



**Niagara River Greenway Commission
Project Consultation & Review Submission**

June 2024

**Niagara Wheatfield Eco-Campus:
Cayuga Creek Living Shoreline**



Project Registration Number: _____

Niagara River Greenway Commission Consultation and Review Form:

Type of Review: ☒ Mandatory Consultation
 ☐ Voluntary Review and/or Endorsement

PROJECT SPONSOR INFORMATION

Name: Buffalo Niagara Waterkeeper

Mailing Address: 721 Main Street, Buffalo

State: New York Zip Code: 14203

Federal ID# 22-2993054 Charities Registration #: 04-91-05

PROJECT TYPE

Check all that apply: ☐ Trail Development / Improvement ☐ Interpretation / Cultural Monuments
 ☒ Ecosystem / Riparian Habitat Restoration ☐ Stewardship
 ☒ Niagara River Greenway Placemaking / Public Access / Wayfinding

Funding Committee ☐ Host Community Standing Committee
 Request: ☐ Buffalo and Erie County Standing Committee
 ☒ Ecological Standing Committee
 ☐ State Parks Standing Committee
 ☐ Unsure at this time

Total Amount \$1,125,350
 Requested:

PROJECT INFORMATION

Project Name: Niagara Wheatfield Eco-Campus: Cayuga Creek Living Shoreline

Location: Niagara Wheatfield Senior High School

Site Address: 2292 Saunders Settlement Road, Sanborn NY

State: NY

Zip Code: 14132

Minor Civil Division(s): Sanborn

County: Niagara

Project Proponent Property Interest (own, lease, easement or other): Other

AUTHORIZED OFFICIAL

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PROJECT POINT OF CONTACT

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1. IN A BRIEF PARAGRAPH, DESCRIBE THE PROJECT AND ITS PURPOSE, HOW AND WHEN IT WILL BE ACCOMPLISHED, AND WHY IT IS IMPORTANT.

PROJECT BACKGROUND:

The Niagara Wheatfield Central School District has been working for the past several years to develop and advance their vision for the Niagara Wheatfield Eco-Campus Revitalization Project. The purpose of the Niagara Wheatfield Eco-Campus Revitalization Project is to transform the campus from a series of buildings, parking lots and open spaces into a campus that integrates nature and ecology, nature-based recreational features, and education and engagement opportunities related to the ecological, historical and cultural importance of Cayuga Creek and the Niagara River Watershed. The project focuses on an approximately 1.7-mile trail surrounding the High School and Middle School campus, with special attention given to the area immediately surrounding Cayuga Creek, a natural western border to the campus. Cayuga Creek is the school's direct connection to the Great Lakes. The school recognizes that any environmental improvements made will help to improve water quality in Cayuga Creek and, by extension, to the Great Lakes. This project strives to make tangible improvements to local water quality, habitat, and ecology, offer opportunities for the enjoyment of nature, and provide tremendous learning opportunities for Niagara Wheatfield students and nature-based recreation and fitness opportunities for the community.

The Niagara Wheatfield Central School District has mapped out an initial vision for the Eco-Campus, including features such as: a fully accessible 1.7-mile walking trail, installation of a boardwalk and bridge over Cayuga Creek, benches along the walking trail, an outdoor classroom, native plantings, riparian buffer improvements, rain gardens, pollinator gardens, and educational signage.

BNW and the Tuscarora Nation's Tuscarora Environment Office (TEP, which is part of the Haudenosaunee Environmental Task Force), have recently been working with the School District to help advance the next steps needed to complete full visioning and implementation of the Eco-Campus. BNW has over a decade of experience with implementing ecological, restoration, and public access improvement projects along waterways in the Niagara River Watershed. TEP holds important knowledge of the cultural and ecological significance of Cayuga Creek and will help incorporate indigenous traditional ecological knowledge (ITEK) into all facets of this work. BNW, TEP, and the School District are actively working together on the next steps for the Eco-Campus, including seeking funding for final visioning, design and engineering, and implementation.

This proposal focuses on a portion of the larger Niagara Wheatfield Eco-Campus vision. The context of the Eco-Campus is summarized here to show how the proposal fits within the entire project. The full Eco-Campus project consists of three primary components, which are depicted in Attachment A:

- **Ecological Restoration and Nature-Based Features:** Ecological restoration is at the core of the envisioned improvements. This includes stream restoration, floodplain enhancement, and riparian revitalization along Cayuga Creek, both within the School District property and adjacent Niagara Wheatfield Athletic Association (NWAA) property. Other restoration priorities within the 116-acre campus include creating no-mow areas, pollinator gardens, rain gardens, and planting native trees.
- **Public Access:** Access and recreation opportunities within the Eco-Campus for students and visitors are an important component of the project. Trails and pathways will be created including a fully paved 1.7 mile walking loop, several spur trails through the creek's riparian zone, creek crossing(s), and several openings to congregate with classes to take advantage of educational opportunities. An elevated boardwalk will allow students to take water samples, make observations, complete

macroinvertebrate surveys, and conduct other forms of water quality testing. The boardwalk will help maintain the ecological integrity of the riparian zone by consolidating foot traffic to one specific area, while greatly expanding access. Connection to the NWAA property will bring students and visitors through a restored floodplain and facilitate access to additional walking trails and playing fields being constructed by the NWAA.

- **Education:** Diverse audiences will be connected to the project through meaningful engagement during the design process, project implementation, and post-implementation monitoring and stewardship. Through this project, youth and other community members will be educated and engaged in the importance of healthy ecosystems and how nature can be integrated in landscapes where it is traditionally and commonly excluded. Opportunities for education and engagement in relation to this project include, but are not limited to, participating in design development meetings, utilizing it as a living classroom, implementing BNW's Young Environmental Leaders (YELP) and RestoreCorps Programs, enriching school clubs, and empowering community members to take on long-term stewardship.

FUNDING STATUS/SUMMARY:

This proposal focuses on a specific portion of the ecological restoration and education components of the larger Niagara Wheatfield Eco-Campus vision described above, namely the restoration of a section of Cayuga Creek and student engagement in the project. BNW intends to apply to the Greenway Ecological Standing Committee (GESC) in June 2024 for this portion of the work. The Committee will provide a conditional vote on the project dependent on the Greenway Consistency determination before any final approvals are made. The Niagara Wheatfield Central School District is planning to apply to the Host Community Standing Committee (HCSC) in 2024 for the design and implementation of public access components. The design funds they are seeking would complement the funds sought through this proposal by:

- Offsetting some of the design costs associated with the public access components within the proposed living shoreline footprint,
- Improving connections to the Cayuga Creek Living Shoreline Project through public access enhancements along the existing 1.7-mile trail that meanders around the school's property.

We will work together to coordinate these efforts as the various components of the project are advanced. Achieving progress on these primary components of the full Eco-Campus vision can serve as a launching point to advance the remainder of the features that will make up the entirety of the project. Project partners will also continue to work together to seek funding for the remaining elements of the full Eco-Campus vision that are outside of the scope of the GESC and HCSC proposals that will be submitted in 2024.

PROJECT DESCRIPTION & PURPOSE:

Buffalo Niagara Waterkeeper is requesting funding for a project that will support the ecological restoration and education goals of the Niagara Wheatfield Eco-Campus vision. The project will focus on the design and construction of a living shoreline project along an important section of Cayuga Creek, which will involve establishing land protection and enhancing floodplain and riparian areas through nature-based practices. The over 10-acre project will provide an abundance of ecological services to the surrounding community while also functioning as an outdoor classroom, providing opportunities for students and community members to engage with their natural heritage, learn about the importance of healthy shoreline ecosystems, and participate in project development.

This project is a continuation of BNW's Living Shoreline Program, which was developed in response to several planning initiatives and data analysis revealing the vast loss in natural shorelines and coastal wetland

habitats within the Niagara Region. Modeling best practices from similar shoreline restoration programs around the nation, Waterkeeper's Living Shoreline Program aims to identify and transform degraded shoreline environment into highly productive and resilient shoreline ecosystems through thoughtful planning, design, and implementation. This program leverages the knowledge and skills of our in-house team of experienced restoration project managers and that of external conservation partners to increase riparian restoration activities in the Niagara River Greenway, while increasing community engagement and awareness of shoreline best management practices.

The project area for this proposal includes the portion of the creek and the adjacent FEMA-mapped floodplain that flows through both the School District property and adjacent NWAA property, totaling 1,475 linear feet of Cayuga Creek and 10.6 acres of land currently considered as a floodplain (955 linear feet of stream and 3.8 acres of floodplain within the School District property and 520 linear feet and 6.8 acres of floodplain within the NWAA property, depicted in Attachment B). The Creek within the project area has some existing riparian buffer with some mowed lawn, and most of the project area within the NWAA property exists as former agricultural land. Much of the existing buffer on the School District property has experienced die-off of ash trees which has degraded the ecological value of this habitat while creating hazardous conditions as these trees begin to fall. Uniform grading practices and years of agricultural plowing on the NWAA property have wiped out any semblance of a functional native riparian plant community. This has diminished the habitat value along the waterway, reduced stormwater holding capacity in riparian areas, and restricted the interaction between Cayuga Creek and its floodplain. Ample opportunity exists to make improvements to this area to improve ecology, water quality, and the natural functions of the creek.

As with all Living Shoreline projects, the overarching goal of this project is to revitalize the identified degraded shoreline areas into higher-functioning and resilient riparian ecosystems. Additionally, the project will provide opportunities for local community members and students to observe, explore, and engage with their natural heritage. The proposal from BNW will focus on designing and implementing the ecological aspects of the living shoreline project and developing education programs related to Cayuga Creek and shoreline ecology. The proposal also seeks partial funding for designing public access components within the living shoreline project area. The actual implementation of these features will be supported by matching funds from the School District and other sources. The project goals for the Cayuga Creek Living Shoreline are:

- Improve and enhance riparian and floodplain habitat along Cayuga Creek, incorporating ITEK;
- Reduce stormwater pollution through natural filtration and green infrastructure practices;
- Control invasive species and replace them with native species; and
- Provide community members and students with the opportunity to experience and learn about native shoreline ecosystems via educational programming, informational signage, overlooks, and trail systems.

Specific restoration activities and approaches that will be considered in the development of the living shoreline project design include, but aren't limited to:

- Removal of invasive species as well as removal of hazardous trees (i.e. dead ash, which will be recycled in the project area as much as possible);
- Enhancement to mapped floodplain area, potentially including grading and enhancing connectivity to the creek;

- Creation of step pools, bioswales, or other green infrastructure practices to intercept runoff from adjacent impervious surfaces and playing fields;
- Creation of diverse native habitats: Wet meadow, meadow, vernal pools, riparian, and floodplain.

Meaningful engagement of teachers and students in the development of this work is important for numerous reasons, including making sure the end product incorporates aspects that align with ongoing learning goals and activities, educating those close to the project on the context and importance of the work, and creating a sense of connectedness to the project that will garner long-term support and stewardship.

The cultural and ecological significance of the Great Lakes watershed, the interconnectedness of the resources contained in the Great Lakes basin, and the need for stewardship of these resources will be central to the experiences provided through this project. During this project, Niagara Wheatfield High School students will learn about their place in the Great Lakes Watershed, local environmental issues, consider the impacts of climate change on Cayuga Creek and their campus, learn about ITEK principles, and will be engaged in the planning of the restoration design. TEP will help to provide Niagara Wheatfield teachers and students with an understanding of ITEK and how it relates to the Eco-Campus, Cayuga Creek and the larger Great Lakes Watershed. BNW will provide up to 3 classroom and/or field experiences that build connections to and understanding of Cayuga Creek, its health and impairments, and its relation to the larger Great Lakes Watershed. These experiences will occur during the school year with at least 15 and up to 30 students per session and could include a Cayuga Creek watershed tour, Water Quality and Macroinvertebrate sampling and analysis, and an opportunity for Niagara Wheatfield High School students to engage with students from Tuscarora Elementary School around the Cayuga Creek Living Shoreline project.

WHY IT'S IMPORTANT:

This project is in the headwaters of Cayuga Creek, which begins just north of the project area in Lewiston, flows through a portion of the Tuscarora Nation, and then crosses over Saunders Settlement Road before reaching it. The Cayuga Creek watershed is complex and has an extensive history of development and stream modifications. Anthropogenic alterations along the Cayuga Creek corridor have led to frequent and severe flooding, degraded water quality, habitat loss, and impacts to the surrounding community. The Cayuga Creek Watershed Restoration Roadmap which was informed by over 70 reports and studies states that, "development within the watershed and associated stream channel straightening along with loss of riparian habitat and floodplains have substantially affected the way precipitation runs off the land to the streams within the watershed, producing higher and more sudden peak flows" (Ecology & Environment, 2009). A long history of agricultural and industrial land uses has generated high levels of contaminants and nutrients entering the creek from both point and nonpoint sources. Additionally, failing septic systems, combined sewer overflows, and sanitary sewer overflows contribute to water quality degradation. As a result, the creek is designated as impaired by the New York State Section 303(d) List of Impaired/TMDL Waters and is documented to contribute to impairments identified for the Niagara River Area of Concern related to water quality and fish consumption.

Upstream of the project area, the Town of Lewiston controls a pumphouse which directs excess water from agricultural areas to Cayuga Creek to help alleviate flooding in agricultural areas which can cause intermittent high flow conditions along the Creek. This project will explore the potential of adding flood storage capacity along the creek during high water associated with pumphouse operations and storm events. This will help address some of the factors that create increased flows and flooding in areas downstream of the project.

The Cayuga Creek Watershed Restoration Road Map (2009) identifies this section of the creek as a potential opportunity for invasive species management, in-channel restoration, wetland habitat expansion, agricultural riparian buffers, and riparian restoration. The project area is one of the last remaining areas along the creek not held in private ownership, presenting an important opportunity to utilize nature-based techniques to address documented impairments along the creek corridor. The project's location in the headwaters of Cayuga Creek provides an opportunity to generate benefits not only within the project area proper, but also the entire downstream area. The restoration activities implemented through this project will help retain floodwaters, capture and filter stormwater, and create diverse and resilient native habitats. These in turn will help to improve water quality while cooling stream temperatures, mitigate flooding in downstream areas, create a stabilized shoreline that is resilient to impacts from climate change and other stressors, and create important habitat for a variety of fish, wildlife and pollinator species.

Cayuga Creek is a tributary to the Niagara River, meaning water quality impairments in this creek affect this important waterway. The Niagara River is a regionally and globally significant Great Lakes connecting channel and one of the most historically biodiverse river corridors in North America, however the Niagara River Remedial Action Plan cites the loss of fish and wildlife habitat and biodiversity along with degradation of nearshore habitats as major issues affecting the health of the Niagara River ecosystem, which ultimately led to its designation as an Area of Concern. This project aims to restore some of the habitat lost in the Niagara River Watershed along the Cayuga Creek tributary and to reduce unchecked stormwater pollution through nature-based practices.

Another goal of BNW's Living Shoreline Program is to offer underserved communities opportunities to re-engage with their natural heritage, re-learn how to understand landscape, and re-kindle a passion for the natural world. BNW does this by creating compelling projects on public lands, allowing visitors to walk trails through native pollinator meadows, observe diverse wetland plantings, and learn about landscape processes through engaging informational signage. This project will create these opportunities for local community members, students at the Niagara Wheatfield Central School District and their families. Out of just under 3,400 students who are enrolled in the school district, 36% of those students are economically disadvantaged.

METHODS:

Throughout the entire process of planning and executing this project, BNW will work closely with the School District, TEP, and NWAA to ensure they are informed and can weigh in each step of the way. More about each partner and their roles in the project are described in Section 4 of the proposal.

The first step in the process will be advancing the protection of the portion of the project area that falls on the NWAA property. The portion of the project that falls within the School District is already open to the public and as the leaders of the Eco-Campus vision, will not develop within the project area in the future. It is important that the portion of the NWAA property that falls within the project area has proper protections to ensure it is not altered or developed in the future and that it is maintained in alignment with the project goals. BNW's staff attorney will work with a land use attorney to execute proper protections for this area, whether that is a deed restriction or easement. Preliminary conversations with the NWAA and BNW are already underway, and all parties are open to establishing protective measures to preserve any future ecological restoration investment.

The restoration design and implementation will follow the typical design, bid, build project sequence. BNW will first secure a professional design consultant through a competitive bidding process. Once selected, the consultant team will gather existing site data and review the current design concepts for the Niagara Wheatfield Eco-Campus that have been developed by the School District (Attachment C). The design concepts will go through revisions based on existing site conditions to maximize the performance of the design, respond to site limitations, and take advantage of any missed opportunities during initial concept development. BNW envisions an intensive charrette process to refine the concepts with all project partners, including representatives from NWCS, NWAA, and TEP. Additionally, BNW and the project consultant will host one community meeting during the concept development phase to inform community members and gather input on the project design. After concept refinement, the design team will enter design development and construction documentation.

As design progresses, the project team will set industry standard design milestone check-ins at the 30%, 60% and 90% design stages. A Technical Advisory Committee (TAC) of interested stakeholder groups and regional leaders will be assembled to provide commentary at two of the design milestone check-ins. The design review meetings help to ensure that the project is progressing in alignment with the landowners' expectations, while also incorporating lessons learned from similar projects to avoid common pitfalls associated with projects of this type. At the 90% design phase, the design materials will be prepared and submitted to relevant permitting agencies, and the project team will begin preparing for construction bidding. The proposed project scope will support full design of both the living shoreline and floodplain restoration as well as public access features within the project area, however, Greenway Ecological Standing Committee funding will only be used to implement the ecological components of the project. BNW will actively pursue additional funds outside of Greenway to concurrently advance the public access components simultaneously with restoration, but if funding is not secured prior to construction bidding, public access features will be advanced through construction in subsequent years. The design will be developed in a way that will minimize disturbance to ecological components if public access elements must be implemented later.

Once permits are received and designs are finalized, the project team will prepare and release the project for contractor bidding. Bids/proposals will be scored, and a contract awarded to the most qualified construction contractor. The design consultant will remain on the project throughout construction to assist with construction contract administration and to ensure design components are being installed as described in the construction contract document drawings. Upon substantial completion of construction, the project will enter a 1-year warranty period to allow for site monitoring and corrective action to be taken by the contractor to address poor plant establishment or unsatisfactory work. Additional tasks to be completed during the warranty period include the installation of project signage and project promotion through BNW's web platforms.

After the construction contracts are closed out, BNW will work with NWCS to monitor project establishment and assist with planning adaptive landscape management (ALM) activities, as needed, in the living shoreline project area. Over the past 5 years, BNW has expanded its expertise in reading landscape establishment and prescribing timely and thoughtful interventions to ensure projects can properly established in the few years after construction. ALM activities, such as supplementary plantings, seeding, habitat box stewardship, and invasive species management, have proven essential in bridging the gap between landscape construction and landscape resilience. BNW is proposing extending the grant timeline two years past construction close out to ensure ALM tasks can occur during the critical years after initial landscape construction.

In conjunction with the design and implementation timeline, BNW will work with educators and administrators at Niagara Wheatfield and the TEC to deliver project-related programming for students.

PROJECT TIMELINE:

BNW plans to apply to the Greenway Ecological Standing Committee (GESC) in June 2024. The Committee will provide a conditional vote on the project dependent on the Greenway Consistency determination before any final approvals are made. If awarded, the project is proposed to begin in January 2025 with the goal of reaching project close-out by December 2029. A more detailed description of project sequencing is provided below.

January 2025:

- Project kick-off

February-May 2025:

- Secure landowner agreements
- Advance protections of project area within NWAA property (determine protection methods and move them forward)
- Develop and release RFP for design services
- Develop and implement at least one educational programming session with Niagara Wheatfield High School students

June-July 2025:

- Score proposals
- Select consultant
- Execute contract for design services
- Continue to advance protection of project area within the NWAA property

August-December 2025:

- Existing conditions data collection
- Concept refinement and community outreach
- Complete protection of project area within NWAA property
- Assemble TAC and organize TAC meetings
- Design development to 90%
- Begin invasive species management
- Develop and implement at least one educational programming session with Niagara Wheatfield High School students

January-June 2026:

- Design development to 100%
- Submit permit applications (January/February)
- Receive permits
- Begin invasive species management
- Develop and implement at least one educational programming session with Niagara Wheatfield High School students

June-July 2026:

- Prepare and release construction bidding materials
- Select qualified contractor
- Execute contract for construction services

July-November 2026:

- Project construction
- Restoration plantings

November 2026-November 2027:

- Substantial completion
- Warranty period

December 2027-November 2029:

- Adaptive management activities

December 2029:

- Project Closeout

Note—BNW will actively pursue state, federal, and philanthropic funding opportunities to support the implementation of the formal public access components of the project. The design of these components is included in the Greenway proposal. If additional funding is secured prior to construction bidding, these sites will be constructed concurrently with the ecological restoration work along the same timeline described above.

2. REFERRING TO THE NIAGARA RIVER GREENWAY PLAN, CLEARLY DOCUMENT AND DESCRIBE HOW THE PROPOSED PROJECT WILL ADVANCE THE NIAGARA RIVER GREENWAY VISION INCLUDING THE GOALS, PRINCIPLES, AND CRITERIA THAT DEFINE THAT VISION.

The Living Shorelines Program has been found consistent with Greenway goals, principals, and criteria and BNW intends to uphold these values in this proposed project along Cayuga Creek. A more detailed description of how this project aligns with the Greenway vision is described below.

GUIDING PRINCIPALS:

Excellence

In congruence with the history of success of BNW's Living Shorelines projects, Waterkeeper is committed to ensuring that this project is completed to the high standards BNW has established for the restoration projects completed through the Living Shoreline Program. This will be achieved through careful selection of project partners, thoughtful design, and by utilizing best management practices during construction. Through this Living Shorelines project, the Niagara Wheatfield Central School District, NWAA and community members will gain access to an ecological asset along Cayuga Creek, offering an opportunity for visitors to explore and experience natural shoreline environments.

Restoration

The section of Cayuga Creek within the project area holds vast opportunity for improvement as the current riparian buffer is limited due to mowing and agricultural land uses and has been degraded because of invasive species and ash die-off. As a result, this stretch of creek supports limited wildlife, few pollinators, and experiences impaired water quality due to unchecked stormwater inputs. This project will address these impairments through the revitalization of 10.6 acres of impaired shoreline and riparian habitat. Once restored to a higher function landscape, the living shoreline project will offer many ecological services to the surrounding communities while providing improved habitat for a large variety of species, including pollinators, birds, and amphibians.

Celebration

This project will be designed to celebrate the natural water resources that typify the Western New York region. Plant selection will be limited to Niagara River Watershed natives, further instilling a sense of place by showcasing and celebrating our regional flora identity. Additionally, BNW and project partners will document and share the success of the project with the community through social media posts and our website.

Sustainability

Long-term sustainability of the project will be achieved through the continued partnership with the Niagara Wheatfield Central School District and NWAA, which as the owners of the site will ensure its maintenance as an environmental restoration site. BNW has spoken with representatives from both organizations on this topic and will continue these discussions as the project advances to determine who will take on this role after project construction. The environmental restoration techniques used in the project will repair and enhance the shoreline into a natural system that is functional and self-repairing, once established.

Authenticity

Authenticity of place can be reinforced through the celebration of native flora and creating

meaningful experiences for people to engage with their natural heritage and the significance of this space to indigenous heritage. This Living Shoreline project will touch on all of these things. Thoughtful plant selection will limit species lists to the plants historically documented to occur within the Niagara River Watershed and those that are informed by ITEK, reinforcing regional identity and cultural significance. Trails and overlooks through meadows and wetlands will showcase the region's native flora and will provide opportunities to re-create connections between people and their natural heritage.

Ecological Integrity

The ecological integrity of our natural resources is under constant threat from anthropogenic disturbances. The current conditions of the project area have been negatively affected through riparian infringement and degradation, stormwater pollution, and invasive species colonization. This project will address each of these impairments and revitalize 10.6 acres of shoreline habitat into a higher-functioning environment, reminiscent of how a shoreline and associated habitats would have existed and functioned prior to human disturbance.

Partnerships

BNW will continue to partner closely with the Niagara Wheatfield Central School District, TEP, and NWAA and leverage our relationships with other practitioners in the region to assemble the best possible project team and Technical Advisory Committee for this project. Section #4 of this proposal includes more detail on the partnerships associated with this project.

Public Well-Being

After restoration, this project will provide a wealth of environmental services to the surrounding ecosystems and communities. Students, residents and visitors that encounter the project will experience the benefits associated with healthy shoreline ecosystems including the physical and psychological benefits associated with spending time in a thriving natural setting. Improved water quality and stream health in the project area and downstream will benefit those that recreate and live near Cayuga Creek.

Community Based

BNW and the project consultant will host one community meeting in between the 30% and 60% design stages to inform community members and gather input on the project design. It's important that the final restoration incorporates the desires of the community members in the adjacent communities, those who utilize the park, and anyone else with a vested interest. TEP involvement and student involvement in the project will also ensure key community members provide input on project development.

GOALS:

Improve Access and Make Connections

Current conditions within the project area offer limited engagement and restricted access to the water's edge. The proposed living shoreline will incorporate areas of low growing native plants to improve visual connections to the water. The project will also make physical connections for both people and wildlife through trails and educational signage.

People will enjoy improved access to the water's edge and ecological improvements via trails and

overlooks. The site presents important opportunities to actively engage students and visitors in learning about Cayuga Creek and living shorelines. Trails and educational signage will provide opportunities for this to occur passively on an ongoing basis, and formally through educational experiences that will be led by teachers in the School District, BNW, TEP and other partners. Potential educational experiences include water quality sampling, macroinvertebrate sampling, wildlife observation, and stewardship activities.

Protect and Restore Environmental Systems

When functioning properly, living shoreline environments improve water quality by filtering sediments and improving stormwater infiltration; create habitat that supports the life cycles of many fish and wildlife species; reduce shoreline erosion by absorbing and lessening erosive forces; and enhance public access. This project will restore the ecological integrity of 10.6 acres of shoreline and floodplain habitat, creating the conditions for these currently degraded areas to provide the many ecological services described above.

Also, the Living Shoreline Program aims to showcase best management practices and engage visitors to instill individual accountability towards the health and vitality of our shoreline environments. Each time a visitor walks a meadow pathway or reads a project sign, the project is successful in increasing public awareness about the importance of our shoreline ecosystems, which they take with them.

Promote Long Term Sustainability

Long-term sustainability of the project will be achieved through the continued partnership with the Niagara Wheatfield Central School District and NWAA, which as the owners of the site will ensure its maintenance as an environmental restoration site. BNW has spoken with representatives from both organizations on this topic and will continue these discussions as the project advances to determine who will take on this role after project construction. The environmental restoration techniques used in the project will repair and enhance the shoreline into a natural system that is functional and self-repairing, once established. Being a local organization, BNW often monitors sites to offer landowners advice on sustainable management and to offer adaptive management services through the RestoreCorps program when funding allows.

Celebrate History and Heritage

Restoring degraded shoreline environments into higher functioning ecosystems contributes towards cultivating beauty and pride in our region. When put into a larger context, we realize that our region is not only defined by its globally significant freshwater resources, but also its rebirth and renaissance. Habitat restoration is part of that story and BNW helps tell this story by bringing living shoreline projects to communities throughout the Niagara River Watershed.

Through the careful selection of native plants, BNW strives to create site specific projects that celebrate native flora, reinforcing a regional identity centered around environment and ecology. TEP will provide valuable input on plant selection, ensuring the project incorporates ITEK into the design. These projects create opportunities for meaningful connections to occur as visitors experience these landscapes as they walk the trails and read project signage. This type of experience provides the platform for people to re-engage with their natural heritage and celebrate what makes this region special.

Spark Revitalization and Renewal

All the projects that comprise the Living Shoreline Program have two goals. The first is to restore

ecological function at the site scale, and the second is to inspire change by providing on-the-ground examples of restoration techniques for others to emulate and to educate community members about healthy shorelines and their importance. As part of the Living Shoreline Program, the ecological restoration component of the Eco-Campus contributes directly to this sentiment by improving the health of our natural environment through restoration, and by offering opportunities of meaningful engagement via trails and signage.

Community engagement is a key aspect of changing the current waterfront land management regime to one that promotes healthy shoreline conditions. Successful habitat revitalization projects have the power to inspire citizens to embrace a new landscape aesthetic along the shoreline that is more conducive to ecosystem health. This type of engagement increases awareness and empathy for our shoreline environments, which in turn can lead to a greater demand for these projects in the future and the creation of long-term stewards for years to come.

Extend Olmsted's Legacy

Olmsted's legacy can be seen all over Western New York. Rather than seeing a park as an isolated parcel, his vision was to create park networks and corridors. He challenged the existing paradigm that a park exists in a city, and instead promoted the idea that a city should exist within a park. A green necklace of open spaces and greenways embody this notion, and the Living Shoreline Program strives to add depth to this concept.

Not only should people have access to parks and greenways, but they should also be able to access healthy ecosystems that provide immersive viewing experiences and many other ecological services. This project adds this additional layer by creating 10.6 acres of riparian habitat along Cayuga Creek. The project will enhance habitat connections along the Creek and will provide opportunity to access and engage with restored riparian systems in a meaningful way.

CRITERIA

Priority Status

Restoration of the Niagara River and its tributaries is called out as a priority conservation project in the Niagara River Greenway Plan. The project will also offer improved access to waterfront resources, provide restored natural habitat in an area that has been degraded, and will offer educational opportunities through signage.

Focus Area:

The project is not located within the Greenway Focus Area, however it is significant in the fact that it is located directly along the Cayuga Creek Corridor, which is part of the focus area up to where it flows out of the Niagara Falls Airforce Base, has a strong connection to the Tuscarora Nation, and presents the ability to connect with and educate numerous students and youth because of its proximity to several schools within the Niagara Wheatfield Central School District.

Environmental Soundness:

Through the implementation of the Living Shoreline Program, BNW's team has gained extensive knowledge, partnerships, and technical expertise required to administer and lead restoration projects like the one proposed here. BNW will pull from experience to apply best practices to this project to maximize the project's impact as an ecological and community asset.

Implementable:

As described above, BNW has cultivated productive relationships with the landowners and primary project partners, all of which are eager to work together to transform the existing riparian area and floodplain into a thriving living shoreline. BNW's past experiences with similar restoration projects will ensure all aspects of the project remain feasible and implementable.

Economic Viability:

All professional services provided through this project will be secured through a competitive bid process, allowing BNW to select the most cost effective and qualified applicants to join the project team. Assembling a cost effective and experienced team is one of the primary responsibilities of BNW during this project. Project sustainability and longevity are other important factors to consider when evaluating a project's economic viability. BNW has coordinated with the landowners to confirm they have the skills and capacity to take on long-term stewardship of the project, ensuring the initial investment in enhancing the shoreline areas along this section of Cayuga Creek will endure for many years.

Local Sponsors or Partners:

BNW will be the lead sponsor of the project and will work closely with the landowners and TEP representatives. BNW will also assemble a TAC of local practitioners, agencies, and stakeholders to participate in design discussions to help inform design decisions. Engaging with experienced regional partners will help ensure the project avoids common pitfalls and incorporates best management practices.

Matching Funds/Leveraging

The School District is currently seeking funds from the HCSC. If successful, \$50k of their request will serve as match for this project, covering the majority of the design costs for the public access features. The remainder of their request will serve as leverage.

BNW and the School District are actively looking for additional match opportunities. BNW's proposal includes the design of habitat restoration and public access components within the proposed project area; however, implementation of the public access components will be supported through non-Greenway sources. If funding is secured prior to construction bidding, these two project components will be constructed concurrently. If funding cannot be secured prior to construction mobilization, implementation of the public access features will occur in subsequent years as funding allows.

Consideration of Other Planning Efforts:

The Cayuga Creek Watershed Restoration Road Map (2009) identifies this section of the creek as a potential opportunity for invasive species management, in-channel restoration, wetland habitat expansion, agricultural riparian buffers, and riparian restoration.

The Niagara River Remedial Action Plan cites the loss of fish and wildlife habitat and biodiversity along with degradation of nearshore habitats as major issues affecting the health of the Niagara River ecosystem. The Living Shoreline Program, through which many degraded shoreline areas have been revitalized, addresses this critical impairment, while advancing goals found in other important documents including: The Niagara River Greenway Habitat Conservation Strategy, Great Lakes Regional Collaboration Strategy, NY State Forest Action Plan, NY State Open Space Plan, NY Wildlife Action Plan, Great Lakes Action Agenda, and NYS Comprehensive Wildlife Conservation Strategy.

Clear Benefits:

This project will benefit water quality in Cayuga Creek and the Niagara River through nature-based strategies. Healthy riparian ecosystems are proven to effectively reduce stormwater pollution by extracting, containing, or immobilizing contaminants and excess nutrients from soil and water before it enters local waterbodies. Dense shoreline vegetation also reduces erosion of sediment via complex root systems that hold soils in place. This project proposes the creation of dense riparian plantings and nature-based green infrastructure solutions to maximize the ability of the shoreline to attenuate stormwater before it reaches Cayuga Creek and eventually the larger Great Lakes system.

This project will also benefit wildlife, most notably birds and beneficial insects, through use of native plants and invasive species removal. The delicate relationship between plants and animals is well documented and this project will create a mosaic of different habitats ranging from wetlands to upland pollinator meadows. These types of habitats are desperately needed in the Niagara River watershed and long-term stewardship efforts from the landowners will help ensure this project continues to provide high-quality habitat for a variety of wildlife.

As beneficiaries of this environmental restoration, students and visitors will experience the benefits associated with healthy shoreline ecosystems including the physical and psychological benefits associated with spending time in a thriving natural setting. Students will benefit from programming that connects them to the ecosystem, their place in the Great Lakes Watershed, TEK principles, and the Cayuga Creek Living Shoreline Project. A system of trails and overlooks will be incorporated into the projects design to create opportunities for meaningful experiences.

3. IDENTIFY ALL SOURCES OF FUNDING AND THE AMOUNT OF FUNDING EXPECTED FROM EACH SOURCE. IDENTIFY AND QUANTIFY FUNDS THAT ARE ALREADY ON HAND OR HAVE BEEN ALLOCATED FOR THE PROPOSED PROJECT. EXPLAIN HOW THE PROJECT WILL BE OPERATED AND MAINTAINED.

PROJECT BUDGET:

Personnel	\$274,035
Supplies/Program Expenses	\$28,003
Contractual	\$870,000
Travel	\$3,312
TOTAL PROJECT COST	\$1,175,350
Matching Funds	\$50,000
TOTAL FUNDING REQUEST FROM GREENWAY	\$1,125,350

The numbers provided in the table above are a preliminary estimate based off projects of similar scope and size. A more detailed description of the funding categories is described below. The total project cost represents the total estimated cost to implement the full vision for the living shoreline portion of the Eco-Campus, including public access design within the proposed project area, educational experiences with students during project development and 2 years of adaptive management. **The GESC request will be for a portion of this work with a lower budget than what is presented in this proposal, however we wanted to provide the full costs to the Greenway Commission for review and approval.**

Personnel: Funding will support BNW staff carry out the roles and responsibilities described in question 4 of this proposal.

Supplies/ Program Expenses: Expenses in this category cover the cost of project signage fabrication (\$1,540), contractors construction general liability insurance for each year the project is under construction (\$3,616), refreshments for the community meeting (\$200), permitting costs (\$2,400), the survey and appraisal associated with the land protection activities (\$5,000), plants/seed/other materials associated with adaptive management activities (\$14,850), and community partner honorariums associated with engagement activities (\$400).

Contractual: These expenses will be used to cover third party contracts with consultants and contractors. A breakdown of the estimated contractual costs is provided below.

- Legal services for land protection: \$5,000
- Design and construction contract administration services = \$100,000 (an additional \$50,000 towards these costs will be covered through matching funds that are currently pending)
- Living shoreline project construction = \$655,000
- Invasive species management services during the last two years of the project= \$35,000
- Support for TEP involvement = \$25,000

Travel: We estimated approximately 4,944 miles of travel during the project. A mileage rate of .67 was applied to determine the mileage budget estimate.

Matching Funds: The School District is currently seeking funds from the HCSC. If successful, \$50k of their request will serve as match for this project, covering the majority of the design costs for the public access features. The remainder of their request will serve as leverage.

BNW and the School District are actively looking for additional match opportunities. BNW's proposal includes the design of habitat restoration and public access components within the proposed project area; however, implementation of the public access components will be supported through non-Greenway sources. If funding is secured prior to construction bidding, these two project components will be constructed concurrently. If funding cannot be secured prior to construction mobilization, implementation of the public access features will occur in subsequent years as funding allows.

OPERATION AND MAINTENANCE:

BNW recognizes the importance of proper landscape establishment and ongoing adaptive landscape management for shoreline restoration projects such as this. To ensure long-term success we have incorporated a one-year warranty period for the contractor to ensure the project gets a strong start after initial construction; 2 years of support for adaptive management activities to be determined and led by BNW; coordination with landowners on long-term stewardship tasks and invasive species management needs; and will incorporate this site into future RestoreCorps programming to accomplish future adaptive landscape management needs beyond this project, as future funding allows. More information on each of these establishment and long-term maintenance strategies is described below.

One-year warranty period:

For one year following substantial completion of restoration activities, the contractor will be held to a warranty period which ensures that any project components under the contractor's control that are not successful are replaced or repaired, in accordance with the specifications detailed in the contract documents. During this time, BNW and the consultant will coordinate with the contractor on supplemental seeding, watering, plant replacements, meadow establishment activities, and invasive species management activities as needed to ensure the project gets the best possible start.

Two years of adaptive management:

The first few years immediately following construction are the most critical for project establishment. Staying on top of invasive species and ensuring native plants are establishing, as well as limiting herbivory and other unanticipated threats and disturbances during this time is an important investment in the long-term success of the project. The proposal incorporates resources for BNW staff to monitor the site, determine adaptive management needs, and implement them in coordination with partners for two years after the one-year warranty. Some activities like specialized invasive species management treatments will need to be completed by contractors, otherwise BNW will work with the School District maintenance staff, and student groups to complete ALM tasks. Working with local groups is a priority as it can instill important knowledge that will help inform ongoing project management beyond this specific project funding. BNW has estimated the resources needed to support this task based on past experience with similar projects and will return any unspent resources to the funding committee if ALM needs are less than anticipated at the site.

Landscape management/inspection checklist:

BNW will develop an easy-to-use guide for maintenance and inspection activities and review them on site with School District maintenance personnel before the grant closes. This deliverable will most likely be a landscape mowing plan and an annual site inspection checklist that can be filled out by maintenance personnel to help with early detection of things like invasive species colonization, plant decline, erosion, or loosening of anchored woody debris.

Invasive species management:

BNW will provide the landowner with an invasive species management guide to aid with plant ID and provide information on management strategies for the most common and problematic invasive species. BNW will also monitor the site as often as possible (after project close-out) to identify future invasive species colonization and either notify the School District or mobilize a third-party contractor to perform invasive species management activities as funding allows.

Community Engagement/Stewardship:

Engaging students and community members in long-term maintenance and stewardship is critical to the project's long-term success and supports the desire for students to gain hands-on, real-world experience and connect with the ecology of Cayuga Creek. BNW intends to continue to seek funding to support our partnership with the Niagara Wheatfield Central School District in implementing programs like our Young Environmental Leaders and RestoreCorps Programs (more details below) to ideally involve youth and community members in this project long-term, in addition to empowering our partners to feel confident to lead these activities if BNW's involvement is limited due to funding or time limitations.

For over 10 years, Buffalo Niagara Waterkeeper has engaged local students through their Young Environmental Leaders Program (YELP). Niagara Wheatfield has been an important partner in this program and BNW looks forward to pursuing and securing funding to implement this program to support future connection to the Eco-Campus and the Cayuga Creek Living Shoreline Project. In addition, BNW has spent several years developing a community-based stewardship program called RestoreCorps. As funding allows, BNW will utilize this program and its vast network of volunteers to provide additional adaptive landscape management tasks as needed post project close-out to keep the project functioning as intended. Some of the activities undertaken by the RestoreCorps include dormant live stake installation, mechanical invasive species management of annual/biennial species, wetland plantings, rock-sock wetland planting, upland meadow plug plantings, and tree/shrub plantings (container and bare-root species). Note - The ability to support YELP and mobilize RestoreCorps volunteers will be reliant on other funding sources in the future.

4. DESCRIBE THE MEASURES TAKEN AT THE LOCAL LEVEL TO GAIN COMMUNITY AND GOVERNMENT SUPPORT FOR THIS PROJECT (HEARINGS, PETITIONS, PUBLIC SURVEYS, RESOLUTIONS OF SUPPORT OR OTHER METHODS). IF THIS PROJECT HAS BEEN CITED OR DESCRIBED IN A LOCAL PLANNING DOCUMENT OR SOME EQUIVALENT THEREOF, ATTACH COPIES OF THAT DOCUMENTATION HIGHLIGHTING THE SECTIONS THAT ARE RELEVANT TO THE PROPOSED PROJECT. DESCRIBE THE ROLE OF MUNICIPAL AGENCIES, STAKEHOLDER GROUPS, CONSULTANTS, VOLUNTEERS OR OTHERS WHO WILL BE INVOLVED IN THE PROPOSED PROJECT.

The Cayuga Creek Watershed Restoration Road Map (2009) identifies the project area as a potential opportunity for invasive species management, in-channel restoration, wetland habitat expansion, agricultural riparian buffers, and riparian restoration. This location is one of the last remaining areas along the creek not held in private ownership, presenting an important opportunity to utilize nature-based techniques to address documented impairments along the creek corridor.

The Niagara River Remedial Action Plan cites the loss of fish and wildlife habitat and biodiversity along with degradation of nearshore habitats as major issues affecting the health of the Niagara River ecosystem. The Living Shoreline Program directly addresses this critical impairment, while advancing goals found in other important documents including: The Niagara River Greenway Habitat Conservation Strategy, Great Lakes Regional Collaboration Strategy, NY State Forest Action Plan, NY State Open Space Plan, NY Wildlife Action Plan, Great Lakes Action Agenda, and NYS Comprehensive Wildlife Conservation Strategy.

GAINING LANDOWNER / PARTNER SUPPORT:

BNW has worked with the NRCG and GESC, numerous local municipalities, and other partners for over ten years to build the successful Living Shorelines Program. The success of several shoreline restoration projects in various settings throughout the region provides compelling case studies to share with new partners, which helps to build confidence and garner support for new living shoreline projects.

BNW has been talking with representatives from the Niagara Wheatfield Central School District, NWAA, TEP, and GESC for over a year to discuss partnership opportunities and funding strategies in support of moving this project forward. These meetings laid the groundwork for this proposal, which will make progress on an important focal point of the Eco-Campus.

The Niagara Wheatfield Central School District has been working to bring the Eco-Campus to fruition for many years. In summer of 2018, the formed an eco-campus project committee comprised of administrators, teachers, support staff, parents, students and community organization leaders to work on ways to improve the ecological impact of their campus while also improving usability for students and the community. This committee has successfully organized and run volunteer workdays, which have drawn together over 150 students, parents, staff and community members to work on environmental improvements to the campus. Work achieved through these workdays has included campus-wide clean ups, native plantings and clean ups of several tons of debris in the Creek's riparian zone, as well as improvements to the existing trail.

The School District is working closely with Greenway Commission staff, representatives of the Tuscarora Environment Program, the Tuscarora Nation, the NW Board of Education, district parent groups, HS and MS student clubs and classes, local Rotary and Kiwanis Clubs, the Town of Wheatfield Highway Department, adjoining land owners including the NWAA, local landscaping companies, Reinstein Woods Environmental Educators, the National Wildlife Foundation and BNW to ensure the success of the Eco-Campus project.

Many of these organizations have and are committed to continuing to lend financial and/or volunteer support to the Eco-Campus Project.

In 2020, Niagara Wheatfield Central School District received funding from the GESC to advance project concept designs included as Attachment C.

ROLES AND RESPONSIBILITIES:

The roles and responsibilities of the various groups involved in the project are described below.

- **Buffalo Niagara Waterkeeper**

Will lead grant management and administration. BNW will be responsible for developing an RFP for design services and selecting a qualified consultant, or team of consultants, to provide professional design services. Throughout design development, BNW will work closely with the design consultant to ensure the designs are utilizing best practices and progressing in alignment with the goals set forth in this proposal. Additional responsibilities during the design phase of the project include assembling a TAC, organizing meetings with the various stakeholders to gather consensus on design progress, assisting with permit acquisition, managing project budgets, developing project signage, and assisting with preparing materials for construction contract bid solicitation.

Prior to construction, BNW will be responsible for selecting a qualified contractor through a competitive bidding process. Once the contract is executed and construction begins, BNW will assist the consultant with construction contract administration. Responsibilities will include attending construction progress meetings, observing construction to track progress, answering RFIs, managing budgets, and monitoring site performance post construction.

BNW will also lead adaptive management activities for two years after the period of establishment (part of the construction contract) and will support the design and implementation of educational experiences with students during program development.

- **Consultant**

The consultant will be responsible for data collection, design development, and construction contract administration. Data collection will likely include a topographic and bathymetric survey, a field assessment of existing plant species, geotechnical data, and potentially hydrologic data collection to better understand stormwater management opportunities. This information will inform how the design concept should evolve to maximize the performance of the design, respond to site limitations, and to take advantage of any missed opportunities during initial concept development. After concept refinement, the design team will enter design development and construction documentation.

The consultant will be responsible for developing the designs from schematic through construction documents. Frequent check-ins with BNW at the 30%, 90%, and 100% phases will ensure the design is maximizing its ecological potential and achieving the project goals outlined in this application.

As the design professional and engineer on record, this consultant team will finalize the designs and specifications and lead the permitting process (with BNW support). They will also assist

during contractor bidding/selection and perform the construction contract administrative services during project implementation. Primary responsibilities will include answering RFI's and providing clarification to contract documents; reviewing and approving submittals; providing professional recommendations for any Change Orders; and performing site visits as deemed appropriate to determine if work is proceeding in accordance with Contract Documents and project schedule.

- **Contractor**

The selected contractor will be responsible for constructing the project design as laid out in the construction contract documents.

- **TAC**

The landowners and the TAC (multiple stakeholder groups) will participate in design reviews to offer feedback. This project accounts for two meetings to occur during design development to capture feedback and ensure the design is in alignment with permitting requirements and landowner expectations.

- **Niagara Wheatfield Central School District**

The School District will work closely with BNW throughout project development to ensure the project aligns with the larger Eco-Campus vision and maintenance capabilities. They may also be formally involved in the protection of the project area within the NWAA property. The School District will take on long-term maintenance responsibilities once the project is complete.

- **Niagara Wheatfield Athletic Association (NWAA)**

NWAA will work with project partners to formally protect the project area within their property. They will also be integrated into the design process to ensure as a landowner they are in support of all aspects of the project. BNW will discuss long-term maintenance responsibilities with the NWAA to determine if they can assist the School District with annual maintenance tasks.

- **Tuscarora Environment Program (TEP)**

The TEP is comprised of delegates chosen from each of the Haudenosaunee Nations who are committed to identifying environmental problems in their communities and working to find solutions to them. The TEP is guided by a set of principles guided by our Great Law of Peace and a series of goals that enable them to set policies to protect the natural world using traditional holistic knowledge while promoting the health and survival of the sacred web of life for future generations. The TEP works diligently to restore environmental and community health. TEP's unique indigenous perspective and location in Western New York are guiding them as they look at climate change in local indigenous communities and how can to address sustainability and resiliency for future generations.

The TEP will attend planning and design meetings to provide feedback and ensure the design is progressing in alignment with the restoration goals and cultural values of the TEP and the HETF. Coordinate with other members of the TEP/HETF to keep community members informed on project status and, when appropriate, gather feedback on the living shoreline design component.

The TEP will review proposed outreach materials and signage to ensure they incorporate the cultural values of Tuscarora Environment Program and the Haudenosaunee Environmental Task

Force and support meaningful engagement with community members and students around planning and implementation of the work included in BNW's proposal with consideration of the cultural and ecological significance of the creek and its watershed to the Tuscarora Nation.

- 5. DESCRIBE AND DOCUMENT THE ENVIRONMENTAL SETTING AND EXISTING CONDITIONS AT THE PROPOSED PROJECT SITE. IF YOU ARE NOT THE OWNER OF THE PROPERTY INCLUDE A LETTER(S) OR RESOLUTION(S) EVIDENCING SUPPORT FOR THE PROJECT BY THE OWNER. PROVIDE PHOTOGRAPHS, CONCEPTUAL PLANS AND DRAWINGS THAT SHOW THE SITE AS IT PRESENTLY EXISTS AND HOW THE SITE WILL CHANGE WITH THE ADDITION OF THE PROPOSED PROJECT. DESCRIBE HOW YOUR PROJECT WILL COMPLY WITH THE STATE ENVIRONMENTAL QUALITY REVIEW ACT (SEQRA). THE EXISTENCE OF WETLANDS, SIGNIFICANT UPLAND AND AQUATIC HABITATS, AND PLANT OR ANIMAL SPECIES THAT ARE CLASSIFIED AS RARE, THREATENED, OR ENDANGERED SHOULD BE NOTED. EXPLAIN HOW SUCH NATURAL RESOURCES WILL BE PROTECTED AND/OR ENHANCED. CITE ANY RELEVANT PROJECT-RELATED STUDIES.**

EXISTING CONDITIONS:

The Creek within the project area has some existing riparian buffer with some mowed lawn, and most of the project area within the NWAA property is former agricultural land. Much of the existing buffer has experienced extreme die-off of ash trees which has degraded the ecological value of this habitat while creating hazardous conditions as these trees begin to fall. Ample opportunity exists to improve this area to improve ecology, water quality, and the creek's natural functions.

SEQRA AND RTE SPECIES CONSIDERATIONS:

If SEQRA is required, we will work with the School District and municipality on completing the associated requirements. RTE species have not been observed at any of our sites, but if they are identified, we will adjust our plans to avoid disturbance to these species.

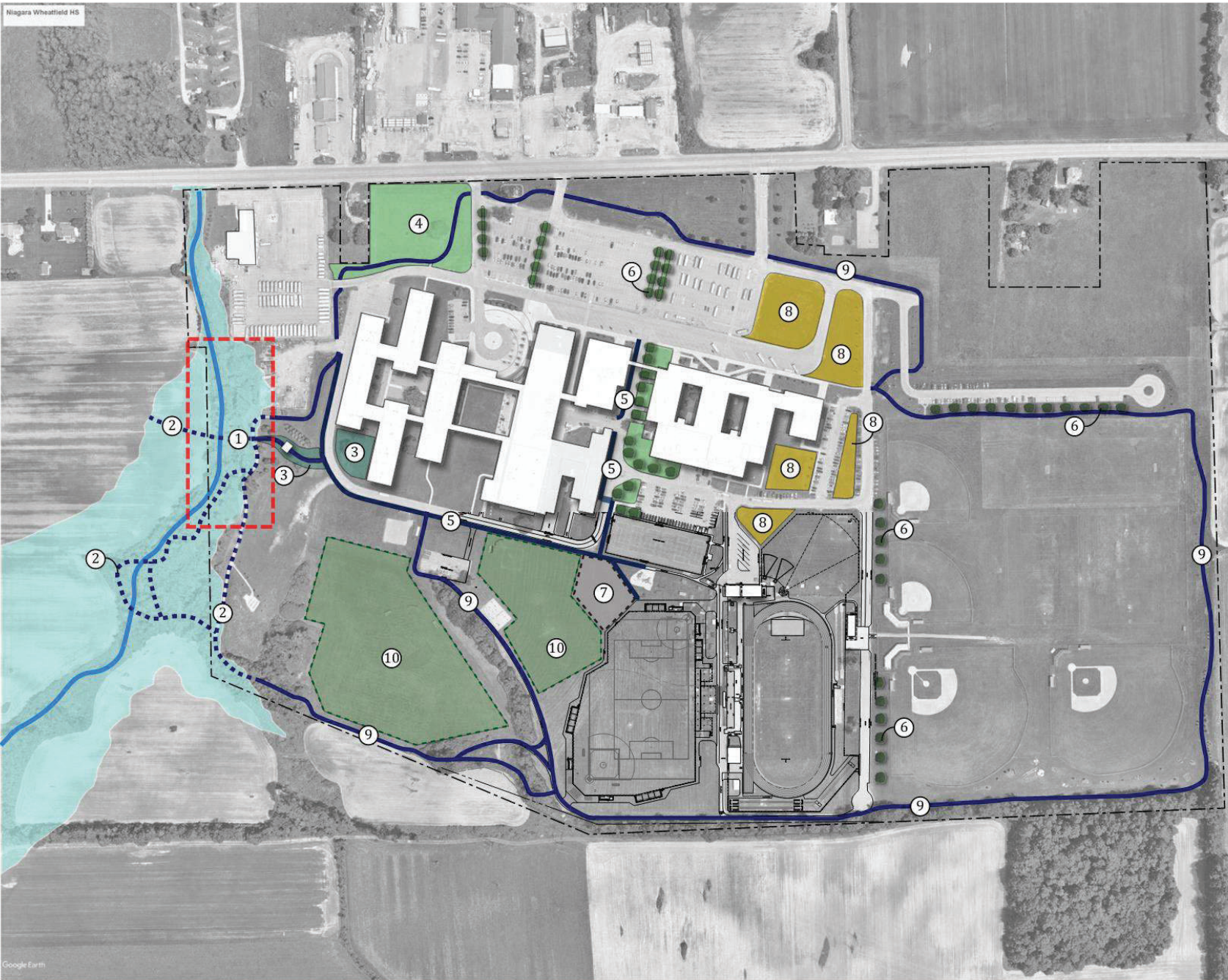
ATTACHMENTS

- A: Eco-Campus Overview
- B: Proposal Project Area
- C: Previously Developed Concepts
- D: Letters of Support

Niagara Wheatfield Eco-Campus Project

- ① Ecological Education Node
- ② Trail Connection between NW CSD and NWAA Property
- ③ Rain Garden
- ④ Native Wildflower Managed Meadow Pilot Area
- ⑤ Sidewalk connection to Athletic Fields
- ⑥ Install New Trees
- ⑦ Future Parking Area
- ⑧ Potential Meadow/Green Space
- ⑨ Flexible pavement walking path
- ⑩ Future Athletic Space






Cayuga Creek
FEMA Floodplain

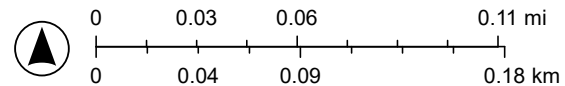


Proposed Project Area



6/14/2024

-  Cayuga Creek
-  1% Annual Chance Flood Hazard
-  Parcels
-  Proposed Project Area
-  Tuscarora Nation





Niagara Wheatfield School District



Niagara Wheatfield Greenway



Niagara Wheatfield Ecological Education Node - Phase 1





Niagara Wheatfield Ecological Education Node - Phase 2





Niagara Wheatfield Ecological Education Node - Phase 3





Niagara Wheatfield Ecological Education Node & Pedestrian Bridge

LEGEND

- ① MEADOW MIX-
10' WIDE LOW GROW, LOW MAINTENANCE
PLANTINGS; SLOWS AND CLEANS
SEDIMENT LADEN RUN-OFF; ANNUAL
BRUSH HOGGING FOR SECURITY PURPOSES
- ② SETTLING BASIN-
COLLECTS & CLEANS RUN-OFF BEFORE
ENTERING CAYUGA CREEK
- ③ WEEP BERM-
FORMS THE BARRIER TO COLLECT
RUN-OFF
- ④ RIPARIAN REVITALIZATION-
SELECT REMOVAL OF INVASIVE SPECIES
AND PLANTING OF DESIRABLE SPECIES
WITH LIMITED SOIL DISTURBANCE.
REMOVAL OF HAZARD TREES FOR
RE-USE WITH ECOLOGICAL STREAM
IMPROVMENTS
- ⑤ STREAM REVITALIZATION-
EROSION CONTROL PRACTICES
UP STREAM BANK TO CONTROL AND
PREVENT FUTURE EROSION.
- ⑥ ECOLOGICAL EDUCATIONAL NODE
OUTDOOR CLASS GATHERING SPACE



Niagara Wheatfield Greenway Plan



RECYCLED ASH TREES
FORM PONDS & PROVIDE
ECOLOGICAL HABITATS



EROSION CONTROL



VIBURNUM DENTATUM
ARROWWOOD VIBURNUM



THELYPTERIS PALUSTRIS
MARSH FERN



CERCIS CANADENSIS
EASTERN REDBUD



PANICUM VIRGATUM
SWITCHGRASS



CORNUS SERICEA 'RED OSIER'
RED-OSIER DOGWOOD



ITEA VIRGINICA
SWEETSPIRE



MONARDA FISTULOSA
WILD BERGAMONT



RUBECKIA HIRTA
BLACK EYED SUSAN



ANDROPOGON SCOPARIUS
LITTLE BLUESTEM



EUPATORIUM FISTULOSUM
JOE-PYE WEED



Niagara Wheatfield Revitalization- Phase 1



SECTION LINE



HAUDENOSAUNEE

Mohawk • Oneida • Onondaga • Cayuga • Seneca • Tuscarora

Tuscarora Environment
5226 Walmore Road
Tuscarora Nation
Via; Lewiston, NY 14092

PH: 716.264.6011
tuscaroraenvironment.org

June 17, 2024

Greenway Commissioners and GESC Committee Members:

Cwę:n? (Hello). I hope this letter finds you and your family well. I am pleased to submit this letter of commitment for the Tuscarora Nation's Tuscarora Environment Office's (TEP), part of the Haudenosaunee Environmental Task Force (HETF), participation as a collaborator in Buffalo Niagara Waterkeeper's (BNW) proposal for funding to support the design and implementation of shoreline restoration along Cayuga Creek as part of the Niagara Wheatfield Eco-Campus as well as associated engagement activities.

Our TEP office carries out the work of the HETF, which is comprised of delegates chosen from each of the Haudenosaunee Nations who are committed to identifying environmental problems in their communities and working to find solutions to them. The HETF is guided by a set of principles, our mission, and a series of goals that enable us to set policies to protect the natural world using our traditional holistic knowledge while promoting the health and survival of the sacred web of life for future generations. TEP and HETF are working diligently to restore environmental and community health for our people and the region, as we are nestled here along the Niagara River and in between two Great Lakes. Our unique indigenous perspective and our location in Western New York are guiding us as we are looking at climate change in our communities and how can we address sustainability and resiliency for our seven generations.

Buffalo Niagara Waterkeeper (BNW) is seeking funding to work in partnership with the Niagara Wheatfield Central School District, Niagara Wheatfield Athletic Association and the TEP to advance the design and implementation of living shoreline and floodplain restoration along Cayuga Creek and within the area designated as a FEMA-floodplain as part of the larger Niagara Wheatfield Eco-Campus vision. This work will also include related education and engagement with students and community members.

Niagara Wheatfield High School is in the Cayuga Creek Watershed, bordering the Tuscarora Nation and serving Tuscarora students. The watershed and the creek are culturally significant to the Tuscarora Nation and are a part of the larger Niagara River watershed. As part of this proposal the TEP is committed to participating in design development, development of educational signage, and educational opportunities with students. Specifically, we will:

- Attend planning and design development meetings to provide feedback and ensure the design is progressing in alignment with the restoration goals and cultural values of the TEP and the HETF.

- Coordinate with other members of the TEP/HETF to keep community members informed on project status and, when appropriate, gather feedback on the living shoreline design component.
- Review proposed outreach materials and signage to ensure they incorporate the cultural values of Tuscarora Environment and the Haudenosaunee Environmental Task Force.
- Support meaningful engagement with community members and students at Niagara Wheatfield around planning and implementation of the work included in BNW's proposal with consideration of the cultural and ecological significance of the creek and its watershed to the Tuscarora Nation.

The TEP and HETF have worked collaboratively with BNW for many years, and we are confident that their organization possesses the experience, leadership, and relationships to use this funding opportunity to meaningfully advance this important work that has the potential to strengthen the bridge between the technical aspects of the Niagara-Wheatfield Eco-Campus, student and community engagement, and the cultural and ecological significance of the creek to our Tuscarora Nation. We are pleased to be a part of BNW's proposal and look forward to contributing towards its progress. In no way do these statements affect the sovereignty of the Tuscarora Nation.

Oneh.

A handwritten signature in black ink that reads "Rene H Rickard". The signature is written in a cursive, flowing style.

Rene Rickard
TEP Director
HETF