview: The majority of the project cost is funded by the Environmental Protection Fund administered by the New York State Department of Environmental Conservation (NYSDEC). The remaining share is provided by the County of Chautauqua as local matching funds from the Occupancy Tax Program and reallocated Chautauqua Lake Management Commission (CLMC) capital funds. The State-funded

share of nearly \$1.1 million would not have been possible without the commitment of these matching funds. Local matching fund contribution percentage requirements vary depending on the source of funding. These particular WQIPs require a 25% local match. That is, for every \$1,000 of a total project amount, a local match contribution of \$250, in either cash or in-kind services such as equipment, labor, or service from local employees or volunteers, results in an additional \$750 from the State in the form of the WQIP grant award. Local match requirements are a critical tool used by funding agencies to ensure local "buy-in" and encourage high-quality projects with clear value to the local populace. When projects are properly vetted, designed, and executed, both sides benefit because the grant recipient or beneficiary has successfully leveraged a significant return on its investment (in this case, \$4 worth of work for every \$1 spent from local funds), and the grant provider assures itself a well thought-out, effective project.

Project Descriptions:

- 1. **Prendergast Creek** Stabilization Project, Chautauqua, NY
 - a. Status: Completed, Fall 2016
 - b. Outcomes & Achievements: Completed a streambank stabilization and stream restoration project on an approximately 1,100-foot-long section of creek. Under the direction of the Chautauqua County Soil & Water Conservation District, Contractors installed approximately 650 feet of large rock rip-rap toe protection in two sections, performed bank-slope grading and stabilization with vegetation, installed two cross-channel grade stabilizers (engineered rock riffles), and performed final site cleanup, grading, and seeding.



- 2. **Bemus Creek** Stabilization Project, Ellery and Bemus Point, NY (two sites)
 - a. Status: Upstream Section completed in Fall 2016; Downstream Section Completed in Summer and Fall 2017
 - b. Outcomes & Achievements: The overall project included two distinct areas of work along Bemus Creek separated by about 1.5 miles. We identified the two work areas as (1) the upstream section (or, Bemus Creek Upper) and (2) the downstream section (or, Bemus Creek Lower). Most construction on the upstream portion of the project took place in Fall 2016, with minor additional work completed in September 2017. There, under the direction of the Chautauqua County Soil & Water Conservation District, Contractors installed approximately 500 feet of large rock rip-rap toe protection in three sections, installed about 70 feet of rootwad and stone revetment, performed bank-slope grading and stabilization with vegetation, installed three cross-channel grade stabilizers (engineered rock riffles), and performed final site cleanup, grading, and seeding. Construction on the downstream section of the project was completed in October 2017 by a Contractor under the direction of the Chautauqua County Soil & Water Conservation District. There, the project included the installation of approximately 470 (+/-) feet of heavy rock rip-rap slope stabilization, bank grading, installation of two engineered rock riffle grade stabilizers, installation of willows along the stabilized bank, and final site grading and seeding.



- 3. **Goose Creek** Stabilization Project, Busti, NY
 - a. Status: Construction completed in Summer 2018
 - b. Outcomes & Achievements: Stabilized an approximately 225-foot-long section of creek, with the installation of large rock rip-rap toe and slope protection, bankslope grading and stabilization with vegetation, and restoration of disturbed areas.



- 4. **Ball Creek** Stabilization Project, North Harmony, NY
 - a. Status: Construction completed in Fall 2017; additional site preparation and planting to enhance riparian buffer was completed in fall 2019.
 - b. Outcomes & Achievements: Stabilized an approximately 250-foot-long section of eroding streambank at the site through the installation of heavy rock rip-rap slope and toe protection, bank slope grading, native willow and dogwood plantings, and installation of a grade stabilizer (engineered rock riffle). The project also includes additional riparian buffer-related work. The site was prepared using an integrated pest management strategy to address the aggressive terrestrial invasive species present at the site (primarily Mugwort) in order to maximize the likelihood of successful establishment of the planted native species. The approach for site preparation and native plantings was based on available scientific publications, best management practices, and coordination with regional experts (Western New York Partnership for Regional Invasive Species Management, Soil & Water Conservation District, and the Chautauqua Watershed Conservancy), and it is anticipated that the establishment of native plantings will occur over several years. The approach and timing of site preparation activities and installation of native plantings was adaptive based on how the site responded

over the course of several seasons, which is consistent with the typical approach for projects of this type. The re-establishment (with native plants) of the riparian buffer at this site will serve to enhance water quality in Ball Creek and Chautauqua Lake through nutrient uptake as well as helping to further stabilize the repaired streambank through the development of a more robust root system. The final site planting included 40 additional native willow live stakes and 50 new native bare-root trees, which occurred in November 2019 with the assistance of Southern Tier Consulting, Chautauqua Watershed Conservancy Volunteers and Staff, and Alliance Staff.



5. **Dutch Hollow Creek** Stabilization Project, Ellery, NY

- a. Status: Phase I construction completed in Fall 2018; Phase II planning and coordination is underway; Phase II construction planned for 2021.
- b. Outcomes & Achievements: Streambank and grade stabilization and stream corridor restoration addressed an approximately 1,100-foot-long reach of Dutch Hollow Creek, just north of Interstate I-86, which is negatively impacted by excessive sediment loading and frequent debris jams that obstruct the channel, causing head cutting, erosion of banks and new side channels, and results in the formation of oversized depositional features. Work aimed to protect nearby infrastructure and banks, and to reduce the amount of sediment and nutrient loading to downstream areas, including Chautauqua Lake, caused by the ongoing bank and channel instability. Coordination among the County, Alliance, Engineer, and Owners is in progress on Phase II of the project with implementation anticipated in 2020 and 2021.



- 6. **West Dutch Hollow Creek** Stabilization Project, Ellery, NY
 - a. Status: Construction substantially completed in Fall 2018 and reached final completion in Fall 2019.
 - b. Outcomes & Achievements: Streambank and grade stabilization and stream corridor restoration addressed an approximately 850-foot-long reach of West Dutch Hollow Creek, where abrupt localized channel erosion was resulting in larger-scale negative impacts further downstream in areas where the stream flows in close proximity to residential properties and roadways. The work aimed to significantly reduce the amount of sediment and nutrient loading to downstream areas, including Chautauqua Lake, caused by the stream instability.



Chautauqua Lake & Watershed Invasive Species Control Project

Description: This 100% NYS-funded, multi-partner project established a framework for a volunteer Aquatic Invasive Species Early Detection program on and around Chautauqua Lake for priority invasive species (e.g., water chestnut, hydrilla) as a necessary complement to existing prevention-focused efforts (e.g., Watercraft Steward Program) and monitoring of macrophyte communities. Eleven free, open-to-the-public educational and technical training events were held in 2018 at nine different locations around Chautauqua Lake. Events included both short, seminar-style events focused on raising awareness of the threat of invasive species, basic aquatic plant identification, an introduction to the NYS iMapInvasives mobile application, and generating awareness for and opportunities to participate in the Early Detection program under development for Chautauqua Lake and longer events with classroom instruction and 'floating classroom' workshops on the water focused on plant identification, field data collection, use of Global Positioning System (GPS) units, the NYS iMapInvasives reporting system, and encouraging continued participation in future events. Training materials from the events were archived as on-demand webinars and electronic files to be used for future training events. Other materials produced under the grant included rack cards and posters related to invasive species on and around Chautauqua Lake. Geographical Information System (GIS) data were collected, evaluated, and used to make maps of invasive species distribution in and around Chautauqua Lake, which will assist with future planning and management decisions and priorities. As a culmination of the educational, outreach, and technical work performed under the grant, a Chautauqua Lake-specific Standard Operating Procedure (SOP) for Early Detection of aquatic invasive plants was also produced as an end-of-project deliverable. Work also included water chestnut control in 2017 at the Audubon Community Nature Center, which threatens Chautauqua Lake. Equipment such as kayaks, inflatable work boat, GPS units, and other macrophyte and water quality related equipment was also purchased under this grant that will be used to support ongoing invasive species related work. We are committed to building upon and leveraging this initial NYS investment by putting this early detection program framework - consisting of increased local capacity and awareness, training and technical materials, and equipment - to work as a newly formed 'Early Detection Volunteer Taskforce' to help protect the environmental, economic, and ecological function of Chautauqua Lake. An expanded program led by the Alliance and the Roger Tory Peterson Institute was completed in 2019 which, included informational seminars, mixed classroom-field 'floating classroom' training events, and 'Aquatic Invasive Species Early Detection Volunteer Taskforce' paddles that searched for priority invasive species (e.g., hydrilla and water chestnut) that are not yet

established in Chautauqua Lake but represent an imminent threat to the ecological, environmental, and economic health of the lake. In 2019 the Aquatic Invasive Species Volunteer Taskforce was successful at locating water chestnut in the Chautauqua Lake outlet during a half-day paddling event on 8/10/19. Western New York (WNY) Partnership for Regional Invasive Species Management (PRISM) also located a stand of water chestnut in the Chautauqua Lake outlet on 8/02/19. WNY PRISM staff pulled and removed two grocery bags full of water chestnut from that location. Alliance staff went back to that location on 10/29/19 and did not locate any more water chestnut plants.

Project budget:

Total: \$50,000 | State: \$50,000

Grantee: County of Chautauqua

Alliance Role: Grant administration; project management/coordination

Other Involved Member Partners: Audubon Community Nature Center; Roger Tory Peterson Institute

Funding Overview: Funding for this project was secured through the efforts of Senator Cathy Young and the County of Chautauqua in the form of a local assistance grant from the Environmental Protection Fund (EPF), as administered by the New York State Department of Environmental Conservation.



Water Quality Improvement Project (WQIP), Chautauqua Lake Mechanized Floating Vegetation Collection Project

Description: Chautauqua County has received a grant to purchase two (2) aquatic skimmer vessels to collect and remove floating vegetation and/or surface scum from Chautauqua Lake, which should help reduce the amount of floating vegetation, improve conditions in the lake, and potentially reduce the growth of Harmful Algal Blooms (HABs). The grant was awarded in late 2018, and in 2019, the County secured the services of Alpha Boats Unlimited to build two (2) MC-202 Aquatic Skimmer Vessels, which have a payload capacity of two (2) tons. Delivery of these skimmer vessels is anticipated to occur during the summer of 2020.

Projected budget:

Total: \$500,000 | State: \$375,000 | Local: \$125,000

Grantee: County of Chautauqua

Alliance Role: Grant writing and administration; project management/coordination; local match via Alliance/Foundation Match Fund

Other Involved Member Partners: Chautauqua Lake Association

Funding Overview: The majority of the project cost is funded by the Environmental Protection Fund administered by the New York State Department of Environmental Conservation (NYSDEC). The remaining share is provided as local matching funds by the County of Chautauqua as operational support to CLA and by the Alliance from the Alliance/Foundation Match Fund.



Primary Partners: Village of Lakewood & Town of Busti

Engineering Planning Grant (EPG), Stormwater Management Engineering Study

Description: The Village of Lakewood, in partnership with the Town of Busti, completed a comprehensive engineering study in 2018 that inventoried and assessed the condition and capacity of existing stormwater infrastructure, defined surface drainage areas (catchment areas), and modeled nutrient and sediment loads, in order to identify viable future improvement projects that would mitigate potential flooding and have a positive impact on the environmental health of Chautauqua Lake. Grant closeout with NYS was completed in early 2019. The 2018 engineering study resulted in six recommended improvement projects that were advanced to conceptual design and cost estimation, three of which were then submitted in partnership with the Alliance for consideration as NYS Consolidated Funding Applications in 2018.

Projected budget: Final Project Budget:

Total: \$136,500 Total: \$119,900

State: \$100,000 State: \$99,916

Local: \$36,500 Local: \$19,984

Grantee: Village of Lakewood

Alliance Role: Grant writing and administration; project management/coordination

Other Involved Member Partners: Town of Busti (local match, technical involvement & key project partner); County of Chautauqua (local match)

Funding Overview: The State share of funding for the project is provided by a New York State (NYS) Department of Environmental Conservation (DEC) / Environmental Facilities Corporation (EFC) Wastewater Infrastructure Engineering Planning Grant (EPG), funded through the New York Clean Water State Revolving Fund (CWSRF) program. Local matching funds are provided by the Village of Lakewood, Town of Busti, and the County of Chautauqua from the Occupancy Tax Program and reallocated Chautauqua Lake Management Commission (CLMC) capital funds.

Village of Lakewood

Green Innovation Grant Program (GIGP), Chautauqua Avenue Green Street Retrofit Project

Description: Sourced from the completed Village of Lakewood and Town of Busti Stormwater Management Engineering Study, this project is a comprehensive green infrastructure retrofit of Chautauqua Avenue in the Village of Lakewood to transform the existing impervious, over-widened Village Center roadway in an effort to improve water quality and quantity conditions by reducing sediment and nutrient loading to lake. The project will result in increased infiltration and biofiltration of urban stormwater, reduced burden on existing drainage infrastructure, and co-benefits of improved aesthetics, increased public awareness of urban stormwater management and lake stewardship, and reinvigoration of traditional "Main Street" character. The preliminary design was prepared as part of the recently completed Lakewood-Busti Stormwater Management Engineering Study, which was a collaborative project among the Town, Village, County of Chautauqua, Alliance, and the NYS Environmental Facilities Corporation (EFC) and Department of Environmental Conservation (DEC). The grant was awarded in late 2018 with implementation beginning in 2019 when the Village secured the engineering services of Barton and Loguidice. Construction of the Chautauqua Avenue Green Street Retrofit Project is anticipated to occur in the fall of 2020 and spring of 2021.

Projected budget:

Total: \$772,724 | State: \$695,000 | Local: \$77,724

Grantee: Village of Lakewood

Alliance Role: Grant writing and administration; project management/coordination; local match via Alliance/Foundation Match Fund

Other Involved Member Partners: County of Chautauqua (local match & financing assistance)

Funding Overview: The State share of funding for the project is provided by a New York State (NYS) Environmental Facilities Corporation (EFC) Green Innovation Grant Program (GIGP) grant. Local matching funds are provided by the Village of Lakewood (planned to be in-kind construction services), County of Chautauqua from reallocated

Chautauqua Lake Management Commission (CLMC) capital funds, and Alliance from the Alliance/Foundation Match Fund.



Town of Busti

Water Quality Improvement Project (WQIP), Precision Swale Stormwater Retrofits

Description: Sourced from the completed Village of Lakewood and Town of Busti Stormwater Management Engineering Study, this project intends to stabilize and enhance approximately 2,100 linear feet of steep-gradient and 2,500 linear feet of shallow-gradient roadside swales at select locations throughout the Town of Busti and Village of Lakewood in order to reduce sediment and nutrient loading to Chautauqua Lake. Best management practices (BMPs) will be incorporated to reduce ongoing channel and bank erosion, reduce water velocities, promote infiltration and biofiltration, enhance biodiversity and habitat for birds and pollinators, and improve aesthetics. Such BMPs may include vegetated filter strips, wetland pockets, stone check dams, riffle-pool complexes, sorptive media for nutrient capture, native wetland plantings, and other features. The proposed locations were identified as part of preliminary design completed in the Lakewood-Busti Stormwater Management Engineering Study, which was a collaborative project among the Town, Village, County of Chautauqua, Alliance, and the NYS Environmental Facilities Corporation and Department of Environmental Conservation. The grant was awarded in late 2018 and project design and engineering by EcoStrategies is underway. Construction of the Precision Swale Stormwater Retrofits project is anticipated to occur in 2020 or 2021.

Projected budget:

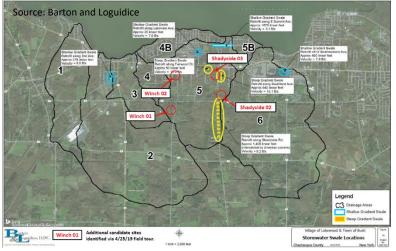
Total: \$269,971 | State: \$202,478 | Local: \$67,493

Grantee: Town of Busti

Alliance Role: Grant writing and administration; project management/coordination; local match via Alliance/Foundation Match Fund

Other Involved Member Partners: County of Chautauqua (local match)

Funding Overview: The majority of the project cost is funded by the Environmental Protection Fund administered by the New York State Department of Environmental Conservation (NYSDEC). The remaining share is provided as local matching funds by the Town of Busti (cash and in-kind), County of Chautauqua from reallocated Chautauqua Lake Management Commission (CLMC) capital funds, and Alliance from the Alliance/Foundation Match Fund.





Project Partner: Village of Celoron

Local Waterfront Revitalization Program (LWRP), Lucille Ball Memorial Park Improvements, Phase I-III (Breakwall/Boardwalk & Kayak Launch)

Description: The Village of Celoron has completed multiple improvements to Lucille Ball Memorial Park located along the Chautauqua Lake waterfront via two New York State grants issued by the Department of State with funds from Title 11 of the Environmental Protection Fund. Phases I through III of the Park improvements were completed in Fall 2018 with grant close-out completed in 2019, and included the replacement of a failing approximately 430-foot-long concrete seawall with a heavystone sloped/irregular shoreline, addition of an approximately 60-foot-long rootwad revetment for shoreline habitat enhancement at the eastern end of the new breakwall, installation of a new approximately 390-foot-long timber boardwalk atop helical piles, removal of two existing wooden docks and one concrete boat ramp, utilities work, installation of benches (including ADA-compliant bench) and trash-receptacles along boardwalk, and installation of a prefabricated floating handicapped-accessible kayak/canoe launch with gangway. Preliminary engineering and permitting for the waterfront work was largely completed in 2015 and 2016. In 2017, the Village, Alliance, and the Village's engineering consultant completed final design, permit modifications, and bidding and award for construction. The construction contractor completed the work in 2018. The Village also completed zoning changes and installed new security cameras at the Park as part of the overall project.

Projected budget for both grants: Final Project budget for both grants:

Total: \$874,130 Total: \$694,274

State: \$437,065 State: \$347,137

Local: \$437,065 Local: \$347,137

Grantee: Village of Celoron

Alliance Role: Grant writing (for second grant) and project administration

Funding Overview: One-half of the project costs will be provided by two grants from the New York State Department of State with funds provided under Title 11 of the Environmental Protection Fund, and the remaining 50% of the project costs were contributed by the Village of Celoron.



Local Waterfront Revitalization Program (LWRP), Lucille Ball Memorial Park Improvements, Phase IV, Amenities Building

Description: The Village of Celoron is in the process of building a new park amenities building in Lucille Ball Memorial Park along Chautauqua Lake. Construction on the amenities building started in 2019 and includes ADA-compliant restrooms, a drinking fountain, a security system, and a storage area. The project implemented the Local Waterfront Revitalization Program which identified the need for park enhancements at Lucille Ball Memorial Park, the centerpiece of downtown Celoron. Once completed, the new building will support increased park and lake use by providing amenities which enhance user experience and allow visitors to stay for longer periods. This project will complement recent Alliance-partnered park enhancements completed by the Village including construction of a new breakwall, waterfront boardwalk, and kayak/canoe launch funded by two previous NYS grant awards. The project is anticipated to be completed in the summer of 2020.

Projected budget:

Total: \$510,240 | State: \$382,680 | Local: \$127,560

Grantee: Village of Celoron

Alliance Role: Grant writing and project management/administration

Funding Overview: Seventy-five percent (75%) of the project costs will be provided by a Local Waterfront Revitalization Program (LWRP) grant from the New York State Department of State with funds provided under Title 11 of the Environmental Protection Fund, and the remaining 25% of the project costs will be contributed by the Village of Celoron in the form of cash or in-kind services.

Primary Partners: Village of Mayville & Town of Chautauqua

Engineering Planning Grant (EPG), Stormwater Management Engineering Study

Description: The Village of Mayville, in partnership with the Town of Chautauqua, retained the services of a Barton and Loguidice, a licensed professional engineer to undertake a study that inventoried and assessed the condition and capacity of existing stormwater infrastructure, defined surface drainage areas (catchment areas), modeled nutrient and sediment loads, and identified viable future improvement projects that would mitigate potential flooding and/or have a positive impact on the environmental health of Chautauqua Lake. The project was completed in late summer 2019 and resulted in over 47 potential project sites. Of the 47 potential retrofit opportunities, six (6) were advanced to 20% concept level design. The study and its priority projects are now being used to support future grant applications for project implementation, which aim to address harmful algae and nuisance macrophyte growth issues in Chautauqua Lake by reducing the quantity and improving the quality of stormwater flows.

Projected budget: Final budget:

Total: \$135,300 Total: \$134,608

State: \$100,000 State: \$100,000

Local: \$35,300 Local: \$34,608

Grantee: Village of Mayville

Alliance Role: Grant writing and administration; project management/coordination; local match via Alliance/Foundation Match Fund

Other Involved Member Partners: Town of Chautauqua (local match, technical involvement & key project partner); County of Chautauqua (local match)

Funding Overview: The State share of funding for the project is provided by a New York State (NYS) Department of Environmental Conservation (DEC) / Environmental

Facilities Corporation (EFC) Wastewater Infrastructure Engineering Planning Grant (EPG), funded through the New York Clean Water State Revolving Fund (CWSRF) program. Local matching funds will be provided by the Village of Mayville, Town of Chautauqua, the County of Chautauqua from the Occupancy Tax Program and reallocated Chautauqua Lake Management Commission (CLMC) capital funds, and the Alliance from the Alliance/Foundation Match Fund.

Primary Partners: North Chautauqua Lake Sewer District & County of Chautauqua

Engineering Planning Grant (EPG), Orchard Terrace Inflow and Infiltration (I&I) Study

This project will assess the Orchard Terrace sanitary sewer collection system within the North Chautauqua Lake Sewer District (NCLSD) along the shoreline of Chautauqua Lake, identify areas of excessive inflow and infiltration (I&I), recommend improvements to the collection system aimed at reducing I&I, and complete an engineering report describing the projects and findings. These recommended system improvements will have a positive impact on both the environmental health of Chautauqua Lake and the affordability and efficiency of the wastewater collection and treatment system. The project is expected to be completed in 2020-2021.

Projected budget:

Total: \$36,000 | State: \$30,000 | Local: \$6,000

Grantee: County of Chautauqua

Alliance Role: Grant writing

Other Involved Member Partners: North Chautauqua Lake Sewer District

Funding Overview: The State share of funding for the project is provided by a New York State (NYS) Department of Environmental Conservation (DEC) / Environmental Facilities Corporation (EFC) Wastewater Infrastructure Engineering Planning Grant

(EPG), funded through the New York Clean Water State Revolving Fund (CWSRF) program. Local matching funds will be provided by the NCLSD/County.

Alliance as Lead:

Five-Year Implementation Strategy for the Management of Chautauqua Lake and its Watershed

Description: In May 2018, the Alliance finalized its 5-Year Implementation Strategy for the Management of Chautauqua Lake and Its Watershed to establish a more objective, transparent approach for prioritizing projects and allocating resources in this time of heightened community concern about the health of the lake — and differing views on which expenditures and projects would have the most beneficial impact. The Strategy offers a structured decision-making process and template to guide decisions about which lake and watershed projects should be pursued and/or funded. The project team, led by independent, outside consultants from EcoLogic, LLC & Anchor QEA, developed a multi-criteria analysis (MCA) tool based on the current science, engineering, and technology of lake and watershed management. The technical criteria were then weighted to incorporate input from the local community regarding what ecosystem functions are of greatest value. Stakeholders from 42 organizations and/or municipalities (including the 31 Founding Members of the Alliance) participated in discussions of local priorities. The Strategy enables the Alliance to explicitly address the tradeoffs inherent in prioritizing project opportunities. It applies decision criteria to evaluate projects, assigns a weighting factor to each criterion, and allows users to score the criteria consistently and objectively on a project-by-project basis. The criteria include environmental factors, which are weighted most heavily, as well as social and economic factors. Separate criteria are applied to watershed and in-lake projects, and a set of general criteria is applied to all projects. The Strategy was immediately put to work by the Alliance to evaluate local funding requests and prioritize projects for NYS and local grant applications in 2018 and 2019. Its use is expected to continue in 2020 and beyond.

Alliance Role: Grantee; Project management/coordination

Other Involved Member & Non-Member Partners: All Active and Founding Members were invited to participate in the project. Additionally, key non-Member watershed and lake stakeholders were also invited to participate in the project. Participation included written questionnaires, focus group meetings, participation at project meetings, and review and comments for Draft products. Thank you to the Alliance

Members and other lake and watershed stakeholder groups and individuals who participated in the project.

Funding Overview: This project was made possible through the generosity of the Sheldon Foundation and the Chautauqua Region Community Foundation (CRCF) who awarded grants to the Alliance to complete the work.

Ralph C. Sheldon Foundation Grant for Alliance-Member Projects

Description: Upon completion of the 5-Year Implementation Strategy for the Management of Chautauqua Lake and Its Watershed and associated Multi-criteria Analysis (MCA) Decision-Making Tool in May 2018, which established a more objective, transparent approach for prioritizing projects and allocating resources, the Alliance received a \$250,000 grant from the Ralph C. Sheldon Foundation to disburse among Members who had previously submitted 2018 funding requests directly to the Sheldon Foundation. The new MCA Tool was utilized to score the four existing Member grant requests, with analysis and scoring done independently by both Alliance staff and outside consultant, EcoLogic LLC. The Alliance Board of Directors considered the results of the independent scoring and the content of the four original grant requests and made the following award decisions, which also include two additional projects identified by the Alliance Board of Directors as important to the health of the lake and watershed:

- \$70,000 to the Chautauqua Lake Association (CLA) for operating assistance for aquatic vegetation control
- \$20,000 to CLA as match funding for a CFA grant application to be prepared by the Alliance for capital equipment acquisition (NYS grant awarded in late 2018)
- \$40,000 to Chautauqua Watershed Conservancy (CWC) for operating assistance with their "Starve the Algae Save the Lake" program
- \$10,000 to CWC for a new baseline Chautauqua Lake tributary stream water quality analysis program (completion scheduled for 2019)
- \$67,000 to Chautauqua Lake Partnership (CLP) for assistance with the Supplemental Environmental Impact Statement for herbicides
- \$20,000 jointly to CLA and CLP if they bring an acceptable proposal to implement an in-lake project that they will collaborate and cooperate on to the Alliance for consideration; (award was re-directed in late 2018 for shoreline cleanup in Burtis Bay in 2019)

Total project budget: \$250,000

Alliance Role: Grantee; Grant administration

Funding Overview: Funding was provided by the Ralph C. Sheldon Foundation in the form of a grant to the Alliance, which was subsequently distributed for Member projects.

2018-2019 Alliance Comprehensive Project Prioritization & Local Foundation Partnership Grant Program

Description: In fall of 2018, the Alliance partnered with the Ralph C. Sheldon Foundation and the Chautauqua Region Community Foundation for a new local grant opportunity for Alliance Members for watershed and in-lake projects and programs. The new grant application format and evaluation process was based on recommendations in the Alliance's recently completed 5-Year Implementation Strategy for the Management of Chautauqua Lake and Its Watershed and associated Multi-criteria Analysis (MCA) Decision-Making Tool, which established a more objective, transparent approach for prioritizing projects and allocating resources. The Alliance published a Request for Applications in September 2018 and received 12 applications totaling over \$1.1M. Scoring was performed using the MCA Tool by three independent groups – outside consultant EcoLogic LLC, the Alliance Scientific Review & Advisory Committee, and Alliance staff. The Alliance Board of Directors considered the results of the independent scoring groups as part of their decision making process. Funding recommendations were made by the Alliance Board of Directors to the partner Foundations in late 2018 with final decisions made in early 2019. Eight of the 12 proposed projects were at least partially funded for implementation in 2019. The project list is below:

- Chautauqua Lake Association, 2019 operational support
- Chautauqua Watershed Conservancy (CWC), Chautauqua Lake Tributary & Conservation Enhancement Program
- CWC, "Starve the Algae, Save the Lake!" Program
- Town of Busti, 2019 Herbicide Program (redirected to Village of Celoron due to lack of NYSDEC permit for Busti in 2019)
- Town of North Harmony, 2019 Herbicide Program
- Town of Ellery, 2019 Herbicide Program
- Town of Ellicott, 2019 Herbicide Program
- Alliance, Chautauqua Lake Aquatic Invasive Species Early Detection Volunteer Taskforce

Total project budget: \$330,000

Alliance Role: Grantee; Grant administration; Project implementation (Invasives grant)

Funding Overview: Funding was provided by the Ralph C. Sheldon Foundation & Chautauqua Region Community Foundation in the form of a grant to the Alliance, which subsequently will be distributed for Alliance and Member projects.



2019 Burtis Bay Clean-Up Project

Description: In the fall of 2018, a large mass of floating aquatic plants (macrophytes) drifted into Burtis Bay, causing stagnant conditions, a fish kill, and sediment and macrophyte deposition. These conditions hindered recreation and aesthetics in the Bay until spring 2019 when they were removed through a collaborative effort among Chautauqua County, the Town of Ellicott, the Village of Celoron, the Alliance, and the Chautauqua Lake Association. The project resulted in the cleanup of accumulated, concentrated primarily aquatic weedmass along an approximately 2,950-foot-long section of shoreline in Burtis Bay on Chautauqua Lake between 4/29 and 5/13/19. This resulted in significantly improved shoreline conditions for residents and other lake users, along with addressing the conditions that resulted in a fish kill in November 2018. The removal of the weedmass from the lake also removed the associated nutrients (e.g., Phosphorus and Nitrogen) that would have otherwise contributed to the lake's overall nutrient load, which affects plant and algae growth. The cleanup also prepared the shoreline for the May 2019 herbicide program, and it served as a model for future multi-partner collaboration on a more balanced, coordinated lake management program. The primary means of cleanup were a water-side approach by the Chautauqua Lake Association (CLA) over the entire project area using a combination of laborers and equipment and a land-based cleanup (excavator and dump truck) by the County of Chautauqua (in coordination with NYSDEC) over an approximately 450foot-long section of the project area. The CLA performed multiple passes along the entire length of the project area between 5/1 and 5/13/19 to cleanup the remaining weedmass from late 2018 and additional new material that washed in from offshore while the cleanup was underway.

Total project budget: \$43,200

Alliance Role: Project management, facilitation, and in-kind labor.

Funding Overview: Funding was provided by the Chautauqua Region Community Foundation (CRCF), the Ralph C. Sheldon Foundation, and the County of Chautauqua.



2019-2020 Alliance Comprehensive Project Prioritization & Local Foundation Partnership Grant Program

Description: In fall of 2019, the Alliance partnered with the Ralph C. Sheldon Foundation, The Lenna Foundation, the Chautauqua Region Community Foundation, and the Gebbie Foundation to continue the second year of a new local grant opportunity for Alliance Members for watershed and in-lake projects and programs. The grant application format and evaluation process was based on recommendations in the Alliance's 5-Year Implementation Strategy for the Management of Chautauqua Lake and Its Watershed and associated Multi-criteria Analysis (MCA) Decision-Making Tool, which established a more objective, transparent approach for prioritizing projects and allocating resources. The Alliance published a Request for Applications in September 2019 and received 18 applications totaling almost \$1.8M. Scoring was performed using the MCA Tool by three independent groups - outside consultant EcoLogic LLC, the Alliance Scientific Review & Advisory Committee, and Alliance staff. The Alliance Board of Directors considered the results of the independent scoring groups as part of their decision making process. Preliminary funding recommendations were made by the Alliance Board of Directors to the partner Foundations in late 2019 with final decisions made in January 2020. Fifteen of the 18 proposed projects are slated for at least partial funding for implementation in 2020. The project list is below:

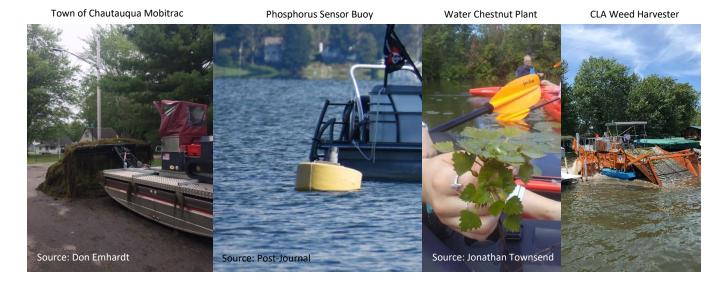
- Chautauqua Lake Association, 2020 operational support
- CWC, "Starve the Algae, Save the Lake!" Program
- Town of Busti, 2020 Herbicide Program
- Town of Ellery, 2020 Herbicide Program

- Town of Ellicott, 2020 Herbicide Program
- Village of Lakewood, 2020 Herbicide Program
- Village of Celoron, 2020 Herbicide Treatment Program
- Village of Bemus Point, 2020 Herbicide Program
- Village of Lakewood, Grandview Stormwater Management Project
- Town of Chautauqua, Mobitrac Equipment Purchase
- Chautauqua Lake Partnership, Chautauqua Lake Weed Survey
- Chautauqua Lake Partnership, Phosphorus Sensors (n=2)
- Audubon Community Nature Center, Water Chestnut Rapid Response
- Roger Tory Peterson Institute, Aquatic Invasive Species Volunteer Taskforce
- Roger Tory Peterson Institute, Chadakoin River Basin Erosion Mitigation Study

Total project budget: \$605,000

Alliance Role: Grantee; Grant administration

Funding Overview: Funding was provided by the Ralph C. Sheldon Foundation, Lenna Foundation, Chautauqua Region Community Foundation, and Gebbie Foundation in the form of grants to the Alliance, which subsequently are being distributed for Member projects.



Independent Third-Party Monitor for Chautauqua Lake Macrophyte Management - 2019 Herbicide Treatment Program

Description: In May 2019, the Towns of North Harmony, Ellicott, and Ellery and the Villages of Lakewood, Celoron, and Bemus Point retained the services of SOLitude Lake Management to treat 388 acres of Chautauqua Lake for invasive species Curly-Leaf Pondweed and Eurasian Watermilfoil using NYS DEC permitted herbicides Aquathol-K and Navigate. The Alliance in partnership with the County of Chautauqua retained the services of Princeton Hydro to act as an independent third-party monitor for the 2019 Chautauqua Lake Herbicide Treatment Program, which was recommended by the 2019 Chautauqua Lake Weed Management Consensus Strategy Memorandum of Agreement (MOA). The objectives of the of the third-party monitoring were to:

- 1. Evaluate potential risk to local drinking water supplies through water quality testing (Stations: Chautauqua Institution (CUD) and Chautauqua Lake Estates [CWD #2]).
- 2. Provide third-party verification of applicator-collected water samples and applicator-contracted laboratories.
- 3. Provide a third-party assessment of potential herbicide drift into non-target locations and potential impacts to non-target species.
- 4. Evaluate the apparent efficacy of herbicide treatments
- 5. Evaluate apparent effects of herbicide treatments on ambient water quality

The complete 2019 report can be found on the Alliance's website under the projects tab. This program is expected to continue in 2020 with adjustments to the objectives and sampling/observation plan based on the 2020 herbicide program.

Total project budget: \$44,546

Alliance Role: Project management and coordination

Funding Overview: Funding was provided by the County of Chautauqua and the Alliance.

5/2019-5/2020 Board of Directors

<u>Director:</u> <u>Nominating Member Affiliation:</u>

Pierre Chagnon - Chair County of Chautauqua

Ted McCague – Vice-Chair Village of Lakewood

David Shepherd - Secretary Holmberg Foundation

Jim Andrews- Treasurer Town of Busti

Rob Yates Town of North Harmony

Mike Latone Chautauqua Lake Partnership

Mike Jabot Chautauqua Watershed Conservancy

Paul (P.J.) Wendel, Jr. County of Chautauqua (Ex officio)

Bruce Erickson Chautauqua Lake Association

George Borrello County of Chautauqua (*Ex officio*)

Mary Laumer Chautauqua Watershed Conservancy

Note: A maximum of 9 directors comprise the board of directors. Those listed above served for all or some portion of 2019. The first 9 directors listed comprise the Alliance Board as of the date of this report.

Special Recognitions

The Alliance wishes to recognize that we as a community continually stand on the shoulders of those who have gone before us. Special appreciation to all those listed below and to the many more who remain unnamed.

CLMC participants: Linda Barber, Chuck Battaglia, Bill Boria, Craig Butler, Sally Carlson, Pierre Chagnon, Doug Champ, Jane Conroe, Rick Constantino, Fred Crosscut, Bill Daily, Jeff Diers, Tom Erlandson, Mark Geise, Tom Geisler, Lyle Hajdu, Vince Horrigan, John Jablonski, Joe Johnson, Don McCord, Wade Morse, Debbie Naybor, Andrew Nixon, Karen Rine, Kevin Sanvidge, Kim Sherwood, Mark Stow, Art Webster, Dave Wilson, Tad Wright and Chris Yates

Leading the evolution from CLMC to an Alliance: Linda Barber, Pierre Chagnon, Don Emhardt, Mark Geise, Lyle Hajdu, Vince Horrigan, Don McCord, Dave McCoy, Randy Sweeney and Tad Wright.

Funders: The Lenna Foundation, Ralph C. Sheldon Foundation, Chautauqua Region Community Foundation, Gebbie Foundation, Holmberg Foundation, and the County of Chautauqua.

Appendix A

2019 May Member Meeting Minutes

Thursday, May 9, 2019 4:00 p.m. at Stow Senior Center

Directors Present: Pierre Chagnon, George Borrello, Jim Andrews, Ted McCague, Jay Bailey, Bruce Erickson, David Wesp

Absent: Linda Barber, David Shepherd

Staff Present: Erin Brickley - Alliance Executive Director, Randall Perry - Alliance Project Manager

Others in Attendance: June Diethrick & Tory Irgang – Chautauqua Region Community Foundation. Linda Swanson – Sheldon Foundation. Eric Zavinski – Post-Journal. Interested citizens: Doug Champ, Sam Hazen, Vince Horrigan, Mike & Peggy Newell.

Member Representatives in Attendance: Scott Schrecengost – Village of Celoron, Mary Laumer, Craig Seger & John Jablonski – Chautauqua Watershed Conservancy (CWC), Doug Conroe, Debbie Moore & Chris Flanders – Chautauqua Lake Association (CLA), Karen Rine – South & Center Chautauqua Lake Sewer District, and Jim Cirbus, Jim Wehrfritz & Craig Butler– Chautauqua Lake Partnership (CLP), Chautauqua County – Dave McCoy, Cassie Pinkoski – Soil & Water, Town of North Harmony – Louise Ortman, Town of Busti – Jesse Robbins.

Scientific Review & Advisory Committee Members in Attendance: Jane Conroe

I. Call to Order:

The third annual May Member Meeting of the Chautauqua Lake and Watershed Management Alliance (Alliance) commenced at 4:30 pm.

II. Review of the 2018 May Member Meeting Minutes:

J. Andrews made a motion to approve the 2018 May Member Meeting Minutes. B. Erickson seconded the motion made by J. Andrews, which passed unanimously.

III. Review of the 2018 Annual Report:

- E. Brickley reviewed highlights of the 2018 Annual Report.
- D. Moore asked if the Audit was ready.
- E. Brickley indicated the Audit is not ready yet, but would be ready by the July Public Board Meeting.

IV. *Election of Directors*:

P. Chagnon asked for any remaining in-person ballots, but none we brought forward. E. Brickley advised that 22 of the 26 Alliance members completed 2019 member voting forms and 17 of 22 voted for the recommended slate.

E. Brickley indicated based on these tallies, the recommended slate of candidates carried and Rob Yates will fill the open town/village slot, Mike Latone and Mary Laumer will fill the two at-large slots, and Pierre Chagnon will retain the County appointed position. Director terms are identified at 3 years. Mr. Chagnon thanked Ms. Barber, Mr. Wesp, and Mr. Bailey for their service on the Alliance Board and welcomed Mr. Yates, Mr. Latone, and Ms. Laumer to the Alliance Board.

V. Open Floor to Members:

Mr. Chagnon opened the floor to any Member updates or upcoming events and/or comments from the general public in attendance. Please see May 9th, 2019 Board Meeting Minutes as Member updates from both the May Member meeting and the May Board meeting that were held consecutively are documented there.

VI. Adjourn:

B. Erickson made a motion to adjourn the May Member Meeting. The Motion was seconded by T. McCague and was passed unanimously. The meeting adjourned at 4:38pm.