2017-2018 Small Grants Program Project Summaries

1. **Project Title:** Increasing Public Stormwater Education, Outreach and Participation within the Shipbuilders Creek Watershed, Webster NY

   Subrecipient: Water Education Collaborative

   Project Lead: Paul Sawyko

Project Description: Shipbuilders Creek watershed is an impaired waterbody included on the NYS 303(d) list, with phosphorus, silt/sediment and stormwater identified as impairment sources. During 2017 and 2018, Water Quality Improvement Project (WQIP) Program funding from NYS DEC will be used to implement two high priority retrofit / stream restoration projects that will significantly reduce pollutant loads to Shipbuilders Creek. At the Thomas High School Campus the creek has been armored and straightened and much of the riparian buffer removed. Through WQIP a 700' section of stream would be restored, including the restoration of a 100' wide buffer of native vegetation, installation of biotechnical streambank erosion controls and bioretention, and creating stable, benched back banks, meanders, and riffles / pools. The School District is committed to being an active partner on the project and students will be involved in planting, maintaining, and monitoring. The second project is at Finn Park where a large offline regional stormwater management facility will be constructed to infiltrate and treat flows associated with older upstream development.

These projects provide highly visible stormwater retrofit demonstrations and create the opportunity, as proposed, to educate residents throughout the watershed about stormwater issues. In turn, this public education project will build support among residents and decision makers to further advance mitigation of stormwater impacts. This proposed project utilizes the Water Education Collaborative's (WEC) popular H2O Hero Program to provide public education and outreach to all residents of the Shipbuilders Creek Watershed through schools and community events, as well as participation of students and adults in stream restoration and protection throughout the Watershed. The public education and outreach portion of the project provides in-class education to students and information at community events for the general public regarding watersheds, stormwater issues and local water quality. A targeted marketing campaign within the Shipbuilders Creek Watershed will ensure coverage to all residents. Public participation will be encouraged through instructional classes and workshops demonstrating the installation of residential green infrastructure, (such as downspout disconnects, rain barrels, rain gardens, and streamside riparian protection where applicable), storm drain marking, and yard signs.

2. **Project Title:** Restoring and Enhancing Wetlands at the Stella Niagara Preserve

   Subrecipient: Western New York Land Conservancy

   Project Lead: Nancy Smith

Project Description: The Land Conservancy will restore and enhance a sedge meadow and wet-mesic grassland, two vulnerable types of wetlands, on the Stella Niagara Preserve in Lewiston, NY. The preserve is in the Lake Ontario Basin and located along the shoreline of the lower Niagara River. The Land Conservancy acquired the preserve in 2015 and now owns and operates it. This project will create just under half an acre of sedge meadow and just over one acre of wet-mesic grassland on the preserve. The project will also help restore the hydrology of a Class C stream that was significantly altered decades ago in order to drain the property.

The funding request of $25,000 is for implementation of the sedge meadow and wet-mesic grassland only, and will cover just under half of the total implementation costs for the sedge meadow and wetmesic grassland. All planning, design, and permitting work for this project will be complete by the end of 2016. Implementation of the sedge meadow and wet-mesic grassland will take place in 2017. This project is part of a larger plan to enhance ecological communities and provide low-impact public access at the preserve, and was based on a lengthy community and stakeholder engagement process.

3. **Project Title:** Vitale Park Green Infrastructure and Shoreline Habitat Restoration

   Subrecipient: Livingston County Planning

   Project Lead: Angela Ellis

Project Description: The Livingston County Planning Department and the Town of Livonia will install a 500 square foot rain garden, two 50 gallon rain barrels, and approximately 400 feet of shoreline restoration at Vitale Park on the shore of Conesus Lake. Each will serve as a functional demonstration project and will be accompanied by an interpretive public education kiosk. A landowner how-to booklet for shoreline restoration, lake friendly landscaping, and green infrastructure will be developed to accompany the Conesus Lake Watershed Council's newly developing "Shorescaping" public education campaign.

4. **Project Title:** Improving Water Quality and Community Resilience Through Watershed Outreach

   Subrecipient: Buffalo Niagara Riverkeeper

   Project Lead: Joel Bernosky

Project Description: Key findings and recommendations of the Niagara River Watershed Strategy and Plan indicate that a holistic, systems-based approach to watershed management is needed in order to effectively create change within communities at the ground level. For example, the Plan found that some of the region's most impaired waterways are found across the northern sub-basins of the watershed and that a lack of planning across municipal borders prohibits wholesale source-to-mouth improvements throughout waterways and riparian corridors. Similarly, the Strategy found that the highest priority for conserving and restoring habitats, including the region's vast living infrastructure network of wetlands and forests, should be a focus on the upper watershed sub-basins, as stream morphologies and water quality are affected beginning at the source of a waterway, and are further degraded downstream. Accordingly, recommendations from both plans include building partnerships across municipalities to conserve resources and promote community resiliency across shared resources and to expand local knowledge of water resources, watershed conditions, and natural living systems to foster public investment and practices to advance watershed health.

With the support of NYS Sea Grant funds, Riverkeeper will utilize an Ecosystem Based Management (EBM) approach to conduct municipal education, engagement and outreach activities across five prioritized sub-basins within the Niagara River watershed. The proposed activities will focus on educating municipal leaders on the known vulnerabilities of landscapes within the Western New York region and will discuss opportunities for habitat conservation/restoration of living infrastructure to support community and ecosystem resiliency. The work will further engage municipal leaders in developing place-based solutions and in identifying near-term opportunities to implement priority actions.

5. **Project Title:** Big Sister Creek Feasibility Study and Design

   Subrecipient: Erie County Department of Environment and Planning (ECDEP)

   Project Lead: P. Josh Wilson

Project Description: Bennett Beach is an Erie County owned park and public bathing beach located at the mouth of Big Sister Creek and experiences beach closings after heavy rain events in the watershed. In 2015, Bennett Beach was closed to swimming 41 days. The Erie County Health Department recently completed beach sanitary surveys indicating that municipal stormwater outfalls may be a contributing factor. Testing has also indicated that bacteria counts are high in upstream receiving waters, implying upstream factors may impact the bathing beach.

Other potential contaminants in Big Sister Creek include nutrients and floatables, which are considered major impacts according to the NYSDEC *WI/WPL Fact Sheet*. Dissolved oxygen, pathogens, and sediment are considered possible minor impacts. Therefore, it is important to address these contaminants in a manner that will improve water quality, protect the habitat, and keep the beach open for use in order to connect people to the water and environment.

Green infrastructure and a constructed wetland have the potential to address many of these water quality issues by slowing the flow of water and allowing for sedimentation, providing for uptake of nutrients by vegetation, and controlling pathogens. Permeable soils at this location make it a great candidate for this type of practice.

This project will also build upon work coordinated by Erie County Department of Environment and Planning (ECDEP) in 2013 to enhance the habitat around Bennett Beach. By continuing habitat restoration upstream, this constructed wetland project has the potential to expand the protected habitat area, as well as protect investments downstream from storm surges eroding the banks.

Erie County will issue a Request for Proposal (RFP) to select a consultant to conduct a feasibility study and develop a design to determine the best location for a constructed wetland and possibly additional green infrastructure practices along the various County-owned parcels along the Creek. The RFP will indicate the need to utilize native vegetation in the design, as well as take into consideration the fisheries. This design can then be utilized to apply for New York State or federal funding for construction.

6. **Project Title:** Parish Flats/Naples Creek Wetlands and Floodplains Restoration – Phase 1

   Subrecipient: The Nature Conservancy

   Project Lead: Stevie Adams

Project Description: The Nature Conservancy will conduct a thorough engineering study of the Naples Creek/Parish Flats area in Naples, NY to inform the selection and design of restoration components for the Parish Flats Restoration Project. This is the first phase of the restoration project to improve habitat quality and diversity in the Hi Tor Wildlife Management Area, address a flooding challenge for the Town of Naples Highway Department, and address water quality and toxic algae blooms in Canandaigua Lake. The conceptual components could intercept flows from 275 acres of existing farmlands, re-create 30 acres of wetlands, reconnect 3,700 linear feet of Naples Creek to its floodplain, improve the quality of 130 acres of grassland habitat, and improve hydrologic connectivity across Parish Flats Road by installing additional road stream crossings.

In order to ensure the restoration is done correctly from the start, which includes eliminating any negative impacts to local landowners and agricultural fields, careful planning and a comprehensive understanding of topography, hydrology, and groundwater is critical. The engineering study will collect high resolution topographic data in order to more accurately assess how water moves across the floodplains of Naples Creek (and its tributary Parish Creek), how that flow will be altered with the various conceptual features, how neighboring land uses might be impacted, and which components are most feasible and best able to meet the project objectives. As project lead, The Nature Conservancy will contract with an engineering firm to conduct the survey and will work with them throughout the process. Contractors are selected pursuant to the Conservancy's procurement policies with cost analysis, availability, experience, and partner input all factors that may be used to select the appropriate firm.

The Nature Conservancy, and its partners are working closely with local landowners and stakeholders to document needs and concerns and to include them in the restoration process. A restored ecosystem in the project location will result in greater flood resiliency, increased biodiversity, and improved water quality. This has benefits for agricultural landowners, municipal stakeholders, and local community members, as well as the ensuring the overall health and resilience of the Hi Tor WMA and Canandaigua Lake ecosystem.

7. **Project Title:** Streambank Restoration Study: Middle Genesee River Basin

   Subrecipient: Genesee RiverWatch

   Project Lead: George Thomas

Project Description: Streambank erosion is a major contributor to the sediment and nutrient loading in the Genesee River Basin. Genesee RiverWatch will complete a streambank restoration plan for the Middle Genesee River Basin to assess that section of the river and its tributaries to determine segments that have significant bank erosion, identify restoration options, estimate the cost and feasibility of those options, and finally create a plan document that details the cost and feasibility of a Middle Genesee River program.

This project will be followed by an extrapolation of the results, along with the results of Genesee RiverWatch's previous study in the Upper Genesee River Basin to create a basin-wide streambank restoration plan for presentation to federal and state government organizations and elected officials. Work by SUNY Geneseo suggests that the streambank erosion and river meandering is different than that which is found in the Upper Basin. The overarching goal is to obtain commitments from those organizations and elected officials to fund a long-term program to significantly reduce the streambank erosion in the whole basin.

8. **Project Title:** Model Intermunicipal Floodplain Overlay District Local Law

   Subrecipient: Genesee/Finger Lakes Regional Planning Council

   Project Lead: Jayme Thomann

Project Description: The Model Intermunicipal Floodplain Overlay District Local Law will be written to reflect constitutional home rule powers of local governments. The New York Municipal Home Rule

Law and the Statute of Local Governments give local governments in New York (e.g., cities, towns and villages) the power to adopt local laws on a wide variety of topics such as aesthetics, architectural review, and historic preservation. This model local law will reflect an outline similar to the "Neighborhood Development Floating Zone," prepared by the Land Use Law Center at Pace Law School in conjunction with the U.S. Green Building Council (USGBC), and the American Planning Association's (APA) "Model Pre-Event Recovery Ordinance." Both models provide a customizable format with annotations for more information.

This model local law outlines a foundation by which a municipality can organize and coordinate with neighboring municipalities to address the effects of climate change, including storm surge, sea-level rise, and inland flooding, to avoid "downstream" adverse effects of one community on another. No Adverse Impact (NAI) floodplain management is an approach developed by the Association of State Floodplain Managers (ASFPM) that ensures the action of any community or property owner—public or private—does not adversely impact the property and rights of others. For local governments, NAI floodplain management represents a more effective way to tackle flood problems. Formal parts of the model law local will follow the standard guidelines found in New York State Department of State's (DOS) *Adopting Local Laws in New York State*. This project deals only with the drafting of a model local law and not any of the procedural, adoption, or filing requirements.