



EasyGrantsID: 65918

National Fish and Wildlife Foundation – National Coastal Resilience Fund 2019, Full Proposal

Title: Cleveland Harbor Eastern Embayment Resilience Study (CHEERS)

Organization: Cleveland Metroparks

Grant Information

Title of Project

Cleveland Harbor Eastern Embayment Resilience Study (CHEERS)

Total Amount Requested	\$ 125,000.00
Matching Contributions Proposed	\$126,000.00
Proposed Grant Period	02/01/ 2020 - 01/31/ 2021

Project Description

The proposed Cleveland Harbor Eastern Embayment Resilience Study (CHEERS) will utilize an innovative design approach to address current and future challenges regarding the resiliency of the Lake Erie shoreline, as well as that of adjacent neighborhoods and the larger community of NE Ohio. The eastern embayment lacks in-water and nearshore habitat and as a result, lacks natural means of shoreline protection. The existing shoreline is hardened with boulder walls, breakwaters, and steel bulkheads and does not contain areas for wave dissipation, areas to adjust to lake level fluctuations, or means to break energy associated with storm events. Furthermore, I-90 runs east-west adjacent to the shoreline and the highway is frequently impacted by high winds, waves, and storm events. The Lake Erie shoreline is an important stopover for migrating birds and a popular sportfish destination. This study will examine opportunities to create habitat for wildlife while combatting climate change.

Project Abstract

Cleveland Metroparks, in partnership with the Cleveland-Cuyahoga County Port Authority, and the Ohio Department of Natural Resources Office of Coastal Management, will complete a consultant-led, comprehensive planning effort to address current and future challenges associated with resiliency of the Lake Erie shoreline in the Cleveland Harbor in City of Cleveland. This proposed study, the Cleveland Harbor Eastern Embayment Resilience Study (CHEERS), will include a technical evaluation of baseline existing conditions in the project area, significant community engagement, and preliminary design. This study will examine the potential for the beneficial re-use of local dredge materials to create natural habitat such as emergent wetlands, shrub habitat, and coastal mud flats along the shoreline to create additional habitat for bird, fish, and other species. This habitat will also serve to protect the shoreline and nearby critical infrastructure from storm events, high winds, and changes in lake levels, which are currently at a historic high due to recent wet weather events. This project includes unique components such as its proximity to an active airport so federal aviation policies must be consulted and its adjacency to the future Lake Erie Water Trail so that tourism and pedestrian safety must also be prioritized.

Organization and Primary Contact Information

Organization	Cleveland Metroparks
Organization Type	State or Local Government
City, State, Country	Cleveland, Ohio, North America - United States

Region (if international)

Primary Contact	Ms. Kristen Trolio
Position/Title	
Phone and E-mail	216-635-3244 x ; kmt@clevelandmetroparks.com



NFWF

EasyGrantsID: 65918

National Fish and Wildlife Foundation – National Coastal Resilience Fund 2019, Full Proposal

Title: Cleveland Harbor Eastern Embayment Resilience Study (CHEERS)

Organization: Cleveland Metroparks

Additional Contacts

Role	Name



EasyGrantsID: 65918

National Fish and Wildlife Foundation – National Coastal Resilience Fund 2019, Full Proposal

Title: Cleveland Harbor Eastern Embayment Resilience Study (CHEERS)

Organization: Cleveland Metroparks

Project Location Information

Project Location Description	The project area includes a portion of the Lake Erie shoreline in the City of Cleveland, Cuyahoga County, Ohio. The project is located within the Cleveland Harbor in the Captain of the Port Buffalo/Cleveland Zone; U.S. Congressional District OH-11; Latitude/Longitude: 41.53776, -81.6414.
Project Country(ies)	North America - United States
Project State(s)	Ohio
Project Congressional District(s)	District 11 (OH)

Permits and Approvals

Permits/Approvals Description:

Permits/Approvals Status:

Permits/Approvals Agency-Contact Person:

Permits/Approvals Submittal-Approval Date:



EasyGrantsID: 65918

National Fish and Wildlife Foundation – National Coastal Resilience Fund 2019, Full
Proposal

Title: Cleveland Harbor Eastern Embayment Resilience Study (CHEERS)

Organization: Cleveland Metroparks

Activities and Outcomes

Funding Strategy: Planning, Research, Monitoring

Metric: Resilience - Community benefits projected - # of critical facilities or infrastructure

Required: Recommended

Description: Enter the number of critical infrastructure assets or facilities that are within the radius of enhanced protection. This can include those necessary or ensuring public health and safety such as, hospitals, shelters, emergency and evacuation routes, fire and police stations, etc. as well as critical infrastructure – wastewater treatment facilities, power plants, etc.

Starting Value 2100.00 # of critical facilities or infrastructure

Target value 2100.00 # of critical facilities or infrastructure

Note: Starting and Target Value - 2,100LF. CHEERS will focus on approximately 2,100LF of critical infrastructure, including I-90, along the Lake Erie Shoreline in the City of Cleveland.

Funding Strategy: Planning, Research, Monitoring

Metric: Resilience - Community benefits projected - # properties with enhanced protection

Required: Recommended

Description: Enter the number of commercial or residential properties within the radius of enhanced protection.

Starting Value 0.00 # properties with enhanced protection

Target value 2.00 # properties with enhanced protection

Note: Target - 2 miles. The main goal of this project is to study and create a plan to address the physical, ecological, and social resilience of the Lake Erie shoreline, to protect existing infrastructure, and to enhance habitat. CHEERS will plan to study and enhance approximately 2 miles of hardened shoreline.

Funding Strategy: Capacity, Outreach, Incentives

Metric: Resilience - Outreach/ Education/ Technical Assistance - # govt entities participating

Required: Recommended

Description: Enter the number of municipalities, local, state, and federal government entities participating in the project and add the names of these institutions in the notes.



EasyGrantsID: 65918

National Fish and Wildlife Foundation – National Coastal Resilience Fund 2019, Full
Proposal

Title: Cleveland Harbor Eastern Embayment Resilience Study (CHEERS)

Organization: Cleveland Metroparks

Starting Value	7.00 # gov't entities participating
Target value	7.00 # gov't entities participating

Note: Target - 7 entities. At the time of application, 7 government entities are participating in the project. Cleveland Metroparks, Port, ODNR, City of Cleveland, and ODOT have committed matching funds and staff time towards the project. NOACA and Cuyahoga Soil and Water have agreed to participate in the project. Additionally, Doan Brook Watershed Partners and TPL are non-profit organizations that will offer expertise to the project.

Funding Strategy: Capacity, Outreach, Incentives

Metric: Resilience - Outreach/ Education/ Technical Assistance - # people reached

Required: Recommended

Description: Enter the number of people demonstrating a minimum level of knowledge, attitudes, or skills to enable them to become resiliency leaders. This metric refers to people other than staff or FTEs. In the notes include the hours of training and participant demographics.

Starting Value	0.00 # people reached
Target value	150.00 # people reached

Note: Target - 150 individuals. As part of the project scope, the consultant will lead community outreach activities with an emphasis on the adjacent St. Clair Superior and Glenville neighborhoods.

Funding Strategy: Planning, Research, Monitoring

Metric: Resilience - Restoration planning/design/permitting - # E&D plans developed

Required: Recommended

Description: Enter the number of Engineering and Design plans developed. Generally there will be one plan per project to be constructed.

Starting Value	0.00 # E&D plans developed
Target value	2.00 # E&D plans developed

Note: Target - 1 plan. The end goal of this phase of the project is to complete 50% design plans and then to seek additional funds to complete and E&D plan for the project area.

Funding Strategy: Capacity, Outreach, Incentives

Metric: Resilience - Volunteer participation - # volunteers participating

Required: Recommended



EasyGrantsID: 65918

National Fish and Wildlife Foundation – National Coastal Resilience Fund 2019, Full
Proposal

Title: Cleveland Harbor Eastern Embayment Resilience Study (CHEERS)

Organization: Cleveland Metroparks

Description: Enter the number of volunteers participating in projects

Starting Value	0.00 # volunteers participating
Target value	20.00 # volunteers participating

Note: Target - 20 volunteers. Staff from the participating entities will commit staff time and expertise to the project. The requested NFWF and matching funds will be used to pay the project consultant; staff time is NOT included in the budget.



EasyGrantsID: 65918
 National Fish and Wildlife Foundation –
 National Coastal Resilience Fund 2019, Full
 Proposal

Title: Cleveland Harbor Eastern Embayment Resilience Study (CHEERS)
 Organization: Cleveland Metroparks

I. PERSONNEL									\$0.00
Staff Name	Position	Annual Salary	Project Hours	Hourly Rate	LOE (%)	Project Salary	% Fringe	\$ Fringe	Total Personnel
Totals						\$0.00		\$0.00	\$0.00

II. TRAVEL									\$0.00
------------	--	--	--	--	--	--	--	--	--------

Domestic Airfare – Per Flight

Purpose/Destination	Unit Cost	Quantity	Total Cost
SubTotal			\$0.00

International Airfare – Per Flight

Purpose/Destination	Unit Cost	Quantity	Total Cost
SubTotal			\$0.00

Train – Per Ticket

Purpose/Destination	Unit Cost	Quantity	Total Cost
SubTotal			\$0.00



EasyGrantsID: 65918
National Fish and Wildlife Foundation –
National Coastal Resilience Fund 2019, Full
Proposal

Title: Cleveland Harbor Eastern Embayment Resilience Study (CHEERS)
Organization: Cleveland Metroparks

Rental Car – Per Day

Purpose/Destination	Days/Duration	Unit Cost	Quantity	Total Cost
SubTotal				\$0.00

Taxis – Per Trip

Purpose/Destination	Unit Cost	Quantity	Total Cost
SubTotal			\$0.00

Mileage – Per Mile

Purpose/Destination	Unit Cost	Quantity	Total Cost
SubTotal			\$0.00

Gasoline – Per Gallon

Purpose/Destination	Unit Cost	Quantity	Total Cost
SubTotal			\$0.00

Per Diem (M&IE) – Per Day

Purpose/Destination	Days/Duration	Unit Cost	Quantity	Total Cost
SubTotal				\$0.00



EasyGrantsID: 65918
National Fish and Wildlife Foundation –
National Coastal Resilience Fund 2019, Full
Proposal

Title: Cleveland Harbor Eastern Embayment Resilience Study (CHEERS)
Organization: Cleveland Metroparks

Lodging – Per Night

Purpose/Destination	Days/Duration	Unit Cost	Quantity	Total Cost
SubTotal				\$0.00

Meals (no M&IE) – Per Meal

Purpose/Destination	Days/Duration	Unit Cost	Quantity	Total Cost
SubTotal				\$0.00

III. EQUIPMENT	\$0.00
-----------------------	---------------

Item Name	Description	Unit Cost	Quantity	Total Cost

IV. MATERIALS & SUPPLIES	\$0.00
-------------------------------------	---------------

Type	Purpose	Unit of Measure	Unit Cost	Quantity	Total Cost

V. CONTRACTUAL SERVICES	\$125,000.00
--------------------------------	---------------------

Subcontract/Contract – Per Agreement

Contractor Name	Description	Total Cost
TBD	Planning and Design Consultant	\$125,000.00
SubTotal		\$125,000.00



EasyGrantsID: 65918
National Fish and Wildlife Foundation –
National Coastal Resilience Fund 2019, Full
Proposal

Title: Cleveland Harbor Eastern Embayment Resilience Study (CHEERS)
Organization: Cleveland Metroparks

Subgrant – Per Agreement

Subrecipient	Description	Total Cost

SubTotal \$0.00

VI. OTHER DIRECT COSTS	\$0.00
------------------------	--------

Type	Purpose	Unit of Measure	Unit Cost	Quantity	Total Cost

VII. TOTAL DIRECT COSTS	\$125,000.00
-------------------------	--------------

VIII. INDIRECT COSTS	\$0.00
----------------------	--------

Explanation of Modified Total Direct Cost Base(MTDC)	Rate Type	NICRA Expiration	\$MTDC	Rate(%)	Total Cost

IX. TOTAL PROJECT COSTS	\$125,000.00
-------------------------	--------------



Title: Cleveland Harbor Eastern Embayment Resilience Study (CHEERS)
Organization: Cleveland Metroparks

Budget Narrative

Budget Narrative: Cleveland Metroparks will release a RFQu and subsequent RFP for a project consultant for CHEERS. The RFP submissions will be reviewed by a panel including project partners. The contract will be awarded by the Board of Park Commissioners of the Cleveland Metropolitan Park District. The consultant will be provided with goals and deliverables as outlined in the application with a 12-month timeline for project completion.

1. Personnel

Personnel -

2. Travel

Domestic Airfare - Per Flight -

International Airfare - Per Flight -

Train - Per Ticket -

Rental Car - Per Day -

Taxis - Per Trip -

Mileage - Per Mile -

Gasoline - Per Gallon -

Per Diem (M&IE) - Per Day -

Lodging - Per Night -

Meals (No M&IE) - Per Meal -



Title: Cleveland Harbor Eastern Embayment Resilience Study (CHEERS)
Organization: Cleveland Metroparks

3. Equipment

Equipment -

4. Materials and Supplies

Materials and Supplies -

5. Contractual Services

Subcontract/Contract - Per
Agreement -

Cleveland Metroparks will release a RFQu and subsequent RFP for a project consultant for CHEERS. The RFP submissions will be reviewed by a panel including project partners. The contract will be awarded by the Board of Park Commissioners of the Cleveland Metropolitan Park District. The consultant will be provided with goals and deliverables as outlined in the application with a 12-month timeline for project completion.

Subgrant - Per Agreement -

6. Other Direct Costs

Other Direct Costs -



Title: Cleveland Harbor Eastern Embayment Resilience Study (CHEERS)
Organization: Cleveland Metroparks

EasyGrantsID: 65918
National Fish and Wildlife Foundation –
National Coastal Resilience Fund 2019, Full
Proposal

7. Indirect Costs

Indirect Costs -



EasyGrantsID: 65918

National Fish and Wildlife Foundation – National Coastal Resilience Fund 2019, Full Proposal

Title: Cleveland Harbor Eastern Embayment Resilience Study (CHEERS)

Organization: Cleveland Metroparks

Matching Contributions

Matching Contribution Amount:	\$25,200.00
Type:	Cash
Status:	Pledged
Source:	Cleveland Metroparks
Source Type:	Non-Federal
Description:	Cash match towards planning study

Matching Contribution Amount:	\$25,200.00
Type:	Cash
Status:	Pledged
Source:	Cleveland Cuyahoga-County Port Authority
Source Type:	Non-Federal
Description:	Cash match towards planning study

Matching Contribution Amount:	\$25,200.00
Type:	Cash
Status:	Pledged
Source:	Ohio Department of Natural Resources
Source Type:	Non-Federal
Description:	Cash match towards planning study

Matching Contribution Amount:	\$25,200.00
Type:	Cash
Status:	Pledged
Source:	Ohio Department of Transportation
Source Type:	Non-Federal
Description:	Cash match towards planning study

Matching Contribution Amount:	\$25,200.00
--------------------------------------	-------------



NFWF

EasyGrantsID: 65918

National Fish and Wildlife Foundation – National Coastal Resilience Fund 2019, Full Proposal

Title: Cleveland Harbor Eastern Embayment Resilience Study (CHEERS)

Organization: Cleveland Metroparks

Type:	Cash
Status:	Pledged
Source:	City of Cleveland
Source Type:	Non-Federal
Description:	Cash match towards planning study

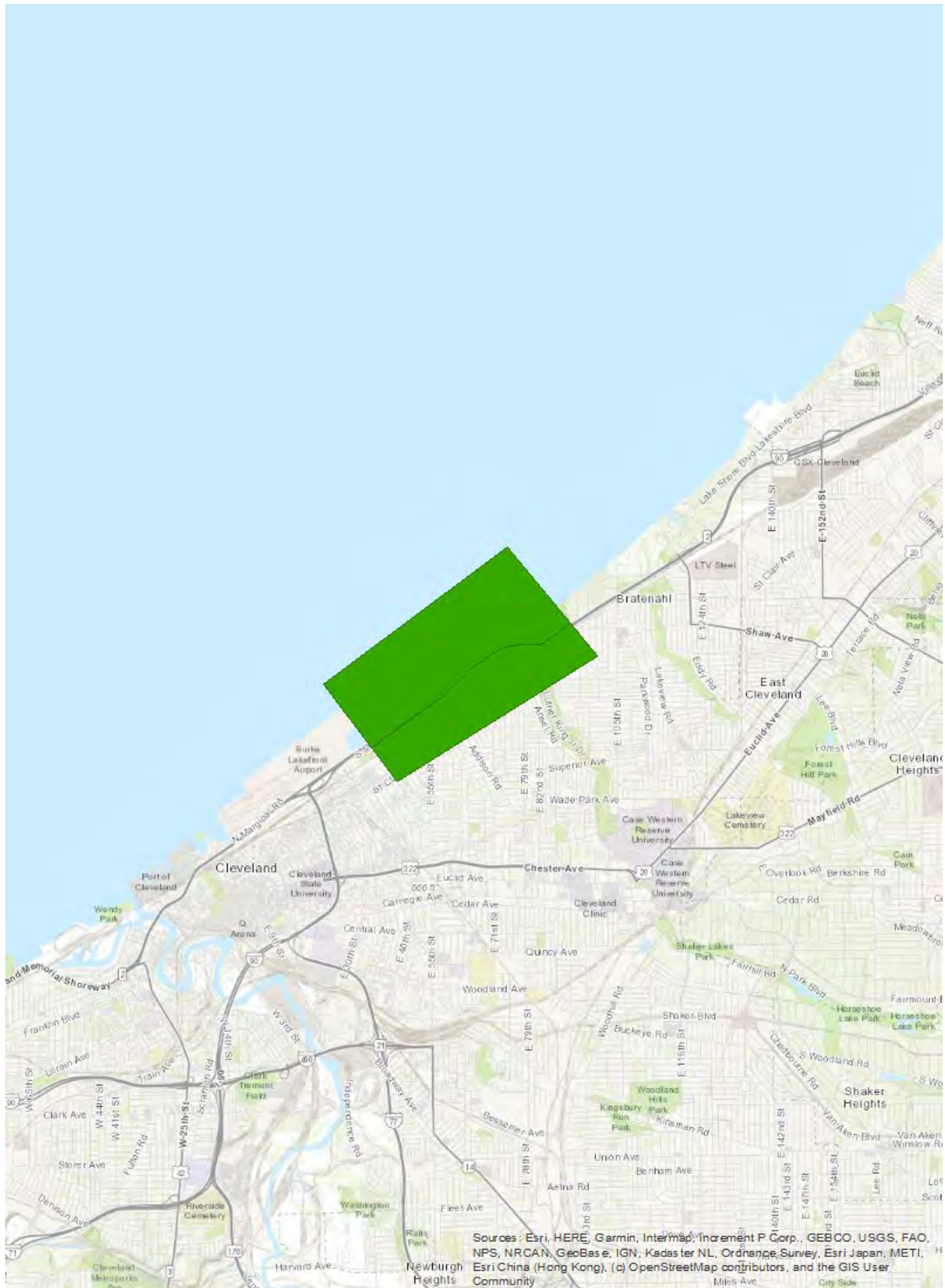
Total Amount of Matching Contributions:	\$126,000.00
--	--------------

EasyGrantsID: 65918

National Fish and Wildlife Foundation – National Coastal Resilience Fund 2019, Full Proposal

Title: Cleveland Harbor Eastern Embayment Resilience Study (CHEERS)

Organization: Cleveland Metroparks





EasyGrantsID: 65918

National Fish and Wildlife Foundation – National Coastal Resilience Fund 2019, Full Proposal

Title: Cleveland Harbor Eastern Embayment Resilience Study (CHEERS)

Organization: Cleveland Metroparks

The following pages contain the uploaded documents, in the order shown below, as provided by the applicant:

Upload Type	File Name	Uploaded By	Uploaded Date
NCRF Full Proposal Narrative	Full Proposal Narrative Cleveland Metroparks CHEERS.pdf	Trolio, Kristen	07/22/2019
Project Map	CHEERS Project Area Map.pdf	Trolio, Kristen	07/22/2019
Letters of Support	Letters of Support - Cleveland Metroparks.pdf	Trolio, Kristen	07/22/2019
Photos - Jpeg	Photo 1 Wave action along I-90 in the proposed study area.jpg	Trolio, Kristen	07/22/2019
Photos - Jpeg	Photo 2 Boulders as the result of Superstorm Sandy 2012 at East 55th Street.jpg	Trolio, Kristen	07/22/2019
Photos - Jpeg	Photo 3 Wave action Superstorm Sandy 2012 at East 55th Street.jpg	Trolio, Kristen	07/22/2019
Statement of Litigation	Statement of Litigation Cleveland Metroparks.pdf	Trolio, Kristen	07/19/2019
Board of Trustees, Directors, or equivalent	Board of Park Commissioners w Executive Staff.pdf	Trolio, Kristen	07/19/2019

The following uploads do not have the same headers and footers as the previous sections of this document in order to preserve the integrity of the actual files uploaded.



Full Proposal Project Narrative

Instructions: Save this document on your computer and complete the narrative in the format provided. The final narrative should not exceed ten (10) pages. You may delete instructions but not the headings in bold. Once complete, upload this document into the online application as instructed.

1. **Coastal Community Context:** Set the context for the need of this project in terms of risk to the coastal community and the efforts to date at this location that have prepared the community to engage in this project. Specifically describe actions and/or events leading up to this point that prioritize the proposed actions as well as any predicative modeling or threats assessments that have been done at this location.

The proposed Cleveland Harbor Eastern Embayment Resilience Study (CHEERS) will utilize an innovative design approach to address current and anticipated future challenges to address the *physical, ecological, and social resilience* of the Lake Erie shoreline, the adjacent neighborhoods, and the larger community. The proposed project area is in the City of Cleveland, Cuyahoga County, Ohio. The area encompasses the Lake Erie shoreline from Lakeside Yacht Club on the west to the Cleveland Lakefront Nature Preserve on the east and from the federal break wall on the north to I-90 on the south. The majority of the area is managed by Cleveland Metroparks, the Cleveland-Cuyahoga County Port Authority (Port), and the Ohio Department of Transportation (ODOT). The project area is located in the Captain of the Port Buffalo/ Cleveland Zone; U.S. Congressional District OH-11; Latitude/Longitude near project area center: 41.53776, -81.64148.

Cleveland Metroparks is partnering with four additional government entities on this project. The partners are listed below and represent local, regional, and statewide agencies with vested interest in the waterfront. Each entity is contributing an equal amount financially as matching funds for the project and will provide staff experts to guide the proposed study. The additional partners are:

- City of Cleveland
- Cleveland-Cuyahoga County Port Authority
- Ohio Department of Natural Resources Office of Coastal Management
- Ohio Department of Transportation

Physical Resilience

The eastern embayment in the City of Cleveland (the project area) lacks in-water and nearshore habitat and as a result, lacks natural means of shoreline protection. The shoreline is hardened with boulder walls, breakwaters, and steel bulkheads and does not contain adequate areas for wave dissipation, means to break energy associated with storm events, or areas to adjust to lake level fluctuations. Water level fluctuations and extreme storm events in the region are increasing in frequency and severity due to climate change, therefore exposing communities and infrastructure on the Great Lakes to threats of erosion, wave surges, flooding, and storm impacts. The inadequacy of the hardened shoreline to provide buffer from climate threats intersects with vulnerabilities specific to the project area, putting the communities and wildlife within and near the project area at risk.

Interstate 90 (I-90) is a major highway that runs directly along the project area, with an annual average daily traffic volume of 129,647 in both directions (ODOT). Coastal threats magnified by the hardened shoreline put this infrastructure at risk of damage and contribute to hazardous driving conditions. During 2012's Superstorm Sandy, 67 mph winds and 20-foot waves on Lake Erie were documented, resulting in closure of all 10 lanes of traffic and structural damage along the shore. According to ODOT District 12, high storm surges that hit the hardened shore regularly spray onto I-90 in the study area causing wet or icy roadways or high water which results in extremely hazardous driving conditions. Large quantities of roadway crew time and resources are required to maintain the roadway and mitigate these risks. This stretch of roadway is included in ODOT's Highway Safety Improvement Program due to frequent crashes and twenty percent of these incidents have occurred in wet pavement conditions.

Lake Erie's water level is currently at a historic high. The U.S. Army Corps of Engineers (USACE) and the Federal Emergency Management Agency (FEMA) are working to develop a Great Lakes Coastal Special Flood Hazard Area

(SHFA) assessment, which includes the impacts of wind surge and wave runup. The USACE is also drafting an update to its Dredged Material Management Plan for the Cleveland Harbor to assess options for the beneficial re-use of dredge material for habitat. According to the Port, on an annual basis, more than 250,000 CY of dredge sediment is removed from the Cuyahoga River navigation channel in support of maritime transportation, a major economic engine of the northeast Ohio region. The Port beneficially harvests and repurposes 50% of this material into marketable soil products including manufactured top soils, fill sand, and other permitted land application products. The Port believes a sizable percentage of the remaining sediment, which is presently landfilled on top of federally abandoned confined disposal facilities within Cleveland Harbor, could be beneficially repurposed in an environmentally responsible and beneficial manner. This would create a long-term, sustainable solution for dredge management in Cleveland Harbor and provide the material necessary to enhance coastal resiliency within the study area. CHEERS will examine these reports and use recommendations to achieve the project goal of long-term protection of critical infrastructure along Lake Erie's shoreline and the beneficial re-use of dredge material.

Ecological Resilience

The eastern embayment in the City of Cleveland lacks in-water and nearshore habitat and the shoreline is hardened with boulder walls, breakwaters, and steel bulkheads. The ecological components of the proposed CHEERS study align closely with decade-long conversations among local professionals and community members, including opportunities identified by shoreline ecology and planning experts at a 2002 workshop focused on ecological restoration of Cleveland's lakefront titled "Ecological Restoration Opportunities for Cleveland's Lakefront", which was facilitated by Andropogon Associates for EcoCity Cleveland. This document helped inform the City of Cleveland's 2004 Waterfront District Plan for the Lake Erie waterfront. Ideas generated in the workshop emphasized the importance of restoring ecological coastal conditions and exploring living infrastructure as a tool to create spawning, nursery, feeding, and refuge areas for fish. Popular concepts included creating habitat cells along the break wall, including within the CHEERS project area, and creating a new break wall directly in the CHEERS project area to provide habitat protection.

Proposed outcomes of the CHEERS study also align with priorities identified in the Lake Erie Protection & Restoration Plan (LEPR), which identifies coastal health and exploring beneficial uses of dredge material as a priorities. LEPR specifically calls for development and implementation of plans to restore beaches and shorelines, with the strategic objective to "protect, enhance and restore wetlands and their functionality and expand wetland acreage within the watershed, with a priority focus on coastal wetlands" (Ohio Lake Erie Commission, 2013).

The Lake Erie shoreline is an important stopover for migrating birds, bats, and insects, and locations within this project area are listed as migrant "hotspots" on eBird (<https://ebird.org>) and are within designated "Important Bird Areas" by the National Audubon Society. Federally listed species such as Kirtland Warbler, Rod Knot, and Piping Plover have been observed on the lakeshore of the City of Cleveland and are only three of the approximately 275 documented bird species in these areas. The suitable nearshore habitat in and around the project area is limited, but highly used. Overall, this is a very important migratory stopover point and one of its most important traits is that it is one of the very few spots along the lakefront with intact, native soils. Enlarging the available habitat area here will make it even more attractive to migrating birds, bats, and invertebrates.

Cleveland's Burke Lakefront Airport, which is adjacent to the project area and identified on the attached map, has ongoing dredge management and disposal areas that offer wildlife habitat, but are in conflict with aviation operations, putting birds and planes at risk. Since 1990, 587 birds distributed among 44 identified species have been struck by planes at Burke Lakefront Airport (BKL strike data). This project will propose additional habitat using dredge material along the lakefront but not near the airport, which has the potential to mitigate this risk of bird-plane strikes by directing wildlife away from the airport to other available habitat.

The project area is an important and popular sportfish destination and the creation of more shallow areas along the shoreline will allow for more for macrophytic vegetation and will enhance these fish populations. The existing bulkhead and steep shorelines do not provide adequate cover for spawning or feeding. The creation of graded and sloping shorelines will provide habitat for species such as northern pike, largemouth bass, bowfin, and various sunfish species, as well as the Great Lakes musky, which is listed as a species of concern at the state level.

Additionally, the CHEERS study area is home to unique plant species. On May 29, 2015, *Spiranthes lucida* (Shining ladies tresses) was found in the study area. This plant, listed as potentially threatened, can occur in only one spot on

this property due to its unique habitat requirements that. It was found on the hillside seep and is associated with calcareous habitats. It is the earliest flowering *Spiranthes* in Ohio. Additionally, on June 4, 2015, *Carex mesochorea* (midland sedge), a state threatened plant, was found near a parking lot in the proposed study area.

Social Resilience

The majority of the Lake Erie shore in the City of Cleveland is dominated by industrial use or private residences. A small portion of the shoreline is reserved for publicly-accessible parks, including Cleveland Metroparks East 55th Street Marina and Gordon Park that provide much needed public greenspaces with amenities such as public boat ramps, fishing areas, restrooms, and food services. Cleveland Metroparks assumed the management of these lakefront parks in 2013 from the Ohio Department of Natural Resources, which had maintained them as state parks since 1978. Since 2013, the Park District has made significant strides to transform these underutilized and under-maintained parks into destinations of choice along the city's lakefront. The Park District has thoroughly cleaned the parks, increased Police presence to improve safety, and made significant capital investments of over \$18M across its Lakefront Parks. An additional \$120,000 will be invested in Gordon Park in 2020 to construct a new restroom facility, which was funded by a local private foundation, Holden Parks Trust. In 2018, Cleveland Metroparks eastern lakefront parks received over 839,000 visitors and visitation has held steady at near or over 800,000 visitors for the past five years.

Prior to the 2013 acquisition, Cleveland Metroparks conducted a series of in-person and online public outreach activities to engage the community in the transition of ownership of the parks and to begin to evaluate priorities for restoration. Outreach activities included public open houses and meetings with special interest organizations with over 250 attendees. Additionally, an online survey was conducted with over 1,600 respondents and an in-park survey was conducted with 322 respondents. The majority of public comments related to the need for a safe and friendly park, which Cleveland Metroparks has fully embraced. Subsequently, in 2014, as part of the Master Planning process for the lakefront parks, Cleveland Metroparks held additional public open houses and in-park surveys were again conducted with an additional 381 respondents. This information was used to inform the master plans and the Park District's work in the lakefront parks since 2013.

According to a walk and bikeshed analysis conducted by Cleveland Metroparks in 2016, approximately 79,000 residents live within a 3-mile bike ride of the project area. Of this population, 81% is African-American, 71% report a household income of less than \$35,000, and 36% of households do not own a vehicle. The neighborhood adjacent to the project area in the City of Cleveland, St. Clair Superior, is a confluence of diverse cultures and businesses with a resident-driven goal to revitalize their community in response to vacancy and loss of industry. This neighborhood is exceptionally vulnerable to climate threats based on sociodemographic factors including race, educational attainment, and income (Hardy, 2017; Cleveland Neighborhood Progress, 2015). The City of Cleveland's population faces sociodemographic challenges associated with increased climate and storm hazard vulnerability at one of the highest rates in Cuyahoga County (Hardy, 2017). The rates in St. Clair-Superior are higher still, where 18.9% more of the population is nonwhite, 24% fewer adults have a high school diploma, and 18.4% more households are below the poverty threshold than in Cleveland as a whole (U.S. Census Bureau, 2009).

These statistics indicate that the community near the project area is at risk of facing *magnified* impacts associated with coastal climate threats due to a lack of institutional and financial resources available to absorb damages (Hardy, 2017). The need to build climate resilience in low-income neighborhoods is a pressing issue in the Cleveland area. It is specifically addressed in the Cleveland Neighborhood Progress Climate Resilience Plan, which incorporates these social vulnerability metrics and identifies "protecting residents and neighborhoods from flooding, increased precipitation, and extreme weather events" in its top three priorities (Cleveland Neighborhood Progress, 2015).

Furthermore, a detailed resiliency study of four neighborhoods in Cleveland, including the Glenville neighborhood that is immediately adjacent to the proposed project area, was performed between 2016 and 2017 under the "Climate Smart Cities" program by The Trust for Public Land with funding from the Environmental Protection Agency, through the National Oceanic and Atmospheric Administration. This effort looked at the impacts that parks, open space, and green infrastructure, including living shorelines, can have on communities to improve overall resiliency, especially for at-risk populations. The objectives of the program were organized around four areas: Connect, Cool, Absorb, and Protect. An interactive GIS-based mapping tool was developed to assist with scenario planning related to resiliency efforts in the City of Cleveland and this tool will be utilized in the proposed CHEERS effort to aid in visualization and data analysis (http://web.tplgis.org/cleveland_csc/).

Building on the success of this Climate Smart Cities decision support tool for Cleveland, The Trust for Public Land partnered with the City of Cleveland Office of Sustainability and the Cleveland Tree Coalition to engage neighborhood leaders in support of a Climate Action Plan update. In August 2018, The Trust for Public Land hosted a training workshop on the Cleveland Climate Smart Cities decision support tool for climate ambassadors who consisted of representatives of community development corporations from four priority neighborhoods in the City of Cleveland: Slavic Village, Detroit-Shoreway, Glenville, and Central-Kinsman. Implementation opportunities to use the tool were reviewed, including through coalitions and learning labs, policy and decision-making, and on-the-ground projects. The CHEERS study proposes to continue this community engagement efforts with community development corporations and stakeholders to leverage work already completed.

The resilience of the aquatic ecosystem in the project area will impact the resource-dependent fishing community. In a 1997 study, anglers were surveyed at nine locations, two of which were within the project area. Sixty-four percent of anglers reported that they or someone they know were eating the fish they caught and 34% also displayed characteristics of subsistence fishing (Lampert, 1997). The high rate of urban subsistence fishing in the project area highlights the use-value of aquatic ecosystems to the lakefront community and the potential benefits to communities associated with improved habitat conditions. Strengthening the habitats that support anglers in the project area also supports connection between the lake and inner-city residents who may not otherwise engage with the lake, fostering a broader base for environmental stewardship in the community.

2. **Activities:** List the main activities that will be employed with distinct headings and elaborate on the methodology and the expected progress within the grant period. Please link all activities to expected outcome(s) of the project and describe how they relate to established coastal resilience plans (management, conservation, recovery, etc.) and priority conservation needs in the specific project location. Please refer to the RFP for specific aspects of a priority application and provide appropriate detail on all methods.

Cleveland Metroparks will solicit proposals via a public qualifications-based process to complete the proposed scope of work. An RFQ and subsequent RFP will be released. Submissions will be scored by a panel of stakeholders that includes project partners. The contract will be awarded by the Board of Park Commissioners of the Cleveland Metropolitan Park District and will follow guidelines outlined in the Ohio Revised Code and Cleveland Metroparks Purchasing Guidelines. Cleveland Metroparks staff will manage the consultant and all project partners will provide technical expertise. The project deliverable will be 50% design plans for in-water and nearshore habitat for the project area as described above, including options for the beneficial re-use of dredge material. The consultant will be provided with a 12-month timeline with set milestones.

Activities proposed under the plan to be completed by the consultant include:

- *Technical evaluation:* Assess baseline conditions including erosion, hazard areas, infrastructure conditions and needs, existing habitat and species diversity (as described below in #4), and recreational access. Incorporate results of FEMA's Coastal SFHA study, USACE's Dredged Material Management Plan, ODOT's Transportation Data Management System, the City of Cleveland's preliminary concept plans for the former FirstEnergy site, and Cleveland Metroparks Lakefront Master Plans and Resource Management plans and data.
- *Community engagement:* Work with partners and local community groups to develop a strategy to engage diverse stakeholders and to solicit meaningful input. Utilize and build from prior studies and public engagement efforts, including the Climate Smart Cities program and Cleveland Neighborhood Progress's Climate Resilience Plan, to advance resiliency efforts. Integrate the community feedback, with emphasis on the St. Clair Superior and Glenville neighborhoods, into the creative process to result in locally-driven priorities and solutions.
- *Research and Preliminary Design:* Study similar projects including the GSA's award-winning Rebuild by Design program. "Rebuild by Design was an initiative of the Presidential Hurricane Sandy Rebuilding Task Force and was formed as a partnership between The Rockefeller Foundation and the U.S. Department of Housing and Urban Development (HUD) to develop creative and viable solutions to challenges that Superstorm Sandy made all too clear" (www.rebuildbydesign.org). The research portion of CHEERS will

evaluate the project results and adapt best practices and next generation approaches to coastal protection to deliver benefits beyond typical erosion-control and armoring to provide habitat, recreation opportunities, and increased use and access of water resources. Proposed improvements will aim to support economic revitalization and increased resilience in the surrounding areas by reflecting community input generated during the engagement process.

3. **Outcome(s):** Elaborate on the outcome(s) anticipated for both the target coastal community and the targeted wildlife/habitat as a result of the project if funded. Outcomes should be specific and measurable and should reference how they align with established resilience plans where applicable (provide links to plans when possible). Outcomes that will not be achieved within the grant period but are anticipated as a direct result of the funding should also be described. Provide a bulleted list of annual milestones toward progress to outcomes and/or implementation table is required.

Short-term outcomes of this project include:

- 50% design plans for in-water and nearshore habitat for the project area as described above, including options for the beneficial re-use of dredge material
- Opportunities for increased community access and recreational uses along the Lake Erie shore
- Significant stakeholder and community input from partners as listed in this proposal

The creation of in-water habitat will be beneficial to species such as northern pike, largemouth bass, bowfin, various sunfish species, and the Great Lakes musky, which is listed as a species of concern at the state level. New in-water and nearshore habitat within the project area will also reduce bird's and wildlife's dependence on the habitat at the adjacent Burke Lakefront Airport, which in turn will lessen bird-plane strikes. Federally listed species such as Kirtland Warbler, Red Knot, and Piping Plover have been observed on the lakeshore of the city of Cleveland and are only three of the approximately 275 documented bird species in these areas that will benefit from additional shoreline habitat.

Approximately 79,000 individuals live within a 3-mile bike ride of the project area and this population is disproportionately vulnerable to the effects of climate change based on poor socioeconomic factors. Furthermore, segments of this population rely on sustenance fishing in Lake Erie and overall recreational amenities in the adjacent neighborhoods are scarce. CHEERS will incorporate public input from adjacent communities to shape potential programmatic elements such as increased access to the water, opportunities for nature education, features to support health and wellness, and areas to encourage lively community interaction as well as zones for quiet contemplation and relaxation.

The study area is highly visible from I-90. Over 125 million vehicles pass the site each day, providing an opportunity to demonstrate ecological restoration principles of regional importance in a location where the public can both view and easily access the water. Coordination between the partners and outreach to special interest groups such as the Lake Erie Water Trail committee and the Doan Brook Watershed Partners will help further connect this planning process to a regional audience. Boots-on-the-ground surveys and observations by the project consultant will yield pertinent information in order to achieve the above-listed outcomes.

The long-term utility of this project will be widespread. It will inform local and regional leaders and can help communities throughout the Great Lakes identify practices to better withstand future storms while enhancing day-to-day life in nearby communities. The project will identify innovative methods to *contribute to the physical, ecological, and social resilience of the Lake Erie shoreline, local neighborhoods, and the larger community*. The beneficial re-use of locally-generated dredge material is envisioned as a key element in the effort to protect shoreline infrastructure and provide critical habitat along the lakeshore while improving access to the lakefront.

4. **Tracking Metrics:** Indicate how the project will monitor/assess progress on the metrics selected previously in the application. Please note any challenges or limitations anticipated with tracking the metrics. You may also list metrics that you will use to monitor success that are not part of NFWF's standard metrics.

Cleveland Metroparks has assembled a core project team that includes the City of Cleveland, Cleveland-Cuyahoga County Port Authority, Ohio Department of Natural Resources Office of Coastal Management, and Ohio Department of Transportation. In addition to a financial investment in the project, these entities will provide technical expertise and work with the chosen consultant to achieve the above-listed short-term outcomes. Additional governmental entities will also be involved in the project and will commit staff time towards the project, including Cuyahoga Soil and Water Conservation District and Northeast Ohio Areawide Coordinating Agency. Doan Brook Watershed Partners is a local non-profit that serves this area and has also committed time and expertise to the project. CHEERS aligns with the mission and goals of these entities and participation by these organizations, as well as other organizations that may join as the project progresses, will be tracked as part of the meeting minutes and project correspondence.

As mentioned above, the project consultant will be tasked with gathering significant community input to ensure community buy-in as well as understanding community need. The number of community members engaged in public meetings or online surveys will be recorded and reported.

Cleveland Metroparks staff have baseline wildlife data for the project area including bird point-count surveys, bird acoustic migration data, and have recently added two MOTUS towers on the Lake Erie shoreline. MOTUS Wildlife Tracking Systems use automated radio telemetry to record radio signals from transmitters ("nanotags") that have been placed on wildlife, such as small mammals and birds. Over 500 receiving stations have been installed throughout North and South America, Africa, Europe, and Australia. These receivers all monitor the same frequencies allowing uniquely tagged wildlife to be tracked over great distances. This data is extremely important to understand bird and bat migration patterns and to track species that utilize habitat along the Lake Erie shoreline. Surveys for fish and aquatic vegetation have also been completed and will be completed in future years as well.

5. **Project Team:** List key individuals and describe their qualifications relevant for project implementation.

Cleveland Metroparks is partnering with four additional government entities on this project. Organization information for Cleveland Metroparks and qualifications of key personnel from each partner organization are listed below.

Organization Information:

Cleveland Metroparks mission is to conserve significant natural resources and enhance people's lives by integrating high-quality outdoor education, recreation, and zoological opportunities into people's lives. Cleveland Metroparks was established in 1917 to provide open greenspace for the people of Greater Cleveland and to preserve the natural resources of the region. Today, the Park District consists of 23,694 acres in 18 reservations.

Cleveland Metroparks is a separate political subdivision of the state of Ohio. The Park District is governed by Cleveland Metroparks Board of Park Commissioners, composed of three citizens who serve three-year terms without compensation. Board members are appointed by the presiding Judge of the Probate Court of Cuyahoga County. Cleveland Metroparks has adopted a non-discrimination policy, which is available via the Park District's website, www.clevelandmetroparks.com. The policy reads:

"The Chief Executive Officer for Cleveland Metroparks has adopted a policy acknowledging that Cleveland Metroparks operates its programs, services, and activities without regard to race, color, religion, age, national origin, national ancestry, sex, pregnancy, gender, sexual orientation, military service or veteran status, mental or physical disability, or genetic information..."

Cleveland Metroparks has long been recognized for its excellence in providing consistent, high-quality park maintenance. In 1994, 2001, 2007, and 2016, the Park District received the National Gold Medal Award for Excellence in Park and Recreation Administration. Cleveland Metroparks was also certified in 2013 and 2018 by the Commission for the Accreditation of Park and Recreation Agencies (CAPRA).

To ensure financial sustainability, Cleveland Metroparks relies on a diversity of revenue streams to support all aspects of the Park District. Cleveland Metroparks operating levy supports 65% of the Park District's overall budget. Other major sources of revenue include grants and donations (9%), Cleveland Metroparks Zoo (8%), golf operations (6%), and concession sales (4%). Cleveland Metroparks has a long history and solid reputation for administration of grants across the spectrum of federal, state, and private sources. Cleveland Metroparks is the lead agency or a partner agency on approximately 71 awarded and in-progress grants as of May 2019 that total over \$31 million.

Project Personnel:

Sean E. McDermott, P.E. – Cleveland Metroparks, Chief Planning and Design Officer. As the Chief Planning and Design Officer, Sean is responsible for long-range strategic planning in concert with design and construction of the Metroparks capital improvements throughout the Park District and the Cleveland Metroparks Zoo. Prior to joining the Metroparks in 2013, Sean managed retail, commercial, and multi-family projects nationwide for a Cleveland-based real estate developer. Sean holds a Bachelor of Civil Engineering from the University of Dayton and a Masters of Urban Planning, Design and Development from Cleveland State University, Maxine Goodman Levin College of Urban Affairs. He is a registered Professional Engineer in the State of Ohio, a volunteer and past president of LakewoodAlive, vice chair of New Village Corporation board, a member of the 2015 Cleveland Bridge Builders class, and a 2018 Crain's Cleveland 40 under 40 honoree.

Kelly Coffman – Cleveland Metroparks, Senior Strategic Planner. As an experienced landscape architect and LEED professional, Kelly brings a systems-based approach to planning and landscape architecture projects. She is interested in bridging the gap between greenspace and neighborhoods, designing facilities that connect people with nature, and working with communities to encourage positive redevelopment. Her career spans experience at several multi-disciplinary firms along with 15 years in planning and project management for regional park systems. Select project experience includes Cuyahoga Greenways (a recent county-wide trail plan), developing park master plans for 18 reservations and 23,600 acres, and representing Cleveland Metroparks in numerous collaborative planning efforts. She holds a Bachelor of Science degree in Landscape Architecture from The Ohio State University.

Jennifer Greiser – Cleveland Metroparks, Director of Natural Resources. Jennifer has worked for the Park District since 2010, most recently as the Senior Director of Natural Resources – Urban Watershed in which she oversaw stream restoration projects throughout the park system, as well as the Watershed Volunteer Program. Jennifer was promoted to the Director position in 2019. Jennifer is the Chair of the Cuyahoga River Area of Concern Advisory Committee and serves on the Chagrin River Watershed Partners Board of Trustees. Prior to her work at Cleveland Metroparks, Jennifer worked for the New York City Department of Environmental Protection and holds a M.P.A. in Environmental Policy and Natural Resource Management from Indiana University.

Nicholas LaPointe - Cleveland-Cuyahoga County Port Authority, Director of Planning & Capital Development. Nick oversees the Port Authority's capital infrastructure planning, maintenance, asset management, and project delivery program. In addition, Nick oversees the operation and management of the Port Authority's Sediment Processing & Management Facility, where the Port Authority beneficially harvests and reuses dredge sediment from the Cuyahoga River. Prior to joining the Cleveland-Cuyahoga County Port Authority in 2015, Nick worked for Weeks Marine, a large marine construction and dredging company, where he was part of project delivery team that worked on coastal resiliency and large marine-based civil works projects for public and private clients. Nick spent the early days of his career as a licensed merchant marine officer on the Western Basin of Lake Erie. Nick has a deep passion and understanding of the maritime industry. He holds a Bachelor of Science degree in Civil Engineering from the University of Toledo and a Master of Business Administration from Case Western Reserve University.

David Lastovka, P.E. – ODOT, Cleveland Innerbelt Corridor Project Manager. David is the Cleveland Innerbelt Corridor Project Manager, the \$2B reconstruction of I-90 through Downtown Cleveland. During his 27 year career at ODOT he has served in various positions including acting Capital Programs Administrator, District Design Engineer, District Hydraulics Engineer, Major Project's Engineer, and Deputy Project Manager for the Cleveland Innerbelt Project. David is a graduate of Ohio State University, is a registered Professional Engineer, and is a lifelong resident of northeast Ohio.

Scudder D. Mackey, Ph.D. - Ohio Department of Natural Resources, Chief, Office of Coastal Management.

The Office of Coastal Management has regulatory and resource management responsibilities along the Ohio Lake Erie shoreline. Working cooperatively with Ohio EPA and local partners, Dr. Mackey has developed and implemented multiple in-water wetland habitat enhancement and restoration projects in the Great Lakes region. Many of these projects incorporate innovative design approaches that also beneficially use dredge material. More recently, Dr. Mackey has applied Landscape Conservation Design Principles to identify and develop integrated habitat and water quality improvement projects along the Ohio Lake Erie coastline. Prior to joining the Ohio Department of Natural Resources, Dr. Mackey was an independent environmental consultant providing professional consulting services across Great Lakes region and southern Canada. Dr. Mackey served as Supervisor for the Lake Erie Geology Group for the Ohio Department of Natural Resources and worked for the Great Lakes Governors as Project Implementation Manager with the Great Lakes Protection Fund. Dr. Mackey holds a Doctorate in Geology from the State University of New York at Binghamton.

Freddy Collier, Jr. – City of Cleveland, Director of Planning. Freddy was appointed by Mayor Frank G. Jackson to serve as the Director of Cleveland City Planning Commission in 2014. Freddy has over 20 years of experience in community lending and urban planning. As Director, Freddy works with a team of professional planners who enlist other City departments, community stakeholders, and agencies to promote and implement planning initiatives throughout the City of Cleveland, Cuyahoga County, and Northeast Ohio. He secured \$270,000 in grant resources in his first year to advance Mayor Jackson’s vision of creating a healthy city and has been a leader in promoting the connections between planning and health outcomes in the community. Freddy began his career with the City Planning Commission in 1999 and has led several citywide initiatives including the Connecting Cleveland 2020 Citywide Plan, the City’s comprehensive masterplan designed to guide the development direction of the City of Cleveland.

6. **Other (Optional):** Provide any further information important for the review of this proposal (i.e. other benefits to the project such as public access, recreational value).

Like many Great Lakes cities, Cleveland is tasked with determining what is next for its lakefront that was formerly dominated by industrial priorities. Events like the recent closure of the FirstEnergy power plant in the City of Cleveland and the associated former outfall in Lake Erie present opportunities for productive re-use of this site and furthermore, the opportunity for a turning-point in the prioritization of social and environmental issues impacting Cleveland’s lakefront. With climate change projected to impact lake conditions as well as influence migration of people to the Great Lakes region due to resource necessity over the next century (Burkholder, 2017 p. 109), a study such as CHEERS that will thoroughly explore lakefront uses and resiliency has increased urgency. CHEERS has the potential to serve as a demonstration of strategic investment by multiple stakeholder to achieve locally-driven goals with an end result of overall community resilience and ecological restoration.

Public access and recreational opportunities have been improved on the City of Cleveland’s westside lakefront over recent years and similar efforts are underway on the eastside where the project area is located. The communities specifically surrounding the project area were physically separated from the lake by construction of I-90 in the 1960’s and have had poor lakefront access and limited recreational activities ever since. In efforts to improve recreational opportunities along Cleveland’s entire shoreline, a water trail for paddlers is proposed for Lake Erie, but may face challenges in the project area where the hardened shoreline reflects high-energy waves back into the lake, often making nearshore lake conditions inhospitable to paddle recreation and further impeding recreational access. Creation of nearshore habitat will help dissipate wave energy and enable direct contact with the water where it was previously inaccessible. This connection between communities and the lake will have additional community and ecological benefits, such as providing opportunities for learning and public participation in habitat management.

7. **Representative Project Photos:** Via the Uploads section of the proposal, please include 1-3 photos of the project location or activities. For each uploaded photo, provide a photo credit and brief description below. *Example — Photo 1: John Smith, NFWF. Photo of the current eroded area to be addressed by plantings.*

Photo 1: Wave action along I-90 in the project area (Cleveland.com)

Photo 2: Boulders as a result of Superstorm Sandy in 2012 at East 55th Street (ODNR)

Photo 3: Wave action as a result of Superstorm Sandy in 2012 at East 55th Street (ODNR)

8. **Designs, Site Maps and Letters of Support:** Please see the RFP for other uploaded documents that are required for proposals. Letters of Support should be on letterhead where applicable.

Attached Letters of Support include:

- Doan Brook Watershed Partners
- City of Cleveland
- Cleveland-Cuyahoga County Port Authority
- Cuyahoga Soil and Water Conservation District
- Ohio Department of Natural Resources Office of Coastal Management
- Ohio Department of Transportation
- Senator Sherrod Brown
- The Trust for Public Land

References

- BKL bird strike handout (n.d.). Attached in email from Jon Cepek, Cleveland Metroparks Wildlife Ecologist on 17 July, 2019.
- Burkholder, S., Lutsky, K., (2017) Reclaiming the littoral. *Third Coast atlas: prelude to a plan* (pp. 102-112). Barcelona, Spain: Actar Publishers.
- City of Cleveland (2002) *Connecting Cleveland 2020 Citywide Plan*. Retrieved from: <http://planning.city.cleveland.oh.us/cwp/cpc.html>
- City of Cleveland (2004) *Cleveland Waterfront District Plan*. Retrieved from: http://planning.city.cleveland.oh.us/lakefront/iactive/poster/waterfront_poster.pdf
- City of Cleveland (2007) *Cleveland Bikeway Master Plan*. Retrieved from: <http://planning.city.cleveland.oh.us/bike/index.php>
- Cleveland Metroparks (2012) *Cleveland Metroparks 2020 Plan: The Emerald Necklace Centennial Plan*. Retrieved from: <https://www.clevelandmetroparks.com/about/cleveland-metroparks-organization/future-plans>
- Cleveland Metroparks (2014) *Cleveland Metroparks Lakefront Reservation Master Plan*. Retrieved from: <https://www.clevelandmetroparks.com/getattachment/About/Cleveland-Metroparks-Organization/Future-Plans/Lakefront-Reservation-2014-Plan.pdf.ashx>
- Cleveland Neighborhood Progress. (2015) *Cleveland climate resilience & urban opportunity plan*. Retrieved from: http://www.clevelandnp.org/wp-content/uploads/2015/11/Final-Implementation-Plan_CNP.pdf
- EcoCity Cleveland. (2002) *Ecological restoration opportunities for Cleveland's lakefront*. Cleveland, OH: Green City Blue Lake.
- Hardy, S. D. (2017) Here comes the rain: assessing storm hazard vulnerability in Northeast Ohio. *International Journal of Disaster Risk Reduction*, 24, 391-398. doi: 10.1016/j.ijdr.2017.07.004
- Lampert, L. (1997) *Tainting of fish and wildlife flavor (technical report 3)*. Retrieved from EPA website: <https://www.epa.gov/sites/production/files/2015-11/documents/lake-erie-lamp-tech-report-3-bui-tainting-fish-wildlife-flavor-1997-33pp.pdf>
- Northeast Ohio Sustainable Communities Consortium (2014) *Vibrant NEO 2040: A Vision, Framework, and Action Products for Our Future*. Retrieved from: <http://vibrantneo.org/vibrantneo-2040/vneo-2040-full-report/>
- Ohio Department of Transportation. Email with District 12 staff on 11 July 2019 – 17 July 2019.
- Ohio Lake Erie Commission (2013) *Lake Erie protection & restoration plan*. Retrieved from: <https://lakeerie.ohio.gov/Portals/0/Reports/LEPR%202013%20Final.pdf>
- U.S. Census Bureau (2009) American Community Survey. Data for the indicators in this table was provided by The Urban Institute, Washington, DC. Prepared by: Center on Urban Poverty and Community Development, MSASS, Case Western Reserve University.



Lake Erie

BURKE
LAKEFRONT
AIRPORT

PROPOSED STUDY AREA

DIKE 14

GORDON PARK

DOWNTOWN
CLEVELAND

COMMUNITY OUTREACH
FOCUS AREA



Trustees

Darnell Brown, Chair
City of Cleveland

Nancy Moore, President
Shaker Heights City Council

Karen Knittel, Vice President
City of Cleveland Heights

Curt Witche, Treasurer
At-Large

Laura Gooch, Secretary
At-Large

Dorothy Adams
At-Large

Sandra Albro
Holden Forests & Gardens

Chris Bongorno
University Circle Inc.

Kay Carlson
Nature Center at Shaker Lakes

Mary Dunbar
Cleveland Heights City Council

Jane Goodman
Cuyahoga River Restoration

Blaine Griffin
Cleveland City Council

Jeff Jowett
Northeast Ohio Regional
Sewer District

Christian Maier
City of Shaker Heights

Stacey Polk
At-Large

Julia Swanson
Cleveland Museum of
Natural History

July 18, 2019

National Fish and Wildlife Foundation
1133 Fifteenth Street, N.W., Suite 1000
Washington, DC 20005
Attn: Ms. Aislinn Gauchay

RE: Letter of Support - Cleveland Harbor Eastern Embayment Resilience Study

Dear Ms. Gauchay,

Please accept this letter of support and collaboration from the Doan Brook Watershed Partnership (DBWP) for the Cleveland Harbor Eastern Embayment Resilience Study (CHEERS). This project, led by Cleveland Metroparks with support from the Cleveland-Cuyahoga County Port Authority, Ohio Department of Natural Resources Office of Coastal Management, and the Ohio Department of Transportation, will yield valuable information that will contribute to the health and resilience of the community.

CHEERS will identify and examine opportunities for improving resilience along Cleveland's eastern Lake Erie shoreline. The goals of the project include improved habitat for fish and wildlife, protection of critical infrastructure from storm events, and enhancement of public green space in this area. Present conditions offer residents green space near Lake Erie, but do not provide direct contact with the water due to the existing bulkheads and armored shoreline. Wave action in the Eastern Embayment makes it difficult to use Lake Erie for paddle sports or other recreation activity. Shoreline improvements within the project area are necessary for residents to physically connect to Lake Erie.

Partners and stakeholders, including DBWP, are particularly interested in enhancing the ability of nearby neighborhoods to connect to the lakefront. Lake Erie presents a tremendous asset, yet adjacent land and neighborhoods are generally disconnected from the scenic, recreational, and health-enhancing aspects of public open space. The CHEERS effort will engage neighborhood residents and generate valuable community feedback as part of this process on what improvements will likely draw our residents to the waterfront.

The study will engage and educate stakeholders about Lake Erie and the opportunities for resilient improvements for a healthy coastal community. These efforts for habitat restoration align with DBWP's goal of promoting equitable access to recreation and healthy environments for all of the residents of our watershed and we urge your support of this proposal. We look forward to participating in the proposed planning process.

Sincerely,

Victoria Mills
Executive Director



City of Cleveland

Frank G. Jackson, Mayor

City Planning Commission



Freddy L. Collier Jr., Director

Cleveland City Hall

601 Lakeside Avenue, Room 501

Cleveland, Ohio 44114

T: (216) 664-2210 F: (216) 664-3281 | www.planning.city.cleveland.oh.us

July 16, 2019

National Fish and Wildlife Foundation
1133 Fifteenth Street, N.W., Suite 1000
Washington, DC 20005
Attn: Ms. Aislinn Gauchay

Dear Ms. Gauchay,

Please accept this letter of support and collaboration from the City of Cleveland for the Cleveland Harbor Eastern Embayment Resilience Study (CHEERS). This project, led by Cleveland Metroparks with support from the Cleveland-Cuyahoga County Port Authority, Ohio Department of Natural Resources Office of Coastal Management, and the Ohio Department of Transportation, will yield valuable information that will contribute to the health and resilience of the City of Cleveland.

CHEERS will identify and examine opportunities for improving resilience along the City's eastern Lake Erie shoreline. The goals of the project include improved habitat for fish and wildlife, protection of critical infrastructure from storm events, and enhancement of public green space in this area. Present conditions offer residents green space near Lake Erie, but do not provide direct contact with the water due to the existing bulkheads and armored shoreline. Wave action in the Eastern Embayment makes it difficult to use Lake Erie for paddle sports or other recreation activity. Shoreline improvements within the project area are necessary for our City's residents to physically connect to Lake Erie.

The City of Cleveland is particularly interested in enhancing the ability of nearby neighborhoods to connect to the lakefront. Lake Erie presents a tremendous asset, yet adjacent land and neighborhoods are generally disconnected from the scenic, recreational, and health-enhancing aspects of public open space. The CHEERS effort will engage neighborhood residents and generate valuable community feedback as part of this process on what improvements will likely draw our residents to the waterfront.

The City of Cleveland supports the protection of habitat along our waterways. The City of Cleveland also supports investments that leverage our waterfront to create economic development. Although these two concepts have worked at cross purposes in the past, we believe that responsible investments along our waterways can support economic development while ensuring that we protect and enhance our natural environment. This study will help provide insight on how we can accomplish those two very important goals in the study area. In addition, The City of Cleveland supports efforts along our waterfronts that advances environmental goals, promote responsible development in the right locations, and ensures that public access is maintained or created. These are all critical elements to having a vibrant waterfront.



City of Cleveland

Frank G. Jackson, Mayor

City Planning Commission



The study will engage and educate stakeholders about Lake Erie and the opportunities for resilient improvements for a healthy coastal community. These efforts for habitat restoration can also revitalization in the nearby communities, helping to support Mayor Frank Jackson's Neighborhood Transformation Initiative. This proposed study will pave the way for future investment in this area of our City and we urge your support of this proposal. We pledge to be stakeholders in the planning process and to assist with human and financial resources associated with the effort.

Thank you for this opportunity.

Sincerely,

A handwritten signature in blue ink, appearing to read "Freddy L. Collier Jr.", written over a horizontal line.

Freddy L. Collier Jr.

Director, Cleveland City Planning Commission



July 19, 2019

Ms. Aislinn Guachay
National Fish & Wildlife Foundation
1133 Fifteenth Street, N.W., Suite 1000
Washington, DC 20005

Subject: Letter of Support Cleveland Harbor Eastern Embayment Resilience Study (CHEERS)

To Whom It May Concern:

On behalf of the Port of Cleveland, I am writing to express our support for the Cleveland Metropark's 2019 National Coastal Resilience Grant application for the Cleveland Harbor Eastern Embayment Resilience Study (CHEERS). If selected, our experienced staff is committed to supporting Cleveland Metroparks as an engaged project partner. The Port will commit local matching funds in an amount not to exceed \$31,500.00

The Port of Cleveland works in close partnership with Cleveland Metroparks on many initiatives within Cleveland Harbor and along the Cuyahoga River. We have full confidence in Cleveland Metroparks's ability to manage and deliver a comprehensive planning study that will: lead to innovative solutions to enhance coastal resiliency, create opportunities for habitat and wildlife to thrive within Cleveland Harbor, increase opportunities to beneficially use dredge sediment in which our maritime community strongly supports, and improve access to Lake Erie in an area of the City with limited connections to our greatest natural resource.

The diverse support gained for this Project at the state and local levels enhance our enthusiasm that this planning study is only the initial phase of what we see as a great opportunity. The Port of Cleveland remains committed to connecting people with nature along the waterfront by creating and enhancing places within our community to do so.

Sincerely,

A handwritten signature in black ink, appearing to read "William D. Friedman".

William D. Friedman
President & CEO



3311 Perkins Avenue, Suite 100
Cleveland, Ohio 44114
216-524-6580 Fax: 216-524-6584
www.cuyahogawcd.org

July 17, 2019

National Fish and Wildlife Foundation
1133 Fifteenth Street, N.W., Suite 1000
Washington, DC 20005
Attn: Ms. Aislinn Gauchay

Dear Ms. Gauchay:

On behalf of the Cuyahoga Soil and Water Conservation District, please accept this letter as support for the Cleveland Harbor Eastern Embayment Resilience Study (CHEERS). This project, led by Cleveland Metroparks with support from the Cleveland-Cuyahoga County Port Authority, Ohio Department of Natural Resources Office of Coastal Management, and the Ohio Department of Transportation, will yield valuable information that will contribute to the protection of our water resources in the City of Cleveland.

The mission of our organization is to advocate and implement best management practices for conservation of land and aquatic resources in a developed environment through education, stewardship and technical assistance. CHEERS will provide recommendations to conserve and improve aquatic resources within the project area along Lake Erie and we fully support this research and design. Our organization has a history of collaboration and planning to develop and implement watershed-scale plans and we pledge our time to be a part of this planning process as well.

We regularly partner with Cleveland Metroparks on a wide-range of projects and we are fully confident in their ability to successfully and skillfully execute this project. We applaud the innovative efforts of the project team and we highly recommend your support of this project.

Thank you for your consideration

Sincerely,

A handwritten signature in blue ink, appearing to read "Janine H. Rybka".

Janine Rybka
Director



Ohio Department of Natural Resources

MIKE DeWINE, GOVERNOR

MARY MERTZ, DIRECTOR

July 19, 2019

National Fish and Wildlife Foundation
1133 Fifteenth Street, N.W., Suite 1000
Washington, DC 20005

Attn: Ms. Aislinn Gauchay

Dear Ms. Gauchay,

Please accept this letter of support and collaboration from the Ohio Department of Natural Resources (ODNR) Office of Coastal Management for the Cleveland Harbor Eastern Embayment Resilience Study (CHEERS). This project, led by Cleveland Metroparks with support from the Cleveland-Cuyahoga County Port Authority, ODNR Office of Coastal Management, and the Ohio Department of Transportation, will yield valuable information that will contribute to the ecological health and resilience of the City of Cleveland.

CHEERS will identify and examine opportunities for improving resilience along the City's eastern Lake Erie shoreline. The goals of the project include improved habitat for fish and wildlife, protection of critical infrastructure from storm events, and the enhancement of public green space and access in this area. Existing bulkheads and an armored shoreline provide limited fish and wildlife habitat and currently limit access to the Lake. Wave action in the Eastern Embayment makes it difficult to use Lake Erie for paddle sports or other recreational activities. Shoreline improvements within the project area are necessary to enhance public access, restore fish and wildlife habitat, and provide recreational opportunities to Lake Erie.

As a project partner, this letter will confirm that the ODNR Office of Coastal Management will commit up to \$31,500 in financial support towards the non-federal match requirement for the CHEERS project. In addition, ODNR will provide technical support and engineering guidance with respect to potential conceptual designs that will enhance both coastal and ecological resiliency along the City's eastern Lake Erie shoreline.

This study will provide opportunities to engage and educate stakeholders about Lake Erie and will explore ways to enhance public access and reconnect the local community to Lake Erie. Moreover, there may be significant habitat benefits along what is currently a highly altered and urbanized shoreline.

The ODNR Office of Coastal Management recommends that this project be fully funded and looks forward to working the project partners to enhance the coastal and ecological resiliency of the Cleveland waterfront.

Sincerely,

A handwritten signature in blue ink, reading "Scudder D. Mackey".

Scudder D. Mackey, Ph.D.
Chief, Office of Coastal Management
Ohio Department of Natural Resources

OFFICE OF COASTAL MANAGEMENT

105 WEST SHORELINE DRIVE SANDUSKY, OH 44870 (419) 626-7980 / (888) 644-6267



OHIO DEPARTMENT OF TRANSPORTATION
Mike DeWine, Governor Jack Marchbanks, Ph.D., Director

1980 W. Broad Street, Columbus, OH 43223
614-466-7170
transportation.ohio.gov

July 22, 2019

National Fish and Wildlife Foundation
1133 Fifteenth Street, N.W., Suite 1000
Washington, DC 20005
Attn: Ms. Aislinn Gauchay

Dear Ms. Gauchay:

On behalf of the Ohio Department of Transportation (ODOT), please accept this letter as support for the Cleveland Harbor Eastern Embayment Resilience Study (CHEERS). ODOT has committed to partner on this project with Cleveland Metroparks, the Cleveland-Cuyahoga County Port Authority, and the Ohio Department of Natural Resources. We commit to serve as a key stakeholder and offer technical expertise throughout the planning process.

One goal of this study is the protection of critical infrastructure from storm events. ODOT's I-90 borders the proposed project area is a heavily-trafficked commuter and freight east-west route through the City of Cleveland with annual average daily traffic volume of 129,647 vehicles. This interstate is frequently affected by water and high waves from the adjacent Lake Erie and our organization has a vested interest in the safety of this corridor as well as the safety of all motorists. Furthermore, this infrastructure was severely impacted by Superstorm Sandy and all 10 lanes of traffic were temporarily closed.

This project will yield valuable information that will contribute to the protection of infrastructure and the resilience of the adjacent neighborhoods in the City of Cleveland. We look forward to contributing to this planning process and in addition to staff time, ODOT will commit up to \$31,500 towards the project costs.

Thank you for your time and your consideration of this application.

Respectfully,

Jack Marchbanks, Ph.D

United States Senate

WASHINGTON, DC 20510 - 3505

July 19, 2019

Mr. Edwin R. Rodriguez
National Fish and Wildlife Foundation
1133 Fifteenth St., NW STE 10000
Washington, DC 20005

**Re: Cleveland Metroparks
National Fish and Wildlife Foundation
Cleveland Harbor Eastern Embayment Resilience Study (CHEERS)**

Dear Mr. Rodriguez:

I write to draw your attention to the Cleveland Metro Parks application, in partnership with the Cleveland-Cuyahoga County Port Authority, and the Ohio Department of Natural Resources, for a National Coastal Resilience Fund grant from the National Fish and Wildlife Foundation in support of their Cleveland Harbor Eastern Embayment Resilience Study (CHEERS). CHEERS will examine the resiliency of the Lake Erie shoreline East of Burke Lakefront Airport. Cleveland Metro Parks recognizes the physical, social, and ecological importance of the Lake Erie shoreline. The shore is bordered by parks, including Cleveland Metroparks' East 55th Street Marina, Gordon Park, and Interstate 90. This area is currently affected by the shoreline's lack of areas for wave dissipation, making these surrounding neighborhoods and interstate 90 vulnerable to high winds and waves from coastal storms.

CHEERS will include an evaluation of existing conditions in the project area and significant community engagement. The study will also examine the potential for the re-use of local dredge materials to create a natural habitat, such as wetlands, shrub habitat, and coastal mudflats, along the shoreline for birds, fish, and other species. This habitat will serve to protect the shoreline and surrounding areas from storm events and changes in lake levels, which are at an historical high due to recent heavy rains.

This project is essential to ensuring the community's prosperity in the face of intense rains and a changing climate. I have made it a priority to recognize the effects of climate change on local communities, and this project will help Northeast Ohio prepare for changing conditions along the Lake Erie shoreline. The project will educate Ohioans and local leaders on tactics to withstand storm events, while also improving day-to-day life in neighboring communities, beautifying the area, and improving access to the lakefront for recreational activities.

I hope you will give full and fair consideration to this proposed project.

Sincerely,

Sherrad Brown

Sherrod Brown
United States Senator

July 22, 2019

National Fish and Wildlife Foundation
1133 Fifteenth Street, N.W., Suite 1000
Washington, DC 20005
Attn: Ms. Aislinn Gauchay

Dear Ms. Gauchay,

Please accept this letter of support and collaboration from the Trust for Public Land (TPL) for the Cleveland Harbor Eastern Embayment Resilience Study (CHEERS). This project, led by Cleveland Metroparks with support from the Cleveland-Cuyahoga County Port Authority, Ohio Department of Natural Resources Office of Coastal Management, the City of Cleveland, and the Ohio Department of Transportation, will yield valuable information that will contribute to the health and resilience of the City of Cleveland.

CHEERS will identify and examine opportunities for improving resilience along the City's eastern Lake Erie shoreline. The goals of the project include improved habitat for fish and wildlife, protection of critical infrastructure from storm events, and enhancement of public green space in this area. Present conditions offer residents green space near Lake Erie, but do not provide direct contact with the water due to the existing bulkheads and armored shoreline. Wave action in the Eastern Embayment makes it difficult to use Lake Erie for paddle sports or other recreation activity. Shoreline improvements within the project area are necessary for our City's residents to physically connect to Lake Erie.

TPL supports enhancing the ability of nearby neighborhoods to connect to the lakefront. Lake Erie presents a tremendous asset, yet adjacent land and neighborhoods are generally disconnected from the scenic, recreational, and health-enhancing aspects of public open space. The CHEERS effort will engage neighborhood residents and generate valuable community feedback as part of this process on what improvements will likely draw our residents to the waterfront.

The study will engage and educate stakeholders about Lake Erie and the opportunities for resilient improvements for a healthy coastal community. These efforts for habitat restoration can align with social revitalization in the nearby communities, helping to achieve a number of initiatives including TPL's Climate Smart Cities and efforts to provide a park access within a 10-minute walk of every home in every city across the country. This proposed study can advance investment in this area of our City and we urge your support of this proposal.

Thank you for this opportunity.

Sincerely,



Matthew Schmidt, AICP
Program Director









NFWF

Statement of Litigation

Instructions: Save this document on your computer and complete. The final narrative should not exceed two (2) pages; do not delete the text provided below. Once complete, upload this document into the on-line application as instructed.

Litigation: In the space provided below, state any litigation (including bankruptcies) involving your organization and either a federal, state, or local government agency as parties. This includes anticipated litigation, pending litigation, or litigation completed within the past twelve months. Federal, state, and local government applicants are not required to complete this section. If your organization is not involved in any litigation, please state below.

Not applicable; Cleveland Metroparks is a local political subdivision of the State of Ohio.

Board of Park Commissioners

Cleveland Metroparks is a separate political subdivision of the state of Ohio. The Park District is governed by Cleveland Metroparks Board of Park Commissioners, composed of three citizens who serve three-year terms without compensation. Board members are appointed by the presiding Judge of the Probate Court of Cuyahoga County.

The 2019 officers of the Board of Park Commissioners are:

- **Debra K. Berry**, President
Vice President of Planning and Real Estate Development, University Circle, Inc.
Current Term: January 1, 2018-December 31, 2020
- **Dan T. Moore**, Vice President
President, Dan T. Moore Companies
Current Term: January 1, 2017-December 31, 2019
- **Bruce G. Rinker**, Vice President
Attorney, Mansour, Gavin, Gerlack & Manos Co., LPA
Current Term: January 1, 2019-December 31, 2021

Executive Staff

- Brian M. Zimmerman, Chief Executive Officer
- Joseph V. Roszak, Chief Operating Officer
- William Chorba III, Chief Financial Officer

