Agenda
Planning and Policy Committee
West Olive Administration Building – Board Room and YouTube
12220 Fillmore Street, West Olive, Michigan 49460
Tuesday, June 4, 2024
9:00 AM

Public Comment

Approval of Agenda

Consent Resolutions:

1. Approval of the minutes from the May 7, 2024 Planning and Policy Committee Meeting

Agenda and Action Requests:

1. Ottawa Sands Ecological Enhancement - Change Order
   Suggested Motion:
   To approve the addition to the contract for GEI consultants in the amount of $99,963 for work at Ottawa Sands lake shoreline enhancements and forward to the Board of Commissioners for final approval.

2. Ottawa County Parks Coastal Resiliency Project
   Suggested Motion:
   To approve the contract with GEI Consultants of Michigan in the amount of $274,684 for professional services related to coastal resiliency feasibility and preliminary engineering at Ottawa Sands and Harbor Island in the City of Grand Haven.

3. Idema Explorer's Trail Eastmanville Bayou Segment Easement
   Suggested Motion:
   To purchase an easement from Joselyn Paola Vallejo for trail construction of the Eastmanville Bayou segment of the idem a Explorers Trail for a cost of $3690.00.

4. Application for Consistency with the Ottawa County Solid Waste Management Plan
   Suggested Motion:
   To recommend and forward to the Board of Commissioners to find that the Summary Report is consistent with the Ottawa County Solid Waste Management Plan in with current rules developed under Part 115 of the Natural Resources and Environmental Protection Act, P.A. 451 of 1994, as amended (Part 115) and to recommend for approval a Letter of Consistency for the Summary Report pending Holland Charter Township (host community) also approves the Summary Report to be written by the current DPA and administrative staff on behalf of the Ottawa County Board of Commissioners.

5. Probate Court: Grand Haven Courthouse Alterations

   Suggested Motion:
   To create a capital project for Probate Court alterations in the Grand Haven Courthouse.

Committee Reports:

Public Comment

Adjournment at Call of the Chairperson

PLANNING AND POLICY COMMITTEE

Proposed Minutes

DATE: May 7, 2024

TIME: 9:00 a.m.

PLACE: Fillmore Street Complex

PRESENT: Roger Belknap, Roger Bergman, Allison Miedema, Sylvia Rhodea, and Joe Moss. (5)

SUBJECT: PUBLIC COMMENT

None.

SUBJECT: APPROVAL OF AGENDA

PP 24-019 Motion: To approve the agenda of today.
Moved by: Bergman UNANIMOUS

SUBJECT: CONSENT RESOLUTIONS

PP 24-020 Motion: To approve the minutes from the April 2, 2024, Planning and Policy Committee Meeting.
Moved by: Miedema UNANIMOUS

SUBJECT: IDEMA EXPLORERS TRAIL TEAM PINK TRAIL EASEMENT

PP 24-021 Motion: To approve and forward to the Board of Commissioners acquisition of an easement from Team Pink Corp. for the purpose of constructing, operating, and maintaining a portion of the Bass River Segment of the Idema Explorers Trail at a cost of $10,000.
Moved by: Bergman

The motion passed with the following votes: Yeas: Joe Moss, Sylvia Rhodea, Allison Miedema, Roger Bergman, Roger Belknap. (5)

SUBJECT: COMMITTEE REPORTS

1. Groundwater Activity Update-Paul Sachs gave a Groundwater update.

SUBJECT: PUBLIC COMMENT

None.

SUBJECT: ADJOURNMENT

The chairperson called for adjournment at 9:37 a.m.

Action Request

Electronic Submission – Contract # 2265

Ottawa County
Where Freedom Rings

Committee: PLANNING AND POLICY

Meeting Date: 6/4/2024

Vendor/3rd Party: GEI CONSULTANTS

Requesting Department: PARKS AND RECREATION

Submitted By: CURT TERHAAR

Agenda Item: OTTAWA SANDS ECOLOGICAL ENHANCEMENT - CHANGE ORDER

Suggested Motion:

To approve the addition to the contract for GEI consultants in the amount of $99,963 for work at Ottawa Sands lake shoreline enhancements and forward to the Board of Commissioners for final approval.

Summary of Request:

GEI Consultants was hired to implement natural resource restoration and enhancements at Ottawa Sands. Original funding was estimated at $450,000. However, final funding, which comes completely from State and Federal grants, is $542,000. This addition to the contract will allow for the project to be improved with more native plantings, woody habitat structures, and construction fencing to protect newly developed habitat areas while they are established. The increased density of native plants will accelerate the process of habitat establishment and increase the likelihood of success.

Financial Information:

Total Cost: $99,996.00	General Fund Cost: $0.00	Included in Budget: Yes

If not included in Budget, recommended funding source:

Action is Related to an Activity Which Is: Non-Mandated

Action is Related to Strategic Plan:

Goal 2: To Contribute to the Long-Term Economic, Social and Environmental Health of the County.

Administration:

Recommended by County Administrator: *5/16/2024 2:46:46 PM*

Committee/Governing/Advisory Board Approval Date: 6/4/2024

FIRST CONTRACT AMENDMENT
PROFESSIONAL SERVICES AGREEMENT

This Amendment (hereinafter "Amendment") pertains to the Professional Services Agreement executed on November 23, 2022. This Amendment and the original Contract executed on November 23, 2022, collectively constitute the "Contract" by and between GEI Consultants Inc (referred to as the "Contractor"), 5225 Edgewater Drive, Allendale, Michigan 49401 and the County of Ottawa (referred to as the "County"), located at 12220 Fillmore St., West Olive, MI 49460.

WHEREAS, the County and GEI Consultants Inc are parties to a Professional Services Agreement effective as of November 23, 2022. Under the Contract, GEI Consultants Inc agrees to provide design and implementation services for restoration efforts of wetland at Ottawa Sands County Park to Ottawa County Parks and Recreation Commission, 12220 Fillmore St., West Olive, MI 49460.

WHEREAS, the parties to this Amendment now desire to make certain amendments to the Contract provided herein, including the restoration of additional shoreline at Ottawa Sands County Park as outlined in Exhibit A.

NOW, THEREFORE, in consideration of the mutual provisions, covenants and undertakings set forth in this Amendment and in the Contract, and other good and valuable consideration, which is hereby acknowledged, the parties to this Amendment agree as follows:

1. SCOPE OF WORK:

The Contractor is to provide Ottawa County Parks and Recreation Commission with the services for shoreline restoration at Ottawa Sands County Park as described in Exhibit A.

2. PRICING:

The pricing reflects the additional services added in this amendment. The additional cost to the County is described in Exhibit A and is to include all conditions defined in the Scope of Work in this amendment. The additional charges as described in

Exhibit A shall not exceed $99,963 ($90,875 + 10% contingency). The charges for this additional service shall be billed to in accordance with the original Contract.

3. AMENDMENT TERMS:

Notwithstanding the foregoing, if the Contractor materially breaches this Agreement and/or its incorporated documents and has failed to cure the defect upon the thirty (30) days' notice, the County may terminate this Agreement upon ninety (90) days' notice.

This Amendment contains all revised terms and conditions agreed upon by the parties. All terms and conditions in the November 23, 2022 Contract that are not inconsistent with the provisions herein shall remain in full force and effect. This Amendment and November 23, 2022 Contract contain the complete expression of the parties' agreement and all other understandings, oral and written, are merged into the Agreement.

[Signatures on next page]

FIRST CONTRACT AMENDMENT
PROFESSIONAL SERVICES AGREEMENT

IN WITNESS WHEREOF, this Amendment is executed effective on the latest date set forth below.

COUNTY OF OTTAWA

By: _____ _____

Joe Moss, Chairperson
Board of Commissioners

Date

By: _____ _____

Justin F. Roebuck,
County Clerk/Register

Date

By: _____ _____

Jason Shamblin,
Parks and Recreation Director

Date

The undersigned certifies, under penalty of perjury, that I have the legal authorization to bind the firm hereunder:

GEI CONSULTANTS INC

By: _____ 3/18/2024

Signature

Date

Brian Majka

Printed Name

Senior Professional

Title

Exhibit A

GEI Consultants

Consulting Engineers and Scientists

February 29, 2024

Ms. Nealy Molhoek
Ottawa County Parks and Recreation
12220 Fillmore Street, Room 267
West Olive, MI 49460

Re: Contract Amendment for the restoration at Ottawa Sands County Park

Dear Ms. Molhoek,

As per the request of Ottawa County Parks and Recreation, GEI Consultants of Michigan P.C. (GEI) is requesting a contract amendment to restore additional shoreline at Ottawa Sands County Park. Following the initial grant agreement by the National Audubon Society/Sustain Our Great Lakes program, the Michigan Department of Natural Resources (MDNR) provided additional funding to allow for the expansion of the overall project, The project elements funded by MDNR were included with the project designs that have been approved and permitted. All proposed work would be completed at the unit rates established under our existing agreement for the restoration at Ottawa Sands, PO #23000520, unless project elements were not in the initial proposal, A breakdown of the additional services along with the cost breakdown are provided below.

Task	Unit	Qty	Unit Cost	Total Cost
Mobilization	LS	1	$2,000	$2,000
Construction Fencing	LF	6,000	$4	$24,000
Native Planting	EA	10,000	$4.50	$45,000
Woody Habitat Structures	EA	125	$175	$21,875
			Subtotal	$90,875
			Total (with 10% contingency)	$99,963

Please feel free to contact me at (616) 384-2710 or bmajka@geiconsultants.com should you need any additional information or have any questions.

Sincerely,

GEI CONSULTANTS OF MICHIGAN, P.C.

Brian Majka,
Senior Professional

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 12/30/2023

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
MARSH USA LLC.
1166 Avenue of the Americas
New York, NY 10036-2774

RECEIVED
JAN 08 2024

CN102051728-GEI10-GAWUP-23-

INSURED
GEI Consultants of Michigan, P.C.(5700)
5225 Edgewater Drive Office
Allendale, MI 49401

OTTAWA COUNTY PARKS AND RECREATION COMMISSION

CONTACT NAME:
PHONE (A/C, No, Ext): **FAX (A/C, No):**
E-MAIL ADDRESS:

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : Arch Insurance Company	11150
INSURER B : N/A	N/A
INSURER C : Arch Indemnity Insurance Company	30830
INSURER D : Allied World Surplus Lines Insurance Company	24319
INSURER E : Allied World Assurance Company (U.S.) Inc.	19489
INSURER F :	

COVERAGES **CERTIFICATE NUMBER:** NYC-011479756-04 **REVISION NUMBER:** 0

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY	X		11PKG1998000	01/01/2024	01/01/2025	EACH OCCURRENCE	$ 1,000,000
	CLAIMS-MADE [X] OCCUR						DAMAGE TO RENTED PREMISES (Ea occurrence)	$ 100,000
				SIR - $500,000			MED EXP (Any one person)	$ 5,000
							PERSONAL & ADV INJURY	$ 1,500,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE	$ 2,000,000
	X POLICY [ ] PRO-JECT [ ] LOC						PRODUCTS - COMP/OP AGG	$ 1,000,000
	OTHER:							$
A	AUTOMOBILE LIABILITY	X		11PKG1998000 (AOS)	01/01/2024	01/01/2025	COMBINED SINGLE LIMIT (Ea accident)	$ 1,000,000
A	X ANY AUTO			11CAB1998100 (MA)	01/01/2024	01/01/2025	BODILY INJURY (Per person)	$
	OWNED AUTOS ONLY / SCHEDULED AUTOS						BODILY INJURY (Per accident)	$
	X HIRED AUTOS ONLY / X NON-OWNED AUTOS ONLY						PROPERTY DAMAGE (Per accident)	$
							Comp / Coll Ded	$ 5,000
	UMBRELLA LIAB [ ] OCCUR						EACH OCCURRENCE	$
	EXCESS LIAB [ ] CLAIMS-MADE						AGGREGATE	$
	DED [ ] RETENTION $							$
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY			14WC11998300 (AOS)	01/01/2024	01/01/2025	X PER STATUTE [ ] OTH-ER	
C	ANYPROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y/N [N] N/A (Mandatory in NH)			11WC11998200 (FL)	01/01/2024	01/01/2025	E.L. EACH ACCIDENT	$ 500,000
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE	$ 500,000
							E.L. DISEASE - POLICY LIMIT	$ 500,000
D	A&E CONTR. PROF LIAB.			0312-7531	05/01/2023	05/01/2024	Each Claim / Aggr.	1,000,000
E	CONTR. POLLUTION LIAB.			0312-7536	05/01/2023	05/01/2024	Each Claim / Aggr.	1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
Ottawa Sands' Wetlands, 2022.
The County is listed as additional assured on General, Commercial, and Auto liability policies as required by written contract. Additional insure status shall not terminate upon completion of the project/work. 30-day notice will be provided before terminating the policy.

CERTIFICATE HOLDER

Ottawa County Parks and Recreation
Attn: Melanie Manion
12220 Fillmore St
West Olive, MI 49460

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Marsh USA LLC

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 12/30/2023

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
MARSH USA LLC.
1166 Avenue of the Americas
New York, NY 10036-2774

RECEIVED
JAN 08 2024
OTTAWA COUNTY PARKS AND RECREATION COMMISSION

CN102051728-GEI10-GAWUP-23- Y

CONTACT NAME:
PHONE (A/C, No, Ext): **FAX (A/C, No):**
E-MAIL ADDRESS:

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : Arch Insurance Company	11150
INSURER B : XL Insurance America, Inc.	24554
INSURER C : Arch Indemnity Insurance Company	30830
INSURER D : Allied World Surplus Lines Insurance Company	24319
INSURER E : Allied World Assurance Company (U.S.) Inc.	19489
INSURER F :	

INSURED
GEI Consultants, Inc. (5700)
d/b/a GEI Consultants of Michigan P.C.
5525 Edgewater Drive
Allendale, MI 49401

COVERAGES **CERTIFICATE NUMBER:** NYC-010838868-10 **REVISION NUMBER:** 0

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY			11PKG1998000	01/01/2024	01/01/2025	EACH OCCURRENCE	$ 1,500,000
	CLAIMS-MADE [X] OCCUR						DAMAGE TO RENTED PREMISES (Ea occurrence)	$ 100,000
				SIR - $500,000			MED EXP (Any one person)	$ 5,000
							PERSONAL & ADV INJURY	$ 1,500,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE	$ 3,000,000
	X POLICY [ ] PRO-JECT [ ] LOC						PRODUCTS - COMP/OP AGG	$ 3,000,000
	OTHER:							$
A	AUTOMOBILE LIABILITY			11PKG1998000 (AOS)	01/01/2024	01/01/2025	COMBINED SINGLE LIMIT (Ea accident)	$ 2,000,000
A	X ANY AUTO			11CAB1998100 (MA)	01/01/2024	01/01/2025	BODILY INJURY (Per person)	$
	OWNED AUTOS ONLY / SCHEDULED AUTOS						BODILY INJURY (Per accident)	$
	X HIRED AUTOS ONLY / X NON-OWNED AUTOS ONLY						PROPERTY DAMAGE (Per accident)	$
							Comp / Coll Ded	$ 5,000
B	UMBRELLA LIAB X OCCUR			US00064696LI24A	01/01/2024	01/01/2025	EACH OCCURRENCE	$ 1,000,000
	X EXCESS LIAB CLAIMS-MADE						AGGREGATE	$ 1,000,000
	DED RETENTION $							$
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y/N			14WC11998300 (AOS)	01/01/2024	01/01/2025	X PER STATUTE OTH-ER	
C	ANYPROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBEREXCLUDED? [N]	N/A		11WC11998200 (FL)	01/01/2024	01/01/2025	E.L. EACH ACCIDENT	$ 1,000,000
	(Mandatory in NH)						E.L. DISEASE - EA EMPLOYEE	$ 1,000,000
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - POLICY LIMIT	$ 1,000,000
D	A&E CONTR. PROF LIAB.			0312-7531	05/01/2023	05/01/2024	Each Claim / Aggr.	10,000,000
E	CONTR. POLLUTION LIAB.			0312-7536	05/01/2023	05/01/2024	Each Claim / Aggr.	10,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

CERTIFICATE HOLDER

Ottawa County Parks and Recreation
Attn: Melanie Manion
12220 Fillmore St
West Olive, MI 49460

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Marsh USA LLC

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 12/30/2023

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
MARSH USA LLC.
1166 Avenue of the Americas
New York, NY 10036-2774

RECEIVED
JAN 08 2024

CN102051728-GEI10-GAWUP-23-

CONTACT NAME:
PHONE (A/C, No, Ext): **FAX (A/C, No):**
E-MAIL ADDRESS:

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : Arch Insurance Company	11150
INSURER B : XL Insurance America, Inc.	24554
INSURER C : Arch Indemnity Insurance Company	30830
INSURER D : Allied World Surplus Lines Insurance Company	24319
INSURER E : Allied World Assurance Company (U.S.) Inc.	19489
INSURER F :	

INSURED
GEI Consultants, Inc. (5700)
d/b/a GEI Consultants of Michigan P.C.
5525 Edgewater Drive
Allendale, MI 49401

OTTAWA COUNTY PARKS AND RECREATION COMMISSION

COVERAGES **CERTIFICATE NUMBER:** NYC-010839691-10 **REVISION NUMBER:** 0

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS		
A	X COMMERCIAL GENERAL LIABILITY			11PKG1998000	01/01/2024	01/01/2025	EACH OCCURRENCE	$	1,500,000
	CLAIMS-MADE X OCCUR						DAMAGE TO RENTED PREMISES (Ea occurrence)	$	100,000
				SIR - $500,000			MED EXP (Any one person)	$	5,000
							PERSONAL & ADV INJURY	$	1,500,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE	$	3,000,000
	X POLICY PRO-JECT LOC						PRODUCTS - COMP/OP AGG	$	3,000,000
	OTHER:							$	
A	AUTOMOBILE LIABILITY			11PKG1998000 (AOS)	01/01/2024	01/01/2025	COMBINED SINGLE LIMIT (Ea accident)	$	2,000,000
A	X ANY AUTO			11CAB1998100 (MA)	01/01/2024	01/01/2025	BODILY INJURY (Per person)	$	
	OWNED AUTOS ONLY / SCHEDULED AUTOS						BODILY INJURY (Per accident)	$	
	X HIRED AUTOS ONLY / X NON-OWNED AUTOS ONLY						PROPERTY DAMAGE (Per accident)	$	
							Comp / Coll Ded	$	5,000
B	UMBRELLA LIAB X OCCUR			US00064696LI24A	01/01/2024	01/01/2025	EACH OCCURRENCE	$	1,000,000
	X EXCESS LIAB CLAIMS-MADE						AGGREGATE	$	1,000,000
	DED RETENTION $							$	
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y/N			14WC11998300 (AOS)	01/01/2024	01/01/2025	X PER STATUTE OTH-ER		
C	ANYPROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? N (Mandatory in NH)	N/A		11WC11998200 (FL)	01/01/2024	01/01/2025	E.L. EACH ACCIDENT	$	1,000,000
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE	$	1,000,000
							E.L. DISEASE - POLICY LIMIT	$	1,000,000
D	A&E CONTR. PROF LIAB.			0312-7531	05/01/2023	05/01/2024	Each Claim / Aggr.		10,000,000
E	CONTR. POLLUTION LIAB.			0312-7536	05/01/2023	05/01/2024	Each Claim / Aggr.		10,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

CERTIFICATE HOLDER

Ottawa County Parks
Attn: Melanie Manion
12220 Fillmore
West Olive, MI 49460

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Marsh USA LLC

Action Request

Electronic Submission – Contract # 2326

Ottawa County
Where Freedom Rings

Committee: PLANNING AND POLICY

Meeting Date: 6/4/2024

Vendor/3rd Party: GEI CONSULTANTS

Requesting Department: PARKS AND RECREATION

Submitted By: CURT TERHAAR

Agenda Item: OTTAWA COUNTY PARKS COASTAL RESILIENCY PROJECT

Suggested Motion:

To approve the contract with GEI Consultants of Michigan in the amount of $274,684 for professional services related to coastal resiliency feasibility and preliminary engineering at Ottawa Sands and Harbor Island in the City of Grand Haven

Summary of Request:

Ottawa County Parks has been working since 2020 to implement portions of the Master Plan for Ottawa County Parks. This plan includes habitat and other improvements in a large area of the interior of the park and along the park's over one mile long shoreline along the Grand River. Concurrently, Ottawa County Parks is participating in discussions with the City of Grand Haven in regard to future uses of Harbor Island as the process of closing a power plant and remediation of contamination on the island continues. It is anticipated that any future uses of the island can and will incorporate improvements, restoration, and management of the existing wetlands, shoreline, and other natural areas of the site. This project addresses both of these sites by completing a comprehensive inventory and analysis of the existing habitats on the sites along with a study of the feasibility of implementing nature-based solutions that address resiliency, erosion control, and long term sustainability of these natural features. Work at Ottawa Sands will also include preliminary engineering of recreational and accessibility elements of the master plan to integrate them into the habitat improvements. The project is 100% funded by a grant from the National Fish & wildlife Federation.

Financial Information:

Total Cost: $274,584.00	General Fund Cost: $0.00	Included in Budget: Yes

If not included in Budget, recommended funding source:

Action is Related to an Activity Which Is: Non-Mandated

Action is Related to Strategic Plan:

Goal 2: To Contribute to the Long-Term Economic, Social and Environmental Health of the County.

Administration:

Recommended by County Administrator: *5/22/2024 1:23:41 PM*

Committee/Governing/Advisory Board Approval Date: 6/4/2024

Ottawa County

OTTAWA COUNTY
CONTRACT FOR COASTAL RESILIENCE FEASIBILITY AND PRELIMINARY ENGINEERING SERVICES

This CONTRACT is made and hereby effective on the 1st day of May, 2024 by and between the County of Ottawa, a municipality in the State of Michigan, (hereinafter, the "County'') acting by and through its duly elected Board of Commissioners, (hereinafter the ''Board"), and GEI Consultants of Michigan, P.C. (hereinafter, “Contractor”), with a principal place of business at 5225 Edgewater Drive Office, Allendale, MI 49401.

IT IS HEREBY AGREED AS FOLLOWS:

1. Scope of Work: The Contractor commits to delivering the "services" as specified in Exhibit A. Proposal Alternates A1 and C, as outlined in Exhibit A, are integral parts of the contract's scope of work. Proposal Alternate A2, also defined in Exhibit A, remains at the County's discretion for inclusion at a later stage of this Contract. Ensuring the diligent, timely, and orderly completion of the work falls under the Contractor's responsibility, including the provision of sufficient personnel and equipment for the project.

2. Compensation: In consideration for the services to be performed by the Contractor, the County agrees to pay Contractor the compensation set forth on Exhibit A in alignment with the Scope of Work. Payment to the Contractor for services will be under the County’s terms of Net 30.

3. Contract Documents: The following documents are the entire Contract between the Contractor and the County. The Contract includes the following documents listed below, which are incorporated herein by reference and are deemed to be part of this Contract as if set forth in full:
   a) This Contract (including attached exhibits)
   b) All Provisions required by law to be inserted in this contract whether actually inserted or not.

4. Performance
   a) Contractor shall perform the work as required by and in accordance with the schedule of time requirements set forth in Exhibit A.
   b) Failure to complete services as required shall constitute breach of this Contract.
   c) Contractor shall have five (5) calendar days to cure a breach of this Contract (the "Cure Period"). Failure to cure a breach of this Contract within said Cure Period shall allow the County to, without further notice to the Contractor, declare this Contract terminated and proceed with the replacement of the Contractor and the County shall be entitled to all remedies available to it at law or in equity.

5. Terms of Contract: The Contract shall commence when signed by both parties and unless terminated earlier in accordance with the terms of this Contract, this Contract period will cover a period from project kick-off to project completion of stated objectives, Exhibit A.

   This Contract may be terminated prior to completion of the Services at the option of the County, upon delivery of written notice by the terminating party to the other party.

6. Expenses: Contractor shall be responsible for all the Contractor's expenses incurred while performing services under this Contract. This includes license fees, fuel and fleet maintenance, insurance premiums, telephone and all salary/payroll expenses, and other compensation paid to employees or contract personnel that the Contractor hires to complete the work under this Contract.

7. Employees: The Contractor and all Contractor' employees, while on County premises, shall carry proper identification. Examples of proper identification are State issued Driver's License or State issued Identification Card.

   The Contractor shall employ only United States citizens, legal residents, or legal resident aliens. Upon request of the County, the Contractor shall provide copies of, or access to, work/payroll records and necessary documents to verify status of employees.

   The Contractor will be supplied with a phone number to contact in case of an emergency. Access to designated restricted areas is forbidden to Contractor's employees. Restricted area will be designated by the authorized County representative.

8. Materials: Contractor will furnish all materials, equipment and supplies used to provide the services required by this Contract.

9. Background Checks: (as required by the Facility) Contractor employees are subject to background checks to ensure, at a minimum, that no employee has a felony or domestic violence or other bar-able conviction(s). The background checks for Contractor employees will be conducted by the County prior to the commencement of any on-site work.

10. Compliance with Laws, Ordinances, and Regulations and Procurement of Permits:
    a) This Contract is governed by the laws of the State of Michigan.
    b) The Contractor shall at all times comply with all local, state, and federal laws, rules, and regulations applicable to this Contract and the work to be done herewith.
    c) The Contractor shall obtain, and pay thereof, all permits required by any agency or authority having jurisdiction over the work. The Contractor shall provide a copy of any permit to the County within 3 business days of the County's request.

11. Exclusive Contract: This Contract, including exhibits attached hereto, a County Purchase Order, if applicable, is the entire Contract between Contractor and the County for the services as detailed in Exhibit A.

12. Modifying the Contract: This Contract may be modified only by a writing signed by both parties.

13. Record Keeping: The Contractor shall keep all records related to this Contract for the term of the Contract and 3 years thereafter.

14. Dispute: In the event of any conflicts or discrepancies in the wording of any terms, provisions and conditions contained in this Contract, describing Contractor's obligations and responsibilities hereunder, said conflicts and discrepancies shall be resolved by first applying the interpretation of this Contract and its exhibits, attachments, and addendums, then the mutually agreed Contractor's planning documents that affirm the details of the Services to be provided. Any contract or modification of this Contract shall be written and signed by both parties and will supersede any previous written understandings.

    Should any disputes arise with respect to this Contract, Contractor and County agree to act immediately to resolve any such disputes. Pending resolution of such dispute or difference and without prejudice to their rights, both the Contractor and the County shall continue to respect all their obligations and to perform all their duties under this Contract.

15. Jurisdiction and Venue: The parties' consent to the exercise of general personal jurisdiction over it by the Ottawa County Circuit Court. Any action on a controversy that arises under or in association with this Contract shall be brought in the State of Michigan, which both parties agree is a reasonably convenient place for trial of the action. The parties both agree that their consent in accordance with this Section is not obtained by misrepresentation, duress, the abuse of economic power, or other unconscionable means.

16. Indemnification: Contractor agrees to indemnify, defend, and hold harmless the County and its officials, officers, employees, volunteers, and agents from and against any and all liability arising out of or in any way related to Contractor's performance of services under this Contract, including, but not limited to, any and all liability resulting from or arising out of intentional, reckless, or negligent acts or omissions of the Contractor, its employees, agents or subcontractors.

17. Insurance: Contractor agrees to provide proof of the following insurance coverages, as more fully set forth in Exhibit B, entitled Vendor Insurance Requirements: Workers' Compensation; Employers' Liability; Commercial General Liability; Umbrella/Excess Liability; and, if applicable, Automobile, Professional Liability, and Privacy and Security Liability (Cyber Security). Coverage limits are to be statutory and, if no statute applies, are to be at least $1,000,000 per occurrence or claim and $2,000,000 aggregate. These coverages shall protect the Contractor

and the County and their respective representatives against any and all claims arising out of or related in any way to the work performed or the products provided.

18. Relationship of Parties: The Contractor is an independent contractor and is not an agent or employee of the County for any purpose including, but not limited to, the ability to bind the County and all labor or employee related matters such as tax withholding/reporting, employee wages or benefits, or workers compensation. This Contract is not intended to create any joint venture or partnership of any kind. The provisions of this Contract are for the benefit of the parties hereto, and not for the benefit of any other person or legal entity.

19. Subcontracts: Contractor may not assign or subcontract any rights or obligations under this contract without the County's prior written approval.

20. Governmental Immunity: The County does not waive its governmental immunity by entering into this Contract, and fully retains all immunities and defenses provided by law with respect to any action based upon or occurring as a result of this Contract.

21. Safety: The Contractor shall at all times observe and comply with all federal, state, local and County facility laws, ordinances, rules, and regulations that may in any manner affect the safety and the conduct of the work. The Contractor shall indemnify and hold the County harmless against any claim or liability arising from the violation of any such provisions.

22. Absence of Waiver: The failure of either party to insist on the performance of any of the terms and conditions of this Contract, or the waiver of any breach of such terms and conditions, shall not be construed as thereafter waiving such terms and conditions, which shall continue and remain in full force and effect as if such forbearance or waiver had occurred.

23. Notices:
    a) All notices and other communications for the parties may be served, mailed, or delivered at the following addresses:

If to the Contractor: GEI Consultants of Michigan, P.C.
Attn: Brian Majka
5225 Edgewater Drive Office
Allendale, MI
Email: bmajka@geiconsultants.com

If to Ottawa County: Ottawa County Parks and Recreation Commission
Attn: Jason Shamblin
12220 Fillmore St.
West Olive, MI 49460
Email: jshamblin@miottawa.org

24. Partial Invalidity: The partial invalidity of any portion of this Contract shall not be deemed to affect the validity of any other provision. In the event that any provision of this Contract is held to be invalid, the parties agree that the remaining provisions shall be deemed to be in full force and effect as if they had been executed by both parties subsequent to the expunction of the invalid provision.

25. Attorney Review: The parties represent that they have carefully read this Contract and have had the opportunity to review it with an attorney. The parties affirmatively state that they understand the contents of this Contract and sign it as their free act and deed.

26. No Third-Party Benefit: The provisions of this Contract are for the benefit of the parties hereto, and not for the benefit of any other person or legal entity.

27. Availability of Funds: Each payment obligation of the County is conditioned upon the availability of government funds appropriated or allocated for the payment of this obligation. If funds are not allocated and available for continuance of the services performed herein, either party may terminate this Contract at the end of the period for which funds are available. The County shall notify the Contractor at the earliest possible time of the services that will or may be affected by the shortage of funds.

28. Miscellaneous:
    a) Force Majeure: Either party shall be excused from performance under this Contract for any period of time during which the party is prevented from performing its obligations hereunder as a result of any Act of God, war, civil disobedience, court order, labor dispute, or other cause beyond the party's reasonable control. Such non-performance shall not constitute grounds for default.
    b) Title and Headings: Titles and headings to articles, sections or paragraphs in this Contract are inserted for convenience of reference only and are not intended to affect the interpretation or construction of the Contract.
    c) Modification: Any modification of this Contract or additional obligation assumed by either party in connection with this Contract shall be binding only if evidenced in a writing signed by either party or its authorized representative.
    d) Anticipatory Breach: If the Contractor, at any time before delivery of services, declares its intent not to perform in accordance with this Contract, Ottawa County shall have an immediate cause of action for breach of this Contract, and shall be entitled to all remedies available to it at law or in equity.

In witness whereof, each party to this Contract has caused it to be executed on the date(s) indicated below.

COUNTY OF OTTAWA

By: _____ _____

Joe Moss, Chairperson
Board of Commissioners

Date

By: _____ _____

Justin F. Roebuck,
County Clerk/Register

Date

By: _____ _____

Jason Shamblin,
Parks and Recreation Director

Date

The undersigned certifies, under penalty of perjury, that I have the legal authorization to bind the firm hereunder:

GEI CONSULTANTS OF MICHIGAN, P.C.

5/16/2024

By: _____ _____

Signature

Date

Brian Majka

Printed Name

Senior Professional

Title

Exhibit A

Ottawa County

Request for Proposal 24-055
Coastal Resilience Feasibility and Preliminary Engineering Services

The County of Ottawa, on behalf of Ottawa County Parks and Recreation Commission (OCPRC), is requesting proposals from experienced and qualified vendors to provide site investigation and engineering services to determine the feasibility of nature-based solutions for wetland and riverfront shoreline enhancements at Ottawa Sands and Harbor Island, two adjacent publicly owned sites in northwest Ottawa County, and, where feasible, provide preliminary engineering and cost estimates for these projects. The vendor is also expected to assist with community engagement to gather public input on any proposed solutions in conjunction with other ongoing engagement efforts related to both these locations.

By responding to this RFP, the Proposer agrees to perform in accordance with the terms and conditions set forth herein.

RFP Issue Date:	Thursday, March 7, 2024
Questions Deadline:	Tuesday, March 19, 2024
Addendum Issuance:	Monday, March 25, 2024
RFP Deadline:	By 2:00 PM (ET) Tuesday, April 2, 2024

RFP Administrator: Steven Holden, Procurement Specialist, 616-994-4778, purchasing.rfp@miottawa.org

All requests for additional information or questions should be directed to the RFP Administrator.

Table of Contents

Exhibits:

Section 1: Information Summary

General Information:

The County of Ottawa distributes solicitation documents through the Michigan Intergovernmental Trade Network (MITN), website at http://www.bidnetdirect.com/mitn and through the Purchasing page of the County of Ottawa's website located at http://www.miottawa.org/Departments/FiscalServices/bids.htm. Copies of proposal documents obtained from any other sources are not considered official copies, and may result in failure to receive addenda, corrections or other revisions that may be issued.

For purposes of this RFP, the term "Contractor," "Vendor," "Proposer," "Respondent," or "Bidder" are considered to have the same meaning, all referring to the person or company responding to this RFP. Additionally, the terms "County," "Client," or "Owner" refers to the County of Ottawa.

Proposal Submission:

Proposals must be received by 2:00 PM (ET) on Tuesday, April 2, 2024 Proposals received after this time may not be considered. Proposals may be withdrawn at any time prior to the scheduled proposal deadline. Proposals must be firm and may not be withdrawn for a minimum period of 90 calendar days after the RFP Deadline. Proposals should be concise and complete, covering all items identified, emphasizing an understanding of the project and the resources to perform the intended work. Proposals will be reviewed to determine if submission requirements are met. Proposals that do not comply with submittal instructions established in this document and/or that do not include the required information may be rejected as non-responsive. Vendor assumes responsibility for meeting the submission requirements and addressing all necessary technical and operational issues to meet the project objectives.

All proposals must include completed, signed copies of all required attachments. Vendor assumes all risks associated with electronic submission (including possible technical issues). Proposals containing hyper-links to required response documents or required information (i.e. pricing, references etc.) may be disqualified. Attachments must be filled out in full and signed by an authorized Company representative.

Proposal Response:

Proposal response must contain completed, signed copies of each of the following required attachments:

- ATTACHMENT A – COVER SHEET FOR PROPOSAL
- ATTACHMENT B – VENDOR REFERENCES
- ATTACHMENT C – PROPOSAL RESPONSE

Proposals will be accepted by e-mail submission only, as follows:

Respondents will submit an electronic response (preferably single-file PDF format) by e-mail to: purchasing.rfp@miottawa.org with subject line of: "RFP 24-055 Coastal Resilience Feasibility and Preliminary Engineering Services." The County can receive email attachments up to 25 megabytes. Proposal documents larger than 20 megabytes should be sent in multiple emails with subject line of: "RFP 24-055 – 1 of 2", etcetera. It will be the Proposers' responsibility to ensure that their proposal have been appropriately delivered and received.

Modification:

Prior to the date and time set forth as the Proposal Receipt Deadline, proposals may be modified or withdrawn by the Proposer's authorized representative. After the submission deadline, responses may not be modified or withdrawn without written consent of the County.

Pre-Proposal Conference:

No pre-proposal conference scheduled.

Questions:

Vendors may submit questions and requests for clarification relating to this RFP to the RFP Administrator by the stated deadline. Responses to all questions and inquiries received by the County will be issued in the form of an Addendum and posted on the MITN and the County's website, as needed. Only answers to questions submitted prior to the submission deadline and released in the form of an Addendum will be considered official and final. Any remarks or explanations made by phone, email, or in-person will be considered draft and will be non-binding.

Section 2: Background Information

County Information:

Beautiful Ottawa County is located in the southwestern section of Michigan's Lower Peninsula. Its western boundary is formed by Lake Michigan, and its eastern boundary is approximately 30 miles inland. The County landmass consists of a total area of 565 square miles with over 300 miles of water frontage. The County is composed of 6 cities, 17 townships, and 1 village.

The current County's legislative body is an eleven-member Board of Commissioners which is elected from single-member districts, determined by population, on a partisan basis for two-year terms. The Board of Commissioners provides oversight, establishes policy, and builds the strategic plan for County operations.

Ottawa County has been named the fastest-growing population in the state. Between 2010 and 2020, there was a 12.3% increase in population. The estimated population in the County in 2021 was 299,157. This significant population growth is expected to continue in the years ahead.

Section 3: Scope of Work

The Ottawa County Parks and Recreation Commission (OCPRC) is seeking a vendor to provide site investigation and engineering services to determine the feasibility of nature-based solutions for wetland and riverfront shoreline enhancements at Ottawa Sands and Harbor Island, two adjacent publicly owned sites in northwest Ottawa County, and, where feasible, provide preliminary engineering and cost estimates for these projects. The vendor is also expected to assist with community engagement to gather public input on any proposed solutions in conjunction with other ongoing engagement efforts related to both these locations.

This project is being conducted with funding from the National Fish and Wildlife Foundation Coastal Resilience program, which "restores, increases and strengthens natural infrastructure to protect coastal communities while also enhancing habitats for fish and wildlife." For reference, the full grant proposal is included as Exhibit 2. The project focuses on two primary locations, with a third location under consideration as an alternate proposal:

Ottawa Sands

This is a 345-acre park that recently had an active sand mining operation. A wetland assessment, conducted as part of the Master Planning process in 2020, made recommendations to improve the park's natural features, and implementation has commenced on a wetland creation project in the former mining area. The green infrastructure plan in the master plan calls for additional wetland creation and also calls for shoreline enhancement along over 5,500' of Grand River shoreline at Ottawa Sands. The Master Plan, including the wetland assessment, can be found at this link: https://www.miottawa.org/Parks/ottawasands.htm

Harbor Island

This is a large, highly disturbed island between two channels of the Grand River with approximately 185 acres that is publicly owned. Part of the island (25-acres) was under the control of a public utility that has recently demolished a coal-fired power plant and is now reviewing remediation. This opens potential opportunities for wetland and other habitat restoration/creation. The City of Grand Haven has retained the firm HDR, Inc to assist with remediation, community engagement, and master planning. The vendor for this project will coordinate with HDR where needed on community engagement and incorporating nature-based solutions into any future master plan. More background information can be found here: https://renewharborisland.org/

Alternate: Grand Haven Dune Property/Kitchel-Hartger Lindquist Dune Preserve

These two public properties directly south of Ottawa Sands on the north side of the Grand River include 3,465' of river frontage that is mostly "natural" with no plans for additional public access or infrastructure.

This project grew out of the Grand River Coastal Corridor Assessment conducted by Audubon Great Lakes, which is a key reference document (see this link: https://grandrivergreenway.org/wp-content/uploads/2021/12/Grand-River-Greenway-Coastal-Corridor-Assessment-and-Recommendations.pdf) The Grand River Coastal Corridor includes Ottawa Sands, Harbor Island, and other preserved properties in northwest Ottawa County.

The Lower Grand River Organization of Watersheds (LGROW) is leading another related project - a three-year engagement and planning effort to build stakeholder support for "landscape level" planning and management for the Coastal Corridor. In order to facilitate continuity among these projects, the vendor will also coordinate with LGROW where needed on community engagement. LGROW is also engaged with the Harbor Island process with HDR.

In reviewing the project objectives below, it should be noted that the following are the intended outcomes of this project:

Properties/Infrastructure Assets:

- Ottawa Sands County Park – improved flood storage, stabilized shoreline, and enhanced integrity of existing wetlands.
- Harbor Island – reduced flooding for recreational areas of property or future developed areas
- Reduced flooding/impacts during high water periods for developed areas of the Grand River channel west of the US 31 corridor.

Fish and Wildlife Benefits

- Improved/new spawning and nursing habitat for species such as Lake Sturgeon, Lake Whitefish, Yellow Perch, Esocids, and Centrarchids (these species were noted as potential beneficiaries of habitat improvements by the Grand River Coastal Corridor Assessment).

- Improved/new habitat for secretive marsh birds (common gallinule, sora, swamp sparrow, blue-winged teal, Virginia rail, marsh wren, least bittern, pied-billed grebe, black-crowned night heron, and American bittern). All species were observed during the Grand River Coastal Corridor Assessment.
- Improved/new habitat for migratory birds (over 300 species migrate through this corridor according to the Grand River Coastal Corridor Assessment).
- Improved/new habitat for amphibian/reptile species such as northern brown snake, eastern snapping turtle, eastern American toad, fowler's toad, green frog, and northern leopard from (all observed in Ottawa Sands Herpetological Assessment).

It is possible that some of these intended outcomes will not be feasible given the project parameters, but determining the feasibility of these outcomes is also likely key to the project. Furthermore, establishing measurables for any feasibility outcome is also critical.

Section 4: Objectives

Please carefully review this document. It provides information necessary to aid participating bidders in formulating a thorough response. A formal, comprehensive review period will be conducted to ensure that the County selects the best possible vendor that will provide the best value and service.

A. Ottawa Sands – Wetlands and Shoreline Enhancements Investigations and Designs

Wetlands Enhancements

The Ottawa Sands Master Plan includes recommendations for creation of up to 18-acres of wetlands as a "dunal marsh prairie" in a large open field area left after sand mining activities were completed. Note that a portion of this area, a former mining lagoon that was filled in as part of mining reclamation requirements is scheduled to be re-excavated in 2024 to create a 4.3-acre wetland as part of separate restoration project.

This project will build off the design and evaluations of the mining lagoon restoration area to engineer the remaining dunal marsh prairie.

This will include the following project deliverables:

- **Natural Features Assessments/Baseline Metrics:**

  Completion of additional natural features inventories and detailed site analysis for the proposed wetland creation area of Ottawa Sands (which has had previous assessments completed as part of the master plan) needed for baseline metrics and to help guide the design of new wetlands (reference relevant outcomes above for guidance). This includes accurate and detailed descriptions of existing conditions.

- **Groundwater Analysis**

  Investigation of groundwater interaction between the park lake, the Grand River, and Lake Michigan to determine impacts on the proposed wetlands and if there are flood storage benefits of wetland creation at Ottawa Sands.

- **Recommendations for Wetland Creation**

  The consultant should utilize the analyses above to make final recommendations for the optimal size and arrangement of wetlands to be created.

- **Permit-Ready Design Documents (60% design)**

  Design and engineering of proposed wetlands and associated earthwork including grading and planting plans suitable for submission to permitting agencies. It should also incorporate recreational elements in keeping with the master plan including future trails, boardwalks, bridges, and overlooks as determined during the design process.

- **Cost Estimates**

  Initial estimates were completed as part of the 2020 Master Plan. Updated cost estimates based on the design work completed above should be prepared.

- **Alternate for inclusion in Proposal: Final Construction Drawings and Permitting**

  Please include a separate cost to prepare final construction drawings and specifications and complete necessary permits. Fees may be based on a flat fee or percentage of construction cost basis.

Shoreline Enhancements

As noted above, the Ottawa Sands Master Plan recommends consideration of various nature-based enhancement techniques to improve habitat, provide flood resilience, and prevent erosion along the 5,740' of Grand River shoreline at Ottawa Sands. To help advance this proposal, this project will review and recommend optimal nature-based solutions but also require preliminary engineering for associated infrastructure proposed in the Master Plan to ensure that this recreational infrastructure is properly incorporated and considered as part of any nature-based interventions.

This will include the following elements:

- **Shoreline Assessments**

  Inventory and analysis of the current conditions of the Ottawa Sands Grand River shoreline as required to develop recommendations for nature-based solutions for improved habitat, enhanced flood resilience, and erosion prevention.

- **Recommendations**

  The following three sub-areas should be considered as part of the final recommendations (these areas may increase/decrease in size based on the assessments):

  - Approximately 750' of eroding shoreline along the former freighter docking area Recommendations must complement the proposed master plan recreational elements including:

        - Courtesy day docks
        - Renovated “breasting dolphins”
        - Upland terracing and Greenway Plaza
        - Riverfront promenade
        - Riverfront event facility and associated utilities)
    - Approximately 750’ of shoreline along a wide bay along the Grand River (known as the Sag) to integrate nature-based solutions with the proposed non-motorized pathway boardwalk.
    - The remaining 4,000’ of river shoreline with emphasis on long-term sustainability of natural features and park trails.

- Permit-Ready Design Documents (60% design)

  Based on the recommendations above, design shoreline nature-based solutions and, where applicable, design directly-related recreational amenities (e.g. day docks, renovation dolphins, upland terracing, riverfront promenade, and Sag boardwalk), and site planning for indirect elements (Greenway Plaza and event facility). This work should include conceptual design, design development including preliminary grading and planting plans suitable for submission to permitting agencies.

- Updated Cost Estimates

  Initial estimates were completed as part of the 2020 Master Plan. Updated cost estimates based on the design work referenced above should be prepared.

- Alternate for inclusion in Proposal: Final Construction Drawings and Permitting

  Please include the cost to prepare final construction drawings and specifications and complete the necessary permits. Fees may be based on a flat fee or percentage of construction cost basis.

B. Harbor Island – Wetlands and Shoreline Enhancements Investigations and Designs

Harbor Island has approximately 114 acres of existing wetlands and another 59 acres of other lands that could be evaluated for wetland creation or other nature-based solutions (if feasible in view of ongoing remediation analysis). However, the current ecological status of the property needs additional evaluation beyond the work being conducted by HDR to better understand the best solutions that could be applied to this area. Therefore, to accomplish this, this project will include the following elements:

- In coordination with ongoing remediation and visioning efforts at Harbor Island (Refer to Exhibit 1 - Harbor Island Restoration Analysis Map for more details):
    - Natural Features Assessments

      Completion of Natural Features Inventories for the project area including:

        - Plant Inventory
        - Herpetological Assessment
        - Wetland Assessment
        - Other assessments for consideration as proposed by the vendor.

    - Shoreline/Wetland Enhancement Recommendations

      Assessment of and recommendations for feasible and prudent nature-based solutions for the public lands on the island, including:

        - Wetland restoration/enhancements for approximately 114 acres of degraded wetlands
        - Wetland creation or other habitat improvements, green infrastructure, or best management practices for a to-be-determined portion of an additional approximately 59 acres. This could include creating connectivity between water and wetland features where none currently exists.
        - Resilient shoreline treatment for up to 5200’ of existing hardened and/or disturbed shoreline.
- Permit-Ready Design Documents (50% design)

  Design and engineering for solutions selected for incorporation into the evolving Harbor Island redevelopment master plan. This work should include conceptual design, design development including preliminary grading and planting plans, and should be suitable for review by permitting agencies.

- Cost Estimates

  Provide cost estimates based on the design work referenced above.

C. Alternate: Grand Haven Dune Property/Kitchel-Hartger Lindquist Dune Preserve Shoreline Enhancements Investigations and Designs

Given that it is a logical extension of the Ottawa Sands/Harbor Island riverfront and nature-based solutions recommended for the Ottawa Sands shoreline in particular would be applicable to the 3,465’ of shoreline along these properties, Ottawa County

Parks would like an alternate cost to be included in the proposal for the following elements:

- Natural Features Assessments/Baseline Metrics:

  Completion of additional natural features inventories and detailed site analysis needed for baseline metrics for shoreline enhancements (reference relevant outcomes above for guidance). This includes accurate and detailed descriptions of existing conditions.

- Shoreline Assessments and Recommendations

  Assess the status of the Grand River shoreline at these properties and develop recommendations for nature-based solutions for improved habitat, enhanced flood resilience, and erosion prevention.

- Permit-Ready Design Documents (60% design)

  Based on the recommendations above, design and engineer shoreline nature-based solutions. This work should include conceptual design, design development including preliminary grading and planting plans suitable for submittal to permitting agencies. It should be considered that the recommendations may include only minimal interventions for current conditions and may not require significant engineering.

- Cost Estimates

  Cost estimates based on the design work referenced above.

D. Other Deliverables

Community Engagement

As referenced above, this project will require coordination with ongoing engagement efforts related to these projects. In addition, two open houses should be planned for the public to review the specific recommendations for each site (one each for Ottawa Sands and Harbor Island). If conditions permit, an outdoor open house would be preferred at Ottawa Sands. In collaboration with Ottawa County Parks, a summary of Community Engagement will be produced that should be incorporated into the final report.

Project Report

Prepare an overall project report which outlines the process used to develop the recommendations and designs and documents its findings. The report should be

suitable for public dissemination and is meant to serve as a guidebook for similar projects within coastal Great Lakes areas.

E. Vendor Qualifications and Mandatory Requirements

Vendor (or team of vendors) should include team members who

- Have demonstrated expertise and experience in coastal resilience, environmental science, or related fields.
- Demonstrate an understanding of local, state, and federal regulations, environmental factors, and community dynamics.
- Have expertise in ecology, urban planning, community engagement, and engineering green infrastructure, trails, and docking structures.

F. Pricing and Invoicing

Vendor should include pricing structure and cost estimates for each activity within the Scope of Work and Objectives of this RFP. Proposals should define where invoicing will take place. For instance, Vendor should define invoice occurrence at each deliverable, milestone, and/or end of phases.

County of Ottawa is tax exempt. Michigan Sales and Use Tax Certificate of Exemption are available upon request.

Section 5: Proposal Selection and Award Process

An Evaluation Committee(s) will be established by the County to review the proposals and to make recommendation for contract award(s).

A Proposer may not contact any member of the Evaluation Committee except at the RFP Administrator's direction. Purchasing will notify vendors of relevant steps and status throughout the evaluation process.

Proposals will be evaluated based on the following criteria (of equal weight and in no particular order):

- Experience and Qualifications
- Past Projects
- Vendor References
- Proposal Response to Questions
- Costs and Fees Proposed
- Other Information

As part of the proposal evaluation process, the finalist vendor(s) may be invited to attend an in-person or virtual interview. The County reserves the right to interview any number of qualifying vendor(s) as part of the evaluation and section process. The County reserves the right to award a contract without an interview, as determined in the best interest of the County.

The County of Ottawa reserves the right to select and subsequently recommend for award the proposal that best meets its required needs, quality levels, and budget constraints. The lowest priced response does not guarantee recommendation for contract award. The County reserves the right to award by item, group, or total proposal.

The Respondent to whom the award is made will be notified at the earliest possible date. Tentative acceptance of the proposal, intent to recommend award of a contract and actual award of the contract will be provided to the representative(s) designated in the proposal response.

Section 6: Contract Terms, Period, Procedures and Use

The County of Ottawa's intent is to award a contract that will cover an initial period of a defined start date to completion of the project.

This contract will not be enforced until both parties have agreed and signed as accepted. The Vendor must execute and perform said Agreement.

The proposal, or any part thereof, submitted by the awarded vendor may be attached to and become part of the contract. Proposal pricing reflects a commitment to the terms indicated. As part of the contract negotiation process, the County reserves the right to delete or modify any task from the scope of services and reserves the right to modify the scope of services during the course of the contract. Any changes in pricing or payment terms proposed by the Vendor resulting from the requested changes are subject to acceptance by the County.

In the event that a successful agreement cannot be executed, the County reserves the right to proceed with contract negotiations with the other responsive, qualified vendors to provide service as referenced under negotiation process.

Contractors are not to start work until receipt of an Ottawa County Purchase Order, authorizing work to begin. The County's obligation will commence only following the parties' execution of the Contract and the County Board of Commissioners' approval. Upon written notice to the Contractor, the County may set a different starting date for the Contract. The County will not be responsible for any work done or expense incurred by the Contractor or any subcontractor, even if such work was done or such expense was incurred in good faith, if it occurs prior to the Contract start date set by the County.

This contract is for use only by the County, including departments, agencies, or courts of the County of Ottawa.

Exhibit 1 - Harbor Island Restoration Analysis Map

Harbor Island
Conceptual Restoration Analysis

N
W E
S

1 inch = 350 feet

Other Infrastructure
(11 Acres)

Wetland (114 Acres):
Restoration/Enhancement?

Private

Meekhof (2.4 Acres)

Lawn Area (22 Acres):
- Remediation?
- Wetland Creation?

Wetland:
Restoration/Enhancment?

Open Water (1 Acre):
- Remediation?
- Wetland Creation?

Paved Areas

Transformer

Wetland:
Restoration/Enhancement?

Floodplain/Wetland (9 Acres):
- Restoration?
- Wetland Creation?

Developed Upland (2.4 Acres):
- Remediation?
- Wetland Creation?

Power Plant (21 Acres):
- Remediation?
- Wetland Creation?

Linear Park
(3.6 Acres)

Ottawa County GIS

Exhibit 2 - National Fish and Wildlife Foundation Grant Agreement

NFWF	**NATIONAL FISH AND WILDLIFE FOUNDATION GRANT AGREEMENT**	**1. NFWF PROPOSAL ID:** 75868	**2. NFWF GRANT ID:** 0318.23.075868
		3. UNIQUE ENTITY IDENTIFIER (UEI) EZE8NUD6HSQ7	**4. INDIRECT COST RATE (REFERENCE LINE 17 for RATE TERMS)** N/A

5. SUBRECIPIENT TYPE State or Local Government	**6. NFWF SUBRECIPIENT** County of Ottawa
7. NFWF SUBRECIPIENT CONTACT	**8. NFWF GRANTS ADMINISTRATOR/NFWF CONTACT INFORMATION**
Aaron Bodbyl-Mast County of Ottawa 12220 Fillmore St West Olive, MI 49460 abodbyl-mast@miottawa.org	Caleb Hall-Arnett National Fish and Wildlife Foundation 1133 15th Street, N.W. Suite 1000 Washington, D.C. 20005 Tel:202-857-0166 Fax: 202-857-0162 caleb.hall-arnett@nfwf.org

9. PROJECT TITLE
Assessing Nature-Based Solution to Enhance the Grand River Coastal Corridor (MI)

10. PROJECT DESCRIPTION
Conduct site assessment and preliminary design to enhance and restore habitat on approximately 200 acres of publicly owned land in the Grand River Coastal Corridor in northwest Ottawa County through natural features inventory and analysis, feasibility determination, and cost estimating of potential nature-based solutions. Project will improve resilience and habitat in historically degraded lowland and shoreline areas.

11. PERIOD OF PERFORMANCE	**12. TOTAL AWARD TO SUBRECIPIENT**	**13. TOTAL FED. FUNDS**	**14. TOTAL NON-FED. FUNDS**
June 1, 2023 to June 30, 2026	$275,000	$275,000	N/A

15. FEDERAL MATCH REQUIREMENT N/A	**16. NON-FEDERAL MATCH REQUIREMENT** $275,000

17. SUBRECIPIENT INDIRECT COST RATE TERMS

The rate specified in Line 4 reflects that the Subrecipient has elected not to claim an indirect cost rate and that this election shall apply throughout the project's period of performance.

18. TABLE OF CONTENTS

19. FUNDING SOURCE INFORMATION/FEDERAL AND NON-FEDERAL							
A. FUNDING SOURCE (FS)	B. NFWF FS ID	C. FS AWARD DATE TO NFWF	D. FAIN	E. TOT FED. AWARD TO NFWF	F. TOT OBLG. TO SUBRECIPIENT	G. FS END DATE	H. CFDA
National Oceanic And Atmospheric Administration	FC.R581	09/06/2023	NA23NOS4730330	$46,000,000	$275,000	05/31/2028	11.473

20. NOTICE OF AWARD

The National Fish and Wildlife Foundation (NFWF) agrees to provide the NFWF Award to the NFWF Subrecipient for the purpose of satisfactorily performing the Project described in a full proposal as identified on line 1 and incorporated into this Agreement by reference. The NFWF Award is provided on the condition that the NFWF Subrecipient agrees that it will raise and spend at least the amount listed on lines 15 and 16 in matching contributions on the Project, as applicable. The Project must be completed, with all NFWF funds and matching contributions spent, during the Period of Performance as set forth above. All items designated on the Cover Page and the Table of Contents are incorporated into this Agreement by reference herein. NFWF Subrecipient agrees to abide by all statutory or regulatory requirements, or obligations otherwise required by law. Subrecipient is obligated to notify NFWF if any of the information on the Cover Page changes in any way, whether material or immaterial.

A. NAME AND TITLE OF AUTHORIZED SUBRECIPIENT SIGNER (*Type or Print*)		D. NAME AND TITLE OF NFWF AWARDING OFFICIAL	
Jason Shamblin, Parks Director		Holly A. Bamford, PhD, Chief Conservation Officer	
B. SUBRECIPIENT BY	**C. DATE** 12-18-23	**E. NATIONAL FISH AND WILDLIFE FOUNDATION** BY	**F. DATE** 12/21/2023

NFWF prohibits discrimination in all its programs and activities on the basis of race, color, religion, age, sex, national origin, ancestry, marital status, personal appearance, citizen status, disability, sexual orientation, gender identity or expression, pregnancy, child birth or related medical conditions, family responsibilities, matriculation, genetic information, political or union affiliation, veteran status or any other status protected by applicable law ("Protected Categories"). In addition, NFWF prohibits retaliation against an individual who opposes an unlawful educational practice or policy or files a charge, testifies or participates in any complaint under Title VI. NFWF complies with all applicable federal, state and local laws in its commitment to being an equal opportunity provider and employer; accordingly, it is NFWF's policy to administer all employment actions, including but not limited to, recruiting, hiring, training, promoting, and payment of wages, without regard to any Protected Category(ies).

See Reporting Schedule on the following page.

National Fish and Wildlife Foundation
Coastal Resilience Grant

Ottawa County

By:  12/18/2023

Joe Moss, Chairperson Date
Board of Commissioners

By:  12/12/2023

Justin F. Roebuck, Clerk/Register Date

21. REPORTING DUE DATES/SUBRECIPIENT REPORTING SCHEDULE

Reporting Task	Task Due Date
Interim Programmatic Report	April 27, 2024
Annual Financial Report	October 27, 2024
Interim Programmatic Report	October 27, 2024
Interim Programmatic Report	April 27, 2025
Annual Financial Report	October 27, 2025
Interim Programmatic Report	October 27, 2025
Interim Programmatic Report	April 27, 2026
Final Financial Report	September 30, 2026
Final Programmatic Report	September 30, 2026

SECTION 1 NFWF AGREEMENT ADMINISTRATION

1.1. Amendments.

During the life of the Project, the NFWF Subrecipient is required to immediately inform in writing the NFWF Grants Administrator of any changes in contact information, Key Personnel, scope of work, indirect cost rate, as well as any difficulties in completing the performance goals articulated in the Project description. NFWF Subrecipients must request an amendment from NFWF upon determination of a deviation from the original Grant Agreement as soon as such deviation is detected. NFWF reserves the right to approve, deny and/or negotiate any such request. Alternatively, NFWF may initiate an amendment if NFWF determines an amendment is necessary at any time. Amendment requests are to be submitted via NFWF's grants management system.

1.1.1. Budget Amendment Request.

If the NFWF Subrecipient determines that: 1) the amount of the budget is going to change in any one direct cost category by an amount that exceeds 10% of the Award, or 2) there is a need to increase indirect costs, the NFWF Subrecipient must seek prior written approval via an amendment request in NFWF's grants management system.

1.1.2. Extension of Performance Period.

If additional time is needed to complete the approved Project, the NFWF Subrecipient should contact the NFWF Grants Administrator at least 45 calendar days prior to the project period expiration date to initiate the no-cost extension request process in NFWF's grants management system. In addition, if there are overdue reports required, the NFWF Subrecipient must ensure that they are submitted along with or prior to submitting the no-cost extension request.

1.2. Matching Contributions.

Matching Contributions consist of cash, contributed goods and services, volunteer hours, and/or property raised and spent for the Project. Matching Contributions for the purposes of this Project must meet the following criteria: (1) Are verifiable from the NFWF Subrecipient's records; (2) Are not included as contributions for any other federal award; (3) Are necessary and reasonable for the accomplishment of project or program objectives; (4) Are allowable under OMB Cost Principles; (5) Are not paid by the U.S. Government under another federal award except where the federal statute authorizing a program specifically provides that federal funds made available for such program can be applied to matching or cost sharing requirements of other federal programs when authorized by federal statute; (6) Are provided for in the approved budget when required by the federal awarding agency; (7) Are committed directly to the project and must be used within the period of performance as identified in this Agreement; (8) Otherwise conform to the law; and, (9) Are in compliance with the requirements of Section 3.3 of this Agreement concerning Compliance with Laws.

1.2.1. Documentation and Reporting of Matching Contributions.

The NFWF Subrecipient must retain supporting documentation, including detailed time records for contributed services, original receipts, appraisals of real property, and comparable rentals for other contributed property, at its place of business in the event of an audit of the NFWF Subrecipient as required by applicable federal regulations. The NFWF Subrecipient must report match progress in Payment Requests and Financial Reports.

1.2.2. Assessing Fair Market Value.

Fair market value of donated goods, services and property, including volunteer hours, shall be computed as outlined in §200.306 of 2 CFR Subtitle A, Chapter II, Part 200, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards, (hereinafter "OMB Uniform Guidance"), regardless of whether this Agreement is federally funded.

1.3. Payment of Funds.

To be eligible to receive funds, NFWF Subrecipient must submit to NFWF (1) an original executed copy of this Agreement for the Project; (2) any due financial and programmatic reports; and (3) a complete and accurate Payment Request via NFWF's grants management system. At any time, NFWF reserves the right to require submission of source documentation, including but not limited to timesheets, cash receipts, contracts or subaward agreements, for any costs where the NFWF Subrecipient is seeking reimbursement by NFWF. NFWF reserves the right to retain up to ten percent (10%) of funds until submission and acceptance of final reports.

1.3.1. Reimbursements.

NFWF Subrecipient may request funds on a reimbursable basis. Reimbursement requests must include expenditures to date and an explanation of any variance from the approved budget.

1.3.2. Advances.

NFWF Subrecipient may request advance payment of funds prior to expenditure provided that the NFWF Subrecipient: (1) demonstrates an immediate need for advance payment; (2) documents expenditure of advanced funds; 3) maintains written procedures that minimize the time elapsing between the transfer of funds and disbursement; and (4) has established appropriate financial management systems that meet the needs and standards for fund control and accountability. Approval of any advance payment of funds is made at the sole discretion of NFWF, based on an assessment of the NFWF Subrecipient's needs.

1.3.3. Interest.

Any interest earned in any one year on funds advanced to the NFWF Subrecipient that exceeds $500 must be reported to NFWF, and the disposition of those funds negotiated with NFWF. Interest amounts up to $500 per year may be retained by the NFWF Subrecipient for administrative expense.

1.4. Reports.

1.4.1. Interim Programmatic Reports.

The NFWF Subrecipient will submit interim programmatic reports to NFWF based on the reporting schedule in Line 21 of the Cover Sheet to this Agreement, as may be amended at NFWF's sole discretion. The interim programmatic report shall consist of written statements of Project accomplishments and updated metric values since Project initiation, or since the last reporting period, and shall be submitted via NFWF's grants management system. NFWF may require specific formatting and/or additional information as appropriate.

1.4.2. Interim Financial Reports.

The NFWF Subrecipient will submit interim financial reports to NFWF based on the reporting schedule in Line 21 of the Cover Sheet to this Agreement, as may be amended at NFWF's sole discretion. The interim financial report shall consist of financial information detailing cumulative expenditures made under this Project since Project initiation and shall be uploaded via NFWF's grants management system. NFWF may require specific formatting and/or additional information as appropriate.

1.4.3. Annual Financial Report.

The NFWF Subrecipient will submit annual financial reports to NFWF based on the reporting schedule in Line 21 of the Cover Sheet to this Agreement, as may be amended at NFWF's sole discretion. The NFWF Subrecipient must enter a justification when there is a difference between the amount disbursed by NFWF and the amount expended by the grantee. Failure to submit an annual financial report in a timely manner will delay payment of submitted payment requests.

1.4.4. Final Reports.

Based on the reporting schedule in Line 21 of the Cover Sheet to this Agreement, the NFWF Subrecipient will submit (1) a Final Financial Report accounting for all Project funds received, Project expenditures, and budget variances (if any) compared to the approved budget; (2) a Final Programmatic Report summarizing and documenting the accomplishments and metric values achieved during the Period of Performance; (3) copies of any publications, press releases and other appropriate products resulting from the Project; and (4) photographs as described in Section 1.4.3.1 below. The final reports and digital photo files should be uploaded via NFWF's grants management system. Any requests for extensions of final report submission dates must be made in writing to the NFWF Grants Administrator and approved by NFWF in advance. NFWF may require specific formatting and/or additional information as appropriate.

1.4.4.1. Photographs.

NFWF requests, as appropriate for the Project, a representative number of high-resolution (minimum 300 dpi) photographs depicting the Project (before-and-after images, images of species impacted, and/or images of staff/volunteers working on the Project). Photographs should be uploaded with the Final Programmatic Report via NFWF's grants management system as individual .jpg files. The Final Programmatic Report narrative should list each photograph, the date the photograph was taken, the location of the photographed image, caption, photo

credit, and any other pertinent information (e.g., species, activity conducted)describing what the photograph is depicting. By uploading photographs to NFWF's grants management system the NFWF Subrecipient certifies that the photographs are unencumbered and that NFWF and Project Funders have a fully paid up non-exclusive, royalty-free, irrevocable, perpetual, worldwide license for posting of Final Reports and for any other purposes that NFWF or the Project Funder determines appropriate.

1.4.5. Significant Developments.

The NFWF Subrecipient shall report on events that may occur between the scheduled performance reporting dates that have a significant impact on the Project. Such reporting shall be made as soon as the following conditions become known:

1.4.5.1. Problems, delays, or adverse conditions which will materially impair the ability to meet the Project objective, including but not limited to the objective itself, its schedule and/or the budget. This disclosure must include a statement of the action taken, or contemplated, and any assistance needed to resolve the matter; and/or,

1.4.5.2. Favorable developments which enable meeting time schedules and objectives sooner or at less cost than anticipated or produce more or different beneficial results than originally planned.

1.5. Reports and Payment Requests.

All reports, financial, programmatic, or otherwise, or payment requests under a federal award must be submitted by a representative of the NFWF Subrecipient who has the NFWF Subrecipient's full authority to render such reports and requests for payment and to provide required certifications as set forth in 2 CFR 200.415, as applicable.

1.6. Record Retention and Access.

1.6.1. Retention Requirements for Records.

NFWF Subrecipient shall maintain all records connected with this Agreement for a period of at least three (3) years following the latest end date of the funding source(s) referenced above in line 19. FUNDING SOURCE INFORMATION/FEDERAL AND NON-FEDERAL or the close-out of all pending matters or audits related to this Agreement, whichever is later. As funding source end dates may be extended over time, the NFWF Subrecipient will be notified of the most up-to-date record retention requirements upon closure of this Award. If any litigation, claim, or audit is started (irrespective of the NFWF Subrecipient's involvement in such matter) before the expiration of the 3-year period, the records shall be retained until all litigation, claims or audit findings or pending matters involving the records have been resolved and final action taken. NFWF shall notify NFWF Subrecipient if any such litigation, claim or audit takes place or if funding source end date(s) is extended so as to extend the retention period. Records for real property and equipment acquired with federal funds must be retained for at least three (3) years following disposition of such real property. For awards solely funded with funding sources with "N/A" listed as the end date, NFWF Subrecipient shall maintain all records connected with this Agreement

for a period of at least three (3) years following the date of final payment or the Period of Performance end date, whichever is later.

1.6.2. Access to Records.

NFWF or any of its authorized representatives shall have access to such records and financial statements upon request, as shall Inspectors General, the Comptroller General of the United States or any of their authorized representatives if the Funding Source or any funding entity (*i.e.,* a secondary funding source) is a federal agency and/or any portion of the Project provided herein is paid with federal funds. The rights of access in this section are not limited to the required retention period but last as long as the records are retained.

SECTION 2 NFWF AGREEMENT CLAUSES

2.1. Restrictions on Use of Funds.

The NFWF Subrecipient agrees that any funds provided by NFWF and all Matching Contributions will be expended only for the purposes and programs described in this Agreement. No funds provided by NFWF pursuant to this Agreement or Matching Contributions may be used to support litigation expenses, lobbying activities, or any other activities not authorized under this Agreement or otherwise unallowable under the Federal Cost Principles set forth in the OMB Uniform Guidance.

2.2. Assignment.

The NFWF Subrecipient may not assign this Agreement, in whole or in part, to any other individual or other legal entity without the prior written approval of NFWF.

2.3. Subawards and Contracts.

When making subawards or contracting, NFWF Subrecipient shall:(1) abide by all applicable granting and contracting procedures, including but not limited to those requirements of the OMB Uniform Guidance (2 C.F.R. Part 200); (2) ensure that all applicable federal, state and local requirements are properly flowed down to the subawardee or contractor, including but not limited to the applicable provisions of the OMB Uniform Guidance (2 C.F.R. Part 200); and (3) ensure that such subaward or contracting complies with the requirements in Section 3.3 of this Agreement concerning Compliance with Laws. NFWF Subrecipient shall also include in any subaward or contract a similar provision to this, requiring the use of proper grant and contracting procedures and subsequent flow down of federal, state, and local requirements to lower-tiered subawardees and contractors.

2.4. Unexpended Funds.

Any funds provided by NFWF and held by the NFWF Subrecipient and not expended at the end of the Period of Performance will be returned to NFWF within ninety (90) days after the end of the Period of Performance.

2.5. Publicity, Acknowledgment of Support, and Disclaimers.

2.5.1. Publicity.

The NFWF Subrecipient gives NFWF the right and authority to publicize NFWF's financial support for this Agreement and the Project in press releases, publications, and other public communications.

2.5.2. Acknowledgment of Support.

The NFWF Subrecipient agrees to: (1) give appropriate credit to NFWF and any Funding Sources identified in this Agreement for their financial support in any and all press releases, publications, annual reports, signage, video credits, dedications, and other public communications regarding this Agreement or any of the project deliverables associated with this Agreement, subject to any terms and conditions as may be stated in Section 5 and Section 6 of this Agreement; and (2) include the disclaimer provided at Section 2.5.4.

2.5.3. Logo Use.

The NFWF Subrecipient must obtain prior NFWF approval for the use relating to this Award of the NFWF logo or the logo or marks of any Funding Source.

2.5.4. Disclaimers.

Payments made to the NFWF Subrecipient under this Agreement do not by direct reference or by implication convey NFWF's endorsement nor the endorsement by any other entity that provides funds to the NFWF Subrecipient through this Agreement, including the U.S. Government, as applicable, for the Project. All information submitted for publication or other public releases of information regarding this Agreement shall carry the following disclaimer, which NFWF may revise at any time at its sole discretion:

For Projects funded in whole or part with federal funds: "The views and conclusions contained in this document are those of the authors and should not be interpreted as representing the opinions or policies of the U.S. Government or the National Fish and Wildlife Foundation and its funding sources. Mention of trade names or commercial products does not constitute their endorsement by the U.S. Government, or the National Fish and Wildlife Foundation or its funding sources."

For Projects not funded with federal funds: "The views and conclusions contained in this document are those of the authors and should not be interpreted as representing the opinions of the National Fish and Wildlife Foundation or its funding sources. Mention of trade names or commercial products does not constitute their endorsement by the National Fish and Wildlife Foundation or its funding sources."

2.6. Posting of Final Reports.

The NFWF Subrecipient hereby acknowledges and consents for NFWF and any Funding Source identified in this Agreement to post its final programmatic reports and deliverables on their respective websites. In the event that the NFWF Subrecipient intends to claim that its final report contains material that does not have to be posted on such websites because it is protected from disclosure by statutory or regulatory provisions, the NFWF Subrecipient shall so notify NFWF and any Funding Source identified in this Agreement and clearly mark all such potentially protected materials as "PROTECTED," providing an accurate and complete citation to the statutory or regulatory source for such protection.

2.7. Website Links.

The NFWF Subrecipient agrees to permit NFWF to post a link on any or all NFWF websites to any websites created by the NFWF Subrecipient in connection with the Project.

2.8. Evaluation.

Throughout a program or business plan, NFWF engages in monitoring and evaluation to assess progress toward conservation goals and inform future decision-making. These efforts use both data collected by grantees as part of their NFWF grant as well as post-award project data collected by third-party entities commissioned to conduct a program evaluation. The NFWF Subrecipient agrees to cooperate with NFWF by providing timely responses to all reasonable requests for information

to assist in evaluating the accomplishments of the Project period of five (5) years after the project end date.

2.9. Intellectual Property.

Reports, materials, books, databases, monitoring data, maps and spatial data, audio/video, and other forms of intellectual property created using this grant may be copyrighted or otherwise legally protected by the NFWF Subrecipient or by the author. The NFWF Subrecipient agrees to provide to NFWF and any Funding Source identified in this Agreement a non-exclusive, royalty-free, irrevocable, perpetual, worldwide license to use, publish, copy and alter the NFWF Subrecipient's intellectual property created using this award for non-commercial purposes in any media – whether now known or later devised – including posting such intellectual property on NFWF's or Funding Source websites and featuring in publications. NFWF retains the right to use project metrics and spatial data submitted by the NFWF Subrecipient to estimate societal benefits that result and to report these results to funding partners on a case-by-case basis as determined by NFWF. These may include but are not limited to: habitat and species response, species connectivity, water quality, water quantity, risk of detrimental events (e.g., wildfire, floods), carbon accounting (e.g., sequestration, avoided emissions), environmental justice, and diversity, equity, and inclusion.

2.10. System for Award Management (SAM) Registration.

The NFWF Subrecipient must maintain an active SAM registration at www.SAM.gov until the final financial report is submitted or final payment is received, whichever is later. If the NFWF Subrecipient's SAM registration expires during the required period, NFWF will suspend payment to the NFWF Subrecipient until the SAM registration is updated.

2.11. Arbitration.

All claims, disputes, and other matters in question arising out of, or relating to this Agreement, its interpretation or breach, shall be decided through arbitration by a person or persons mutually acceptable to both NFWF and the NFWF Subrecipient. Notice of the demand for arbitration shall be made within a reasonable time, not to exceed three years, after the claim, dispute, or other matter in question has arisen. The award rendered by the arbitrator or arbitrators shall be final. The terms of this provision will survive termination of this Agreement.

2.12. Indemnity.

The NFWF Subrecipient shall indemnify and hold harmless NFWF, any Funding Source identified in this Grant Agreement, their respective officers, directors, agents, and employees in respect of any and all claims, injuries, losses, diminution in value, damages, liabilities, whether or not currently due, and expenses including without limitation, settlement costs and any legal or other expenses for investigating or defending any actions or threatened actions or liabilities arising from or in connection with the Project. The terms of this provision will survive termination of this Agreement.

2.13. Insurance.

The NFWF Subrecipient agrees to obtain and maintain all appropriate and/or required insurance coverages against liability for injury to persons or property from any and all activities undertaken by the NFWF Subrecipient and associated with this Agreement in any way. NFWF reserves the right to require additional insurance limits and policies based on specific activities under this Agreement, that NFWF be named insured on all applicable insurance policies, and that the NFWF Subrecipient

provide a certificate of insurance and/or copies of applicable insurance policies as requested by NFWF. The terms of this provision will survive termination of this Agreement.

2.14. Choice of Law/Jurisdiction.

This Agreement shall be subject to and interpreted by the laws of the District of Columbia, without regard to choice of law principles. By entering into this Agreement, the NFWF Subrecipient agrees to submit to the exclusive jurisdiction of the courts of the District of Columbia. The terms of this provision will survive termination of this Agreement.

2.15. Stop Work.

NFWF may, at any time, by written order to the NFWF Subrecipient, require the NFWF Subrecipient to stop all, or any part, of the work called for by this Agreement for a period of 90 days after the order is delivered to the NFWF Subrecipient. The order shall be specifically identified as a stop-work order issued under this section. Upon receipt of the order, the NFWF Subrecipient shall immediately comply with its terms and take all reasonable steps to minimize the incurrence of costs allocable to this Agreement covered by the order during the period of work stoppage. Within a period of 90 calendar days after a stop-work order is delivered to the NFWF Subrecipient, or within any extension of that period to which the parties shall have agreed, NFWF shall either cancel the stop-work order or terminate the Agreement under section 2.16.

2.16. Termination.

2.16.1. Upon the occurrence of any of the following enumerated circumstances, NFWF may terminate this Agreement, or any portion thereunder, upon receipt by the NFWF Subrecipient of NFWF's written notice of termination, or as otherwise specified in the notice of termination:

2.16.1.1. the NFWF Subrecipient is adjudged or becomes bankrupt or insolvent, is unable to pay its debts as they become due, or makes an assignment for the benefit of its creditors; or,

2.16.1.2. the NFWF Subrecipient voluntarily or involuntarily undertakes to dissolve or wind up its affairs; or,

2.16.1.3. suspension or debarment by the Government of the NFWF Subrecipient; or,

2.16.1.4. any breach of the requirements set forth in Section 3.3 of this Agreement concerning Compliance with Laws; or,

2.16.1.5. NFWF learns that NFWF Subrecipient has an organizational conflict of interest, or any other conflict of interest, as determined in the sole discretion of NFWF, that NFWF believes, in its sole discretion, cannot be mitigated; or,

2.16.1.6. after written notice and a reasonable opportunity, the NFWF Subrecipient is unable to cure a perceived non-compliance with any material term (other than those enumerated at 2.16.1.1 – 2.16.1.5) of this Agreement. The cure period shall be considered the timeframe specified by the Funding Source(s), if

any, minus one (1) to five (5) days or as agreed upon by the Parties in writing, or if no time is specified by the Funding Source(s), ten (10) days or as otherwise agreed upon by the Parties. Within this time period the NFWF Subrecipient shall, as determined by NFWF, (a) satisfactorily demonstrate its compliance with the term(s) originally believed to be in non-compliance; or (b) NFWF, at its sole discretion, may determine that NFWF Subrecipient has satisfactorily demonstrated that reasonable progress has been made so as not to endanger performance under this Agreement; or,

2.16.1.7. if the Funding Source issues an early termination under the funding agreement(s) covering all or part of the Project at issue hereunder.

2.16.2. Either Party may terminate this Agreement by written notice to the other Party for any reason by providing thirty (30) days' prior written notice to the other Party.

2.16.3. In the event of termination of this Agreement prior to Project completion, the NFWF Subrecipient shall immediately (unless otherwise directed by NFWF in its notice if NFWF initiated the termination) undertake all reasonable steps to wind down the Project cooperatively with NFWF, including but not limited to the following:

2.16.3.1. Stop any portion of the Project's work that is incomplete (unless work to be completed and a different date for termination of work are specified in NFWF's notice).

2.16.3.2. Place no further work orders or enter into any further subawards or contracts for materials, services, or facilities, except as necessary to complete work as specified in NFWF's notice.

2.16.3.3. Terminate all pending Project work orders, subawards, and contracts for work that has not yet commenced.

2.16.3.4. With the prior written consent of NFWF, promptly take all other reasonable and feasible steps to minimize and/or mitigate any damages that may be caused by the failure to complete the Project, including but not limited to reasonable settlements of any outstanding claims arising out of termination of Project work orders, subawards, and contracts. NFWF will reimburse the NFWF Subrecipient for non-cancelable allowable costs incurred by the NFWF Subrecipient prior to termination that cannot be mitigated. However, the foregoing is subject to the complete reimbursement of such costs by the Funding Source; accordingly, any amounts ultimately not paid, or which are recouped by the Funding Source, are subject to recoupment by NFWF.

2.16.3.5. Deliver or make available to NFWF all data, drawings, specifications, reports, estimates, summaries, and such other information and material as may have been accumulated by the NFWF Subrecipient under this Agreement, whether completed or in progress.

2.16.3.6. Return to NFWF any unobligated portion of the Award.

2.17. Entire Agreement.

These terms and conditions, including the Attachments hereto, constitute the entire agreement between the Parties relating to the Project described herein and supersede all previous communications, representations, or agreements, either oral or written, with respect to the subject matter hereof. No representations or statements of any kind made by any representative of a Party, which are not stated herein, shall be binding on said Party.

2.18. Severability.

Each provision of this Agreement is distinct and severable from the others. If one or more provisions is or becomes invalid, unlawful, or unenforceable in whole or in part, the validity, lawfulness and enforceability of the remaining provisions (and of the same provision to the extent enforceable) will not be impaired, and the Parties agree to substitute a provision as similar to the offending provision as possible without its being invalid, unlawful or unenforceable.

2.19. Interpretation and Construction.

2.19.1. This Agreement shall be interpreted as a unified contractual document with the Sections and the Attachments having equal effect, except in the event of any inconsistency between them. In the event of a conflict between any portion of this Agreement and another portion of this Grant Agreement, first the Sections will apply in the following order of precedence: 5, 4, 3, 1, 2 and 6, and then any supplemental attachments.

2.19.2. The title designations of the provisions to this Agreement are for convenience only and shall not affect the interpretation or construction of this Agreement.

2.19.3. Every right or remedy conferred by this Agreement upon or reserved to the Parties shall be cumulative and shall be in addition to every right or remedy now or hereafter existing at law or in equity, and the pursuit of any right or remedy shall not be construed a selection.

2.19.4. The failure of NFWF to exercise any right or privilege granted hereunder or to insist upon the performance and/or compliance of any provision of this Agreement, a referenced contractual, statutory or regulatory term, or an Attachment hereto, shall not be construed as waiving any such right, privilege, or performance/compliance issue, and the same shall continue in full force and effect.

2.19.5. Notwithstanding any express statements regarding the continuation of an obligation beyond the expiration or termination of this Agreement, the rights and obligations of this Agreement, which by their nature extend beyond its expiration or termination, shall remain in full force and effect and shall bind the Parties and their legal representatives, successors, heirs, and assigns.

SECTION 3 REPRESENTATIONS, CERTIFICATIONS, OBLIGATIONS AND OTHER STATEMENTS – GENERAL

3.1. Binding Obligation.

By execution of this Agreement, NFWF Subrecipient represents and certifies that this Agreement has been duly executed by a representative of the NFWF Subrecipient with full authority to execute this Agreement and binds the NFWF Subrecipient to the terms hereof. After execution by the representative of the NFWF Subrecipient named on the signature page hereto, this Agreement represents the legal, valid, and binding obligation of the NFWF Subrecipient, enforceable against the NFWF Subrecipient in accordance with its terms.

3.2. Additional Support.

In making this Award, NFWF assumes no obligation to provide further funding or support to the NFWF Subrecipient beyond the terms stated in this Agreement.

3.3. Compliance with Laws.

3.3.1. In General.

By execution of this Agreement and through its continued performance hereunder, the NFWF Subrecipient represents, certifies and agrees that it is and shall continue to conduct all such activities in compliance with all applicable federal, state, and local laws, regulations, and ordinances and to secure all appropriate necessary public or private permits and consents. The terms of this provision will survive termination of this Agreement and must be flowed down to any and all contractors, subcontractors or subrecipients entered into by NFWF Subrecipient in the performance of this Agreement.

3.3.2. Compliance with Anti-Corruption Laws.

The NFWF Subrecipient represents, certifies and agrees to ensure that no payments have been or will be made or received by the NFWF Subrecipient in connection with this Agreement in violation of the U.S. Foreign Corrupt Practices Act of 1977, as amended (15 U.S.C. §dd-1 *et seq*.), or any other applicable anti-corruption laws or regulations (e.g., UK Bribery Act 2010) in the countries in which the NFWF Subrecipient performs under this Agreement.

3.3.3. Compliance with Anti-Terrorism Laws.

The NFWF Subrecipient represents, certifies and agrees not to provide material support or resources directly or indirectly to, or knowingly permit any funds provided by NFWF pursuant to this Agreement or Matching Contributions to be transferred to, any individual, corporation or other entity that the NFWF Subrecipient knows, or has reason to know, commits, attempts to commit, advocates, facilitates, or participates in any terrorist activity, or has committed, attempted to commit, advocated, facilitated or participated in any terrorist activity, including, but not limited to, the individuals and entities (1) on the master list of Specially Designated Nationals and Blocked Persons maintained by the U.S. Department of Treasury's Office of Foreign Assets Control, which list is available at www.treas.gov/offices/enforcement/ofac; (2) on the consolidated list of individuals and entities maintained by the "1267 Committee" of the United Nations Security Council at http://www.un.org/sc/committees/1267/aq_sanctions_list.shtml; (3) on the consolidated

list maintained by the U.S. Department of Commerce at http://export.gov/ecr/eg_main_023148.asp, or (4) on such other list as NFWF may identify from time to time.

3.3.4. Compliance with Additional Laws and Restrictions.

The NFWF Subrecipient represents, certifies and agrees to ensure that its activities under this Agreement comply with all applicable U.S. laws, regulations and executive orders regarding money laundering, terrorist financing, U.S. sanctions laws, U.S. export controls, restrictive trade practices, boycotts, and all other economic sanctions or trade restrictions promulgated from time to time by means of statute, executive order, regulation or as administered by the U.S. Department of State, the Office of Foreign Assets Control, U.S. Department of the Treasury, or the Bureau of Industry and Security, U.S. Department of Commerce.

3.4. Subrecipient Debarment and Suspensions.

By and through NFWF Subrecipient's execution of this Agreement, NFWF Subrecipient warrants and represents its initial and continued compliance that it is not listed on the General Services Administration's, government-wide System for Award Management Exclusions (SAM Exclusions), in accordance with the OMB guidelines at 2 C.F.R Part 180 that implement E.O.s 12549 (3 C.F.R., 1986 Comp., p. 189) and 12689 (3 C.F.R., 1989 Comp., p. 235), "Debarment and Suspension." The NFWF Subrecipient further provides that it shall not enter into any subaward, contract or other agreement using funds provided by NFWF with any party listed on the SAM Exclusions in accordance with Executive Orders 12549 and 12689. The SAM Exclusions can be found at https://www.sam.gov/portal/public/SAM/.

3.5. Conflicts of Interest.

By execution of this Agreement, NFWF Subrecipient acknowledges that it is prohibited from using any Project funds received under this Agreement in a manner which may give rise to an apparent or actual conflict of interest, including organizational conflicts of interest, on the part of the NFWF Subrecipient. Such a conflict of interest would arise when the employee, officer, or agent, any member of his or her immediate family, his or her partner, or an organization which employs or is about to employ any of the parties indicated herein, has a financial or other interest in or a tangible personal benefit from a firm considered for a contract. The officers, employees, and agents of NFWF Subrecipient may neither solicit nor accept gratuities, favors, or anything of monetary value from contractors or parties to subcontracts. An organizational conflict of interest is defined as a relationship that because of relationships with a parent company, affiliate, or subsidiary organization, the non-federal entity is unable or appears to be unable to be impartial in conducting a procurement action involving a related organization. The NFWF Subrecipient represents and certifies that it has adopted a conflict of interest policy that, at a minimum, complies with the requirements of the OMB Uniform Guidance, and will comply with such policy in the use of any Project funds received under this Agreement. NFWF Subrecipient may set standards for situations in which the financial interest is not substantial or the gift is an unsolicited item of nominal value. The standards of conduct must provide for disciplinary actions to be applied for violations of such standards by officers, employees, or agents of NFWF Subrecipient. If NFWF Subrecipient becomes aware of any actual or potential conflict of interest or organizational conflict of interest, during the course of performance of this Agreement, NFWF Subrecipient will immediately notify NFWF in writing of such actual or potential conflict of interest, whether organizational or otherwise.

SECTION 4 REPRESENTATIONS, CERTIFICATIONS, AND OTHER STATEMENTS RELATING TO FEDERAL FUNDS – GENERAL

4.1. If the Funding Source or any funding entity (*i.e.,* a secondary funding source) is a federal agency and/or any portion of the Project provided herein is paid with federal funds, the NFWF Subrecipient must read and understand certain applicable federal regulations, including but not limited to, the following in Sections 4 and 5 of this Agreement as set forth herein.

The NFWF Subrecipient will need to understand and comply with the OMB Uniform Guidance (including related Supplements as may be applicable to a specific federal funding source(s), and Appendices as may be applicable), in addition to other applicable federal regulations. This includes, but is not limited to, the provisions of the Federal Funding Accountability and Transparency Act (FFATA), which includes requirements on executive compensation, and also requirements implementing the Act for the non-federal entity at 2 CFR part 25 Financial Assistance Use of Universal Identifier and System for Award Management and 2 CFR part 170 Reporting Subaward and Executive Compensation Information. The most recent version of the Electronic Code of Federal Regulations can be found at https://www.ecfr.gov/.

4.2. 2 CFR § 200 Subpart F Audits.

It is the responsibility of the NFWF Subrecipient to arrange for audits as required by 2 CFR Part 200, Subpart F – Audit Requirements. The NFWF Subrecipient shall notify NFWF in writing about 2 CFR Subpart F audit findings related to projects funded by NFWF pass-through funds. The NFWF Subrecipient understands that NFWF may require the NFWF Subrecipient to take corrective action measures in response to a deficiency identified during an audit.

4.3. Real and Personal Property.

In accordance with 2 C.F.R. § 200.316 (Property trust relationship), real property, equipment, and intangible property acquired or improved with federal funds must be held in trust by the NFWF Subrecipient as trustee for the beneficiaries of the project or program under which the property was acquired or improved. This trust relationship exists throughout the duration of the property's estimated useful life during which time the Federal Government retains an undivided, equitable reversionary interest in the property (Federal Interest). During the duration of the Federal Interest, the NFWF Subrecipient must comply with all use, reporting, and disposition requirements and restrictions as set forth in 2 C.F.R. §§ 200.310 (Insurance coverage) through 200.316 (Property trust relationship) and 200.329 (Reporting on real property), as applicable.

4.4. Mandatory Disclosure.

NFWF Subrecipient must disclose, in a timely manner, in writing to NFWF all violations of federal criminal law involving fraud, bribery, or gratuity violations potentially affecting the federal award. Failure to make required disclosures can result in any of the remedies described in this Agreement, including termination, and any remedies provided under law, including suspension or debarment by cognizant federal authorities.

4.5. Trafficking in Persons.

Pursuant to section 106(a) of the Trafficking Victims Protection Act of 2000, as amended (22 U.S.C. 7104(g)) (codified at 2 C.F.R. Part 175), NFWF Subrecipient shall comply with the below provisions. Further, NFWF Subrecipient shall flow down these provisions in all subawards and contracts,

including a requirement that Subrecipients similarly flow down these provisions in all lower-tiered subawards and subcontracts. The provision is cited herein:

I. Trafficking in persons.
   a. *Provisions applicable to a recipient that is a private entity*.
      1. You as the recipient, your employees, subrecipients under this award, and subrecipients' employees may not—
         i. Engage in severe forms of trafficking in persons during the period of time that the award is in effect;
         ii. Procure a commercial sex act during the period of time that the award is in effect; or
         iii. Use forced labor in the performance of the award or subawards under the award.
      2. We as the federal awarding agency's pass-through entity may unilaterally terminate this award, without penalty, if you or a subrecipient that is a private entity —

         i. Is determined to have violated a prohibition in paragraph a.1 of this award term; or
         ii. Has an employee who is determined by the agency official authorized to terminate the award to have violated a prohibition in paragraph a.1 of this award term through conduct that is either—
            A. Associated with performance under this award; or
            B. Imputed to you or the subrecipient using the standards and due process for imputing the conduct of an individual to an organization that are provided in 2 CFR part 180, "OMB Guidelines to Agencies on Government-wide Debarment and Suspension (Nonprocurement),".
   b. *Provision applicable to a recipient other than a private entity*. We as the federal awarding agency's pass-through entity may unilaterally terminate this award, without penalty, if a subrecipient that is a private entity-
      1. Is determined to have violated an applicable prohibition in paragraph a.1 of this award term; or
      2. Has an employee who is determined by the agency official authorized to terminate the award to have violated an applicable prohibition in paragraph a.1 of this award term through conduct that is either—
         i. Associated with performance under this award; or
         ii. Imputed to the subrecipient using the standards and due process for imputing the conduct of an individual to an organization that are provided in 2 CFR part 180, "OMB Guidelines to Agencies on Government-wide Debarment and Suspension (Nonprocurement),".
   c. *Provisions applicable to any recipient*.
      1. You must inform us immediately of any information you receive from any source alleging a violation of a prohibition in paragraph a.1 of this award term.
      2. Our right to terminate unilaterally that is described in paragraph a.2 or b of this section:
         i. Implements section 106(g) of the Trafficking Victims Protection Act of 2000 (TVPA), as amended (22 U.S.C. 7104(g)), and

ii. Is in addition to all other remedies for noncompliance that are available to us under this award.

3. You must include the requirements of paragraph a.1 of this award term in any subaward you make to a private entity.

d. *Definitions*. For purposes of this award term:

1. "Employee" means either:
   i. An individual employed by you or a subrecipient who is engaged in the performance of the project or program under this award; or
   ii. Another person engaged in the performance of the project or program under this award and not compensated by you including, but not limited to, a volunteer or individual whose services are contributed by a third party as an in-kind contribution toward cost sharing or matching requirements.
2. "Forced labor" means labor obtained by any of the following methods: the recruitment, harboring, transportation, provision, or obtaining of a person for labor or services, through the use of force, fraud, or coercion for the purpose of subjection to involuntary servitude, peonage, debt bondage, or slavery.
3. "Private entity":
   i. Means any entity other than a State, local government, Indian tribe, or foreign public entity, as those terms are defined in 2 CFR 175.25.
   ii. Includes:
      A. A nonprofit organization, including any nonprofit institution of higher education, hospital, or tribal organization other than one included in the definition of Indian tribe at 2 CFR 175.25(b).
      B. A for-profit organization.
4. "Severe forms of trafficking in persons," "commercial sex act," and "coercion" have the meanings given at section 103 of the TVPA, as amended (22 U.S.C. 7102).

4.6. 41 United States Code (U.S.C.) 4712, Enhancement of Recipient and Subrecipient Employee Whistleblower Protection:

(a) This award, related subawards, and related contracts over the simplified acquisition threshold and all employees working on this award, related subawards, and related contracts over the simplified acquisition threshold are subject to the whistleblower rights and remedies established at 41 U.S.C. 4712.

(b) Recipients, their subrecipients, and their contractors awarded contracts over the simplified acquisition threshold related to this award, shall inform their employees in writing, in the predominant language of the workforce, of the employee whistleblower rights and protections under 41 U.S.C. 4712.

(c) The recipient shall insert this clause, including this paragraph (c), in all subawards and contracts over the simplified acquisition threshold related to this award.

4.7. 41 USC §6306, Prohibition on Members of Congress Making Contracts with Federal Government.

No member of or delegate to Congress or Resident Commissioner shall be admitted to any share or part of this award, or to any benefit that may arise therefrom; this provision shall not be construed to extend to an award made to a corporation for the public's general benefit. NFWF Subrecipient

shall flow down this provision in all subawards and contracts, including a requirement that subrecipients similarly flow down this provision in all lower-tiered subawards and subcontracts.

4.8. Executive Order 13513, Federal Leadership on Reducing Text Messaging while Driving.

(Sub)Recipients are encouraged to adopt and enforce policies that ban text messaging while driving, including conducting initiatives of the type described in section 3(a) of the order. NFWF Subrecipient shall flow down this provision in all subawards and contracts, including a requirement that subrecipients similarly flow down this provision in all lower-tiered subawards and subcontracts.

4.9. 43 CFR §18 New Restrictions on Lobbying.

By execution of this Agreement, the NFWF Subrecipient agrees to comply with 43 CFR 18, New Restrictions on Lobbying, and certifies to the following statements:

(a) No federal appropriated funds have been paid or will be paid, by or on behalf of the NFWF Subrecipient, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, and officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any federal contract, the making of any federal grant, the making of any federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any federal contract, grant, loan, or cooperative agreement.

(b) If any funds other than federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying" in accordance with its instructions.

(c) The NFWF Subrecipient shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all Subrecipients shall certify accordingly. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification, as represented by execution of this Agreement, is a prerequisite for making or entering into this transaction imposed by Section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure. All liability arising from an erroneous representation shall be borne solely by the entity filing that representation and shall not be shared by any entity to which the erroneous representation is forwarded. Submitting an erroneous certification or disclosure constitutes a failure to file the required certification or disclosure, respectively. If a person fails to file a required certification or disclosure, the United States may pursue all available remedies, including those authorized by section 1352, title 31 of the U.S. Code.

4.10. Prohibition on Issuing Financial Assistance Awards to Entities that Require Certain Internal Confidentiality Agreements.

The NFWF Subrecipient must not require their employees, subrecipients, or contractors seeking to report fraud, waste, or abuse to sign internal confidentiality agreements or statements prohibiting or otherwise restricting such employees, subrecipients, or contractors from lawfully reporting such waste, fraud, or abuse to a designated investigative or law enforcement representative of a federal department or agency authorized to receive such information. The NFWF Subrecipient must notify their employees, subrecipients, or contractors that existing internal confidentiality agreements covered by this condition are no longer in effect.

4.11. Drug-Free Workplace.

The NFWF Subrecipient must make an ongoing, good faith effort to maintain a drug-free workplace pursuant to the specific requirements set forth in 41 USC Chapter 81 Drug-Free Workplace.

4.12. Prohibition on Certain Telecommunications and Video Surveillance Services or Equipment. (Effective 8/13/2020)

As required by 2 CFR 200.216, the NFWF Subrecipient is prohibited from obligating or expending funds awarded under this Agreement to procure or obtain; extend or renew a contract to procure or obtain; or enter into a contract (or extend or renew a contract) to procure or obtain equipment, services, or systems that use covered telecommunications equipment or services from Huawei Technologies Company, ZTE Corporation, Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, and Dahua Technology Company, or any other company, including affiliates and subsidiaries, owned or controlled by the People's Republic of China, which are a substantial or essential component of any system, or as critical technology as part of any system. By and through the NFWF Subrecipient's execution of this Agreement, the NFWF Subrecipient warrants and represents that the NFWF Subrecipient will not obligate or expend funds awarded under this Agreement for "covered telecommunications equipment or services" (as this term is defined and this restriction is imposed under 2 CFR 200.216).

4.13. Domestic Preference for Procurements.

a) Under this Agreement and in accordance with 2 C.F.R. § 200.322, the NFWF Subrecipient shall to the greatest extent practicable, provide a preference for the purchase, acquisition, or use of goods, products or materials produced in the United States (including but not limited to iron, aluminum, steel, cement, and other manufactured products).

b) For purposes of this agreement, the following definitions apply:
   i. "Produced in the United States" means, for iron and steel products, that all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States; and
   ii. "Manufactured products" means items and construction materials composed in whole or in part of non-ferrous metals such as aluminum; plastics and polymer-based products such as polyvinyl chloride pipe; aggregates such as concrete; glass, including optical fiber; and lumber.

SECTION 5 REPRESENTATIONS, CERTIFICATIONS, AND OTHER STATEMENTS RELATING TO FEDERAL FUNDS – FUNDING SOURCE SPECIFIC

NFWF Subrecipient acknowledges that when all or part of this Agreement is funded by a federal award that certain representations, certifications, and other statements relating to the use of such funds or performance of the Project may be necessary. These representations, certifications and other statements are set forth below. Unless otherwise stated in this Agreement, the execution and submission of this Agreement serves as affirmative acknowledgement of an agreement with the below representations, certifications, and other statements. Further, should circumstances of the NFWF Subrecipient change during the performance of this Agreement that would render one of these representations, certifications and/or other statements inaccurate, invalid or incorrect, the NFWF Subrecipient shall promptly notify NFWF of such change in circumstance. Finally, NFWF reserves the right to update and require subsequent acknowledgement of an agreement with new or revised representations, certifications, and other statements at no additional cost under this Agreement.

FC.R581:
Department of Commerce (DOC) Compliance Requirements.

The NFWF Subrecipient must comply with the terms and conditions of a DOC financial assistance award, including applicable provisions of the OMB Uniform Guidance (2 C.F.R. Part 200), and all associated Terms and Conditions set forth in the Department of Commerce Financial Assistance Standard Terms and Conditions Dated November 12, 2020, available at http://www.osec.doc.gov/oam/grants_management/policy/. See 2 C.F.R. § 200.101(b)(1) (Applicability), which describes the applicability of 2 C.F.R. Part 200 to various types of Federal awards and §§200.331-333 (Subrecipient monitoring and management). Additionally, the NFWF Subrecipient must flow these requirements down to all subrecipients and contractors, including lower tier subrecipients.

Field Work.

The NFWF Subrecipient is required to follow recognized best practices for minimizing impacts to the human and natural environment when applicable and will provide for safety in their projects as needed, including addressing the safety of personnel, associates, visitors, and volunteers in their projects. In addition, any use of unoccupied aircraft systems in projects under this award must be in compliance with all applicable Federal Aviation Administration regulations, and any other applicable federal, state, or local regulations.
Required Use of American Iron, Steel, Manufactured Products, and Construction Materials.
If applicable, and pursuant to the Infrastructure Investment and Jobs Act ("IIJA"), Pub.L. No. 117-58, which includes the Build American, Buy American (BABA) Act, Pub. L. No. 117-58, §§ 70901-52 and OMB M-22-11, recipients of an award of Federal financial assistance from the Department of Commerce (DOC) are hereby notified that none of the funds provided under this award may be used for a project for infrastructure unless: (1) all iron and steel used in the project are produced in the United States–this means all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States; (2) all manufactured products used in the project are produced in the United States—this means the manufactured product was manufactured in the United States; and the cost of the components of the manufactured product that are mined, produced, or manufactured in the United States is greater than 55 percent of the

total cost of all components of the manufactured product, unless another standard for determining the minimum amount of domestic content of the manufactured product has been established under applicable law or regulation; and (3) all construction materials are manufactured in the United States—this means that all manufacturing processes for the construction material occurred in the United States. The Buy America preference only applies to articles, materials, and supplies that are consumed in, incorporated into, or affixed to an infrastructure project. As such, it does not apply to tools, equipment, and supplies, such as temporary scaffolding, brought to the construction site and removed at or before the completion of the infrastructure project. Nor does a Buy America preference apply to equipment and furnishings, such as movable chairs, desks, and portable computer equipment, that are used at or within the finished infrastructure project but are not an integral part of the structure or permanently affixed to the infrastructure project. This requirement also applies to subrecipients.

Waivers: When necessary, recipients may apply for, and DOC may grant, a waiver from these requirements. DOC will notify the recipient for information on the process for requesting a waiver from these requirements. When DOC has made a determination that one of the following exceptions applies, the awarding official may waive the application of the domestic content procurement preference in any case in which DOC determines that: a. applying the domestic content procurement preference would be inconsistent with the public interest; b. the types of iron, steel, manufactured products, or construction materials are not produced in the United States in sufficient and reasonably available quantities or of a satisfactory quality; or c. the inclusion of iron, steel, manufactured products, or construction materials produced in the United States will increase the cost of the overall project by more than 25 percent. A request to waive the application of the domestic content procurement preference must be in writing. DOC will provide instructions on the format, contents,
and supporting materials required for any waiver request. Waiver requests are subject to public comment periods of no less than 15 days and must be reviewed by the Made in America Office. There may be instances where an award qualifies, in whole or in part, for an existing waiver described at whitehouse.gov/omb/management/made-in-america.

Definitions: “Construction materials” includes an article, material, or supply—other than an item of primarily iron or steel; a manufactured product; cement and cementitious materials; aggregates such as stone, sand, or gravel; or aggregate binding agents or additives —that is or consists primarily of: non-ferrous metals; plastic and polymer-based products (including polyvinyl chloride, composite building materials, and polymers used in fiber optic cables); glass (including optic glass); lumber; or drywall. “Domestic content procurement preference’’ means all iron and steel used in the project are produced in the United States; the manufactured products used in the project are produced in the United States; or the construction materials used in the project are produced in the United States. “Infrastructure” includes, at a minimum, the structures, facilities, and equipment for, in the United States, roads, highways, and bridges; public transportation; dams, ports, harbors, and other maritime facilities; intercity passenger and freight railroads; freight and intermodal facilities; airports; water systems, including drinking water and wastewater systems; electrical transmission facilities and systems; utilities; broadband infrastructure; and buildings and real property. Infrastructure includes facilities that generate, transport, and distribute energy. ‘‘Project’’ means the construction, alteration, maintenance, or repair of infrastructure in the United States. -- 1 Excludes cement and cementitious materials, aggregates such as stone, sand, or gravel, or aggregate binding agents or additives. 2 IIJA, § 70917(c)(1).

Implementation of Domestic Sourcing Requirements

Prior to initiation of any construction that may arise in this award, the NFWF Subrecipient is required to inform NFWF whether it is using iron, steel, manufactured products, or construction materials as described in "Required Use of American Iron, Steel, Manufactured Products, and Construction Materials" above. In addition, the NFWF Subrecipient is required to inform the NFWF whether those materials are produced or manufactured in the United States, or alternatively, it is requesting one or more waivers, as described in the award condition.

Data Sharing Directive.

The Data and Publication Sharing Directive for NOAA Grants, Cooperative Agreements, and Contracts ensures that environmental data funded extramurally by NOAA are made publicly accessible in a timely fashion (typically within two years of collection), and that final manuscripts of peer-reviewed research papers are deposited with the NOAA Central Library (upon acceptance by the journal, or no later than at time of publication). Therefore, non-Federal entities, or recipients, must make data produced under financial assistance publicly accessible in accordance with the Data Management Plan included with the Proposal, unless the grant program grants a modification or an exemption. The text of the Directive is available at https://nosc.noaa.gov/EDMC/PD.DSP.php.

A) Data Sharing: Environmental data collected or created under this Grant, Cooperative Agreement, or Contract must be made publicly visible and accessible in a timely manner, free of charge or at minimal cost that is no more than the cost of distribution to the user, except where limited by law, regulation, policy, or national security requirements. Data are to be made available in a form that would permit further analysis or reuse: data must be encoded in a machine-readable format, preferably using existing open format standards; data must be sufficiently documented, preferably using open metadata standards, to enable users to independently read and understand the data. The location (internet address) of the data should be included in the final report. Pursuant to NOAA Information Quality Guidelines, data should undergo quality control (QC) and a description of the QC process and results should be referenced in the metadata. Failure to perform quality control does not constitute an excuse not to share data. Data without QC are considered “experimental products” and their dissemination must be accompanied by explicit limitations on their quality or by an indicated degree of uncertainty.

B) Timeliness: Data accessibility must occur no later than publication of a peer-reviewed article based on the data, or two years after the data are collected and verified, or two years after the original end date of the grant (not including any extensions or follow-on funding), whichever is soonest, unless a delay has been authorized by the NOAA funding program.

C) Disclaimer: Data produced under this award and made available to the public must be accompanied by the following statement: "These data and related items of information have not been formally disseminated by NOAA, and do not represent any agency determination, view, or policy."

D) Failure to Share Data: Failing or delaying to make environmental data accessible in accordance with the submitted Data Management Plan, unless authorized by the NOAA Program, may lead to enforcement actions, and will be considered by NOAA when making future award decisions. Funding recipients are responsible for ensuring these conditions are also met by sub-recipients and subcontractors.

E) Funding acknowledgement: Federal funding sources shall be identified in all scholarly publications. An Acknowledgements section shall be included in the body of the publication stating the relevant Grant Programs and Award Numbers. In addition, funding sources shall be reported during the publication submission process using the FundRef mechanism (http://www.crossref.org/fundref/) if supported by the Publisher.

F) Manuscript submission: The final pre-publication manuscripts of scholarly publications produced with NOAA funding shall be submitted to the NOAA Institutional Repository at http://library.noaa.gov/repository after acceptance, and no later than upon publication, of the paper by a journal. NOAA will produce a publicly-visible catalog entry directing users to the published version of the article. After an embargo period of one year after publication, NOAA shall make the manuscript itself publicly visible, free of charge, while continuing to direct users to the published version of record.

G) Data Citation: Publications based on data, and new products derived from source data, must cite the data used according to the conventions of the Publisher, using unambiguous labels such as Digital Object Identifiers (DOIs). All data and derived products that are used to support the conclusions of a peer-reviewed publication must be made available in a form that permits verification and reproducibility of the results.

Scientific Integrity.

a) Maintaining Integrity. The NFWF Subrecipient shall maintain the scientific integrity of research performed pursuant to this grant or financial assistance award including the prevention, detection, and remediation of any allegations regarding the violation of scientific integrity or scientific and research misconduct, and the conduct of inquiries, investigations, and adjudications of allegations of violations of scientific integrity or scientific and research misconduct. All the requirements of this provision flow down to subrecipients.

b) Peer Review. The peer review of the results of scientific activities under a NOAA grant, financial assistance award, or cooperative agreement shall be accomplished to ensure consistency with NOAA standards on quality, relevance, scientific integrity, reproducibility, transparency, and performance. NOAA will ensure that peer review of "influential scientific information" or "highly influential scientific assessments" is conducted in accordance with the Office of Management and Budget (OMB) Final Information Quality Bulletin for Peer Review and NOAA policies on peer review, such as the Information Quality Guidelines.

c) In performing or presenting the results of scientific activities under the NOAA grant, financial assistance award, or cooperative agreement and in responding to allegations regarding the violation of scientific integrity or scientific and research misconduct, the NFWF Subrecipient and all subrecipients shall comply with the provisions herein and NOAA Administrative Order (NAO) 202-735D, Scientific Integrity, and its Procedural Handbook, including any amendments thereto. That Order can be found at https://nrc.noaa.gov/ScientificIntegrityCommons.aspx.

d) Primary Responsibility. The NFWF Subrecipient shall have the primary responsibility to prevent, detect, and investigate allegations of a violation of scientific integrity or scientific and research misconduct. Unless otherwise instructed by the grants officer, the recipient shall promptly conduct an initial inquiry into any allegation of such misconduct and may rely on its internal policies and procedures, as appropriate, to do so.

e) By executing this grant, financial assistance award, or cooperative agreement the NFWF Subrecipient provides its assurance that it has established an administrative process for performing an inquiry, investigating, and reporting allegations of a violation of scientific integrity or scientific and research misconduct; and that it will comply with its own administrative process for performing an inquiry, investigation, and reporting of such misconduct.

f) The NFWF Subrecipient shall insert this provision in all subawards at all tiers under this grant, financial assistance award, or cooperative agreement.

SECTION 6 OTHER REPRESENTATIONS, CERTIFICATIONS, STATEMENTS AND CLAUSES

NFWF Subrecipient acknowledges that all or part of this Agreement may be funded by a non-federal source that requires certain representations, certifications, and other statements relating to the use of such funds or performance of the Project. These representations, certifications and other statements are set forth below. Unless otherwise stated in this Agreement, the execution and submission of this Agreement serves as affirmative acknowledgement of an agreement with the below representations, certifications, and other statements. Further, should circumstances of the NFWF Subrecipient change during the performance of this Agreement that would render one of these representations, certifications and/or other statements inaccurate, invalid or incorrect, the NFWF Subrecipient shall promptly notify NFWF of such change in circumstance. Finally, NFWF reserves the right to update and require subsequent acknowledgement of an agreement with new or revised representations, certifications, and other statements at no additional cost under this Agreement.

None.

Ottawa County

Fiscal Services Department – Purchasing Division
12220 Fillmore Street - Room 331 - West Olive, Michigan 49460

Phone 616-738-4855
E-mail: purchasing.rfp@miottawa.org

ADDENDUM 1 - RFP 24-055 COASTAL RESILIENCE FEASIBILITY AND PRELIMINARY ENGINEERING SERVICES

MARCH 25, 2024

All Vendors:

The purpose of this addendum is to modify and/or clarify the above project. Information published here becomes part of the solicitation and is official and final. Vendors are to acknowledge the receipt of all addenda in their submission.

ITEM 1: REVISION:

Cover Page: "*RFP Deadline: By 2:00PM (ET) Tuesday, April 2, 2024,*"
and every reference to this due date within all solicitation documents.

Revised to: "*RFP Deadline: By 2:00PM (ET) Tuesday, April 9, 2024.*"

ITEM 2: VENDOR QUESTIONS RECEIVED AND ANSWERED:

Q1. Will the County be providing topographic surveys for the properties, or will that be part of our scope of services?

A1. We will provide 1' contours from 2018 GIS data but additional topo may be required.

Q2. Regarding Ottawa Sands, what level of detail is desired for groundwater analysis? Is it simply gathering survey data of the water level of Grand River, Lake Michigan, and the wetland? Or would it be a full groundwater modeling?

A2. Analysis related to the work currently being completed at the site will be shared with the chosen consultant. However, additional work as required to assure that future wetlands are successful should be included. It should be noted that the inland lake is several feet above the river and Lake Michigan water levels.

Q3. Regarding Ottawa Sands, have any topographic surveys been conducted of the property or of the mine lagoon area?

A3. There is limited additional topo (beyond the 2018 GIS data) that has been completed related to the recent development projects, but not in the lagoon area.

Q4. Regarding Harbor Island, what are the current findings of contamination on the site? Is the entire island above contamination thresholds? Is capping required for these contamination areas?

A4. That is still to be determined by the City of Grand Haven's consultant HDR. That is why the Request for Proposal includes language stating that some engineering work would be dependent on the feasibility of working in or around potential contaminated areas.

Q5. Regarding Harbor Island, have any hydraulic flow studies/models been conducted?

A5. No

Q6. Regarding Harbor Island, have any mussel surveys been conducted?

A6. Not to our knowledge.

Q7. Regarding Harbor Island, have any topographic surveys been conducted?

A7. No

Q8. Would the County be amenable to an extension to the RFP deadline of April 2, 2024?

A8. Yes. We can extend it to April 9. See Revisions.

Q9. Can the County offer clarity regarding the budgeted value available to award the selected vendor for the scope of work and objectives? Is the potential award the sum of the total federal funds non-federal match requirement detailed in Exhibit 2?

A9. The project budget is the total amount of federal funds - $275,000.

Q10. Does the County have any recent geotechnical investigation data for any of the proposed shoreline stabilization areas?

A10. No

Q11. Does the County have any recent topographic or bathymetric data for any of the proposed restoration areas?

A11. Only the 2018 1' topo from Ottawa County GIS

Q12. Could the County confirm the level of design required for each of the structural components (promenade, day docks, etc.)? Are these to the same 60% level of design and permit-ready condition?

A12. 60% design and permit-ready condition is the minimum desired. However, pricing for full design is also desired.

Q13. Considering the following excerpts from the Scope of Work in the RFP document:

"Recommendations must complement the proposed master plan recreational elements including:

- *Courtesy day docks*
- *Renovated "breasting dolphins"*
- *Upland terracing and Greenway Plaza*
- *Riverfront promenade*
- *Riverfront event facility and associated utilities"*

And

"Based on the recommendations above, design shoreline nature-based solutions and, where applicable, design directly related recreational amenities (e.g. day docks, renovation dolphins, upland terracing, riverfront promenade, and Sag boardwalk), and site planning for indirect elements (Greenway Plaza and event facility). This work should include conceptual design, design development including preliminary grading and planting plans suitable for submission to permitting agencies."

Can the County clarify if the awarded vendor is responsible for designing the recreational amenities, so simply accounting for them in the design of the overall shoreline stabilization efforts?

A13. The vendor is expected to be responsible for the design of the directly related recreational elements. The indirectly related developments would need to be simply accounted for within the overall site planning.

ATTACHMENT A – COVER SHEET FOR PROPOSAL

Proposals must include this cover sheet (or this sheet reproduced on company letterhead) as PAGE 1 of the response. Vendors may complete all required attachments as a stand-alone response (fillable form .pdf document, written or typed).

☐ an individual, ☑ a corporation (please mark appropriate box), duly organized under the laws of the State of Michigan.

The undersigned, having carefully read and considered the services as described within the RFP, does hereby offer to perform such services on behalf of the County in the manner described and subject to the terms and conditions set forth in the attached proposal, including, by reference here, the County's RFP document.

NO CONFLICT(S) OF INTEREST: By submission of a proposal, vendor agrees that at the time of submittal, he/she: (1) has no interest (including financial benefit, commission, finder's fee, or any other remuneration) and shall not acquire any interest, either direct or indirect, that would conflict in any manner or degree with the performance of the vendor's services, or (2) benefit from an award resulting in a "Conflict of Interest," including holding or retaining membership or employment on a board, elected office, department, division or bureau, or committee sanctioned by and/or governed by the County.

MICHIGAN ECONOMIC SANCTIONS ACT, 2012 ("IRAN-LINKED BUSINESS"): By submission of a proposal, vendor certifies, under civil penalty for false certification, that it is fully eligible to do so under law and that it is not an "Iran linked business," as defined in the Michigan Economic Sanctions Act, 2012 P.A. 517.

DEBARMENT AND SUSPENSION: By submission of a proposal, the undersigned certifies to the best of his/her knowledge and belief, that the corporation, LLC, partnership, or sole proprietor, and/or its' principals, owners, officers, shareholders, key employees, directors and member partners: (1) are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency; (2) have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; (3) are not presently indicted for or otherwise criminally charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated above; and, (4) have not within a three-year period preceding this proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

CERTIFICATION OF INSURANCE AND INDEMNITY REQUIREMENTS: By submission of a proposal, the undersigned certifies and represents an understanding of the County's Insurance and Indemnification requirements as defined within Ottawa County Terms and Conditions. Potential vendors must understand and agree that fiscal responsibility for claims or damages to any person or to companies and agents shall rest with the vendor.

ATTACHMENT A – (CONTINUED)

The vendor must affect and maintain any and all insurance coverage, including, but not limited to, Workers' Compensation, Employers' Liability and General, Contractual and Professional Liability to support such financial obligations. A certificate of insurance detailing insurance coverages may be requested. The certificate must indicate that insurers will provide to the County written notice thirty (30) days prior to terminating any insurance policy.

The undersigned affirms that he/she is duly authorized to execute this proposal, that this company, corporation, firm, partnership or individual has not prepared this proposal in collusion with any other vendor and that the contents of this proposal as to prices, terms or conditions have not been communicated by the undersigned, nor by any employee or agent, to any competitor, and will not be, prior to the award and the vendor has full authority to execute any resulting contract awarded as the result of, or on the basis of the proposal.

Proposals must be signed by an official authorized to bind the provider to its provisions for at least a period of 90 days.

Company Name: GEI Consultants of Michigan, P.C.

Contact Name and Title: Brian Majka, Senior Restoration Ecologist

Mailing Address: 5225 Edgewater Drive, Allendale, MI 49401

Phone Number: 616.384.2710 | cell: 616.843.3635 Email Address: bmajka@geiconsultants.com

Website: www.geiconsultants.com

Federal Employer Identification Number: 46-4340136

The submission of a proposal hereunder shall be considered evidence that the vendor is satisfied with respect to the conditions to be encountered and the character, quantity, and quality of the work to be performed.

BY: _____ 4/8/2024

(Signature of Authorized Representative) Date

Jamie S. Matus, Senior Vice President/Central Region Growth Leader

(Printed Name and Title of Authorized Representative)

GEI acknowledges receipt of Addendum #1 dated March 25, 2024.

Ottawa County

RFP 24-055 Coastal Resilience Feasibility and Preliminary Engineering Services

ATTACHMENT B – VENDOR REFERENCES

Provide (3) three references from projects or services provided that are similar in size and/or scope, preferably from other governmental/municipal, and/or other community-based organizations. By providing the references below, Vendor authorizes any person contacted to give the County any and all information concerning work experience or performance and releases all parties from all liability for any damage that may result from furnishing the same to the County. Please do NOT include Ottawa County as a reference.

Vendor Reference 1			
Customer Name:	Oceana County Parks and Recreation	Contact Person:	Garry McKeen, Chairperson
Contact Number:	312.401.4939	Contact Email:	gamckeen1@gmail.com
Project Description:	GEI worked with the West Michigan Shoreline Regional Development Commission, Conservation Resource Alliance, and Oceana County to develop plans to remove the Marshville Dam and restore 2,000 linear feet of Stony Creek. See Project Sheet for additional details.		

Vendor Reference 2			
Customer Name:	West Michigan Shoreline Regional Development Commission	Contact Person:	Fallon Chabala, Environmental Program Manager
Contact Number:	231.722. 7878 ext. 130	Contact Email:	Fchabala@wmsrdc.org
Project Description:	GEI has provided services to the West Michigan Shoreline Regional Development Commission since 2009 on multiple projects. Services included, but are not limited to, engineering design, permitting, restoration, construction management, stakeholder coordination and grant administration. See Muskegon Lake Area of Concern Ecological Restoration, Stony Creek Dam Removal and Creek Restoration, Muskegon Lake Nature Preserve Fish and Wildlife Habitat Restoration Project Sheets for additional Details.		

Vendor Reference 3			
Customer Name:	Edsel and Eleanor Ford House Coastal Wetland and Shoreline Restoration	Contact Person:	Kevin Drotos, Landscape and Natural Areas Manager, Project Manager
Contact Number:	313.453.2044	Contact Email:	kdrotos@fordhouse.org
Project Description:	GEI worked with the Edsel and Eleanore Ford House to develop plans for shoreline restoration, wetland restoration, and visitor improvements on the estate of Edsel and Eleanore Ford on Lake St. Clair. See Project Sheet for additional details.		

ATTACHMENT C - PROPOSAL RESPONSE

To be submitted as a stand-alone document, the proposal response should be clear and concise narrative, providing detailed information and responses to all questions listed below. See attached GEI Proposal Response

1. EXPERIENCE AND QUALIFICATIONS - Describe the organization, date founded, and ownership of your firm or groups of firms. Provide an overview of your team's qualifications and relevant experience. How long has your organization(s) been providing services regarding coastal resilience, green infrastructure, and/or designing recreational facilities in the floodplain.
   See attached GEI Proposal Response
2. PAST PROJECTS – Provide multiple examples of past projects that are closely related to the project described in this RFP.
   See attached GEI Proposal Response
3. APPROACH AND METHODOLOGY – Describe the approach your organization will take to conduct assessments and develop adaptation strategies. How will your organization use scientific data and stakeholder input in your process?
   See attached GEI Proposal Response
4. PROJECT MANAGEMENT – Outline a proposed timeline and project schedule for completing the project. Describe the different reports and deliverables that can be expected for each stage in the project.
   See attached GEI Proposal Response
5. COSTS AND FEES PROPOSED – Provide pricing breakdowns for each of the objectives outlined in this RFP and label alternate pricing as it is defined in the RFP document. Please give a not-to-exceed cost or provide details on costs that could be variable.
   See attached GEI Proposal Response
6. OTHER INFORMATION – Include any additional information that may add value to your organization for this project.
   See attached GEI Proposal Response

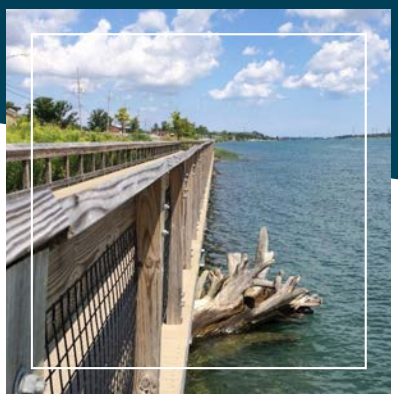
GEI acknowledges receipt of Addendum #1 dated March 25, 2024.

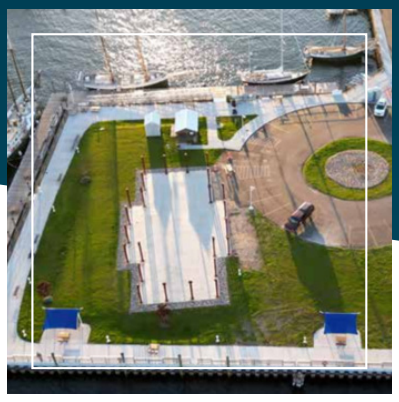
GEI Consultants

Coastal Resilience Feasibility and Preliminary Engineering Services

Request for Proposal 24-055

Proposal Prepared for: County of Ottawa
April 9, 2024





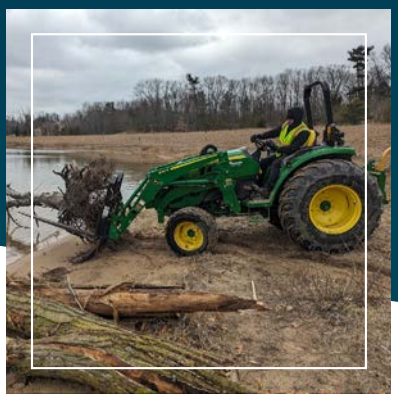


TABLE OF CONTENTS

GEI Consultants

Geotechnical
Environmental
Water Resources

April 9, 2024

Via email

Steve Holden, Procurement Specialist
Ottawa County
12220 Fillmore Street
West Olive, MI49460

RE: RFP 24-055 – Coastal Resilience Feasibility and Preliminary Engineering Services

Dear Mr. Holden and Review Team:

GEI Consultants of Michigan, P.C. (GEI) is pleased to submit our team's qualifications and proposal for the above mentioned project. If awarded this project, GEI will partner with Edgewater Resources and Rowe Professional Services to implement the work specified in the request for proposal. We believe the GEI team is uniquely qualified for this project, due to our combined geography and Great Lakes-wide directly relevant experience. Specifically:

- This project will be led out of GEI's Allendale office, located in Ottawa County.
- GEI's project manager, Brian Majka, has led complex coastal resilience and ecological restoration projects throughout the Great Lakes, as well as over 30 projects within the Lower Grand River Coastal Corridor. He lives in the Lower Grand River Coastal Corridor and is an active member of the Grand Haven community.
- GEI is actively working on or has completed work at Ottawa Sands County Park, Harbor Island, and Kitchel-Lindquist Dunes Preserve.
- GEI is a recognized leader in ecological design and shoreline restoration throughout the Great Lakes, having supported the states of Michigan, Ohio, and New York with the development of Great Lakes Coastal Resiliency and Adaptation certification and training programs in addition to our project experience.
- Edgewater Resources has extensive experience in the design of waterfront development and coastal resiliency projects throughout the Great Lakes.
- Both GEI and Edgewater Resources have a past history of successful projects with Ottawa County Parks.

GEI Consultants of Michigan, P.C.
5225 Edgewater Dr, Allendale, MI 49401
616.384.2710

Geotechnical
Environmental
Water Resources

As an integrated team of ecologists, designers, and engineers, we have dedicated our careers to the protection and restoration of natural resources, while also connecting people to nature. We are especially excited for this opportunity because it would allow us to contribute to landscape-scale restoration and community resilience projects in our own community. Through both personal and professional involvement, the GEI team has been contributing toward the ecological and community goals of the coastal corridor for over 20 years, and we would be honored to be selected for this project.

GEI looks forward to being able to provide professional services to Ottawa County. Please feel free to contact Brian Majka at 616.843.3635 or bmajka@geiconsultants.com should you need any additional information or have questions regarding our proposal.

Sincerely,

GEI CONSULTANTS OF MICHIGAN, P.C.

Jamie Matus, CPG
Senior Vice President

Brian Majka, CERP
Senior Restoration Ecologist

PROJECT UNDERSTANDING

Ottawa Sands County Park and Harbor Island

West Michigan's drowned river mouths, or lacustrine estuaries, are critical ecological and socioeconomic resources locally, regionally, and globally. These areas, such as the Lower Grand River, Mona Lake, Muskegon Lake, Lake Macatawa, and White Lake, occupy relatively small geographic areas but provide value that is disproportionate to their size due to the critical functions they perform. From an ecological perspective, these lacustrine estuaries provide critical habitat for birds, fish, herpetofauna, mammals, mollusks, and insects that require clean water, native plants, and connectivity to Lake Michigan throughout their life cycle. In fact, nearly every species of fish in the Great Lakes use coastal wetlands for habitat at some time during their life cycle (Albert 2003). Socioeconomically, these areas are important locations for tourism, industry, shipping, recreation, and overall quality of life for visitors and local residents.

Although these drowned river mouths provide numerous benefits, they have also been severely impacted for the same reasons that make them special. Their unique location in the landscape has often led to overuse, overdevelopment, and industrialization. At the same time, they lie at the downstream end of some of Michigan's longest rivers—and the watersheds associated with these rivers contribute excess nutrients, pollution, and sediment that disrupt the natural ecological processes. Complicating measures further, the coastal wetlands in these areas are heavily influenced by fluctuating Great Lakes water levels, making the wetlands dynamic and ever changing. The Lower Grand River, located near the confluence of the Grand River and Lake Michigan, is heavily influenced by all of these factors.

The National Audubon Society has designated the Grand River Coastal Corridor as a globally significant Important Bird Area (IBI), indicating that the corridor should be prioritized for landscape-scale conservation and restoration. This geographic area spans from Holland to Muskegon, with the City of Grand Haven and the Grand River outlet located in the center. A popular tourist destination, much of the Lower Grand River has been developed by the local communities for both tourism and industry. However, there remains critical habitat that must be protected and restored to ensure the local ecology can thrive for years to come while providing places to recreate passively and actively. Among these parcels are Ottawa Sands County Park (owned by the Ottawa County Parks and Recreation Commission), Harbor Island (owned by the City of Grand Haven), and Kitchel-Lindquist Hartger Dunes Preserve (owned by the City of Ferrysburg). These properties combine to make up over 500 acres of dunes, Great Lakes coastal wetlands, and riverine habitat. Recognizing the importance of the protection and restoration of this critical habitat, the Ottawa County Parks and Recreation Commission (OCPR) has teamed with the Cities of Grand Haven and Ferrysburg to obtain a National Fish and Wildlife Foundation grant to assess and design restoration measures at each of the properties.

Ottawa Sands County Park, Harbor Island, and Kitchel-Lindquist Hartger Dunes Preserve are publicly accessible and beloved public properties. Each contain trails and/or amenities that are heavily used by the community for both passive and active recreation. Therefore, any ecological restoration measures implemented at the sites must be complementary to the public use. Restoration can only be considered successful if it balances the physical, chemical, ecological, and anthropogenic factors that affect each site.

Previous public engagement efforts have already helped establish a vision for Ottawa Sands and Harbor Island as environmentally sustainable parks for improved habitat and climate resilience. In all our projects, we aim to meet the specific needs of each unique community, and we understand that Ottawa County is a fast-growing county with many younger individuals and families who want unique recreation opportunities. We are responsive to the fact that these sites have the potential to serve as vibrant recreational hubs, offering multiple land and water-based trail connections. Still, we would also aim to accentuate the quiet, passive aspects of the site. We understand that simple pleasures such as walking, birdwatching, and waterfront viewing are popular proposed recreational uses. Through various walking paths, waterfront promenades.

Harbor Island

If awarded this work, GEI Consultants of Michigan, P.C. (GEI) will team with Edgewater Resources (Edgewater) and Rowe Professional Services to complete the work. Our combined team brings extensive experience in ecological design, ecological engineering, coastal engineering, civil engineering, landscape architecture, hydrology, waterfront development, and professional surveying locally, regionally, and nationally. Our firms have experience teaming on past and current projects, and have developed a professional working relationship that utilizes each of our strengths and expertise to design and execute waterfront development and ecological design projects throughout the Great Lakes.

GEI

GEI provides engineering and scientific consulting services to public and private clients throughout the country. GEI's lower Michigan offices in Allendale, Lansing, Plymouth, and Traverse City possess an integrated team of biologists, ecologists, landscape architects, and engineers that have designed and implemented some of the largest and most complex ecological restoration projects in the state. The GEI team has been designing and implementing coastal resiliency, natural shoreline, green infrastructure, and recreational improvement projects since the early 2000's.

If awarded this work, the project will be led by GEI's Allendale office. Located in Ottawa County, the GEI team is uniquely qualified for this project due to our experience across the Great Lakes basin, in the Grand River Coastal Corridor, and at each of the properties included in this request for proposal (RFP). Specifically, GEI's lower Michigan team has led the following efforts in or near the Grand River Coastal Corridor:

- Design, permitting, oversight, and implementation of over 30 restoration projects around Muskegon Lake, leading to nearly 5 miles of shoreline restoration and over 150 acres of wetland restoration. Projects have been implemented at a variety of public and private parcels, including major public parks such as Heritage Landing and Grand Trunk
- Mapping and treatment of invasive species at Harbor Island and within the Lower Grand River corridor
- Design and implementation of the restoration of nearly one mile of shoreline and 6 acres of interdunal wetlands at Ottawa Sands County Park [OSCP, (currently under construction)]
- Design and implementation of Grand River shoreline restoration at Kitchel-Lindquist Hartger Dunes Preserve (anticipated construction in May, 2024)

GEI NATURAL RESOURCES MANAGEMENT SERVICES

Avian surveys

Aquatic ecology and fisheries management

Bat habitat surveys

Bioengineering materials and shoreline stabilization

Biological inventories and botanical surveys

Brownfield redevelopment planning

Community preservation planning and outreach

Construction and construction oversight

Ecological and human risk assessments

Ecological restoration and mitigation

Endangered and threatened species surveys and monitoring

GIS design, modeling, and database management

Herpetofauna surveys

In-house aquatic toxicology laboratory

Invasive species control

Macroinvertebrate identification

Reservoir limnology

Wetland determinations and delineations

Wildlife habitat restoration and enhancement

GEI Consultants of Michigan, P.C. was formed in 2013 and is an affiliated company of GEI Consultants, Inc. GEI Consultants, Inc. was founded in 1970 and is now owned by Global Infrastructure Solutions, Inc.

GEI WATER RESOURCES MANAGEMENT AND ENGINEERING SERVICES

Alternative stormwater solutions and green infrastructure
Comprehensive groundwater services
Construction and implementation
Dam removal
Hydrologic/Hydraulic studies
Stream and riparian assessment
Toxic substances and Areas of Concern
Water conveyance (pipelines, pumps)
Water quality assessment and compliance
Water rights, water banking, and permitting
Water supply planning and permitting
Watershed and stormwater management
Wetland, lake, and stream design and restoration

GEI PERMITTING & COMPLIANCE SERVICES

EGLE Aquatic Nuisance Control permitting
Clean Air Act compliance
Clean Water Act Sections 401 and 404 compliance
Facility siting, permitting, and licensing
Federal and state endangered species compliance
Michigan Natural Resources and Environmental Protection Act compliance
National Environmental Protection Act and state-level environmental impact assessment
Product safety, assessment, and regulatory support
Regulatory impact analysis
Resource Conservation and Recovery Act compliance
Toxic Substances Control Act compliance

- Design of approximately 150 acres of coastal wetland restoration at the Mona Lake celery flats in Norton Shores for the Muskegon County Water Resources Commissioner (design currently underway with construction anticipated in 2026)

While the GEI team brings a local presence and experience to the project, our team is recognized as a leader in Michigan and throughout the Great Lakes in ecological design. Our integrated team of ecologists, engineers, and landscape architects have participated in or led the following efforts:

- GEI is a founding member of the Michigan Natural Shoreline Partnership, where we helped develop and teach the Certified Natural Shoreline Professional training program
- GEI is currently working under a grant with the Michigan Department of Environment, Great Lakes, and Energy (EGLE) Coastal Management Program as a technical advisor to support the state in developing the state Coastal Adaptation Toolkit. We are the only consultant serving in this capacity
- GEI developed a Decision Support Tool for the use of natural and nature-based features for the States of Michigan and New York
- GEI developed the Ohio Department of Natural Resources Coastal Management Program Natural and Nature-Based Features Training Program, which recently won the Ohio American Council of Engineering Companies (ACEC) “Outstanding Small Project” award
- GEI is currently developing plans for the shoreline restoration, wetland restoration, native landscaping, and public use amenities at the Edsel and Eleanor Ford House on Lake St. Clair
- GEI developed plans for public recreational amenities and 2,000 linear feet of nature-based shoreline for the City of Marysville on the St. Clair River, one of the first large-scale natural shorelines that has been installed on a major river in Michigan.

“The GEI team have been instrumental in moving the Marshville Dam Removal Project forward. They have corralled large group of stakeholders, parlaying each of their unique expertise into a unified restoration plan that will maximize the ecological benefits for Stony Creek, Marshville Dam County Park, and the surrounding wetlands.” – DJ Shook, Conservation Resource Alliance

Subconsultants

Edgewater Resources

Edgewater's team of coastal engineers, civil engineers, and landscape architects brings extensive waterfront recreation planning expertise to the project team. Our global experience ranges from marine, lakefront, and riverfront projects in the Caribbean and South America to waterfront communities across the Great Lakes, some directly in Ottawa County, such as the Historic Ottawa Beach Marina. All our projects have the common the goal of connecting communities to their waterfronts through improved infrastructure and recreation opportunities.

Edgewater has designed and built many waterfront projects to accommodate uses such as transient docking, fishing, water taxi use, and kayak launches that serve as water trail stops. Edgewater's ultimate role on the consultant team would be to develop preliminary engineering drawings and cost estimation services for the recreation elements of the project, including the courtesy day docks and breasting dolphins, riverfront boardwalk promenades, and overlooks.

Rowe Professional Services

Since 1962, ROWE has grown to be a leading professional consulting firm, driving infrastructure and development projects for our public, private, governmental, tribal, and not-for-profit clients. With our resources, broad expertise, and client-centered philosophy, ROWE has built a reputation that is unsurpassed by our toughest competitors. Our service specialties include civil engineering, surveying, aerial photography and mapping, landscape architecture, planning, and land development. Each of these services is delivered to you by a team of licensed and certified professionals from our offices throughout Michigan.

Project Team

GEI Senior Ecologist Brian Majka, CERP, will serve as the project manager for the GEI team. Brian lives just outside the City of Grand Haven in Robinson Township and is a regular recreational user of the lower Grand River. He also brings more than 20 years of experience in ecological design and is a recognized leader in wetland restoration and natural and nature-based features design throughout the Great Lakes.

Figure 1 depicts our team's organizational chart. Team member resumes are provided in **Appendix A.**

Our selected Project Manager Brian Majka, CERP, is a Senior Restoration Ecologist at GEI and local to Ottawa County.

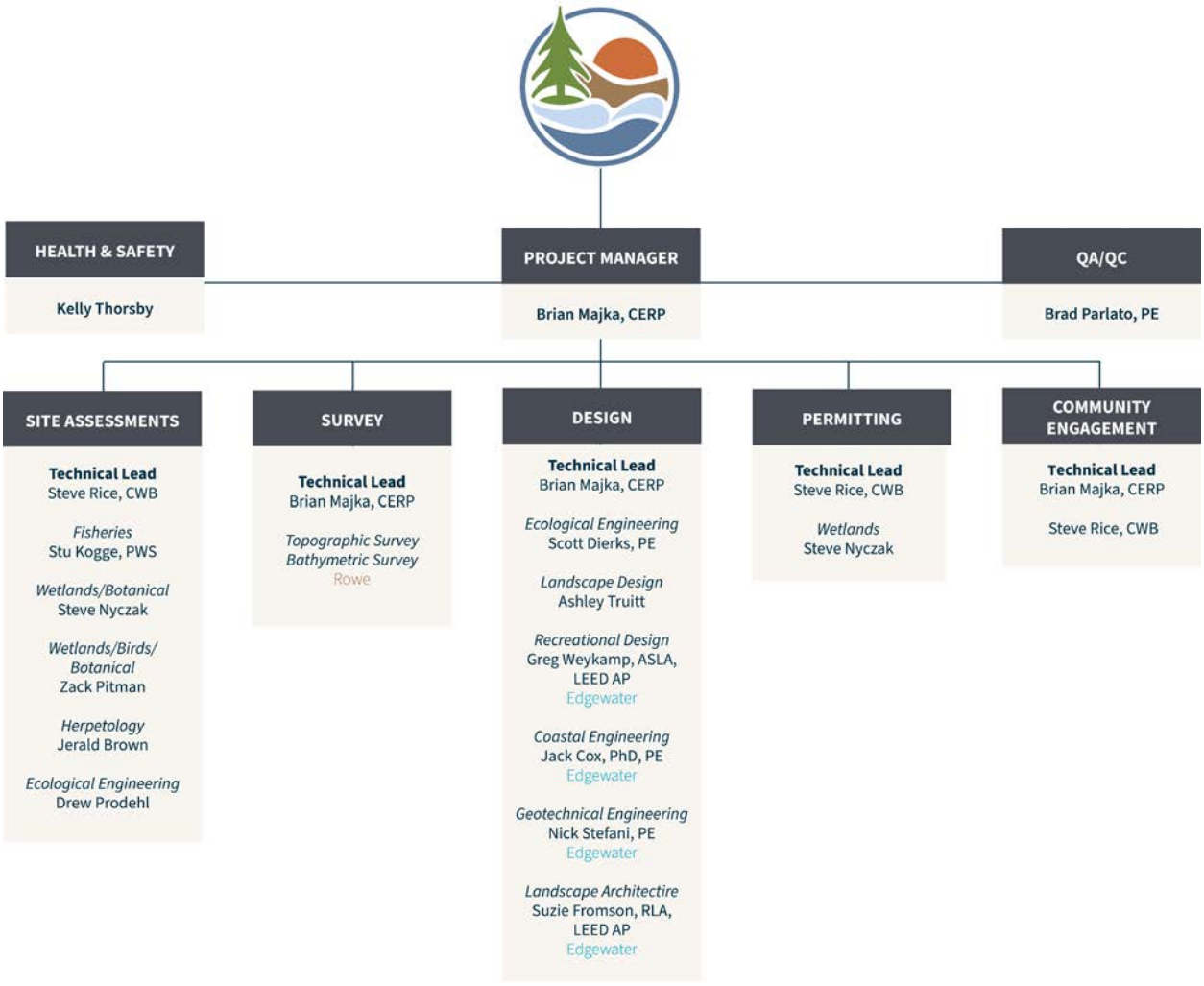


Figure 1. Project Team Organizational Chart

PAST PROJECTS

We have provided details descriptions of relevant past project experience for our team in **Appendix B,** including:

GEI

- Ottawa Sands County Park for Ottawa County Parks and Recreation Commission (OCPRC)
- Muskegon Lake Area of Concern Ecological Restoration for West Michigan Shoreline Regional Development Commission (WMSRDC)
- Edsel and Eleanore Ford House Shoreline and Wetland Restoration for Edsel and Eleanor Ford House
- Kitchel-Lindquist Hartger Dunes Preserve for the City of Ferrysburg
- Stony Creek Dam Removal and Creek Restoration for WMSRDC
- St. Clair River Shoreline Restorationfor the City of Marysville
- Muskegon Lake Nature Preserve Fish and Wildlife Habitat Restoration for WMSRDC
- Lower Grand River Assessment and Phragmites Controlfor OCPRC and Ottawa Conservation District
- Old Woman Creek Natural Shoreline Protection Design and Training Materials for KS Associates, Inc. and Ohio DNR
- Riverside Park for OCPRC
- Red Cedar River Bank Stabilization and Floodplain Naturalization for Michigan State University

Edgewater Resources

- Historic Ottawa Beach Marina for OCPRC
- Renovation of a Historic Waterfront for Discovery Center Great Lakes
- Blossom Heath Park and Pier for City of St. Clair Shores
- Nelson Park Master Planfor Decatur Park District

Ottawa Sands – Wetlands and Shoreline Enhancements, Investigations, and Designs

OSCP is a relatively new 345-acre park, owned and managed by the Ottawa County Parks and Recreation Commission (OCPR). Located near the mouth of the Grand River in Ferrysburg, the park provides a unique opportunity to protect critical habitat while also providing both passive and active recreational opportunities. In 2020, OCPR published *miOttawa Sands, A Collective Community Visioning Plan* (OCPR 2020) to guide the development of recreational amenities and habitat improvements at the park (hereafter referred to as the "master plan"), This plan included numerous elements, guided by community input, for improvements throughout the park.

The RFP calls for site assessments and development of plans to restore wetlands and stabilize the Grand River shoreline at the park, while including recreational amenities as described in the master plan. When done properly, the habitat creation and restoration can be integrated with the recreational improvements at the park to connect people to nature while protecting, creating, and restoring critical habitat. Passive recreation use would be balanced with more active use opportunities such as motorized and non-motorized boating and designated play areas. Offering extensive site connections that can be enjoyed on foot, by bicycle, or by boat addresses the growing cultural movement to enjoy spaces without needing to get in a car. This site has tremendous opportunity as a trailhead with its connections to regional land-based trails, such as the proposed Coastal Greenway Trail and Grand River and Idema Explorers Greenway Trail, and also to water-based trails, such as the Grand River Heritage Water Trail and the Lake Michigan Water Trail West.

Wetland construction by GEI at OSCP

WETLANDS ENHANCEMENTS

Prior to sand mining, much of OSCP would historically have been a mosaic of fore dune and back dune. In fact, much of the park is actually classified as *critical dune area* by the Michigan Department of EGLE even though it is highly disturbed and there is a lake present. While there is a natural tendency to consider disturbed areas as highly degraded, site disturbances can sometimes create or reveal unique habitats that provide food, water, and cover for flora and fauna that would not otherwise be present. This is the case at OSCP. The historic mining operations created an ~80-acre spring-fed lake containing a wetland fringe that is now home to protected species such as Fowler's toad (*Anaxyrus fowleri*) as well as a wide array of birds, snakes, frogs, toads, insects, and mammals. Although relatively small, this wetland fringe mimics interdunal wetlands and provides habitat that is rare within the Grand River Coastal Corridor due to the extensive development in the area.

The spring-fed lake drives hydrology at the site that would not otherwise be present, which in turn creates opportunities for wetland creation and restoration throughout the site. Beginning in 2022, GEI worked with OCPR to develop plans to create interdunal wetlands and a littoral shelf at OSCP. This effort included mapping of vegetation and groundwater at both OSCP and at the adjacent Kitchel-Lindquist Hartger Dunes Preserve, which acted as a reference ecosystem for the design of created and restored wetlands. The final design plans for OSCP included development of a 4.3-acre interdunal wetland, 2-acre wetland cove, and nearly a mile of shoreline restoration. The wetland restoration is currently under construction and is targeted for completion in June 2024.

These wetlands are being created and restored in support of the master plan. This current RFP calls for creation and restoration of even more of these interdunal (or, as labeled in the master plan, "dunal wet prairie") wetlands, as defined in the master plan and described in the RFP. As noted, interdunal wetlands have become somewhat rare in the coastal corridor, as development has caused the loss of them through construction and alterations in hydrology. The creation of up to an additional ~12-14 acres of interdunal wetlands could have a significant impact to the local ecology, especially considering the relatively small amount of wetlands currently present are already supporting protected species. In addition, the new wetlands could create opportunities for both passive and active recreation by integrating them with trails and other recreational features at the site.

GEI proposes the following scope and approach to assess existing conditions and develop plans for restoration of up to an additional 12-14 acres of wetlands at OSCP.

Natural Features Assessments/Baseline Metrics

Although a relatively young park, the natural features at OSCP have already been extensively surveyed. As discussed in the master plan, natural features inventories have been completed to support planning efforts for the park. These natural feature inventories include a floristic inventory, wetland mapping, and herpetofauna survey. It is also understood that the areas proposed for wetland restoration are primarily upland disturbed areas that were planted with native warm season grasses following mine activities. As a part of this scope of work, GEI proposes to review that data and review additional publicly available information on biota and habitats not covered within those documents, that are important to incorporate into the final design of the restoration work. Existing information will then be supplemented with additional field surveys to capture new or changed site conditions as a result of park improvements and restoration efforts that have occurred since the original surveys. We anticipate completing the additional natural features assessments in Spring 2025. Because a significant portion of the wetland restoration and shoreline improvements are being constructed in Spring 2024, we believe that the site should be given at least one full growing season for the vegetation to establish before it is monitored for wildlife use. We anticipate completing the new surveys in areas where habitat restoration either has occurred or is proposed through future work at the park.

Review of Existing Information

As noted, there has already been extensive surveys completed at OSCP. GEI will begin by reviewing and compiling the available existing information.

GEI avian biologists propose to review data available on eBird (www.ebird.org) focusing on OSCP and surrounding properties that may contribute to its overall use/value. eBird is a website and app that is utilized by birders around the world to record and track their observations while sharing information. An eBird "hot spot" has been established at OSCP and as of today, 205 distinct species have been identified at the site. These species include many of the secretive marsh birds and migratory waterfowl identified as key species in the *Grand River Coastal Corridor, Ecological Assessment and Conservation Recommendations* (Audubon 2021).

GEI's herpetologists, with extensive knowledge of the herpetofauna present at OSCP, will review the existing data, supplement this data with personal observations, review the sampling protocol, and recommend modifications to sampling protocol for future surveys on site.

Additional information on Michigan's protected (special concern, threatened, and endangered) flora and fauna is available via the Michigan Natural Features Inventory (MNFI). GEI will request site-specific data from MNFI which will summarize occurrences of protected species known from the site and surrounding area. Additionally, GEI will review the Ottawa County Element List on the MNFI website

to identify additional protected species which may be present, but have not yet been documented, or which could occupy the restored site in the future. This additional information on protected flora and fauna can inform restoration targets and lead to the creation of habitat for these sensitive species.

GEI will aggregate the site information that has been gathered at OSCP and compare them to assessments that have been completed at other interdunal wetland and coastal systems, such as the adjacent Kitchel-Lindquist Hartger Dunes Preserve. These intact reference ecosystems will act as templates that can guide the restoration of OSCP, providing baseline metrics for restoration that will be considered in the context of the existing conditions at the park.

Proposed Scope for Additional Surveys

Habitat and Vegetation Mapping

GEI staff survey the newly restored portions of the property as well as any portions proposed for additional restoration. During each of these visits, GEI's biologists/botanists will record a list of all plant species encountered. In addition to these site visits, targeted plant inventory assessments will be completed during the growing season to develop a comprehensive list of all plant species present on site.

At this time, GEI staff propose to complete plant specific inventories in May and July of 2025. During these assessments GEI biologists will work together throughout the project site to systematically meander throughout the area and record vegetative species and community composition. Data will be analyzed using the Universal Floristic Quality Assessment (FQA) Calculator (Freyman et al. 2015). The FQA calculator counts the total number of species present in an inventory, which equates To species richness for the community. This FQA method also assigns each plant species a Coefficient of Conservatism (C) rating from 0 to 10 (Swink and Wilhelm, 1994; Wilhelm and Masters, 1995) that represents an estimated probability that a plant is likely to occur in a landscape relatively unaltered from what is believed to be pre-European settlement. A native species that is almost always restricted to a pre-European settlement remnant (i.e., a high-quality natural area) is given a high rating, up to 10. Conversely, plant species that demonstrate little fidelity to any remnant natural community (i.e., may be found almost anywhere) are given a C value of 0. Plant species that are faithful to remnant natural communities but may be present regardless of the condition of the community, are given intermediate C values between 0 and 10 (Herman et al, 2001). Communities with native mean C values over 3.5 are considered to be high-quality aquatic resources (USFWS, 2020).

Using this method, a Floristic Quality Index (FQI) value is derived for a given area. The FQI is an indication of native vegetative quality for a community and is calculated using the average Coefficient of Conservatism (C) and the total number of species found on the site (n); $FQI = C\sqrt{n}$. Generally, an FQI of less than 20 has minimal significance from a natural quality perspective. Areas with an FQI higher than 35 possess sufficient conservatism and species richness that they are considered floristically important from a statewide perspective. Areas registering above 50 are extremely rare and represent a significant component of Michigan's native biodiversity and natural landscapes (Herman et al, 2001). It is important to note that FQI scores can be largely dependent upon size, landscape patterns, and physiognomy of the site, which can limit their effectiveness in assessing the relative conservation value of different sites (Matthews et al, 2005). GEI opines that an FQI analysis of the Ottawa Sands site will be beneficial for assessing baseline conditions to inform future restoration and management.

Wetland Delineation

GEI will perform an on-site evaluation to delineate wetlands pursuant to Part 303, Wetland Protection, of the Michigan Department of EGLE, Natural Resources and Environmental Protection Act (NREPA), 1994 PA 451, as amended. Utilizing the methods approved by Part 303, GEI will delineate wetlands according to criteria defined by the U.S. Army Corps of Engineers (USACE) *Regional Supplement to the Corps of Engineers Wetland Delineation Manual (Version 2.0): Northcentral and Northeast Regions* (January 2012), which includes evaluation of soils, vegetation, and hydrology. GEI will flag wetland boundaries within the survey area with high visibility flagging tape and/or wire flags.

GEI will then map the wetlands and waterbodies (streams, rivers, ponds, etc.) within the survey area using Global Positioning System (GPS) technology and incorporate the wetland boundaries into the design process. GPS mapping will be conducted concurrently with the wetland delineation. GPS mapping is intended to meet EGLE and USACE accuracy requirements but is not intended to represent a legal boundary survey.

To meet EGLE permitting requirements, GEI will complete USACE Wetland Data Forms and compile the data into a report format to accompany GIS/CAD generated maps depicting wetlands, waterbodies, and/or floodplains

Herpetological Assessment

To obtain data on the herpetofauna at the wetlands of Ottawa Sands, GEI proposes to utilize a combination of visual observations (day and night), auditory surveys, and dip netting at wetlands on site.

Visual Observations

Trained GEI staff will complete visual herpetofauna surveys throughout the Harbor Island site with specific focus near the wetland and shoreline habitats. GEI staff will utilize binoculars and spotting scopes during peak basking hours to search for turtles and snakes. All herpetofauna encountered during additional field assessments (e.g., floristic inventories and wetland delineations) will also be recorded.

Auditory Surveys

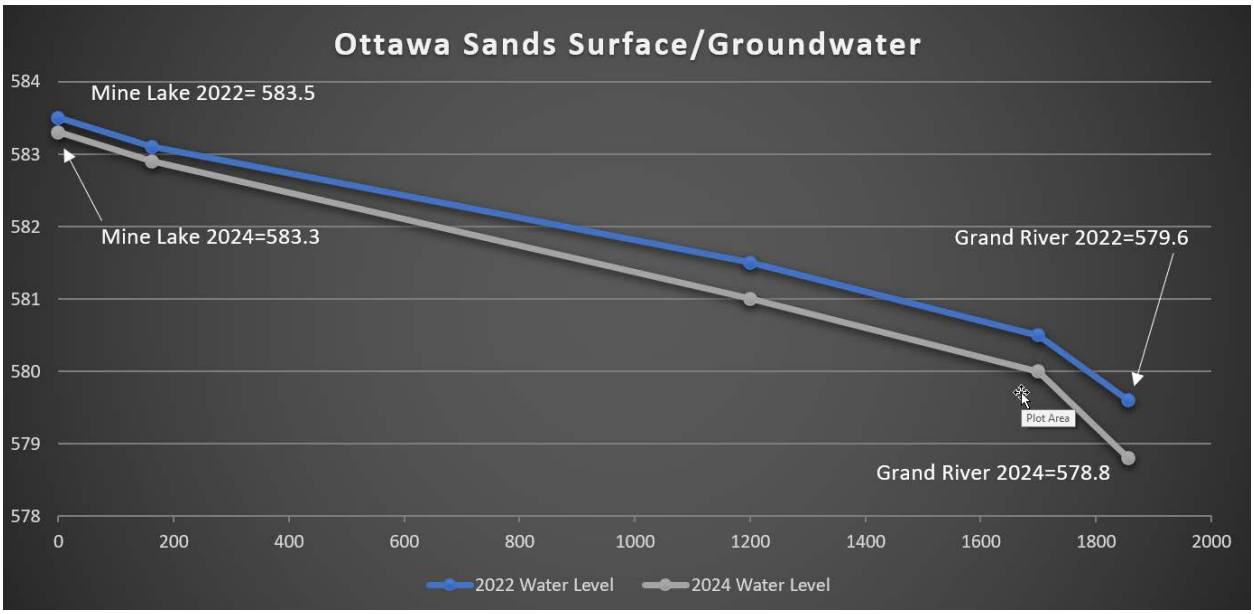
Utilizing the methodology described in the M*arsh Monitoring Program, Participant's Handbook, For Surveying Amphibians* (Bird Studies Canada, 2009), GEI trained staff will establish a sufficient number of auditory survey points to adequately survey the wetland and shoreline habitat at Ottawa Sands. GEI staff will utilize the recommended survey datasheets and will conduct the surveys following the Marsh Monitoring Program guidelines for timing, time of the year, and temperature.

Dip Netting

GEI staff will use D-frame aquatic sampling nets (typically consisting of a long handle, a frame or hoop, and a fine mesh netting attached to the frame) to complete dip-net sampling in the near shore habitat of the wetland present on site. This sampling methodology will aid in the collection and identification of both adult and sub-adult herpetofauna present in these wetland systems.

Groundwater Analysis

A condition of the former sand mine required the installation of piezometers throughout what is now OSCP. In 2022, in support of design efforts for interdunal wetlands at the site, GEI used existing piezometers and installed several new piezometers to assess the groundwater throughout OSCP. Current data measurements were compared with historic measurements from the former sand mining company, historic Lake Michigan water level data, and aerial photography to determine surface and ground water levels over time. The data revealed that the OSCP lake is approximately 4' higher than Lake Michigan (which is the same level as the Grand River at the site location), although the OSCP lake and Lake Michigan do not rise and fall at exactly the same rates. While Lake Michigan may fluctuate more than 6' in elevation (from roughly 576.0-582.5), the OSCP lake fluctuates from approximately 582-584. It is likely that a submerged spring continually feeds the hydrology at the OSCP lake, and the water flows on a gradient downslope until it reaches the Grand River or Lake Michigan.



Surface water/ground water at OSCP

GEI used this historic groundwater data to develop wetland restoration designs at the park. As part of this future proposed effort, GEI proposes to review this historic data in the context of the proposed wetland restoration locations. GEI will also monitor ground water levels in monitoring wells at the site during the course of the project, although it should be noted that some of the wells have been removed for park development and restoration efforts. The data will be reviewed and compiled to inform and provide recommendations for wetland restoration in the areas proposed in the site master plan.

Recommendations for Wetland Creation

GEI will use the combination of existing site topography (obtained from Ottawa County GIS data), groundwater data, site assessments, and evaluation of reference ecosystems to develop plans for wetland restoration at the park. It is anticipated that the proposed wetlands will be in similar locations as those shown in the master plan, although the exact location may vary based on actual site conditions and site development.

We anticipate that the wetlands will contain a mosaic of habitats that will be suitable for a wide array of flora and fauna, as depicted in the visualization below. Specific elements that we anticipate will be included with the restoration design include:

- Excavation of sand to reach the groundwater table at the proposed location.
- Placement of sand on site in a nearby area to create new/artificial sand dunes, similar to those being constructed during the ongoing wetland restoration project.
- Elevations of the wetlands will vary to create different water depths, with the intent of maintaining a functional wetland system at both high and low water levels. The varied water depths will support different plant communities which will therefore provide habitat for a wider diversity of wildlife.
- Wetland habitat will include hemi-marsh, which contains both vegetated and open water wetlands. Hemi-marshes are considered critical habtiat for secretive marsh birds, which are a focual group for the *Grand River Coastal Corridor, Ecological Assessment and Conservation Recommendations* (Audubon 2021).
- The wetlands will be intermixed with upland areas, planted with upland grasses and forbs, to provide habitat for song birds, mammals, and other non-aquatic species.
- Habtiat structures, which may include logs, rootwads, and other natural or man-made features, will be added.
- The wetlands will be seeded and planted with native wetland vegetation that is suitable for the site hydrology and soils. While this is largely expected to include interdunal species such as grass-leaved goldenrod (*Euthamia graminifolia*), baltic rush (*Juncus balticus*), and beak rush (*Rhynchospora capitellata*), the actual species may vary based on final design conditions and plant/seed availability.
- The wetlands will be designed in a way that will connect people with nature. Trails will likely be integrated into the wetland/upland mosaic, and boardwalks may be installed to bring park patrons closer to the wetland plants and animals.

Visualization of proposed wetlands at OSCP

Permit-Ready Design Documents (60% Design)

Upon approval of the recommendations, GEI will develop 60%-level designs that would be suitable for permit application and development of refined construction estimates. Plans are expected to include:

- Construction access and staging locations.
- Plan view and cross sections of proposed soil grading plans.
- The overall site layout, incorporated trails and public access where appropriate.
- Volumes of earthwork needed to complete the wetland construction.
- Soil erosion and sedimentation control measures.
- Native planting and seeding plans.
- Wildlife habitat structures.

Updated Cost Estimates

GEI will use the 60% design drawings to develop construction cost estimates that update those developed for the 2020 master plan. Cost estimates will be based on recent construction bids and will be broken out by each construction task to provide a clear understanding of the project costs.

Alternate: Final Construction Drawings and Permitting

GEI will advance the 60% drawings to final, construction-ready drawings that are suitable for construction bidding and implementation. The drawings will include full construction access routes, detailed erosion control plans, and details plans for native plantings, seeding, and habitat structures. The final construction drawings will be accompanied by written specifications and a bid package, suitable for procurement of competitive construction bids.

Costs have been included for submittal of an EGLE Joint Permit Application (JPA). However, GEI opines the areas proposed for wetland restoration in the master plan lie outside of regulated wetlands, based on a GEI wetland delineation completed at the site in 2022. There is a possibility however, that the wetlands may be constructed in designated critical dune areas (CDA) because a portion of the park is designated as CDA and the line roughly bisects the area proposed for wetland creation in the master plan. If necessary, GEI will submit the EGLE JPA for impacts associated with the proposed project.

SHORELINE ENHANCEMENTS

Ottawa Sands County Park Grand River Shoreline

The Grand River shoreline at OSCP is unique in that it represents some of the last remaining natural shoreline in the area along the Grand River. While much of the surrounding area has been developed and shorelines have been hardened with steel sheeting or rock revetments, the historic use of the park property has left much of the shoreline intact. However, the development of the surrounding shoreline combines with heavy public use in the Lower Grand River, fluctuating Lake Michigan water levels, and ice/water flows in the river to threaten the long-term stability of the shoreline at the park. In addition to potentially impacting the habitat, erosion from these forces may threaten the extensive park recreational improvements that have been implemented or are planned.

Elevated boardwalk and natural shoreline designed by GEI staff

Where there are threats, there are also opportunities. The development of the park has led OCPR to assess the site as a whole, including habitat, public use, and potential threats to the long-term resiliency of the park. This holistic planning has led to the determination that the shoreline should be protected against waves, human use, and development through the use of nature-based methods.

Nature-based methods combine natural materials such as native plants and coarse woody habitat structures with an understanding of natural riverine and coastal processes to provide long-term protection while maintaining the ecological integrity of a shoreline. The intended scope of this effort is to assess the shoreline and develop designs for nature-based techniques and recreational developments that are compatible, leading to a shoreline that provides the target habitat and is stable and functional in the long term while also providing access and use to the park patrons. GEI proposes the following scope to meet these needs.

Shoreline Assessments

As stated in the RFP, there are three primary areas of concern along the Grand River shoreline at OSCP:

- 750 linear feet of eroding shoreline along the former freighter dock
- 750 linear feet of shoreline along the Sag
- 4,000 linear feet of shoreline along the remaining property at the park

The shoreline at the park is subject to both man-made and natural forces that have caused erosion and habitat loss, affecting both the natural communities and use of the property by the public. Design of appropriate nature-based stabilization measures and public recreational enhancements must therefore begin with an assessment of the existing conditions along the shoreline.

Numerous public, non-profit, private, and academic entities have completed assessments and plans for the socioeconomic, biological, and ecological resources in the Lower Grand River. In preparing this proposal, we have reviewed several of these reports from Michigan Department of Natural Resources (MDNR), EGLE, and MNFI to understand how they may affect proposed efforts and the project design. It is our intent to build upon these previously completed studies to determine the best ways to stabilize, restore, and enhance the shoreline at OSCP.

Existing Conditions and Surveys

Past studies on the Lower Grand River show it as having relatively degraded habitat when compared to other large rivers in Michigan (Wilhelm et al. 2005, Wessell et al. 2008, Audubon 2021, and EGLE, 2022). Pre-settlement vegetation data indicates that the riverbanks originally provided good shading, bank stabilization, and cover (Comer, 1996 and Albert, 2003). Preliminary review of aerial imagery indicates most of that vegetation is now absent.

Development has denuded much of the pre-settlement landscape, and with development came removal of bank vegetation and habitat, loss of wetlands, destabilization of stream channels and banks, channel scouring, loss of in-stream habitat, and increased sedimentation which has resulted in buried gravel, cobble, and rock substrates (Hanshue and Harrington, 2017).

Aquatic Biota

Fisheries data from MDNR shows the fish community of the mouth segment of the Grand River reflects the large channel size and open connection to Lake Michigan (Hanshue and Harrington, 2017). Largemouth bass, bluegill, walleye, northern pike, catfish, freshwater drum, gizzard shad, and several species of redhorse suckers and minnows are common while several Lake Michigan species enter the lower river on a seasonal basis (Hanshue and Harrington, 2017, Taylor and Wesley, 2008, and EGLE, 2022). Recent observations also indicate that lake sturgeon, a state threatened species in Michigan, are successfully spawning in the mouth segment (Hanshue and Harrington, 2017). Based on the apparent extensive amount of fisheries data that has been compiled and is available,

Missing from this shoreline aquatic data set are any reports or a good understanding of the freshwater mussel community in the vicinity of the park. GEI conducted some mussel survey work as part of the City of Grand Haven's efforts to expand the public seating area for the Musical Fountain several years ago, but we are unaware of other efforts to document the mussel community in this area. GEI proposes to contact MDNR and U.S. Fish and Wildlife Service (USFWS) staff, that focus on freshwater mussels, to obtain any additional or recent information. This is important since the Lower Grand River is listed as a Group 2 Stream, according to the Michigan Freshwater Mussel Survey Protocols and Relocation Procedures for Rivers and Streams (Hanshue et al., 2021) and Michigan Mussel Mapper. Group 2 Streams have records of state threatened and endangered mussel species and nearly always require some level of survey for any proposed impacts to bottom substrates (below the water surface).

Birds

Although eBird data for the area indicates 205 distinct species have been identified at the site, Grand et al. 2020, has noted a steep decline of migratory birds and secretive marsh birds across the Great Lakes region. The North American Breeding Bird Survey and Michigan Breeding Bird Atlas have indicated declines of secretive marsh birds across Michigan including in both Ottawa and Muskegon Counties (Audubon 2021). As discussed above, similar to the change in fisheries, the declines of secretive marsh birds are closely related to the loss of wetland and nearshore habitat.

Proposed Scope

GEI is proposing to complete the following tasks to supplement the available existing data.

Topographic and Bathymetric Surveys

Ottawa County has Light Detection and Ranging (LIDAR) topographic data available for all upland areas proposed for work. However, LIDAR data does not penetrate into the water, and the nature of this work requires an understanding of the landforms below water in the proposed work area. Therefore, GEI (using Rowe Professional Services as a subcontractor) will complete a topographic and bathymetric survey in the nearshore areas proposed for work (approximately 5,700 linear feet of shoreline). The survey will capture topography and bathymetry approximately 50' landward and 50' riverward from the existing shoreline and will also capture any infrastructure such as the existing docks. This survey will be combined with the existing available data to develop project designs for shoreline stabilization and recreational improvements.

Geotechnical Borings

Based on previous borings taken at the site, we believe it is likely that the shoreline consists primarily of sand. However, it is important to verify and understand the nature of the underlying soils of the site, as the soils will have an effect on both the shoreline protection measures and the long-term stability

of any recreational improvements. To support the project design development, GEI proposes to take up to five hand-auger borings of the nearshore soils in areas where structures or erosion control measures are planned.

Please note that, while we believe this level of effort is appropriate to develop 60% design plans, more detailed borings may be needed to fully develop 100% construction drawings for any dock or pier features. Costs for additional geotechnical borings have been provided in the bid alternate item for "Final Construction Drawings."

Wetland Delineation

GEI will perform an on-site evaluation to delineate wetlands in the same manner described in the Wetlands Enhancements section above.

Bank Erosion Hazard Index (BEHI)

The BEHI was developed by Dr. David Rosgen as a tool to assess erosion potential along streams and rivers. The intent of the tool is to utilize quantified metrics such as bank height, root depth, root density, bank angle, and bank materials to assess the potential of a shoreline to erode, and to also prioritize stabilization strategies. GEI will use the BEHI to evaluate the ~5,700' of Grand River shoreline at the park to determine the potential for erosion.

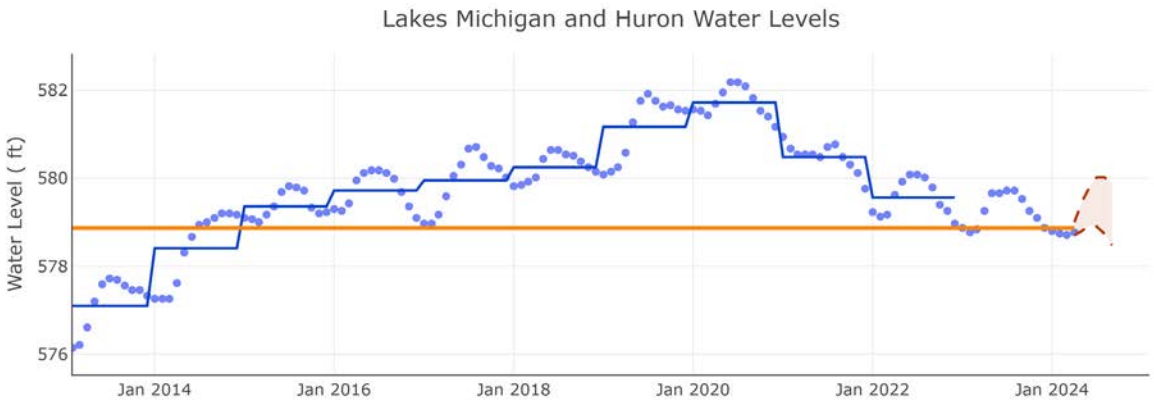
Risk rating categories	Bank Height/ Bankfull Ht	Root Depth/ Bank Height	Root Density (%)	Bank Angle (Degrees)	Surface Protection (%)
Very low	1.0-1.1	1.0-0.9	100-80	0-20	100-80
Low	1.11-1.19	0.89-0.5	79-55	21-60	79-55
Moderate	1.2-1.5	0.49-0.3	54-30	61-80	54-30
High	1.6-2.0	0.29-0.15	29-15	81-90	29-15
Very high	2.1-2.8	0.14-0.05	14-5.0	91-119	14-10
Extreme	<2.8	< 0.05	< 5	>119	< 10

BEHI Scoring (Rosgen 2001)

Hydrologic Assessments

Hydrologic forces acting on the OSCP shoreline are primarily due to wind- and boat-driven waves and water level fluctuations associated with Lake Michigan Because the Grand River is so close to Lake Michigan at the project location, river velocities and associated erosion-inducing shear stresses are relatively low.

GEI will use historic Lake Michigan water level data to assess historic high and low water levels at the site. In combination with this assessment, GEI will determine significant wind-driven wave heights at both low and high water levels to determine the potential for erosion. Using the significant wave height (the average measurement of the largest 33% of waves), design wave heights will be determined which will in turn be used for development of nature-based shoreline protection measures where needed.



Historic Lake Michigan Water Levels (Source: United States Army Corps of Engineers)

The water level assessments will also guide the development of infrastructure at the site. The fluctuating water levels can damage infrastructure and may also make use of public amenities such as trails unusable during high water periods. At the same time, it is important that docks and piers be usable at lower water periods too. Understanding that a future high water period is likely inevitable, designs will need to be sustainable, resilient, and functional at both high and low water scenarios.

Recommendations

GEI will use the previous studies, 2020 master plan, newly gathered data, and input from OCPR to develop designs for shoreline recreational amenities and nature-based shoreline protection techniques. The recommendations will be developed and prioritized based on the following factors:

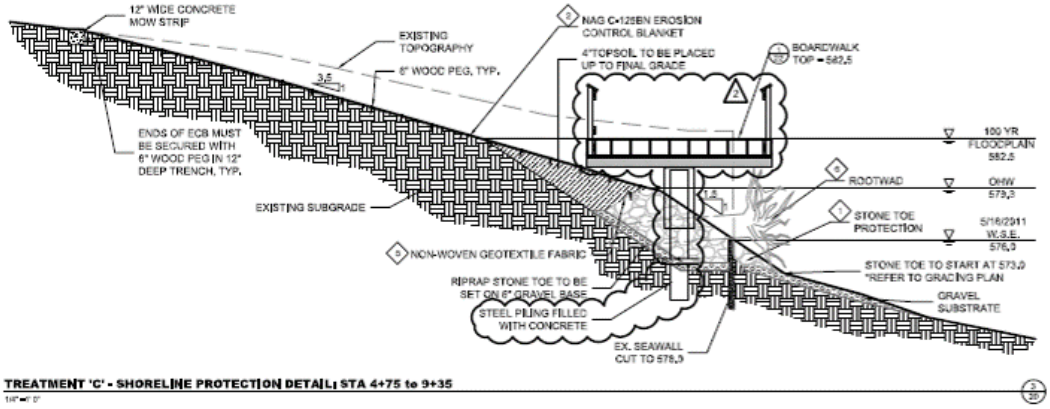
- Consistency with goals and outcomes established in the 2020 master plan
- Proposed public use
- Potential for soil erosion
- Creation of habitat for target wildlife species
- Site conditions, including water levels, waves, and soils
- Constructability, budget, and permittability

In addition to stabilization, the master plan contains multiple recreational amenities along the shoreline and the nearshore area of the Grand River. As indicated in the RFP, project designs need to either include or accommodate these features in a way that ultimately helps OCPR develop the park in a manner consistent with the master plan. Based on our understanding of both the master plan and the RFP, the combined team of GEI and Edgewater Resources proposes to develop 60% design plans and recommendations for nature-based shoreline stabilization for the following features along the shoreline:

- Design plans for natural shoreline stabilization along the Grand River for eroding or potentially eroding areas of the shoreline. It is anticipated that methods will include some combination of grading and sloping, woody habitat structure installation, and native plantings. Enhanced techniques such as bioengineered lifts or stone toes may be incorporated in locations where the shoreline is particularly susceptible to erosion or in places where increased public use may cause erosion.
- GEI and Edgewater will develop 60% level plans for proposed elevated boardwalks along the river, especially in the Sag as shown in the master plan. The paths may meander and at times will be elevated over the river. In these locations, light limits plant growth, which limits the habitat and natural stability.

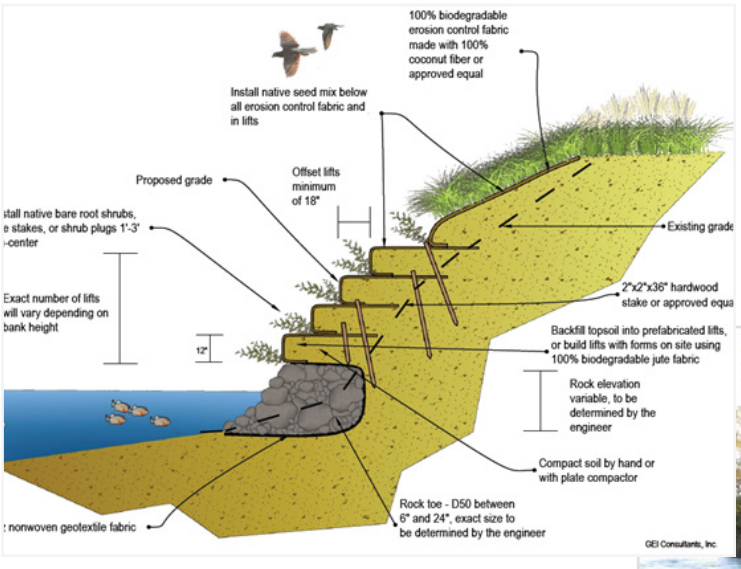
One technique to add natural shoreline elements in these locations is to add anchored woody material below the boardwalks, as shown below. The structures, including both the boardwalk and any habitat elements, would be designed to be functional and stable at both low and high water scenarios.

- GEI and Edgewater will develop 60% design plans to renovate the existing breasted dolphins and to create the new day use docks to be constructed within the existing piers. It should be noted that renovating existing piers can be a complex process and depends on the structural integrity of the existing piers. As demonstrated below and in the attached project sheets, Edgewater has experience renovating historic marine structures. 60% designs for these structures can be completed without a detailed submerged evaluation. However, advancement to final designs will likely require a more detailed submerged assessment of the piers to ensure long-term viability.
- All plans will incorporate nature-based principles wherever possible, but will use hardened structures if necessary.
- It is our intent to develop 60% designs for all elements directly on the Grand River shoreline, and to develop designs that accommodate or make way for the future proposed park elements such as the Greenway Place and event facility. We anticipate that construction access plans or shoreline grading can be used to clear, level, or create conditions needed for the proposed future developments.



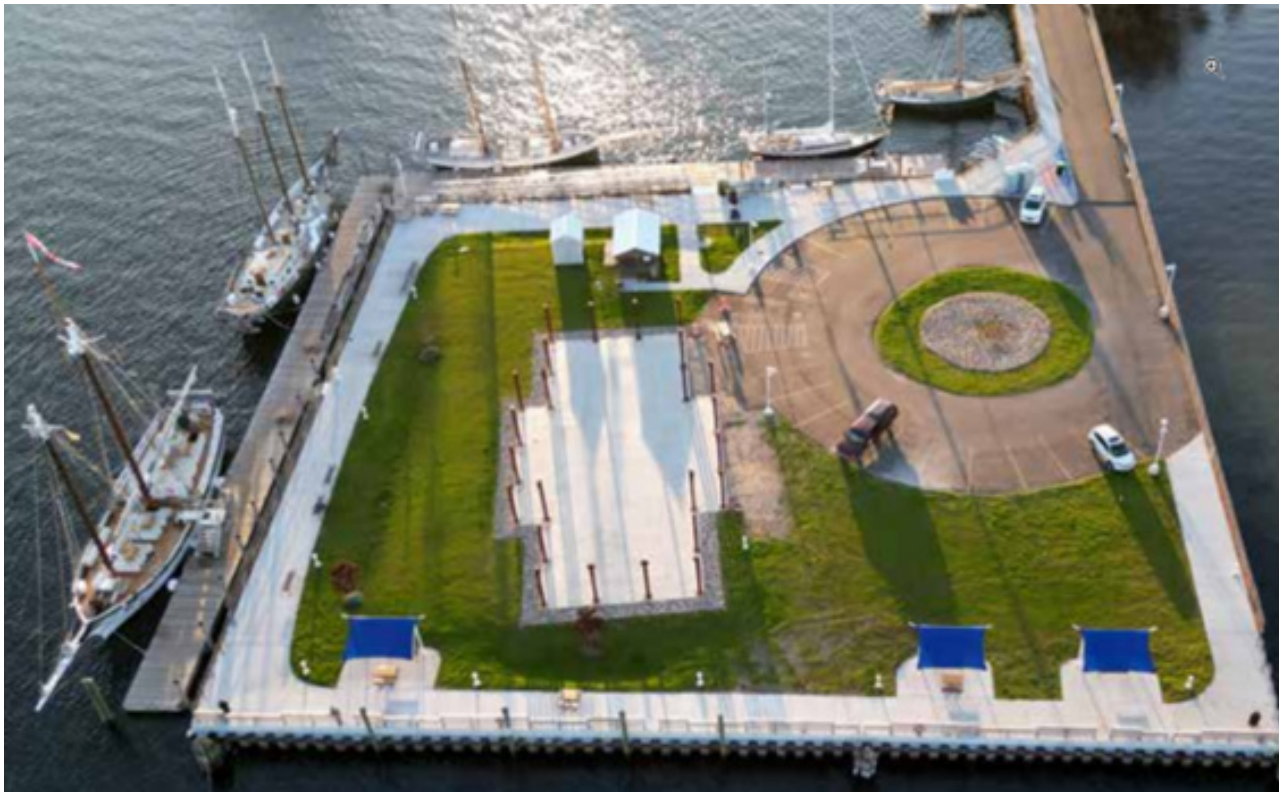
Cross Section Detail

Integrated elevated boardwalk and woody habitat structures on St. Clair River, designed by GEI staff



Bioengineered lifts

Bioengineered Lifts 8 Years Following Construction



Renovated Historic Structure at Discover Center Great Lakes in Traverse City, Design by Edgewater

Permit-Ready Design Documents (60% Design)

Upon approval of the recommendations, GEI will develop 60%-level designs that would be suitable for a permit application and development of refined construction estimates. Plans are expected to include:

- Construction access and staging locations
- Plan view and cross sections of proposed soil grading plans and shoreline protection measures
- Recreational improvements such as boardwalks, courtesy day docks, and renovated breasting dolphins
- Soil erosion and sedimentation control measures
- Native planting and seeding plans
- Wildlife habitat structures

Updated Cost Estimates

GEI will use the 60% design drawings to develop construction cost estimates that update those developed for the 2020 master plan. Cost estimates will be based on recent construction bids and will be broken out by each construction task to provide a clear understanding of the project costs.

Alternate: Final Construction Drawings and Permitting

GEI will advance the 60% drawings to final, construction-ready drawings that are suitable for construction bidding and implementation. The drawings will include full construction access routes, detailed erosion control plans, and details plans for native plantings, seeding, and habitat structures. The final construction drawings will be accompanied by written specifications and a bid package, suitable for procurement of competitive construction bids.

Please note that, while costs have been estimated for full design development, the actual level of effort will likely be dictated by the needs of the structural components of the project. Design of structural elements such as the day use docks, elevated boardwalks, and renovation of the breasted dolphins may require more detailed submerged assessments and geotechnical investigations to ensure long-term stability. The provided costs are based on a visual assessment of the existing conditions and our professional experience, but the final scope and cost may vary from those proposed if conditions are different than those visible or assumed.

GEI will develop and submit a JPA to EGLE for wetland and stream impacts associated with the project. It is anticipated that EGLE will allow impacts to the existing wetlands on site as long as there is no net loss of wetlands and the impacts are used to provide an overall ecological benefit. It should be noted that the provided costs do not include mussel surveys at the project location—due to the lack of previous surveys and nature of the work, it is possible that EGLE and MDNR will require mussel surveys during the permitting process. If this is needed, GEI will provide a cost at that time.

GEI will also develop and submit a Soil Erosion and Sedimentation Control (SESC) permit application to the Ottawa County Water Resources Commissioner for any earth disturbance associated with the project.

Harbor Island – Wetlands and Shoreline Enhancements Investigations and Designs

Harbor Island is a public space owned and operated by the City of Grand Haven. The island is a mosaic of developed park land, boat launch, former power plant, and natural areas such as woods and coastal wetlands. Sitting at the intersection of public use, industry, and natural areas, Harbor Island is a community asset with unlimited potential for preservation, restoration, and potential mixed-use development.

It is understood that there is currently uncertainty as to the future use(s) of Harbor Island, and that the Grand Haven community is actively discussing numerous alternatives for future development, restoration, or preservation. It is also understood that any future use of the island is complicated by known contamination in select areas at the site. Despite the uncertainty and contamination, it cannot be denied that Harbor Island is an ecologically significant property that has over 100 acres of existing Great Lakes coastal wetlands and nearly one mile of Grand River frontage located within a relatively developed area. Therefore, the needs for protection and restoration are significant, and so is the potential.

Harbor Island, with OSCP Visible Downstream

Determining the best possible alternative(s) for Harbor Island will require a detailed understanding the complex physical, ecological, chemical, and socioeconomic factors that influence the island both now and in the future. As described in detail below, GEI proposes to use the following process to assess the site and develop conceptual designs, which would all be completed in a collaborative manner with the city, stakeholders, and other project partners:

1. Gather existing data and previous studies.
2. Assess existing conditions, including natural communities, hydrology, topography, and bathymetry.
3. Collaborate with project partners such as HDR to discuss known contamination and its potential ramifications at the site.
4. Develop a constraints analysis that may impact the development, protection, or restoration of the site. Constraints may include known contamination, protected species, the presence of regulated water bodies such as wetlands, or the presence of immovable infrastructure, Constraints will be evaluated in the context of potential the construction or alteration of existing infrastructure, creation of publicly-accessible features or recreational amenities, or ecological restoration and preservation.
5. Meet with core project partners such as the city to review the collected data and determine project goals.
6. Present available data to the community, discussing alternatives and constraints.
7. Develop conceptual design alternatives and associated cost estimates.
8. Review conceptual design alternatives with city, stakeholders, and the public as appropriate
9. Advance preferred design alternative to 60% design and develop cost estimates

Elements of this proposed approach are discussed in detail below.

NATURAL FEATURES ASSESSMENTS

Plant Inventory

GEI staff will complete a series of habitat assessments on the Harbor Island site throughout the development of this project. During each of these visits, GEI's biologists/botanists will record a list of all plant species encountered. In addition to these site visits, targeted plant inventory assessments will be completed during the growing season to develop a comprehensive list of all plant species present on site.

At this time, GEI staff propose to complete plant specific inventories in May and July of 2024. During these assessments GEI biologists will work together throughout the project site to systematically meander throughout the area and record vegetative species and community composition. Data will be analyzed using the *Universal FQA Calculator* (Freyman et al. 2015). The FQA calculator counts the total number of species present in an inventory, which equates to species richness for the community. This FQA method also assigns each plant species a Coefficient of Conservatism (C) rating from 0 to 10 (Swink and Wilhelm, 1994; Wilhelm and Masters, 1995) that represents an estimated probability that a plant is likely to occur in a landscape relatively unaltered from what is believed to be pre-European settlement. A native species that is almost always restricted to a pre-European settlement remnant (i.e., a high-quality natural area) is given a high rating, up to 10. Conversely, plant species that demonstrate little fidelity to any remnant natural community (i.e., may be found almost anywhere) are given a C value of 0. Plant species that are faithful to remnant natural communities but may be present regardless of the condition of the community, are given intermediate C values between 0 and 10 (Herman et al, 2001). Communities with native mean C values over 3.5 are considered to be high-quality aquatic resources (USFWS, 2020).

Using this method, a FQI value is derived for a given area. The FQI is an indication of native vegetative quality for a community and is calculated using the average Coefficient of Conservatism (C) and the total number of species found on the site (n); $FQI = C\sqrt{n}$. Generally, an FQI of less than 20 has minimal significance from a natural quality perspective. Areas with an FQI higher than 35 possess sufficient conservatism and species richness that they are considered floristically important from a statewide perspective. Areas registering above 50 are extremely rare and represent a significant component of Michigan's native biodiversity and natural landscapes (Herman et al, 2001). It is important to note that FQI scores can be largely dependent upon size, landscape patterns, and physiognomy of the site, which can limit their effectiveness in assessing the relative conservation value of different sites (Matthews et al, 2005). GEI opines that an FQI analysis of the Harbor Island site will be beneficial for assessing baseline conditions to inform future restoration and management.

Herpetological Assessment

To obtain data on the herpetofauna on Harbor Island, GEI proposes to utilize a combination of visual observations (day and night), auditory surveys, and dip netting.

Visual Observations

Trained GEI staff will complete visual herpetofauna surveys throughout the Harbor Island site with specific focus near the wetland and shoreline habitats. GEI staff will utilize binoculars and spotting scopes during peak basking hours to search for turtles and snakes. All herpetofauna encountered during additional field assessments (e.g., floristic inventories and wetland delineations) will also be recorded.

Auditory Surveys

Utilizing the methodology described in the *Marsh Monitoring Program, Participant's Handbook, For Surveying Amphibians* (Bird Studies Canada, 2009), GEI trained staff will establish a sufficient number of auditory survey points to adequately survey the wetland and shoreline habitat at Harbor Island. GEI staff will utilize the recommended survey datasheets and will conduct the surveys following the Marsh Monitoring Program guidelines for timing, time of the year, and temperature. Please note that due to the unseasonably warm weather experienced during the spring of 2024 and timing for awarding this contract, the "early season" survey period of March to May might be missed. However, additional data on the species known to call during this "early season" (chorus frog, wood frog, and spring peeper) may be obtained utilizing the dip netting procedure described below.

Dip Netting

GEI staff will use D-frame aquatic sampling nets (typically consisting of a long handle, a frame or hoop, and a fine mesh netting attached to the frame) to complete dip-net sampling in the near shore habitat of the wetland present on site. This sampling methodology will aid in the collection and identification of both adult and sub-adult herpetofauna present in these wetland systems.

Wetland Assessment and Delineation

GEI will perform an on-site evaluation to delineate wetlands pursuant to Part 303, Wetland Protection, of the Michigan Department of EGLE, NREPA, 1994 PA 451, as amended. Utilizing the methods approved by Part 303, GEI will delineate wetlands according to criteria defined by the *USACE Regional Supplement to the Corps of Engineers Wetland Delineation Manual (Version 2.0): Northcentral and Northeast Regions* (January 2012), which includes evaluation of soils, vegetation, and hydrology. GEI will flag wetland boundaries within the survey area with high visibility flagging tape and/or wire flags.

GEI will also identify and delineate any waterbodies (streams, rivers, ponds, or inland lakes) pursuant to Part 301, Inland Lakes and Streams, NREPA 1994 PA 451, as amended.

GEI will then map the wetlands and waterbodies (streams, rivers, ponds, etc...) within the survey area using GPS technology and incorporate the wetland boundaries into the design process. GPS mapping will be conducted concurrently with the wetland delineation. GPS mapping is intended to meet EGLE and USACE accuracy requirements but is not intended to represent a legal boundary survey.

To meet EGLE permitting requirements, GEI will complete USACE Wetland Data Forms and compile the data into a report format to accompany GIS/CAD generated maps depicting wetlands, waterbodies, and/or floodplains.

Any Additional Assessments

Avian

Similar to the Harbor Island site, an eBird "hot spot" has been established at the Harbor Island property and as of today, 225 distinct species have been identified at the site. These species include many of the secretive marsh birds and migratory waterfowl identified as key species in the Grand River Coastal Corridor, Ecological Assessment and Conservation Recommendations (Audubon 2021). Due to the large birding community present in West Michigan and the current lack of secretive marsh bird habitat on Harbor Island, GEI does not recommend any additional field assessments at this time. Instead, GEI avian biologists propose to review data available on eBird and will update this list with any new avian species encountered during our time completing other assessments on the site.

Natural Communities

A natural community is defined as "an assemblage of interacting plants, animals, and other organisms that repeatedly occurs under similar environmental conditions across the landscape and is predominantly structured by natural processes rather than modern anthropogenic disturbances" (Kost et al, 2007). During the plant inventory surveys, natural community types will be identified and mapped by experienced biologists using landform and vegetative cues to demarcate boundaries. Unique plant species lists will be generated for each community type and entered into the FQA calculator.

Protected Species

As with the Ottawa Sands site, GEI will request site-specific data from MNFI which will summarize occurrences of protected species known from the site and surrounding area. Additionally, GEI will review the Ottawa County Element List on the MNFI website to identify additional protected species which may be present, but have not yet been documented, or which could occupy the restored site in the future. This additional data will inform field efforts for both the plant inventory and herpetological assessment.

Invasive Species

To determine which invasive species are present and could threaten the successful establishment of natural communities during future restoration, GEI biologists will assess the pre-construction vegetative communities within the Harbor Island project area during the plant inventory assessment described above. Field reconnaissance data will be collected and geospatially referenced using the ArcGIS Collector app and Trimble GPS units to facilitate sub-meter accuracy.

A full survey of invasive species presence and cover within the Harbor Island project area will be conducted during the meander survey portion of the field effort. Each invasive species observed will be added to the respective community inventory list and the locations of invasive species will be mapped with GPS units. Significant invasive species populations categorized as a "monoculture" density with an area greater than 1,000 square feet, as defined in the Midwest Invasive Species Information Network (MISIN) mapping protocols, will be demarcated with a polygon in the field. Patchy or sparse populations of invasive species were recorded with a GPS point and assigned the corresponding area and density values, defined in the MISIN mapping protocols.

Topographic and Bathymetric Surveys

Ottawa County has LIDAR topographic data available for all upland areas proposed for work. However, LIDAR data does not penetrate into the water, and the nature of this work requires an understanding of the landforms below water in the proposed work area. Therefore, GEI (using Rowe Professional Services as a subcontractor) will complete a bathymetric survey in the ~110 acres shown below.

Proposed Bathymetric Surveys at Harbor Island

BEHI

The BEHI was developed by Dr. David Rosgen as a tool to assess erosion potential along streams and rivers. The intent of the tool is to utilize quantified metrics such as bank height, root depth, root density, bank angle, and bank materials to assess the potential of a shoreline to erode, and to also prioritize stabilization strategies. GEI will use the BEHI to evaluate the ~5,200' of Grand River shoreline at Harbor Island to determine the potential for erosion and the use of nature-based shoreline softening measures.

Water Level and Plant Community Assessments

The wetland plant communities at Harbor Island will be largely driven by the site topography/bathymetry and Lake Michigan water levels. GEI will use the combined and available data to assess the plant communities in the context of water levels to determine the potential for restoration or enhancements at the site. The water level assessment will also be used to assess the site, including existing infrastructure, for flooding potential. As necessary, the water level assessment will be used to make recommendations for modifications to infrastructure to provide long-term resiliency against flooding.

SHORELINE/WETLAND ENHANCEMENT RECOMMENDATIONS

As previously noted, plant communities and public use at Harbor Island will be largely driven by water levels and site topography/bathymetry. Therefore, the ability to restore or create wetlands or other plant communities at the site will be driven by the ability to modify these conditions while also considering the constraints of contamination, public use, and permitting. A successful and sustainable design will balance each of these factors.

It is our approach to develop plans that are based in sound science that meet the needs of the local ecology and community but are also rooted in practicality. We acknowledge that the potential of Harbor Island must first be envisioned without boundaries—Harbor Island is an incredibly unique asset for the City of Grand Haven, and any plans must be based on a long-term vision for a site that balances the natural communities and human use holistically. At the same time, societal and ecological goals continually shift, as do funding sources, regulations, and environmental conditions.

The delicate balance in developing recommendations for a site like Harbor Island requires creating a long-term vision while developing plans that can be reasonably funded and implemented in the near future. For instance, the National Oceanic and Atmospheric Administration (NOAA) has recently received nearly $3 billion through the Bipartisan Infrastructure Law for habitat restoration and coastal resilience. NOAA has been actively funding coastal habitat restoration projects throughout the United States, and in Michigan. There is no certainty that this funding will be available after the currently 5-year cycle, but there is significant funding available now. In cases such as this, it may benefit the City of Grand Haven to develop at least some plans for Harbor Island that are shovel-ready and implementable immediately to take advantage of the available funding.

Based on our analysis of Harbor Island and understanding of the potential complexities and community needs, we anticipate that recommendations for site development and restoration may include some of the following elements. These are expected to balance both short- and long-term goals of the property.

- Existing wetlands that are non-contaminated should first be prioritized for restoration. The existing wetlands would be difficult or impossible to develop due to regulatory constraints, and the lack of contamination would allow for potential immediate action. Restoration plans for existing wetlands could be developed that include management of vegetation, addition of habitat structures, and potential modification of the site topography/bathymetry. This could allow the creation of hemi-marsh habitat in these wetlands, which includes a mosaic of open water and emergent vegetation. This wetland type is considered a high priority for Audubon Society (Audubon 2021), who has identified it as critical habitat for secretive marsh birds in the Grand River Coastal Corridor, Ecological Assessment and Conservation Recommendations (Audubon 2021).
- Public amenities for passive or active recreation may be added to the wetlands. These may include boardwalks that connect to the existing trail system or kayak launches that provide easy access to the wetlands and Grand River from Harbor Island. Kayak launches would also provide a natural connection to the Grand River Greenway and proposed launch at OSCP.

Harbor Island

- Longer term visions may be developed for contaminated areas of the site. Understanding that the remediation of the site may take years, the plans and recommendations would be based around anticipated plans for the sequence of site remediation.
- Upland areas that are non-contaminated will have the fewest restrictions, and therefore the most possible opportunities for development and/or ecological restoration. Plans for the upland areas will be based around community input and input from the City of Grand Haven. While ecological restoration will be encouraged, recreational amenities or mixed-use development will be considered. Should the construction of infrastructure ultimately be determined a need for the community, GEI will work within those plans to incorporate green infrastructure elements like raingardens, bioswales, and native plant buffers that will infiltrate and filter stormwater to minimize water quality impacts to the Grand River and the adjacent wetlands from the development.
- Recommendations for modifications to either existing or proposed infrastructure to create long-term resiliency against flooding and fluctuating water levels.

GEI has developed two concepts that show ways Harbor Island can be envisioned, based both on the RFP and our understanding of the local community and site conditions. However, there are virtually infinite possibilities for the future of Harbor Island and we anticipate working with the local community to develop design concepts.

PROPOSED FEATURES LEGEND:

1. Wetland Restoration and Enhancements
2. Floodplain Habitat Enhancements
3. Power Plant Remediation- Future Use TBD.
4. Habitat Improvements- Convert Upland Habitat to Wetland or Prairie
5. Accessible Kayak Launch- Create Access to South Channel

Harbor Island Concept: Alternative 1

PROPOSED FEATURES LEGEND:

1. Hemi-Marsh Habitat- 50% Open Water, 50% Emergent Habitat
2. Floodplain Habitat Enhancements
3. Power Plant Remediation- Future Use TBD.
4. Green Stormwater Infrastructure- Raingardens/Bioswales
5. Recreation Enhancements- Playground, Sports Fields, Disc Golf Course
6. Existing Trails- Improve Wayfinding Signage
7. Wetland Boardwalks
8. Accessible Kayak Launch- Create Access Within Wetlands

Harbor Island Concept: Alternative 2

PERMIT-READY DESIGN DOCUMENTS (50% DESIGN)

Upon approval of the recommendations, GEI will develop 50%-level designs that would be suitable for permitting and development of refined construction estimates. Plans are expected to include:

- Construction access and staging locations.
- Plan view and cross sections of proposed soil grading plans.
- The overall site layout, and incorporated trails and public access where appropriate.
- Volumes of earthwork needed to complete the wetland construction.
- SESC measures.
- Native planting and seeding plans.
- Wildlife habitat structures.
- Recreational elements such as trails or boardwalks, if needed.
- Recommendations for modifications to infrastructure to create long-term resilience against flooding, as needed.

COST ESTIMATES

GEI will develop construction cost estimates at the conceptual plan development phase, as well as at the 50% design phase. In our experience, the development of initial cost estimates early in a project can be very important because cost is often a limiting factor in project design. Therefore, costs will be developed early to aid the project partners in decision making.

Refined cost estimates will then be developed once plans have been advanced to 50%.

Alternate: Grand Haven Dune Property/Kitchel-Hartger Lindquist Dune Preserve Shoreline Enhancements Investigations and Designs

NATURAL FEATURES ASSESSMENTS/BASELINE METRICS

Due to the efforts already completed on the adjacent OSCP and our understanding of available local, state, and federal reports and information relative to additional terrestrial and aquatic biota and habitats, GEI does not propose additional field assessments as part of this scope of work. GEI proposes to focus efforts on obtaining and reviewing all pertinent information from the OSCP site natural communities to help guide and be incorporated into landscape level restoration decisions.

SHORELINE ASSESSMENTS AND RECOMMENDATIONS

Assessments

As stated in the RFP, these two properties are located directly south of (adjacent to) OSCP and include 3,465’ of river frontage that is mostly natural with no plans for additional public access or infrastructure. Due to its proximity to OSCP and similar nature of potential need for shoreline habitat improvements, GEI is proposing to complete the same tasks as outlined of OSCP found in the proposed scope, in Shoreline Assessment above. These assessments include:

- Topographic and Bathymetric Surveys
- Geotechnical Borings
- Wetland Delineation
- BEHI
- Hydrologic Assessments

Recommendations

Again, like the proposed scope for the OSCP, GEI will use the previous studies, newly gathered data, and input from stakeholders to develop designs for nature-based shoreline protection techniques. Similar to the work at OSCP, the recommendations will be developed and prioritized based on the following factors:

- Consistency with goals of the stakeholders
- Potential for soil erosion
- Creation of habitat for target wildlife species
- Site conditions, including water levels, waves, and soils
- Constructability, budget, and permittability
- Potential public use

PERMIT-READY DESIGN DOCUMENTS (60% DESIGN)

Upon approval of the recommendations, GEI will develop 60%-level designs that would be suitable for a permit application and development of refined construction estimates. Plans are expected to include:

- Construction access and staging locations
- Plan view and cross sections of proposed soil grading plans and shoreline protection measures
- Recreational improvements such as boardwalks, courtesy day docks, and renovated breasting dolphins
- SESC measures

COST ESTIMATES

GEI will develop construction cost estimates at the conceptual plan development phase, as well as at the 50% design phase. In our experience, the development of initial cost estimates early in a project can be very important because cost is often a limiting factor in project design. Therefore, costs will be developed early to aid the project partners in decision making.

Refined cost estimates will then be developed once plans have been advanced to 50%.

Community Engagement

As public properties, the successful development of habitat restoration and recreational elements at these properties will be most successful if they meet the needs of both the local community and the local ecology. Therefore, community engagement throughout the process is critical.

As per the RFP, GEI will work with project partners to conduct two open houses to discuss the proposed work at Ottawa Sands and Harbor Island, with at least one being held outside at Ottawa Sands if possible. We also recognize that reaching the community may require more than just two open houses. As such, we are committed to engaging with the public both formally and informally beyond the two planned open houses to obtain additional community input if needed. This may include separate meetings with city staff, attendance at city council meetings, or attendance at Harbor Island community update meetings to garner input and answer questions about the work associated with this project.

"Brian Majka's (and the GEI team's) expertise in ecological restoration is surpassed only by his positive attitude and a superior ability to communicate, organize and educate a vast array of project stakeholders and design team members. As a client, the West Michigan Shoreline Regional Development Commission values Mr. Majka's ability to complex, guide diverse project teams through decision-making processes." – Kathy Evans, Environmental Program Manager (Retired), West Michigan Shoreline Regional Development Commission

Project Reporting

At the conclusion of the project, GEI will develop a summary report that details existing conditions, design analysis, and proposed conditions. The report will summarize the community input that was obtained throughout the course of the project, and will also include construction cost estimates and regulatory considerations needed to successfully permit the project.

If awarded the project, GEI will assign Brian Majka as the GEI project manager. Brian has 24 years of experience and has managed complex, interdisciplinary ecological design projects throughout the Great Lakes. The GEI approach to project management begins with establishing clear expectations for project tasks, goals, deliverables and communication. Every project is different, and this project includes a collaboration of multiple stakeholders that may have different needs for communication, scheduling, and deliverables. We have provided a proposed project schedule that is based on the tasks as we understand them, as well as the information provided in the grant. However, we note that there is flexibility with some elements of this schedule. While there are some tasks that are seasonally driven (such as herpetological surveys), others are not. We also understand that review periods often add unforeseen time to projects, as project partners and stakeholders must carefully review project design elements and consider factors such as budgets, community feedback, and coordination with other efforts (such as ongoing remediation efforts at Harbor Island).

As depicted in the project schedule, major deliverables schedules are provided below. These may be altered as needed should the priorities of each effort be different than those envisioned by GEI at this time.

Project Management, Reporting, and Community Engagement

- Project kickoff meeting will likely occur in mid-late May, pending award of proposal, contracting, and schedules of project partners
- We anticipate that community engagement will occur at various levels throughout the project, depending on coordination with other efforts (such as Harbor Island remediation efforts) and other developments at Ottawa Sands County Park
- GEI will schedule and hold progress meetings at a frequency desired by the project team. This may include bi-weekly or monthly meetings, and frequency may change during periods of greater/lesser activity on the project
- The project open houses will likely occur mid-summer, 2026 although interim public meetings may be held
- The final project report will be delivered by August 15, 2026.

Ottawa Sands

WETLAND ENHANCEMENTS

Site Assessments

- Mapping of existing features to be completed by August 1, 2024
- Assessment of areas constructed in 2024 to be completed by June 1, 2025

Recommendations for Wetland Creation

- Initial recommendations to be provided by December 15, 2024. Supplemental recommendations following spring evaluation to be provided by Aug 15, 2025

Permit-Ready Design Documents (60%)

- 60% Design documents will be developed by October 1, 2025. If desired, however, these can be delivered sooner if OCPR and project partners believe they can be developed without the 2025 site assessments

SHORELINE ENHANCEMENTS

Site Assessments

- Topographic/bathymetric surveys will be completed by July 15, 2024
- Remaining site assessments will be completed by November 1, 2024
- If necessary, supplemental site assessments will be completed by June 15, 2025

Recommendations for Shoreline Enhancements

- Initial recommendations and associated cost estimates will be completed by March 1, 2024
- Supplemental recommendations and associated cost estimates will be completed by October 15, 2025

Permit-Ready Design Documents (60%)

- 60% level design documents will be completed by April 15, 2026

Harbor Island

SITE ASSESSMENTS

- Topographic/bathymetric surveys will be completed by July 15, 2024
- Vegetative assessments and habitat mapping will be completed by August 15, 2024
- Shoreline assessments will be completed by August 15,2024

RECOMMENDATIONS FOR WETLAND AND SHORELINE ENHANCEMENT

- Initial recommendations and associated cost estimates will be completed by April 1, 2024
- Supplemental recommendations and associated cost estimates will be completed by October 15, 2025

PERMIT-READY DESIGN DOCUMENTS (60%)

- 60% level design documents will be completed by April 15, 2026

Kitchel-Lindquist Hartger Dunes Preserve

SITE ASSESSMENTS

- Topographic/bathymetric surveys will be completed by July 15, 2024
- Wetland delineation will be completed by August 1, 2024

RECOMMENDATIONS FOR SHORELINE ENHANCEMENTS

- Initial recommendations and associated cost estimates will be completed by April 1, 2024

PERMIT-READY DESIGN DOCUMENTS (60%)

- 60% level design documents will be completed by December 15, 2024

GEI Consultants

Consulting Engineers and Scientists

Proposed Project Schedule

Ottawa County--Coastal Resilience Feasibility and Preliminary Engineering Services

4/9/2024

2024 (May–Dec) | **2025** (Jan–Dec) | **2026** (Jan–Aug)

	May		June		July		Aug		Sept		Oct		Nov		Dec		Jan		Feb		March		April		May		June		July		Aug		Sep		Oct		Nov		Dec		Jan		Feb		March		April		May		Jun		Jul		Aug	
	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	5	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15
A: Ottawa Sands																																																								
Wetland Enhancements																																																								
Natural Features Assessments/Baseline Metrics																																																								
* Review existing data			■	■	■	■																																																		
*Habitat and Vegetation Mapping																									■	■	■	■																												
* Herpetological Assessment																						■	■	■	■	■																														
Groundwater Analysis			■	■	■	■	■	■	■	■																																														
Recommendations for Wetland Creation													■	■	■	■	■	■											■	■	■																									
Permit-Ready Design Documents (60%)																													■	■	■	■	■	■																						
Cost Estimates* **													■	■	■	■	■	■											■	■	■	■	■	■																						
Shoreline Enhancements																																																								
Shoreline Assessments (including topography/bathymetry)			■	■	■	■	■	■	■	■	■	■													■	■	■	■	■																											
Recommendations															■	■	■	■	■	■	■											■	■	■	■	■																				
Permit-Ready Design Documents (60%)																																										■	■	■	■	■	■									
Updated Cost Estimates															■	■	■	■	■	■	■											■	■	■	■	■						■	■	■	■	■	■									
B: Harbor Island																																																								
Natural Features Assessments																																																								
* Plant Inventory (spring and summer surveys) (Includes May bird survey)		■			■	■																																																		
* Herpetological Assessment																							■	■	■	■																														
* Wetland Assessment					■	■	■	■																																																
*Shoreline Assessment					■	■	■	■																																																
Additional Assessments (Topography/bathymetry, Avian, Natural Communities, Protected species, Invasive species)					■	■	■	■	■	■																																														
Shoreline/Wetland Enhancement Recommendations												■	■	■	■	■	■	■	■	■	■	■								■	■	■	■	■	■																					
Permit-Ready Design Documents (50%)																																				■	■	■	■	■	■	■	■	■	■	■										
Cost Estimates* **												■	■	■	■	■	■	■	■	■	■	■								■	■	■	■	■	■																					
D: Other Deliverables																																																								
Community Engagement													■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■		
Project Report																																																				■	■	■	■	■
Proposal Alternates																																																								
A1. Ottawa Sands Wetland Enhancements: Final Construction Drawings and Permitting																																				■	■	■	■	■	■	■	■	■	■	■	■	■								
A2. Ottawa Sands Shoreline Enhancements: Final Construction Drawings and Permitting																																																	■	■	■	■	■	■	■	■
C: Alternate: Grand Haven Dune/Kitchel-Hartger Lindquist																																																								
Natural Features Assessments/Baseline Metrics			■	■	■	■	■	■	■																																															
Shoreline Enhancements and Recommendations									■	■	■	■																																												
Permit-Ready Design Documents (60%)										■	■	■	■	■	■	■																																								
Cost Estimates* **										■	■	■	■	■	■	■																																								

***Note--Schedules are dependent on seasonality for the target assessments and when authorization to proceed is provided. Due to the timing needed for particular surveys, such as the proposed herpetological surveys, work would be completed in either 2024 or 2025**

****Most tasks will occur across a span of time. Schedules reflect periods of inactivity, to allow for review periods by stakeholders and project partners**

*****Cost estimates will be provided each time recommendations are made, or when 60% plans, so budgets can be considered in the decision making process**

COST AND FEES PROPOSED

GEI will submit monthly invoices for work completed throughout the duration of the project.

Ottawa County - Coastal Resilience Feasibility and Preliminary Engineering Services

Request for Proposal 24-055

		GEI Consultants									Edgewater Resources									
	Staff	Erin White - GIS/CAD Support	Emma Giese/Lydea Noye - Watershed Hydrology	Scott Dierks - Water Resource Engineer	Brian Majka - Restoration Ecologist/Project Manager	Steve Rice/Stu Kogge, Senior Ecologist	Steve Nyczak/Zack Pittman, Ecologists	Ashley Truitt, Landscape Architecht/Drew Prodehl, Ecological Engineer	Jerald Brown, Herpetologist	Ecological Field Technician	Nick Stefani, Edgewater Project Manager and Lead Engineer	Greg Weykamp, RLA, Senior Landscape Architect	Jack Cox, PE, PhD, Coastal Engineer	Nick Cortes, Project Engineer	Suzie Fromson, RLA Senior Landscape Architech	Jack Bahmer, Staff Engineer				
	Hourly Rate	$90	$100	$190	$180	$200	$106	$98	$80	$85	$168	$200	$200	$153	$194	$142	Labor Total	Expenses Total	TOTAL	NOTES
A: Ottawa Sands																				
Wetland Enhancements																				
Natural Features Assessments/Baseline Metrics																				
* Review existing data					2	2	8		8								$2,248		$2,248	
*Habitat and Vegetation Mapping		4				5	16	5									$3,546	$200	$3,746	
* Herpetological Assessment		5				4			50								$5,250	$150	$5,400	
Groundwater Analysis			4	4	4			4									$2,272		$2,272	
Recommendations for Wetland Creation				5	10	5	5	16	5								$6,248	$100	$6,348	
Permit-Ready Design Documents (60%)				10	30	5	5	140									$22,550	$100	$22,650	Assumes county LIDAR and topography from current restoration plans will be used
Cost Estimates				5	8												$2,390		$2,390	
Shoreline Enhancements																				
Shoreline Assessments (including topography/bathymetry)					4	10	8	30									$6,508	$10,000	$16,508	Includes topo/bathy survey
Recommendations				20	20			20			20	6	6	20	40	16	$28,212	$100	$28,312	
Permit-Ready Design Documents (60%)				5	20	5		160			30	6	6	48	40	12	$45,478	$100	$45,578	Includes 60% design of day use docks, renovated breasted dolphis, and elevated boardwalks as well as nature-based shoreline stabilization measures. Costs may vary if scope is altered.
Updated Cost Estimates					8												$1,440		$1,440	
B: Harbor Island																				
Natural Features Assessments																				
* Plant Inventory (spring and summer surveys) (Includes May bird survey)		2				2	45										$5,350	$250	$5,600	
* Herpetological Assessment		2				2			55								$4,980	$200	$5,180	
* Wetland Assessment		2				2	40										$4,820	$200	$5,020	
*Shoreline Assessment					6		4	10		10							$3,334	$50	$3,384	
Additional Assessments (Topography/bathymetry, Avian, Natural Communities, Protected species,Invasive species)		4					40	16		40							$9,568	$10,500	$20,068	Includes topo/bathy survey
Shoreline/Wetland Enhancement Recommendations				5	10	5	5	20	5								$6,640		$6,640	
Permit-Ready Design Documents (50%)				10	30	5		160									$23,980		$23,980	
Cost Estimates				2	8												$1,820		$1,820	
D: Other Deliverables																				
Community Engagement					40	16											$10,400	$200	$10,600	
Project Report					30	10		60			18				20		$20,184		$20,184	
		19	**4**	**66**	**230**	**78**	**176**	**641**	**123**	**50**	**68**	**12**	**12**	**68**	**100**	**28**	**$217,218**	**$22,150**	**$239,368**	
																	Base Cost Not to Exceed		**$239,368**	
Proposal Alternates																				
A1. Ottawa Sands Wetland Enhancements: Final Construction Drawings and Permitting				5	24	10	16	60									$14,846	$1,500	$16,346	
A2. Ottawa Sands Shoreline Enhancements: Final Construction Drawings and Permitting				10	40	20	10	260			50	24	24	170	150	150	$104,950	$20,000	$124,950	Includes design of day use docks, renovated breasted dolphis, and elevated boardwalks as well as nature-based shoreline stabilization measures. Costs may vary if scope is altered.
C: Alternate: Grand Haven Dune/Kitchel-Hartger Linquist																	$0		$0	
Natural Features Assessments/Baseline Metrics					5	5	10		10								$3,760	$2,500	$6,260	Includes topo/bathy survey
Shoreline Enhancements and Recommendations				5	8			10									$3,370		$3,370	
Permit-Ready Design Documents (60%)				10	10	5		40									$8,620		$8,620	
Cost Estimates					4												$720		$720	
		0	**0**	**30**	**91**	**40**	**36**	**370**	**10**	**0**	**50**	**24**	**24**	**170**	**150**	**150**				

Total Cost (Base + All Alternates)	**$399,634**
Total Cost (Base + Alternates A1 and C)	**$274,684**

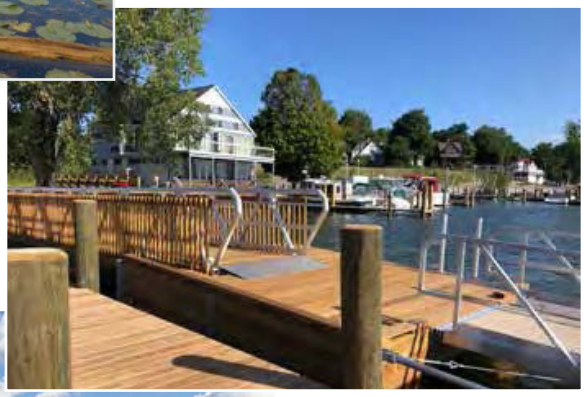
SUMMARY

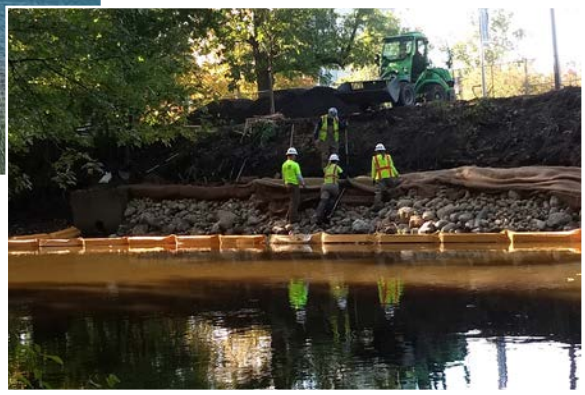
The team of GEI, Edgewater, and Rowe provides a unique combination of local proximity with Great Lakes-wide expertise.

Our team has restored miles of shoreline and hundreds of acres of wetlands in West Michigan alone, often incorporating recreational improvements to connect people to nature.

We understand West Michigan ecology and ecological design. Members of our team not only practice nature-based shoreline and wetland restoration techniques, but we have also written manuals and taught programs to teach others these practices throughout the Great Lakes.

We believe our integrated team of ecologists, engineers, biologists, and landscape architects is uniquely qualified for this project, and we hope to continue our working relationship with Ottawa County Parks and other project partners.





Works Cited

Albert, D.A. 2003. Between land and lake: Michigan's Great Lakes coastal wetlands. Michigan Natural Features Inventory. Michigan State University Extension, East Lansing, MI. Bulletin E-2902. 96 pp.

Audubon. 2021. Grand River Coastal Corridor, Ecological Assessment and Conservation Recommendations.

Bird Studies Canada in cooperation with Environment Canada and the U.S. Environmental Protection Agency. 2009. Marsh Monitoring Program Participant's Handbook for Surveying Amphibians. 2009 Edition. 13 pages.

Comer, P.J. 1996. Wetland trends in Michigan since 1800: a preliminary assessment. Report for USEPA and Michigan Department of Environmental Quality, Land and Water Management Division, Michigan Natural Features Inventory Report 1996-03, Lansing.

Freyman, W., L. Masters, and S. Packard. (2015). The Universal Floristic Quality Assessment (FQA) Calculator: An online tool for ecological assessment and monitoring. Methods in Ecology and Evolution. 7. 10.1111/2041-210X.12491.

Grand, J., S. Saunders, N. Michel, L. Elliott, S. Beilke, A. Bracey, T. Gehring, E. Giese, et al. 2020. Prioritizing coastal wetlands and marsh bird conservation in the U.S. Great Lakes. Biological Conservation 249:108708

Hanshue, S. K., and A. H. Harrington. 2017. Grand River assessment. Michigan Department of Natural Resources Fisheries Report 20, Lansing.

Hanshue, S., Rathbun, J., Badra, P., Bettaso, J., Hosler, B., Pruden, J., & Grabarkiewicz, J. (2021). Michigan freshwater mussel survey protocols and relocation procedures for rivers and streams. Michigan Natural Features Inventory. https://mnfi.anr.msu.edu/pdfs/MI_ Freshwater_Mussel_Survey_ Protocol_May_2021_V3.

Herman, K.D., Masters L.A., Penskar, M.R., et al. (2001). Floristic Quality Assessment with Wetland Categories and Examples of Computer Applications for the State of Michigan – Revised, 2nd Edition. Michigan Department of Natural Resources, Wildlife, Natural Heritage Program. Lansing, MI.

Kost, M.A., Albert, D.A., Cohen, J. G., et al. (2007). Natural Communities of Michigan: Classification and Description. Michigan Natural Features Inventory, Report No. 2007-21, Lansing, MI. https://mnfi.anr.msu.edu/reports/MNFI-Report-2007-21.pdf. Accessed October 30, 2020.

Matthews, J.W., Tessene, P.A., Wiesbrook, S.M., et al. (2005). "Effect of Area and Isolation on Species Richness and Indices of Floristic Quality in Illinois, USA Wetlands." Wetlands 25:607-615.

Michigan Department of Environment, Great Lakes, and Energy (EGLE), Water Resources Division. Revised 2022. Staff Report, Biological and Sediment Chemistry Surveys of Selected Lower Grand River Watershed Streas, Ionia, Kent, Montcalm, Muskegon, and Ottawa Counties, Michigan.

Ottawa Count Parks & Recreation Commission. 2020. miOttawa Sands Park, A Collective Community Visioning Plan.

Rosgen, D.L. 2001. A Practical Method of Computing Streambank Erosion Rate. Proceedings of the Seventh Federal Interagency Sedimentation Conference, Vol. 2, pp. II – 9-15, March 25-29, 2001, Reno, NV. Online at: http://www.wildlandhydrology.com/assets/Streambank_erosion_paper.pdf

Swink, F. and Wilhelm G. (1994). Plants of the Chicago Region. 4th ed. Indianapolis: Indiana Academy of Science.

U.S. Fish and Wildlife Service. (2020). Floristic Quality Assessment. Bloomington, MN: U.S. Fish and Wildlife Service, Midwest Region. https://www.fws.gov/midwest/endangered/section7/s7process/plants/FQA.html.

Accessed December 31, 2020.

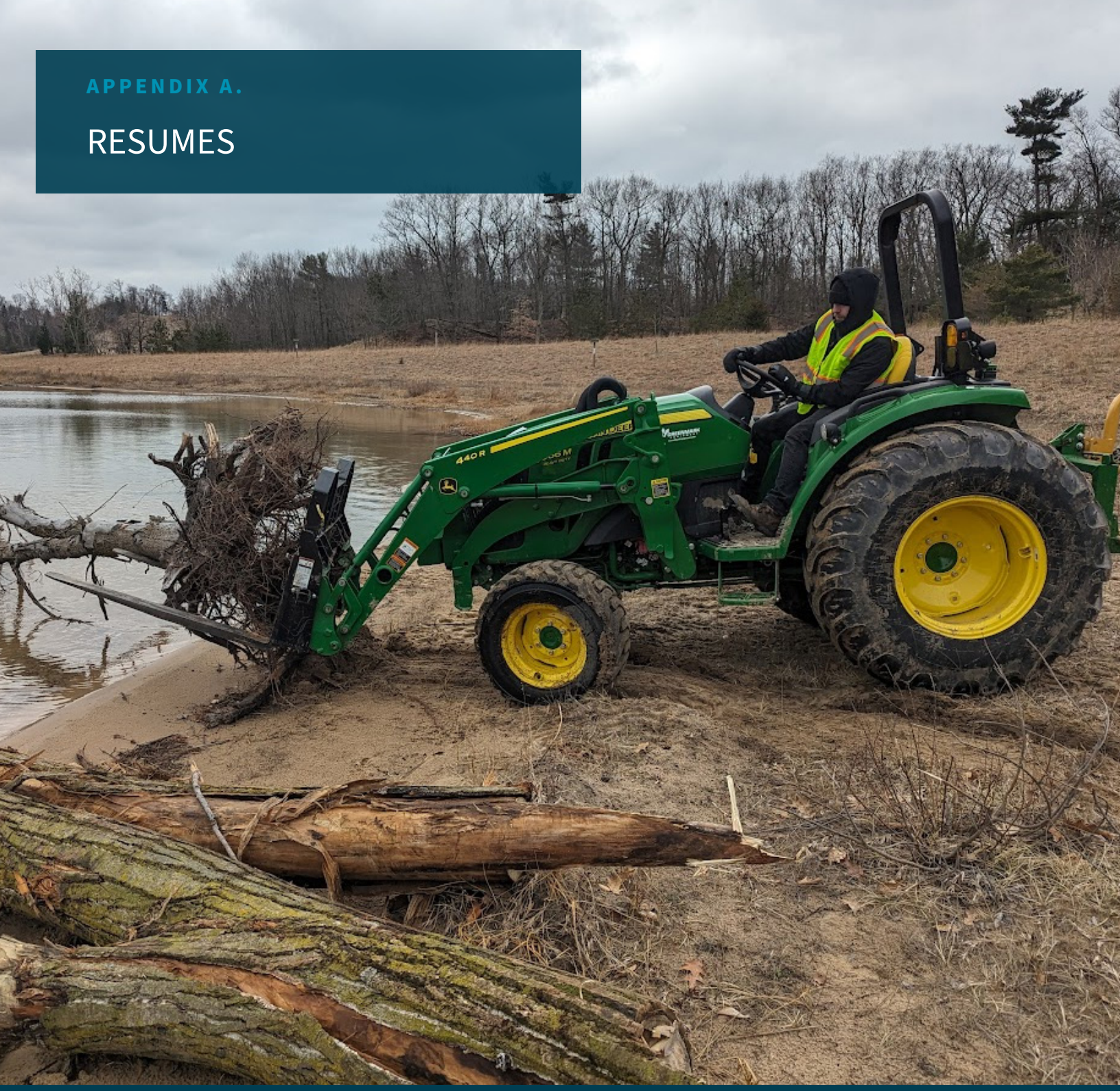
Wessell, K.J., R.W. Merritt, J.G.O. Wilhelm, J.D. Allan, K.W. Cummins, and D.G. Uzarski. 2008. Biological Evaluation of Michigan's Non-Wadeable Rivers Using Macroinvertebrates. Aquatic Ecosystem Health and Management 11: 335-351.

Wilhelm, G. and Masters, L. (1995). Floristic Quality Assessment in the Chicago Region and Application Computer Programs. The Morton Arboretum Report, Lisle IL.

Wilhelm, J.G.O., J.D. Allan, K.J. Wessell, R.W. Merritt, and K.W. Cummins. 2005. Habitat Assessment of Non-Wadeable Rivers in Michigan. Environmental Management 36: 592-609

APPENDIX A.

RESUMES



GEI Consultants

Brian R. Majka
Senior Professional

resume

Brian Majka is a professional restoration ecologist with extensive experience in business management and development, project oversight, design and implementation of wetland construction, stream restoration, soft shoreline engineering, prairie planting, natural areas management and best management practice (BMP) design projects throughout the eastern United States. Mr. Majka is responsible for project management of ecological restoration design and implementation projects for GEI. He actively gives presentations on various ecological restoration-oriented topics throughout the country.

PROJECT EXPERIENCE

Muskegon Lake Area of Concern Restoration Design and Construction Management, Muskegon, MI. Project manager, contracted to design and implement wetland restoration and shoreline softening measures for 30separate locations within the Muskegon Lake Area of Concern (AOC). The goals of the restoration project involved the removal of fill, debris, and hardened concrete shoreline, and the integration of bioengineered solutions to soften shorelines and enhance fish and wildlife habitat. Responsible for site condition analysis, wave energy and hydrologic review, vegetation surveys, local stakeholder coordination, permit acquisition, bid package and restoration plan set development, contractor review and selection, construction oversight, construction management, and long-term management plan development. These restoration efforts have led to over 23,000 linear feet of shoreline restoration, 80 acres of wetland creation, and over 80 acres of benthic restoration through marine debris, fill, and sediment removal.

State of Michigan Natural Shoreline Decision Support Tool. Michigan Department of Environment, Great Lakes, and Energy Coastal Management Program Support, Statewide, Michigan Department of Environment, Great Lakes, and Energy Coastal Management Program. Project Manager for development of Nature Shoreline Decision Support Tool and development of technical guidance documents in support of the Michigan Coastal Adaptation Toolkit. GEI worked with the State of Michigan to develop a Michigan Shoreline Decision Support Tool to aid in the selection of natural and nature-based shoreline restoration techniques along Michigan's 3,288 miles of Great Lakes coasts. The Michigan Shoreline Decision Support Tool is designed to be a planning tool that allows users to explore how variations in input metrics can affect the selection of NNBF strategies. The tool is intended to allow designers, contractors, landowners, and regulators to assess various coastal property types and identify sustainable NNBF strategies that increase resiliency against flooding and erosion.

Lower Muskegon River Coastal Wetland Restoration, West Michigan Shoreline Regional Development Commission, Muskegon County, Michigan. Project manager for design and construction of approximately 60 acres of Great Lakes Coastal Wetland Restoration. The Lower Muskegon River site was formerly a celery farm

EDUCATION
B.S., Natural Resources and Environmental Science, Purdue University

EXPERIENCE IN THE INDUSTRY
24 years

EXPERIENCE WITH GEI
9 years

TRAINING AND CERTIFICATIONS
OSHA 40-Hour HAZWOPER
OSHA 10-Hour Construction Safety
Michigan Commercial Pesticide Applicator's License (Category 5/6)
National Wildfire Coordinating Council S-130/S-190/I-100
Commercial Pilot's License, Small Unmanned Aircraft Systems (SUAS)
SER Certified Ecological Restoration Practitioner (CERP) #0086
State of Michigan Certified Stormwater Operator
Wilderness First Aid
American Heart Association CPR/First Aid

PROFESSIONAL ASSOCIATIONS
Michigan Invasive Plant Council, Vice Chair 2009-2017
Michigan Natural Shoreline Partnership, Vice Chair 2014-2017
Purdue University NRES Alumni Advisory Committee, Member
Grand Valley State University Natural Resources Management Program Advisory Council
West Michigan Conservation Network Steering Committee Member 2016-2022
Applied Fluvial Geomorphology/Rosgen Wildland Hydrology, Level 2
Board of Directors, Midwest-Great Lakes Chapter of Society for Ecological Restoration. 2020-present

GEI Consultants

that was disconnected from the Muskegon River and Lake Michigan through the construction of earthen dikes. The development of project designs included an evaluation of phosphorus, contamination, hydrology, soils, and native vegetation at the site. Construction of the site included dewatering of 60 acres of high nutrient wetlands, installation of well points to increase berm stability, excavation of approximately 120,000 cubic yards of high-phosphorus soil, installation of over 200 wildlife habitat structures, and installation of native seed and vegetation.

Edsel and Eleanor Ford House Shoreline and Wetland Restoration. Ford House, Macomb County, Michigan. Lead restoration ecologist, responsible for design of natural and nature-based shoreline stabilization techniques and wetland restoration at this historic property on the shores of Lake St. Clair. The project is being designed in the vision of the original landscape architect, Jens Jensen, to meet the historic vision of the property while also creating visitor improvements in a way that restores Great Lakes coastal habitat along the shoreline.

Mona Lake Celery Flats Coastal Wetland Restoration, Muskegon County Water Resource Commissioner, Muskegon County, Michigan. Project manager for restoration of approximately 130 acres of Great Lakes Coastal Wetlands. The Mona Lake Celery Flats are historic emergent wetlands that have been disconnected from the Black River and Lake Michigan through earthen dikes.

Marshville Dam Removal and Stony Creek Restoration, West Michigan Shoreline Regional Development Commission/Conservation Resource Alliance. Oceana County, Michigan. Project manager for design and construction oversight of the removal of the Marshville Dam and restoration of Stony Creek, a coldwater trout stream, in areas impacted by the dam. GEI was jointly contracted by WMSRDC and CRA to develop plans to remove the historic Marshville Dam and restore Stony Creek at Marshville Dam County Park. Haven fallen into a state of disrepair, the dam provided a blockage to fish passage and was also a safety concern. To develop project designs, GEI worked with project partners to assess existing conditions at the site—this included a depth to refusal study, assessment of woody debris in the channel and nearby reference reach, mapping of existing vegetation, topographic and bathymetric surveys, sediment sampling, and hydrologic/hydraulic modeling.

Ottawa Sands County Park Shoreline and Interdunal Wetland Restoration, Ottawa County Parks and Recreation Commission, Ottawa County, Michigan. Project Manager for design and construction of shoreline and wetland restoration. GEI partnered with Ottawa County Parks to work in a design-build capacity to develop and construct the planned habitat improvements at the site. Design plans included the creation of approximately 6 acres of interdunal wetland habitat, the creation of a new sand dune, and restoration of approximately 7,000 linear feet of shoreline around the lake by creating a wider littoral shelf and nearshore wetlands. The restoration efforts are intended to provide habitat for a wide range of plants and animals, including fish, reptiles and amphibians, and secretive marsh birds. To complete the design efforts, GEI installed piezometers and staff gauges to assess the surface and groundwater at the park. Using the site data and analysis, GEI worked with park planners to design the habitat improvements in a manner that fit with the park Master Plan.

Old Woman Creek Natural Shoreline Protection Design and Training Materials, KS Associates, Ohio Department of Natural Resources (ODNR), Huron, OH. Project Manager. GEI worked with KS Associates and the ODNR to develop a training program for the use of natural and nature-based shorelines along Ohio's Lake Erie coast. The program included development of fact sheets and supporting course materials, and GEI participated in the instruction of the pilot course. In conjunction with the course, GEI helped develop designs for a nature-based shoreline restoration at Old Woman Creek National Estuarine Research Reserve (NERR) and taught course participants natural shoreline construction techniques in a field-based session that will be included with the course.

New York Natural and Nature-Based Shoreline Decision Support Tool, New York State Office of General Services, Statewide, New York. Lead restoration ecologist. GEI is developing a natural and nature-based features (NNBF) shoreline decision tool intended to integrate ecological and engineering principles into an interactive, multi-dimensional tool to aid in the selection of NNBF features for New York's Great Lakes shorelines along Lake Erie and Lake Ontario. The final tool will be web-based and will contain supporting graphics and informational material.

Steven M. Rice, CWB
Senior Professional

resume

Steve Rice, CWB, is a Certified Wildlife Biologist with more than 32 years of experience in ecological consulting. His experience includes ecological restoration projects, habitat assessments with a focus on threatened and endangered species inventories, wetland delineation, monitoring and mitigation design, and project management. An experienced ecologist, Steve has worked extensively with regulatory agencies in 22 states throughout the East, Southeast, and Midwest. He has a Bachelor of Science in Wildlife Management from Michigan State University and a Master of Science in Range and Wildlife Management from Texas A&M University.

PROJECT EXPERIENCE

Texas Township, Water Quality and Wetland Monitoring, Kalamazoo County, MI. Senior Ecologist and Project Manager for lake wetland and water quality monitoring of Eagle, Crooked, and Bass Lakes and seven designated wetland monitoring sites. Led efforts in developing and implementing a wetland monitoring program to evaluate the potential impacts of high lake levels and pumping on two wetland vegetative communities (rich tamarack swamp and high-quality shrub/emergent wetland). Weekly monitoring and reporting, to meet Michigan Department of Environment, Great Lakes, and Energy requirement, were completed for three years and included documentation of all vegetation species present and approximate percent cover, soil saturation, water level (depth of inundation), approximate distribution of inundation within the monitoring plot, evidence of stunted or stressed woody or herbaceous vegetation such as dead or dying stems, tip die back, and yellowing or disfigured leaves, changes noted since previous monitoring event, and establishment of permanent photopoint documentation.

Water quality monitoring and reporting included water samples for Polycyclic Aromatic Hydrocarbons (PAH) and benzene, toluene, ethylbenzene and xylene (BTEX) compounds evaluation, Escherichia coli (E. coli) evaluation, nutrient analysis, and zooplankton community analysis.

Confidential Gypsum Mining Client, Iosco County, MI. Senior Ecologist responsible for assisting the GEI team in conducting all necessary wetland and threatened and endangered species field assessments, coordination with state and federal agencies on threatened and endangered species, installation of groundwater and surface water monitoring wells for assessing potential impacts of activities on the subject properties and assessing lands for potential use as mitigation for potential expanded mining operations. Coordination with U.S. Fish and Wildlife Service to develop and implement Eastern Massasauga Rattlesnake (*Sistrurus catenatus*) survey protocol for potential Tier 2 habitat on approximately 400 acres. Sampling protocols including a combination of meander surveys and bucket camera traps.

EDUCATION
M.S., Range and Wildlife Management, Texas A&M University-Kingsville
B.S., Wildlife Management, Michigan State University

EXPERIENCE IN THE INDUSTRY
32 years

EXPERIENCE WITH GEI
9+ years

CERTIFICATIONS
Certified Wildlife Biologist
40-Hr OSHA HAZWOPER
8-Hr OSHA HAZWOPER Refresher
Adult First Aid/CPR/AED Exp. April 2024
Michigan, Certified Construction Stormwater Operator
Michigan, Soil Erosion and Sedimentation Control Plan Review and Design
Michigan Department of Agriculture and Rural Development – Commercial Pesticide Applicator 12/31/2025

PROFESSIONAL ASSOCIATIONS
Land Conservancy of West Michigan, Board
Michigan Wetlands Association, Member
Michigan Wetlands Association, Past President
Michigan Water Use Council, Member

GEI Consultants

NEPA – Environmental Assessment, Confidential Client, Chippewa and Mackinac Counties, MI. Project Manager assisting with the development of and Environmental Assessment for the U.S. Forest Service for work proposed within the Hiawatha National Forest. Steve is authoring Chapter 2 – Alternatives, Including the Proposed Action. This section of the Environmental Assessment provides a detailed description of the proposed action as well as alternative methods for achieving the stated purpose. These alternatives were developed based on issues raised by the public and agencies as well as design constraints. This section also provides summary tables of the alternatives and the environmental consequences associated with each alternative. Additional services include wetland delineation and field assessments for protected species including but not limited to Hine's emerald dragonfly (*Somatochlora hineana*), Dwarf lake iris (*Iris lacustris*), and Houghton's goldenrod (*Solidago houghtonii*).

DTE Energy, Multiple Counties, MI. Senior Ecologist and Project Manager responsible for conducting and overseeing the GEI team in providing environmental services including wetland delineations, threatened and endangered species evaluations, GIS mapping, and permitting assistance for >40 proposed Area Expansion Projects (AEP) throughout the state of Michigan. Permitting services included preparation and submittal of Sediment and Erosion Control (SESC) permit applications to the respective County Enforcement Agencies (CEA) and/or Municipal Enforcement Agencies (MEA), Michigan Department of Environment, Great Lakes, and Energy (EGLE) Joint Permit Applications under Michigan's Natural Resource and Environmental Protection Act (NREPA) Part 301/303 General Permits, preparation and submittal of Drain Use Permit applications to the respective Country Drain Commissioner, and Michigan Department of Natural Resources (MDNR) Natural Rivers Permit applications.

Valley Area Improvements Project, American Electric Power (AEP), Berrien, Van Buren, and Cass Counties, MI. Senior Ecologist responsible for leading team responsible for conducting preliminary environmental review efforts for the 17-mile 69kV rebuild from Almena to Hartford, the 25-mile 69kV rebuild from Riverside to South Haven, and the Almena, Hickory Creek, and Main Street Stations. Tasks completed included completing GIS base maps and Michigan Natural Features Inventory (MNFI) Rare Species Review and USFWS Information for Planning and Conservation (IPAC) Database Search, conducting wetland delineation and protected species field evaluations, and completing summary reports of findings for each of the five project areas.

Subsequent tasks included leading permitting efforts for the entire Valley Area Improvements Project which included three separate permit applications and associated support documentation. The permitting phase of the project involved interaction and coordination with the Michigan Department of Environmental Quality, U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, and U.S. Fish and Wildlife Service.

Invenergy Wind Development, Invenergy, Gratiot County, MI. Project Manager responsible for management and completion of environmental support services for a proposed 30,000-acre wind farm project in Gratiot County, Michigan. Initial efforts focused on the development of a special use permit application and completion of preliminary reviews for wetlands and streams, birds, bats, and cultural resources. Subsequent tasks included coordination with the Michigan DNR and the USFWS regarding potential impacts to migratory birds and bats. Based on preliminary findings and coordination with agencies, Steve and his team developed sampling protocol for and conducted avian point count surveys, chiropteran acoustic monitoring, and chiropteran mist-netting surveys. Steve and his team also conducted wetland and stream delineations for the proposed location of wind turbines, underground collection lines, substations, and private access road corridors across the project area. Steve coordinated with the client and regulatory agencies to assistance with final site plan layout and obtained regulatory authorization for wetland impacts associated with the project.

Scott Dierks, P.E.
Hydrologist and Ecological Engineer

resume

Scott Dierks, PE is a civil engineer, hydrologist and ecological engineer. He has spent the last twenty plus years trying to apply the lessons of natural systems to urban and landscape design. This work includes hydrologic, water quality and sediment transport monitoring and modeling. The monitoring and modeling has been used to inform, test and refine stormwater, wastewater and stream planning and restoration projects. His design work has included treatment wetlands for sanitary and leachate wastewaters; urban and rural BMPs, and stream, wetland and shoreline restoration around the Great Lakes. Many of these projects have been funded by grants, and many of the grant applications were partly or in whole, written by Scott and his team. Scott has facilitated and written watershed management plans and is known as an avid collaborator with public agencies, non-profits and other design firms. Scott regularly presents his work at regional and national venues.

EDUCATION
MSE, Environmental Engineering, University of Florida, 1997
B.S., Civil Engineering, University of Rhode Island, 1992
B.A., Psychology, Colgate University, 1985

EXPERIENCE IN THE INDUSTRY
27 Years

EXPERIENCE WITH GEI
>9 years

REGISTRATIONS AND LICENSES
Professional Engineer, Michigan

CERTIFICATIONS
Certified Technical Service Provider (TSP) Wetlands (Interdisciplinary) Engineering Components, number TSP-06-5399

MEMBERSHIPS
Lake Norcentra Planning Committee – Assisting Rochester College with planning work to develop conceptual master plan around Lake Norcentra

Technical Oversight and Advisory Committee on Stormwater, Ann Arbor, Michigan – Member

US Green Building Council – Member

River Raisin Institute, Monroe, Michigan – Board Member

Huron River Impoundment Management Plan Committee, Ann Arbor, Michigan – Member

Stormwater, Michigan State University, Center for Water Sciences, East Lansing, Michigan – Water Fellow

PROJECT EXPERIENCE

Restoration of the Sandusky River Delta, The Nature Conservancy, Sandusky, Ohio. Project Manager for planning and conceptual design of delta restoration measures in Muddy Creek Bay, a ~4 sq.mi. lacustuary on Lake Erie and receiving water for the Sandusky River and its 1,830 sq.mi watershed. Single and double beam sonar was used to map bathymetry of the bay and associated sediment depths. Borings, ADCP velocity measurements, new USACE, USGS, NOAA and FEMA data and upland survey were collected. Loss of the delta and accompanying wetlands was attributed to change of the watershed's land cover, increased runoff and fine sediment loss, drainage controls, shoreline hardening, limiting of landward wetland expansion, and loss of coarse bed load due to dams. Design addresses base issues with approximately $10M in wave attenuation devices, detached barriers, and dike additions. All the projects were evaluated in terms of their impact on whole bay hydrodynamics and sediment transport using a validated 2-dimensional HEC-RAS model of the bay. Wave impacts were evaluated using FEMA's RUNUP model.

Lake Erie Metropark Restoration, Huron-Clinton Metropark Authority, Brownstown Charter Township, MI. Project Manager responsible for design, permits and construction engineering for restoration of 1,100-LF of Lake Erie submergent and emergent marsh without the use of hardened shoreline. The project also includes dredging and habitat restoration of a hydrologically connected, inland pond. Managing field assessments including survey, sediment testing, water level, herpetological, fish and macroinvertebrate surveys. Design has split construction into two phases over two years. The first phase will take advantage of marsh restoration behind an existing riprap lakeward face, with the second phase excavating the remaining berm and creating offshore, detached sills to reduce wave energy at the restored marsh.

Brent Run Landfill Environmental Assessment and Stream Relocation, Waste Connections, Inc., Montrose, MI. Project Manager responsible for development of a stream, wetland and floodplain mitigation plan for a major landfill expansion in Montrose, Michigan. The project included detailed assessment of approximately 300 acres of land and over two miles of stream channel on property owned by the Brent Run Landfill, a Type II sanitary landfill. The site assessments included hydrologic and sediment transport monitoring and modeling, pebble counts, Rosgen/RiverMorph fluvial geomorphologic analysis and longitudinal and cross-section surveys,

wetland delineation, threatened and endangered species assessments, woodland surveys, and fish and macroinvertebrate surveys. The project secured the first-of-its kind Michigan permit for almost a mile of stream relocation, 23 acres of forested wetland mitigation and the creation of 19 ac-ft of additional floodplain storage. Construction was completed Fall 2015. Post-construction monitoring will continue through 2025.. As project manager, responsible for all aspects of the stream restoration design and permitting.

Sterling Riverfront Revitalization Project, City of Sterling, Illinois. Led preparation of the conceptual plan to help secure $2.5M in grant funding for this project. Also led the design team in preparation of construction documents for a riverside park that will transform a brownfield and former steel mill site from an eyesore into a gateway for the City. Design includes roof drain interceptors that carry roof runoff to plaza planters, bioretention basins and a runnel designed to carry water and flood onto intentional floodplain areas. The new greenspace includes extensive native prairie and tree plantings. The park celebrates water by making the cycling of water visible along every step of its journey from rain to river.

Shiatown and Corunna Dam Removals., **Owosso, MI. Friends of the Shiawassee River and City of Corunna, MI.** Project Manager responsible for leading dam removal and stream restoration design and permitting. The project entails design and permitting for removal of the Shiatown Dam and Corunna Dam removals. GEI also assisted with grant application preparation for both dam removals. The Shiatown Dam was removed and the former impoundment restored the summer of 2019. The Corunna Dam was removed the fall of 2019 with restoration and new parking lot, overlook and canoe/kayak launch to be installed summer of 2020.

River Raisin Watershed Wetland Mitigation Bank, Michigan Department of Transportation, Monroe County, MI. As Project Assistant, oversaw hydrologic analysis and applied DRAINMOD model to estimate the long-term hydrology of the proposed system. Contracted to design a 28-acre Michigan DOT forested and scrub-shrub wetland mitigation site. Using the DRAINMOD model, was able to simulate the proposed mitigation wetland design for a 102-year-long historical period to estimate the long-term hydrology of the proposed system. The mitigation wetland was constructed by breaking farm drainage tiles, excavating portions of the site below existing grade, and building a low berm around the site.

River Raisin Dam Remediation, Michigan Department of Environmental Quality and the City of Monroe, Western Lake Erie Basin, MI. Project Manager for engineering and construction oversight of a two-phase project to provide fish and canoe/kayak passage from Lake Erie to the lower 23 miles of the River Raisin for the first time in over 80 years. Responsibilities also included leading the grant application preparation process to secure $3.3 million in Great Lakes Restoration Initiative (GLRI) grant funding for both phases. Project work included hydrologic/hydraulic modeling, fish, macroinvertebrate and mussel sampling, rock ramp/rock arch ramp, dam removal and auxiliary fish passage design, permitting and construction oversight. Phase 1 was completed Fall 2012. Phase 2 was completed September, 2014. Scott was the project manager for all aspects of these projects, including the grant application process. He also led the design and permitting work.

St. Clair River Streambank Stabilization; City of Marysville, Marysville, MI. As Project Manager, oversaw field work, analysis, hydraulic modeling, permitting, design and construction engineering services for removal of approximately 2,500-LF of failing seawall and restoration of the bank to a more natural angle. The project included innovative bank and fringe wetland restoration areas in order to restore some of the most threatened habitat in the river. The project also included design of new sidewalk and 500-LF of boardwalk cantilevered over the river. The project included extensive agency interaction and requirements due to the nature of the river as an international boundary water. Post-construction monitoring by USGS demonstrated that the restored areas attracted more fish as well as a greater diversity of fish species.

Zone Recreation Center Green Infrastructure Design, McKnight & Associates, Cleveland, OH. As Project Manager, oversaw the BMP design, landscaping plan and the stormwater modeling and permitting. Provided Low Impact Development (LID) design consisting of bioretention, native vegetation, planter boxes, and porous pavement. Responsibilities included assisting with the on-site drainage design, hydrologic and hydraulic modeling of BMPs, developing specifications and maintenance recommendations, and preparing the stormwater pollution prevention plan (SWPPP) for implementation during construction.

Stuart N. Kogge, PWS
Senior Wetland/Aquatic Biologist

resume

Stuart (Stu) Kogge, PWS is a senior wetland/aquatic biologist and a Professional Wetland Scientist (PWS) with over 38 years of natural resource and wetland experience. He worked for the MDNR and MDEQ from 1985 to 1995 with most of that time in the Cadillac District office in northern Michigan. He was recommended for and took the MDEQ's State-wide coastal wetland biologist position in 1995 and then the State-wide inland wetlands biologist in 1997. From Lansing, working state-wide, he assessed and managed the State of Michigan's exemplary coastal wetlands pursuant to Part 323, Shorelands Management Act of NREPA and hired and trained wetland contractors for the Wetland Assessment Program (pursuant to Part 303 of NREPA). He also led annual technical, permitting, and enforcement training for all district staff.

In 1999, Stu left the State of Michigan and started Wetland and Coastal Resources, Inc. and in 2000, The Institute for Wetland and Coastal Trainings and Research. In 2008, he joined JFNew as a Technical Vice President leading and managing the larger scale wetland and freshwater aquatic (mussel and fish) projects. In 2014, he joined GEI Consultants, shortly after Cardno bought out JFNew.

Over the past 37 years, Stu has managed and served as a technical expert for hundreds of freshwater aquatic biota projects (most related to freshwater mussels). He holds a USFWS permit for handing federally listed mussel species in Michigan and state listed species in Wisconsin, Ohio, and Michigan. Stu enjoys coordinating with state and federal agencies, strategizing on how to implement aquatic projects, diving, and providing other technical expertise on GEI's mussel and aquatic projects.

FISHERIES RELATED PROJECTS

Adelaide Pointe Marina, Muskegon, Michigan. Sr. Wetland/Aquatic Biologist and Project Manager. Conducted bottom substrate surveys and assessments for fish, macroinvertebrates, and macrophytes to document existing resources within a proposed marina basin. SCUBA gear was used to survey several acres of nearshore and deepwater habitat.

Ox Creek, WEC/Manufactured Gas Utilities, Benton Harbor, MI. Conducted MDEQ Procedure 51 (fish, macroinverts, habitat) bio-integrity assessments to document and support the enhancement of a highly degraded stream channel (TMDL list for Aquatic Inverts). EGLE permit obtained and implemented; creek channel narrowed, shallowed, rock installed, and wetland/floodplain benches created.

Brent Run Landfill Environmental Assessment, Genesee County, Michigan. Brent Run Landfill Environmental Assessment, Genesee County, MI. Manager and technical lead for wetlands and aquatic resource assessments (fish, macroinvertebrates, mussels) and agency coordination. Assessed the terrestrial and aquatic natural resources associated with approximately 300 acres of land and over 6,000 linear feet of stream channel for expansion of the existing landfill, including wetlands, floodplain and stream resources (fish, inverts, mussels), and threatened and endangered species and their habitats. Prepared and obtained USEPA and USFWS approval and MDEQ permit for resource impacts and relocation of over 4,000 linear feet of new stream channel, including relocation of state-listed ellipse (*Venustaconcha elipsiformis*) and slippershell (*Alismidonta viridis*) to upstream locations. Five years later, the new channel has become established with state-listed slippershell and spikes (*Eurynia dilata*) through natural recruitment.

Gold Bond, Gypsum Mine, National City, MI. Project manager and technical lead for assessing watercourses and aquatic resources that may be impacted by expansion of mining operations. Procedure 51 (fish, macroinvertebrates, habitat)

EDUCATION

M.S., Fisheries/Aquatic Biology, Limnology, Michigan State University
B.S., Fisheries and Wildlife Management, Michigan State University

EXPERIENCE IN THE INDUSTRY
38 years

EXPERIENCE WITH GEI
Over 9 years (Sept 2014-present)

CERTIFICATIONS
Ohio Mussel Certification (2022 2027)
Professional Wetland Scientist (since 2000)
Federal permit for handling and relocation of federally-listed freshwater mussels (valid 2019-2024)
Soil Erosion and Sedimentation Control Plan Review and Design; Comprehensive & Storm Water Management – Construction Site (exp 2023)
40-Hr OSHA HAZWOPER
8-Hr HAZWOPER Refresher
American Red Cross Adult CPR/AED

WETLAND and AQUATICS TRAININGS (partial listing)
2022 – Ohio Mussel Workshop
2019 – GEI Internal freshwater mussel, macroinvertebrates, and fish identification
2018 – USFWS Freshwater Mussel Identification (5-days at National Technical Training Center, WV)
2015 – GEI Internal Wetland Training for the Arid West, US, Instructor
2014-2018 – Annual GEI Internal Wetland and Seasonal Botany Training, Instructor
2001-2008 – Twice annual classes with Wetland and Coastal Trainings and Research Institute (non-profit organization co-founded by Stu Kogge) on various classes for regulatory agencies including: Sedges, Spring Flora, Asters and Goldenrods, and Shrubs. Instructor alongside Dr. Anton Reznicek
2007-2008 - Wetland Training for Indiana Department of Environmental Management, Instructor

PROFESSIONAL ASSOCIATIONS
Society of Wetland Scientists, Member
American Fisheries Society, Member
Michigan Wetlands Association, Member
Michigan Association of County Drain Commissioners, DEQ Liaison Committee Member

GEI Consultants

bio-integrity assessments and water quality monitoring of intermittent and perennial streams, where applicable.

Tiara Yacht Club, Lake Macatawa. Evaluated bottom substrates within proposed marina basin for evaluating bottom substrates, fish, and freshwater mussel habitat and for providing professional opinion in court proceedings.

Line 6B, Kalamazoo River and Talmadge Creek Restoration, Calhoun to Kalamazoo County, MI. Site Manager, Senior Wetland/Aquatic Biologist, and NRDA contact with the client, Calhoun County Drain Commissioner, and the regulatory agencies. Aquatic resource related tasks completed during the course of the project included integration of bioengineering measures along the creek and stream corridor, MDEQ P51 assessments (i.e. fish, macroinvertebrates, and habitat), mussel surveys, design and installation of fish and wildlife habitat structures, completion of river and stream geomorphological studies, completion of riverbank soil stability and soil erosion assessments, , design and implementation of natural stream channel and stream bed reconstruction and stabilization, and coordination with federal and state agencies.

Ottawa County Water Resource Commissioner, Sand Creek Drain, Ottawa County, MI. Sr. Wetland/Aquatic Biologist. Conducted a comprehensive ecological and hydrological assessment of Sand Creek including documenting, obstructions to natural flow, erosion, sedimentation, point and non-point sources of pollution, pebble counts, cross-sectional and longitudinal profiles, and MDEQ P51 assessments (i.e. fish, macroinvertebrates, and habitat). Fisheries habitat and bank stabilization structures installed.

Battle Creek River Intercounty Drain, Calhoun and Eaton County, MI. Assessed nearly four miles of the Battle Creek River which had been dredged for the purpose of providing a wetland and river restoration plan. Developed restoration plan to address MDEQ and MDNR interests; plan included restoration of 2.5 acres of wetland and placement of habitat structures and bottom substrates for restoring/improving fish and freshwater mussel habitats.

Hickory Creek Drain, Berrien County Drain Commissioner, Berrien County, MI. Assessed and provided recommendations for ecological restorations, bank stabilizations and fishery enhancements for 18 miles of drain/tributaries.

State and Indian Creek Intercounty Drain, Calhoun and Eaton County, MI. Assessed and provided recommendations for addressing severe erosion, sedimentation and improving drain function/maintenance for over 18 miles of the creek. Provided design and construction oversight for the removal and installation of in-stream obstructions and fish habitat structures for bank stabilization and aquatic habitat, respectively.

Michigan Department of Natural Resources, Fisheries Division, Thompson, MI. Project and technical manager responsible for obtaining USACE and EGLE permits for expanding the fish hatchery into regulated wetlands. In obtaining the permit 120-acres of land was surveyed for flora and fauna, a Final Wetland Mitigation Plan developed and preserved to mitigate for permitted impacts. GEI is conducting the maintenance, monitoring, and reporting to the agencies for the mitigation preservation site.

City of Durand, Mixing Zone Demonstration Study, Shiawassee County, MI. Conducted mixing zone/dissolved oxygen study, macroinvertebrate, fisheries and freshwater mussel surveys and habitat assessments of the Holly Drain and Shiawassee River to assess the impacts of the City of Durand's WWTP outfall into the Shiawassee River. Worked with the City and Michigan DNRE to get approval of an acceptable dissolved oxygen mixing zone within the Shiawassee River for the City of Durand.

Line 5, Enbridge Energy and Barr Engineering, Freshwater Mussels, Fish, Rare Wetlands, Macroinvertebrates, throughout Upper and Lower Peninsula of MI. Sr. Wetland/ Aquatic Biologist. Conducted transect-based surveys for freshwater mussels at over 30 pipeline water crossings. Conducted numerous EGLE P51 and P22 surveys for fish, macroinvertebrates and habitats at some of the same and different water crossings. Surveys required approval of Work Plans by MDNR, EGLE, and USFWS. Mussel surveys included Group 3a streams which required Mr. Kogge to obtain a federal permit for the handling and relocation of federally-listed mussels. Provided quality assurance and control for wetland reports, freshwater mussels, and P51 and P22 reports.

Flower Creek watershed ecological assessment, Muskegon County, MI. Conducted ecological terrestrial and aquatic biota assessments of the watershed for potential designation as an Environmental Area pursuant to Part 323, Shorelands Protection and Management, of NREPA. This included setting fyke and trap nets in riverine and wetland systems.

Pentwater River (Marsh) ecological assessment, Oceana County, MI. Conducted aquatic and fisheries biota assessments of the marsh for potential designation as an Environmental Area pursuant to Part 323 of NREPA. This included setting fyke and trap nets in riverine and wetland systems.

Three Mile Creek Restoration, Hiawatha Sportsman's Club, Engadine, MI. Developed and implemented a dam failure restoration plan for MDEQ compliance. Restored over 2,000 linear feet of cold water stream channel and installed over ten fish habitat structures.

Stephen Nyczak
Staff Ecologist

resume

Stephen Nyczak is a professional wetland/aquatic biologist with twelve years of experience in botany and habitat restoration. He has performed large-scale biological surveys throughout the Midwest and New England. His responsibilities have included documenting hydrology, erosion concerns, plant community identification and quality assessments, vegetation inventory, and overall site conditions for annual mitigation monitoring reports. He also drafts monitoring reports for state agencies, including management recommendations for subsequent growing seasons. He frequently uses GPS technology to map natural features in the field and produced maps using ArcGIS software.

PROJECT EXPERIENCE

Wetland Mitigation Monitoring, Various Clients, Various Counties, MI. Botanist. Responsible for completing the annual monitoring site visits on numerous wetland mitigation projects throughout Michigan. Performed habitat assessment, vegetation inventory, floristic quality assessment, transects sampling study, and wildlife use evaluation for each site. Completed annual monitoring reports for submission to the Michigan Department of Environment, Great Lakes, and Energy and U.S. Army Corps of Engineers.

Utility Corridor Wetland Mitigation Monitoring, Confidential Client, Various Locations, MI. Botanist. Led survey teams in full monitoring studies of wetland areas spanning hundreds of miles of utility corridor in two states. Wetland areas received a botanical inventory, quadrat studies determining relative cover of each species, and general site assessments for problem species, erosion, or general concerns.

Kalamazoo River Aquatic Vegetation Survey, Confidential Client, Marshall, MI. Field Supervisor and Survey Team Leader. Responsible for a comprehensive vegetative survey of vegetation growing in the Kalamazoo River between Marshall and Kalamazoo, Michigan. Coordinated three survey teams for three weeks of survey, assisted with plant identification, managed GPS map data, conducted data validation, and post-survey Quality Assurance/Quality Check (QA/QC).

Pretty Lake Preserve Restoration, J.A. Woollam Foundation, Mattawan, MI. Botanist. Responsible for baseline botanical inventory and invasive species survey on a 220-acre private property. The team performed transect sampling and GPS mapping of distinct vegetation communities for use in property management planning. Performed invasive species monitoring and herbicide treatments on the forested preserve.

Reed Reduction, Beaver, High, and Garden Islands, MI. Worked jointly with Michigan Department of Natural Resources and local township officials to reduce populations of common reed along the shorelines of Beaver, High, and Garden Islands, located in northern Lake Michigan. Applied selective herbicide applications to the target species to prevent unintentional damages to rare, threatened, and endangered

EDUCATION
B.S. Environmental Science, Calvin College, Grand Rapids, MI

EXPERIENCE IN THE INDUSTRY
12 years

EXPERIENCE WITH GEI
8 years

CERTIFICATIONS
OSHA 40-Hour HAZWOPER
OSHA 10-Hour Construction Safety
American Red Cross Adult CPR/AED
New York Commercial Pesticide Application License (Category 3a, 5a, 6a)
Michigan Commercial Pesticide Application License (Category 5, 6)

TRAININGS
Chainsaw Training Class
Aster and Goldenrod Identification Class
Rutgers Wetland Delineation Training

PROFESSIONAL ASSOCIATION
Society for Ecological Restoration

GEI Consultants

species on the islands. Project Manager responsible for assisting with township meetings.

Bar Beach Wetland Restoration, Town of North Hempstead, Hempstead Harbor, NY. Restoration Ecologist. Coordinated and supervised the restoration of 200 feet of tidal shoreline. This effort included the removal of Phragmites, installation of hundreds of native plugs, and construction of biodegradable shoreline protection with coir logs, stakes, and jute matting.

Millbrook Dams Reconstruction, Wetland Mitigation, and Monitoring, Jack's Holding on the Hill, LLC, Millbrook, NY. Restoration Ecologist responsible for coordinating field crews, plant orders, and supplies for wetland enhancement plantings. Oversaw and completed the installation of 30,000 native plugs, 3000 container trees and shrubs, and 2,000 bare roots. Conducted the annual wetland monitoring and drafted the annual report for state submission in 2016 and 2017.

Wetland Delineations, Sunpin Solar, several sites across Massachusetts. Wetland ecologist responsible for natural resource survey and wetland delineation throughout project site. U.S. Army Corps of Engineers forms, Massachusetts Department of Environmental Protection forms, GIS figures, photo logs, and narrative sections were prepared for the full site and delineation report. 2018-2019

Salem Field Landfill, Invasive Species Survey and Removal, Queens, NY. Restoration Ecologist responsible for identifying invasive grasses, vines, shrubs, and trees within designated areas of a large city park and preserve. Identified and cataloged the invasive species on site, created a location map of target species, and produced a restoration plan for removal of invasive species. Led the invasive species control removal work involving the cutting of nonnative trees, vines, and shrubs with hand tools and gas-powered chainsaw. 2016

Wetland Delineations, Cypress Creek Renewables, several project locations, Massachusetts. Several project sites were assigned across the state to be surveyed for natural resources and wetland areas. Delineations were completed and recorded with Trimble GPS devices in the field. All the recorded data was compiled into a report including U.S. Army Corps of Engineers forms and ArcGIS figures. 2018-2019

Sod to Solar Wetland Delineation and Ecological Survey, Environmental Design & Research, Riverhead, NY. Conducted survey of ecological community types across a biologically diverse 80-acre site. The study included wetland delineations with full U.S. Army Corps of Engineers data forms, a threatened and endangered species survey, an invasive species inventory, and figure production for survey items using ArcGIS software. 2018

Town Tree Inventory and Study, Village of Poquott, Poquott, NY. Ecologist responsible for taking a full inventory of mature trees along village roads and within parks. In addition to species, diameter at breast height (DBH), and relative height, the overall health of each tree was also recorded and saved using a tablet device equipped with iTree software. 2016

NYS DOT I-84 Overpass Wetland Delineation, Wawayanda, NY. Ecologist responsible for wetland and creek delineation within designated buffer zone along interstate corridor. Several wetlands were recorded and mapped with a field GPS device. A full study report was repaired and submitted which accounted for each wetland area and included U.S. Army Corps of Engineers forms and ecological summaries. 2019

Site Assessments, National Grid, Long Island NY. Environmental Consultant responsible for delineating fresh water and tidal wetland boundaries, and buffer areas where they may conflict with routine utility construction and repairs. Ecological data was recorded in the field and compiled in a report including wetland delineation maps produced in ArcGIS using GPS data collected with a Trimble unit. 2017-2020

Site Assessments, PSEG Long Island, Long Island NY. Environmental Consultant responsible for delineating fresh water and tidal wetland boundaries, buffer areas, identifying protected species, and identifying protected habitat types where they may conflict with routine utility pole construction and repairs. Ecological data was recorded in the field and compiled in a report including wetland delineation maps produced in ArcGIS using GPS data collected with a Trimble unit. 2017-2020

Zack Pitman
Wetland Ecologist

resume

Zack Pitman is a wetland ecologist in GEI's Traverse City, Michigan, office. He obtained his Bachelor of Science degree in Natural Resources Management with a minor in Biology and emphasis in Ecosystem Science and Management from Grand Valley State University (GVSU) in 2016. Zack then sought and was awarded his Master of Science (M.S.) degree in Biology from GVSU in 2018. His M.S. research focused on spotted knapweed control and prairie restoration at Pierce Cedar Creek Institute (PCCI), which produced a publication in the journal *Ecological Restoration* in 2019. While at PCCI, Zack also assisted in ongoing research projects including eastern massasauga rattlesnake (EMR) census surveys, freshwater mussel and fish surveys, and grassland bird surveys and habitat assessments. After graduating, Zack served as an AmeriCorps member with the Leelanau Conservancy as a Stewardship Technician where his responsibilities included invasive species management, trail maintenance, and ecological monitoring of preserves and natural areas. In 2019, Zack served a second term with AmeriCorps at Michigan Natural Features Inventory (MNFI) as a Conservation Science Technician. Zack's duties at MNFI included conducting rare and protected plant and animal field surveys, maintenance and updating of the NatureServe protected species database, and updating protected species abstracts. After completing his second AmeriCorps term, Zack was hired by GEI as a Wetland Ecologist in 2020.

Zack's experience at GEI includes delineating wetlands in accordance with the United States Army Corps of Engineers (USACE) handbook; documenting fauna encountered during wetland delineations, particularly birds and herpetofauna; mapping wetlands and other sensitive ecological features using Trimble GPS units and ArcGIS online software; creating plant lists and conducting Floristic Quality Assessments; conducting annual monitoring of EGLE wetland mitigation sites; designing and implementing rare plant and animal and surveys, including for federally protected species such as dwarf lake iris and EMR; preparing Joint Permit Applications on behalf of clients using the EGLE MiWaters website; assisting with mussel and stranded aquatic biota surveys; working as part of an ecological restoration field crew to develop and maintain wetland mitigation sites; and drafting reports detailing the results of field work for review by clients and state and federal resource agencies.

SELECTED PROJECT EXPEREINCE

Edsel & Eleanor Ford House, Macomb County, MI. Delineated wetlands and assessed areas for shorebird habitat at a proposed wetland and shoreline restoration site along Lake St. Clair. Provided recommendations to improve shorebird habitat.

Confidential Gypsum Mining Client, Iosco County, MI. Responsible for conducting wetland delineations and habitat mapping on over 500 acres of potential mining expansion. Designed and

EDUCATION
M.S., Biology, Grand Valley State University
B.S., Natural Resources Management, Grand Valley State University

EXPERIENCE IN THE INDUSTRY
6 Years

EXPERIENCE WITH GEI
4 Years

CERTIFICATIONS
S130/190 – Wildland Firefighter Type 1
RX 310 – Intro to Fire Effects
Project Learning Tree & Project Wild Outdoor Educator

TRAINING
Wetland Plants of Northern Michigan
Introduction to Hydric Soils

PROFESSIONAL ASSOCIATIONS
Michigan Wetlands Association
Society for Ecological Restoration – Midwest Great Lakes Chapter

PUBLICATIONS
Pitman, Z.T. and T.A. Aschenbach. 2019. Simulated fire season and temperature affect Centaurea stoebe control, native plant growth, and soil catechin. Ecological Restoration 37(4): 246-255.

conducted field assessments for Federally-threatened eastern massasauga rattlesnakes (*Sistrurus catenatus*), including both passive (camera trap) and active (visual survey transects) surveys in coordination with USFWS staff. Prepared permits for installation of groundwater and surface water monitoring wells for assessing potential impacts of activities on the subject properties and assessed lands for suitability to use as mitigation for potential expanded mining operations.

SEMCO Energy & Gas Company, Delta County, MI. Responsible for conducting annual monitoring of an 11-acre EGLE wetland mitigation site. Monitoring duties included identifying plants to species and estimating percent cover of each species in previously established vegetation monitoring plots, identifying all plant species observed during a meander survey of the entire wetland, and conducting detailed analysis of monitoring plot data. Drafted annual monitoring reports to document mitigation wetland status according to established EGLE performance standards.

Barry County Drain Commissioner, Barry County, MI. Developed and implemented an aquatic invasive species (AIS) and wetland monitoring plan for the Cloverdale Chain of Lakes (COL). Established wetland survey transects and plots throughout the COL for monthly assessment during the growing season. Conducted monthly surveys for AIS, including zebra mussel veligers following established plankton sampling protocols. Drafted monthly summary reports for submittal to EGLE.

Michigan Department of Natural Resources, Fisheries Division, Thompson, MI. Conducted annual wetland monitoring and assessments of a 120-acre wetland preservation site as required by USACE and EGLE permits for expanding the Thompson Fish Hatchery into regulated wetlands. Drafted semi-annual reports to summarize monitoring efforts and document achievement of performance standards.

OHM Advisors and Grand Traverse County Road Commission, Grand Traverse County, MI. Conducted wetland delineations and habitat mapping on over 400 acres to inform selection of the route for a potential bridge crossing of the Boardman River. Documented occurrence of rare/protected species and habitats within the Boardman River Corridor. Attended public meetings to present and communicate findings of field surveys. Drafted a summary report of field survey findings for presentation to federal and state resource agencies.

Huron-Clinton Metropolitan Authority, Flat Rock, MI. Responsible for conducting wetland delineations and habitat mapping on over 360 acres with potential to be impacted by the removal of the Flat Rock and Huroc Dams. Conducted desktop reviews for threatened and endangered plant and animal species within the potential impact area. Documented occurrence of rare/protected species and habitats within the Huron River Corridor.

Damfino Development, LLC, Muskegon County, MI. Conducted field site assessments, wetland delineations, and botanical surveys of a potential development area within an interdunal system on the shore of Muskegon Lake. Assessed classifications of wetlands as to whether they are classified as being interdunal, rare and imperiled, and regulated pursuant to Part 303 of NREPA.

Pierce Cedar Creek Institute for the Environment, Barry County, MI. Assisted researchers with a grassland bird habitat usage and assessment study. Experience included conducting point counts for grassland bird species, mist-netting state endangered Henslow's sparrows (*Ammodramus henslowii*), and documenting vegetation structure and diversity within point count locations.

Land Conservancy of West Michigan, Grand Rapids, MI. Designed a bird survey plan for all 16 LCWM natural areas. Visually and audibly surveyed conservancy properties for all present bird species throughout the breeding season. Mapped and analyzed bird habitat preferences using ArcGIS software. Navigated nature preserves using a map, compass, and GPS unit. Presented survey results to a public audience.

Ashley Truitt
Landscape Architect/CAD Designer

resume

Ashley Truitt is a Landscape Architect in GEI's Allendale, MI office. Ashley's experience in landscape architecture focuses on native landscapes, restoration ecology, and parks and recreation. She has been involved with the design and implementation of numerous projects pertaining to habitat restoration, stormwater management, and residential landscapes. She brings a knowledge of sustainability and conservation practices to complement her expertise in site design and analysis. Ashley is proficient in creating complete and accurate construction document sets, conceptual design renderings, 3D site modeling, and client/community presentation materials.

PROJECT EXPERIENCE

Ottawa Sands Shoreline and Interdunal Wetland Restoration, Ottawa County Parks and Recreation Commission, Spring Lake, MI. Restoration Design Team Member. Developed conceptual perspective graphics that show before and after established design conditions and conceptual plan views. Developed a conceptual design package for grant applications. Designed an interdunal wetland and natural shoreline improvements that include grading to expand littoral shelf, woody habitat structures, native plantings, and wetland creation at varying elevations to ensure habitat at high and low water levels. Created a full construction document package.

Kitchel Lindquist Shoreline Restoration, City of Ferrysburg, Grand Haven, MI. Restoration Design Team Member. Developed conceptual design graphics to gain initial project support. Developed design documents for permit applications that illustrate natural shoreline restoration efforts including woody habitat structures, tiered sills, and native seeding.

Muskegon Lake Boys and Girls Club Shoreline Restoration, West Michigan Shoreline Regional Development Commission, Muskegon, MI. Restoration Design Team Member. Surveyed existing shoreline conditions. Developed construction documents for 400 feet of shoreline restoration that includes stone toe, grading, woody habitat structures, and native seeding.

Sunset Station Park Revitalization and Dune Restoration, Township of Arcadia, Arcadia, MI. Restoration Design Team Member. Developed engineered design set for SPARK grant application consisting of existing conditions, shoreline sections, demolition plan, proposed conditions, restoration plan, and details. Park improvements include beach access, native landscaping, overlook deck, and shoreline stabilization.

River Bluff Park Conceptual Design, Saugatuck Township, Saugatuck, MI. Conceptual Design Team Member. Developed conceptual design figures to demonstrate park improvements, including pedestrian trails, wetland boardwalk, fishing pier, invasive species

EDUCATION
M.L.A., Landscape Architecture, University of Michigan

B.S., Applied Ecology and Environmental Science, Michigan Technological University

EXPERIENCE IN THE INDUSTRY
6 years

EXPERIENCE WITH GEI
2 years

PROFESSIONAL AFFILIATIONS
American Society of Landscape Architects, Associate Member

Michigan Chapter, American Society of Landscape Architects

AWARDS
Washtenaw County Conservation District, School and Community Habitat Grant, 2021

GEI Consultants

management, and natural shoreline restoration utilizing woody material on-site.

Marshville Dam Removal and Stony Creek Restoration, West Michigan Shoreline Regional Development Commission, Shelby, MI. Restoration Design Team Member. Created conceptual design graphics that showcase creek restoration efforts for public meetings. Developed design concepts for an ADA fishing platform and public access to the creek utilizing input from project partners and the community. Developed construction documents consisting of existing conditions, creek profiles and sections, proposed conditions, and details for project phasing.

White River Fish Passage and In-Stream Habitat Restoration, West Michigan Shoreline Regional Development Commission, Shelby, MI. Restoration Design Team Member. Developed construction documents consisting of existing conditions, creek profiles and sections, and proposed conditions for 1,000 feet of in-stream habitat restoration. Utilized the Rosgen Classification of Natural Rivers to quantify existing conditions and develop proposed design parameters.

Kalamazoo River Cleanup Program, Allegan County, MI. Restoration Design Team Member. Developed design graphics that showcase before and after established design conditions, conceptual plan views, and cross-sections of bank treatment typologies for dam removal and river restoration project. Created visualization package to be used for presentations.

Pine Creek Bank Stabilization, DTE Energy, Gratiot County, MI. Restoration Design Team Member**.** Three natural gas pipelines had been exposed due to eroding banks in Pine Creek. Developed construction document set consisting of existing conditions, grading plan, and restoration plan for bank stabilization design.

PREVIOUS PROJECT EXPERIENCE

Supporting Birds and Pollinators Through Ecological Landscape Design, Bird Center of Michigan, Saline, MI. Designer for 2.5-acre habitat restoration. Conducted research, site analysis, and designed native gardens that support local songbird and pollinator populations. Obtained funding from various sources to implement over 500 plants and educational signage. Prepared a management plan and final report for client.

Hale Park Improvements, City of Ionia, Ionia, MI. Landscape Designer. Designed community park improvements to meet the Land and Water Conservation Fund grant scope items. Park improvements include accessible play equipment, basketball courts, walking paths, parking lot, and additional landscaping.

Hoffmaster State Park Beach Access, State of Michigan, Norton Shores, MI. Landscape Design Staff. Conducted a site analysis on the existing beach access and provided recommendations for improvements. Sited a new restroom building at the existing park entrance.

Sleepy Hollow State Park Beach and Restroom Building Improvements, State of Michigan, Laingsburg, MI. Landscape Designer. Designed food truck vendor parking and proposed parking lots and adjacent walkways at the campground restroom buildings to ensure accessibility guidelines were met.

G. Robert Cotton Correctional Facility Paving Analysis, State of Michigan, Jackson, MI. Landscape Design Staff. Conducted a study on current paving conditions at the facility that included improvement recommendations and a complete cost estimate for construction.

PRESIDENT | PRINCIPAL

Gregory Weykamp

ASLA, LEED AP

Greg Weykamp has over thirty-one years of experience in the planning and design of the public realm, with an emphasis on implementation of sustainable built landscapes and urban waterfront environments. His project experience spans waterfront parks, marinas, Master Planned communities, urban revitalization, streetscapes, parks and recreation facilities, medical and university campuses, and military installations.

Education

Bachelor of Landscape Architecture

Michigan State University 1992

Registrations

Landscape Architect

State of Illinois, Indiana, Michigan Ohio, New York, Wisconsin

CLARB Certified

Council of Landscape Architecture

Registration Boards

LEED Accredited Professional Building

Design & Construction

Honors & Awards

Great Lakes Sea Grant

Relevant Experience

Nelson Park Master Plan

The Nelson Park Master Plan project created a new vision for the 180-acre Nelson Park and adjacent parkland along the shores of Lake Decatur in Decatur, Illinois, with the fundamental goal of achieving both financial sustainability for the park and spurring economic growth within the greater Decatur economy. The project included a waterside restaurant entertainment district, regional destination water park, and pedestrian loop around Basin Two of Lake Decatur. Greg led the design effort which included an extensive public involvement process and the development of strategies to expand biologically diverse native habitats, improve the durability of the built environment, and apply improved stormwater management techniques while reducing maintenance and environmental impacts.

East Tawas State Harbor Redevelopment

The State of Michigan engaged Edgewater in the condition assessment, market analysis, boater survey, and master planning of expansion of the existing state harbor facility in East Tawas, Michigan. Following successful completion of the initial planning process, Greg oversaw design of construction Phase I, including a new pedestrian promenade, fuel system, and floating dock and wave attenuator infrastructure for 48 new slips was completed. Construction of Phase I began in 2016 and opened summer of 2017. Greg then managed the design, bidding, contracting and implementation of Phase II which included the demolition of fixed and floating piers along with their replacement with modern floating dockage with code compliant utilities. Phase 2 was completed in Summer 2018 in its entirety and under budget. Greg also led the design team for Phase II improvements completed in Spring 2019.

Gregory Weykamp

ASLA, LEED AP

Historic Ottawa Beach Marina

Edgewater was hired to complete a marina market analysis and feasibility study for the complete transformation of an outdated private marina into a modern public facility owned and operated by Ottawa County Parks. Project elements include a complete renovation of landside park space to integrate the site with a continuous waterfront walkway, new parking, and a modern boater services building. A new system of fixed docks offers seasonal and transient slips, which were partially funded by a USFWS Boating Infrastructure Grant prepared by Edgewater. The facility opened in the summer of 2019. As Principal of the design team, Greg led the design and planning of all aspects of the project.

Discovery Center Great Lakes

The Discovery Center Great Lakes is home to a range of community and non-profit organizations interpreting historic shipping and boating on the Great Lakes. Greg led this design effort through the creation of a Master Plan for a completely renovated waterfront and marina to provide homes for a number of historic tall ships, wooden sailing vessels, and the Traverse Area Community Sailing program. In addition, a number of seasonal and transient slips were made available for lease to help fund non-profit activities and offset the cost of construction.

Oswego Waterfront Master Plan

The Oswego Waterfront Master Plan was the first step in the revitalization of Oswego's waterfront economy, which capitalizes on the region's natural and historic resources. The initial economic driver for this waterfront was the redevelopment of two existing marinas into a single, modern facility that would better serve existing boaters, support the expansion of the thriving charter fishing fleet, and support programs that will make boating accessible to everyone in Oswego regardless of age, income, or ability. As an economic catalyst for Oswego's waterfront, the marina will support the redevelopment of the existing pier into a vibrant mixed-use development that will serve local residents and attract visitors. An extensive community outreach process has led to the development of the waterfront master plan, which also includes an expansion and relocation of the H. Lee White Maritime Museum, and restoration of the historic dry dock facility.

Honors & Awards

Great Lakes Sea Grant Network "Great Lakes Outreach Programming Award,"

Sustainable Small Harbors Project 2013 President's Award

American Society of Landscape Architects, Illinois Chapter

31st Street Harbor, Chicago, Illinois ISS Fabien Cousteau Blue Award 31st Street Harbor

Chicago, Illinois AIA Chicago SustainABILITY Leadership Merit Award 2012

31st Street Harbor First Place

Engineering News Record Midwest "Best Projects" 2012

31st Street Harbor Design Evanston Urban Design Award 2010 Evanston Lakefront Master Plan

Air Force Design Award

Planning / Design Guidelines Category, Misawa AB, 2005Merit Award for Research,

Summer Student Program 2001

Colorado Chapter ASLA

2001 Merit Award for Planning

Great Plains Chapter American Society of Landscape Architecture, Omaha City Parks MasterPlan

1999 National APA Honor Award

GASLA Merit Award

PRINCIPAL | DIRECTOR OF ENGINEERING

Jack Cox

PE, D.CE, D.PE, D.NE

Jack is Principal and Director of Engineering for Edgewater. He is triple board certified in Coastal, Port and Navigation Engineering by the Academy of Coastal, Ocean, Port and Navigation Engineers (ASCE). He possesses internationally recognized credentials in research, engineering, and design of projects involving nearshore hydrodynamics, harbor tranquility, breakwaters, fixed and floating marine structures, vessel navigation and berthing, dredge material disposal, shore protection, port planning, marina design, and risk analysis.

Education

PhD ABT in Coastal Engineering, University of Delaware

Post-Graduate Studies in Geophysical Fluid Dynamics, University of Chicago

Master of Engineering Science, Purdue University

Bachelor of Engineering Science, Purdue University

Registrations

Professional Engineer in the States of AK, DE, FL, IL, IN, LA, MD, MI, NY, NJ, OH, PA, RI, SC, TX, WA, and WI

Certifications

Academy of Coastal, Ocean, Port and Navigation Engineers (ACOPNE)

Relevant Experience

Illinois Beach State Park Shoreline Stabilization

Retained by the Illinois Department of Natural Resources, Jack led the design development of a six-mile shoreline stabilization project to protect and enhance a highly eco-sensitive coastline on Lake Michigan. His team employed a design approach intended to minimize any structural contact with the beach by using tuned offshore structures and introducing the concept of virtual shorelines. The plan integrated a system of properly oriented, configured, and detailed detached structures, submerged reefs, and beach reconstruction using offshore mining. Successful approaches to achieving shoreline resilience and sustainability were accomplished by introducing new geometric elements such as fishtail spurs to induce reverse sediment transport, triggering the self-healing of the beaches. The design was specifically formulated to passively increase the resilience of the shoreline. Jack directed numerical shoreline change modeling and large-scale physical model testing to confirm and refine the design. He also integrated habitat-enhancing features into the breakwater design to create a living shoreline.

Ft. Pierce Marina Living Breakwater Design

In 2004, The Ft. Pierce Marina was devastated by a series of hurricanes, leveling the old panel-style breakwater and washing away all of the docks. Jack directed the design of a “living shoreline” harbor and shoreline wave protection system including the design of segmented rubble mound breakwaters disguised as natural islands and reefs. He developed the breakwater islands and archipelago array to also function as a current diverting system to reduce hazardous tidal velocities along the shoreline and modify and redirect sediment transport and accretion patterns. He also directed three-dimensional model testing of design to control and confirm wave sheltering and sedimentation control current patterns. This project received the 2016 ASCE COPRI award for design excellence.

PRINCIPAL | DIRECTOR OF ENGINEERING

Jack Cox

PE, D.CE, D.PE, D.NE

Diplomate Coastal Engineer

Diplomate Port Engineer

Diplomate Navigation Engineer

Honors & Awards

Adjunct Professor of Practice in The Department of Civil and Environmental Engineering, University of Wisconsin

Assistant Director for The Docks and Marinas Program, Department of Engineering Professional Development, University of Wisconsin

Board of Trustees of The Academy of Coastal, Ocean, Port and Navigation Engineers (ACOPNE) / Trustee for Navigation and Coastal Engineering

Inaugural Diplomate in The Fields of Coastal, Port and Navigation Engineering, ACOPNE/ASCE

US Representative and Deputy Chairman for The PIANC Recreational Boating Commission - 18 Years

Tsunami Technical Advisory Board, University of Washington

Special Presidential License Recipient to Practice Marine Engineering - Cyprus

Patent Holder for "Quay Wall with Absorption Blocks and Interconnecting Flow Paths" Patent No.: US 9,896,814 B2,

Oak Creek Shoreline Stabilization

Edgewater was retained by the City of Oak Creek, Wisconsin to stabilize a mile-long stretch of bluffed shoreline on Lake Michigan. Jack directed a shoreline erosion and bluff retreat study related to sediment starvation caused by an updrift lake projecting municipal installation. His team addressed the risk of bluff failure due to undercutting, exposure of contaminated soils near the bluff edge, and a forecasting of hazards and risks to the city's water supply intake due to high water levels and failure of a seawall due to end erosion effects. Jack evaluated a variety of shore protection solutions including pocket beaches, shoreline revetments, and beach nourishment, based on effectiveness across a range of water levels and for various degrees of expected longevity. He also assisted in the permitting of the mitigation plan, and the engineering of the final solution which integrated a revetted toe, topped by a public promenade accessible by pathways meandering down across the face of a re-stabilized bluff.

Fisherman's Cove Working Waterfront

Jack directed the planning, permitting, and engineering design of a floating harbor infrastructure and wave protection system to accommodate a commercial fishing fleet at Fisherman's Cove in Gooseberry Point, Washington. His team integrated a new ferry dock and terminal with the harbor operation and developed a design for access to the trestle, a product offloading dock, a fuel pier, dry boat storage, and a boatyard. Jack's team integrated a ferry terminal facility and coordinated upland planning for road re-alignments. They also conducted design charettes with the Lummi Nation to define facility needs, sought TIGER grant funding, and facilitated workshops with regulators to expedite NEPA assessment and JARPA permits.

Eleanor and Henry Ford House Museum Shoreline Natural Stabilization

Working as part of the GEI design team, Jack developed design concepts for geomorphically natural shoreline stabilization forms. The engineered biomimicry was based on interpreting the local wave climate and developing geometries and proper operation of these natural nearshore features to create a local marine climate suitable for forming and sustaining habitat and preventing further shoreline loss. The design effort was based on establishing a target ecology which then defined the texture to be achieved by passively controlling the littoral processes through the strategically created artificial geomorphology.

Edgewater resources

Education

Master of Science in Geotechnical Engineering, University of Wisconsin, 2016

Bachelor of Science in Geological Engineering and Geology, University of Wisconsin, 2014

Registrations

Professional Engineer in the States of AL, MO, MS, and WI

Certifications

Young Professional Commission Member, The World Association for Waterborne Transport Infrastructure (PIANC)

Member, American Society of Civil Engineers (ASCE)

PADI Open Water Diver Certification, 2015

PROJECT ENGINEER | PROJECT MANAGER

Nick Stefani

PE

Nick is a coastal and geotechnical engineer for Edgewater. He is responsible for the design, calculations, modeling, and quality control of Edgewater's various waterfront and shoreline projects. Additionally, he serves as a project engineer of various scopes and sizes for Edgewater out of the Madison office. Prior to joining Edgewater, Nick worked on a variety of geotechnical engineering projects including executing varied scopes of subsurface soil investigations and supporting the design and field work for different dam structures.

Relevant Experience

Oak Creek Shoreline Stabilization

The City of Oak Creek, Wisconsin retained Edgewater to stabilize a half-mile-long stretch of bluffed shoreline on Lake Michigan. Nick provided engineering services to design a traditional rock revetment to mitigate wave-inducted toe erosion. The project is unique in that the revetment had to be built into the lake, much more than typically allowed by the agencies, due to environmental and constructability constraints. Services included monitoring the bluff for erosion after significant storms, field surveying for bathymetry, engineering support to obtain applicable grants for construction, rock quarry observation, and construction monitoring services.

Discovery Center Great Lakes Redevelopment

Discovery Center Great Lakes retained Edgewater to inspect the strength of its existing steel sheet pile loading wall. Nick provided geotechnical and stability analysis of the existing pier, which was designed to load coal barges. The client desired to raise the grade of one of the walls by two to three feet but had no existing information to proceed. A campaign was led to discover the structural capacity of the wall and determine cost alternatives to increase its capacity while maintaining the aesthetics of the park's redevelopment.

Kewaunee City Harbor Master Plan

Edgewater was retained to conduct an assessment and overview of potential redevelopment strategies to improve physical conditions throughout Kewaunee City Harbor, Wisconsin. Nick assisted in evaluating the existing conditions, anticipating future changes in water levels, and assessing how those may affect the current infrastructure assets inside the harbor. In addition, this effort considered grant and funding strategies based on public and private economic development opportunities.

Nick Stefani

PE

Eagle Harbor Wave Modeling

The Michigan DNR retained Edgewater to create a solution to evaluate wave agitation at Eagle Harbor State Harbor, Michigan. Nick utilized Spectral and Boussinesq Wave models to propagate deep water waves into the harbor. Two wave buoys collected real-time data to validate the model. The wave model results were then used to orient the docks to mitigate adverse basin tranquility and limit down-drift effects.

Kern Shoreline

The Kern residence retained Edgewater to design, permit, and implement an emergency shoreline protection system along a shallow bluff stretch of shoreline near Fox Point, Michigan. The shoreline eroded with each storm event during the high Lake Michigan water level. The owner desired a "softer," lower impact shore protection system. Nick developed a Geotube/Sandbag solution that was designed and permitted to be installed to protect the bluff.

Soo Locks Channel Depth Expansion

Edgewater was retained to assist with engineering calculations and support for a contractor that was deepening the channel in the Soo Locks, Michigan. Nick provided geotechnical calculations and cost estimates to use steel sheet pile cofferdams to allow dewatering of the channel so that excavation could be completed in dry conditions.

Hamburg Marina Feasibility Study

Edgewater performed engineering feasibility services to locate and dimension a marina along Lake Erie for the Town of Hamburg, New York. Nick assisted in building a wave climate model that would be used to assess four potential sites where a marina and upland facilities could reasonably be located. The wave climate translated the deepwater wave climate to the nearshore where the marina would potentially be located. Breakwaters, docks, and other marina structures were sized and laid out in accordance with the wave climate. As part of the analysis, a jetty extension was also analyzed to help reduce the amount of sedimentation at the Town's public boat launch. A structural addition and spur were appended to the existing jetty to mitigate sand wrapping around the existing structure and silting into the public boat launch.

Edgewater resources

Education

Bachelor of Landscape Architecture, Michigan State University, 2000

Registrations

Landscape Architect in the State of MI

Certifications

Leadership in Energy and Environmental Design (LEED), 2003

Teaching Experience

Graphics for Landscape Designers at The George Washington University, Washington, D.C.

Landscape Graphics at Front Range Community College, Westminster, Colorado

LANDSCAPE ARCHITECT | PROJECT MANAGER

Suzanne Fromson

LEED AP

Suzanne has over twenty years of experience managing a wide range of projects including community and site Master Planning, restoration and resource management plans, park and recreation design and administration, and urban design. Her public collaboration skills, design creativity, construction knowledge, and management of project schedules and budgets make her an integral player in the planning, design, and implementation process.

Relevant Experience

City of Waukegan Lakefront Active Implementation Plan

When the City of Waukegan's Waterfront Master Plan was over ten years old, no improvement projects had yet been implemented. The city hired Edgewater to help form a vision for the future development of their lakefront that contained fully implementable actions. In July 2015, the City of Waukegan, in cooperation with the Waukegan Park District, Waukegan Port District, and with funding from the Great Lakes Restoration Initiative through the Illinois Coastal Management Program, tasked Edgewater with the creation of an Active Implementation Plan. Suzanne was a key team member for all input and data gathering and led the production of the final Implementation Plan document.

Waukegan Beach Management Plan

As part of the Waukegan Active Implementation Plan, a beach management plan was developed to provide a clear vision and strategy for the future of lakefront recreational and natural resources. The study area is one mile south of Illinois Beach State Park, home to over 650 species of plants, abundant wildlife, and the only remaining beach ridge shoreline in the state of Illinois. Waukegan's lakefront provides resting and foraging for migratory birds among other species, to that coastal habitat and natural areas extending northward along Lake Michigan. Suzanne not only helped write the grant to make this plan possible, but she led all aspects of research, data and input gathering, and coordination with dozens of local, state, and federal oversight agencies to make the plan a useful and meaningful tool for the city.

LANDSCAPE ARCHITECT | PROJECT MANAGER

Suzanne Fromson

LEED AP

East Tawas State Harbor Marina Expansion

The State of Michigan engaged Edgewater in the condition assessment, market analysis, boater survey, and Master Planning of the expansion of the existing state harbor facility in East Tawas, Michigan. Suzanne worked as part of the Edgewater architecture and engineering team to create a Master Plan, alternatives, and landscape design during the initial planning phase. The following processes for Phase I included a new pedestrian promenade and floating dock infrastructure, for which Suzanne oversaw the development and implementation.

Ottawa Beach Marina

The Ottawa County Parks & Recreation Commission retained Edgewater to continue the final design, bidding, and construction administration of Historic Holland Beach Marina. As the lead landscape architect for the project, Suzanne provided refined concept design graphics, hardscapes, and landscaping for the marina and surrounding waterfront boardwalk.

Michigan Beach Park Master Plan

Edgewater was tasked with Master Planning services by the City of Charlevoix to help determine proper use and stewardship of a unique city park with 2000 feet of Lake Michigan shoreline and woodland dune habitat. In the initial project scope, the efforts focused on increasing the accessibility and usability of the site while protecting its natural character. An accessible trail from end to end with a new Grant Street connection would greatly improve access and use of the site. An MDNR Passport Grant application was also prepared and submitted as part of this project. Suzanne served as project manager for all phases of work.

Baileys Harbor Waterfront Master Plan

Edgewater was retained by the town of Baileys Harbor to complete design work, construction documentation, bidding, and administration for their waterfront park space. As the project manager, Suzanne oversaw and participated in every step of the design and implementation of the Master Plan. This included the layout of the park, grading, and landscape design. The park has a significant investment in creating an inclusive community landmark and includes ADA-compliant pathways, recreational waterfront access, and amenities.

APPENDIX B.

PROJECT EXAMPLES

GEI Consultants

PROJECT

Ottawa Sands County Park

Location: Ottawa County, Michigan
Client: Ottawa County Parks and Recreation Commission

GEI worked with Ottawa County Parks (OCP) in a design-build capacity to create 6 acres of interdunal wetland and restore approximately 6,000 linear feet of shoreline at Ottawa Sands County Park.

The Ottawa County Parks and Recreation Commission received funding from the National Audubon Society to create and restore habitat at the 345-acre Ottawa Sands County Park. The park is a former sand mine located in sand dunes adjacent to Lake Michigan and the mouth of the Grand River. The park contains a 10-acre lake and has a mosaic of dunes, forests, and wetlands. Due to its proximity to Lake Michigan, the site provides critical Great Lakes habitat while also providing a unique recreational experience for visitors.

GEI partnered with the client to develop and construct habitat improvements at the site. Design plans include the creation of approximately 6 acres of interdunal wetland habitat, the creation of a new sand dune, and restoration of approximately 6,000 linear feet of shoreline around the lake by creating a wider littoral shelf and nearshore wetlands. Restoration efforts are intended to provide habitat for a wide range of plants and animals, including fish, reptiles and amphibians, and secretive marsh birds.

Service Dates

Start: 2022

Completion: Ongoing

Fees

- GEI Fee: $441,714

Key Elements

- Engineered habitat restoration design
- Construction oversight and management
- Permitting
- Shoreline restoration
- Great Lakes coastal wetland restoration
- Native planting and seeding

Before

After (Visualization)

To complete the design efforts, GEI installed piezometers and staff gauges to assess surface and ground water at the park. GEI also completed topographic and nearshore bathymetric surveys and wetland delineations to inform the project design. Using the site data and analysis, GEI worked with park planners to design the habitat improvements in a manner that fit with the park Master Plan. The site has been designed to accommodate short- and long-term fluctuations in Lake Michigan water levels, which strongly influence the site hydrology. In conjunction with the design, GEI and OCP have worked with state regulatory agencies to permit the impacts to wetlands, lake, and critical dune habitat.

Restoration includes excavation to create the wetlands and a wider littoral zone around the lake. Additionally, GEI installed native seed, plants, trees, shrubs, and woody habitat structures to add additional habitat elements.

PROJECT

Muskegon Lake Area of Concern Ecological Restoration

Location: Muskegon County, Michigan
Client: West Michigan Shoreline Regional Development Commission
GEI Engineer of Record: Scott Dierks, PE
GEI Project Manager: Brian Majka

Service Dates

Start: 2009

Completion: Ongoing

Fees

- Final Fee: $1,000,000+

Key Elements

- Fish and wildlife habitat restoration
- Shoreline stabilization design
- Hydrologic reconnection
- Contaminated sediments
- Stakeholder coordination
- Engineered design
- Construction design plan and specification development
- Construction management and oversight
- Invasive species control
- Native plant relocation

GEI has provided engineered design, stakeholder coordination, construction management and grant administration support services to restore over 23,000 linear feet of shoreline and over 100 acres of Great Lakes coastal wetlands on over 30 Muskegon Lake Area of Concern (AOC) habitat and shoreline restoration projects.

Muskegon Lake is a Great Lakes lacustrine estuary adjacent to Lake Michigan. The lake was designated a United States Environmental Protection Agency AOC in 1987 because of water quality and habitat impairments. GEI restoration ecologists, engineers, and remediation specialists worked closely with a variety of private and public stakeholders including the National Oceanic and Atmospheric Administration, the Great Lakes Commission, the Muskegon Lake Watershed Partnership, and the West Michigan Shoreline Regional Development Commission to design and implement numerous restoration projects along the lakeshore. A variety of ecological solutions were used to restore the shoreline and wetlands while also reducing erosion using natural methods. Techniques included hardened shoreline and fill removal, bioengineering, green infrastructure, native plant installation, vegetative buffer establishment, incorporation of large woody habitat structures, invasive species control, marine debris removal, hydrologic reconnection, passive recreation access point creation, and educational outreach.

Specific tasks completed by GEI staff include:

- Site assessment and characterization of topography, bathymetry, soils, wildlife, vegetation, and hydrology
- Wave, hydrologic and sediment transport modeling
- Site design, including shoreline protection, bioengineering, wetland restoration, green infrastructure, native planting, habitat structures, and aesthetic/public use features
- Permitting
- Construction bid package development, construction administration, construction oversight, and as-built surveys
- Post-restoration vegetation and wildlife monitoring
- Installation of ecological restoration measures, including bioengineering and native plantings
- Invasive species mapping and management
- Post-restoration vegetation and wildlife monitoring
- Development of a web-based management plan to guide local stakeholders in the management of the various restoration sites.

PROJECT

Edsel and Eleanore Ford House Shoreline and Wetland Restoration

Location: Grosse Pointe Shores Michigan
Client: Edsel and Eleanor Ford House

GEI worked with the Edsel and Eleanore Ford House to develop plans for shoreline restoration, wetland restoration, and visitor improvements on the estate of Edsel and Eleanore Ford on Lake St. Clair.

Service Dates

Start: 2023

Completion: Present

Fees

- GEI Fee: $488,730

Key Elements

- Shoreline restoration design
- Natural and nature based design
- Wetland restoration design
- Great lakes coastal wetlands
- Native landscape design
- Boardwalk design
- Visitor improvements

The Edsel and Eleanor Ford House is located on Lake St. Clair in Macomb County, Michigan and is the historic estate of Henry Ford's only son and his wife Eleanor. Designated a National Historic Landmark, the estate sits on 87 acres with over one mile of Lake St. Clair frontage and has historic structures and gardens throughout. The gardens and landscape of the property were designed by Jens Jensen, a friend of the Ford family and a pioneer in native and natural landscape design.

Over time, erosion along the shorelines led to hardening through the placement of concrete and rubble. As the Ford House staff worked to meticulously reconstruct the original designs of Jens Jensen at the property, they realized that the shoreline did not meet the original design intent or the ecological management goals of the site. To improve the aesthetics and ecological benefit throughout the estate, the Ford House staff worked with the National Oceanic and Atmospheric Organization to fund design and construction of shoreline restoration, wetland restoration, and visitor improvements throughout the property.

Ford House retained GEI in 2023 to develop design plans for restoration of approximately 1 mile of shoreline and 7 acres of wetlands throughout the state. GEI is currently leading a team that includes InSite Design Studio, Edgewater Resources, and Limnotech to develop the restoration designs. Design plans include the addition of new boardwalks, shoreline softening, wetland restoration, shoreline grading, breakwater habitat structures, fish lunker structures, and native plantings throughout the site. All work is being designed in consideration of the original Jens Jensen design and vision and in coordination with the Ford family. Construction is expected to begin in late 2024.

PROJECT

Kitchel-Lindquist Hartger Dunes Preserve

Location: Ferrysburg, Michigan
Client: City of Ferrysburg, Michigan

Service Dates

Start: 2023

Completion: Present

Fees

- GEI Fee: $39,250

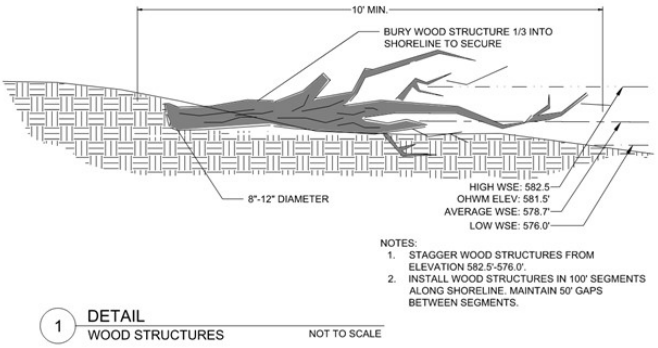
Key Elements

- Shoreline stabilization design
- Grant application
- Shoreline stabilization
- Installation of native plants
- Installation of large woody habitat structures
- Great lakes coastal wetlands

GEI worked with the Kitchel-Lindquist Dunes Preserve and City of Ferrysburg to design and construct natural shoreline restoration techniques along 500 linear feet of the Grand River close to its confluence with Lake Michigan.

Kitchel-Lindquist Hartger Dunes Preserve (KLH) is a 115-acre nature preserve in Western Ottawa County. The preserve is located near the mouth of the Grand River near Lake Michigan and is owned by the City of Ferrysburg. KLH contains a variety of habitats, including foredunes, interdunal wetlands, backdunes, and coastal wetlands. Due to its unique location, the preserve provides critical habitat for a variety of flora and fauna. However, the preserve is also situated in a highly developed area. KLH is adjacent to an active marina and several housing developments, across the Grand River from the City of Grand Haven and is adjacent to an area of active dredging by the United States Army Corps of Engineers.

High water levels in Lake Michigan and along the Grand River led to erosion along the shoreline. GEI worked with KLH to obtain grant funding from the Michigan Department of Environment, Great Lakes, and Energy (EGLE) to develop plans to restore 500 linear feet of the shoreline at the preserve using natural and nature-based techniques, including the installation of large woody habitat structures, replacement of concrete with wetland sills, and native plantings. Working in a design-build capacity, GEI will be constructing the project in Spring, 2024 with its in-house restoration staff



Historic Ottawa Beach Marina

Increasing Public Waterfront Access at a Historic Michigan Marina.

Recognizing the potential for improving the land's function, aesthetics, and financial viability, as well as increasing public access to the waterfront, OCPRC retained Edgewater to evaluate the possible redevelopment of the marina area.

Several concepts and construction cost estimates were developed to illustrate marina configuration alternatives and their relationships with non-park shoreline property and riparian rights. Local and regional market studies were completed, preferred concepts were identified, and financial plans were prepared to show revenue projections, as well as funding and operations options.

Edgewater resources

Client

Ottawa Count Parks and Recreation Commission

Location

Holland, Michigan

Services

Master Planning

Permitting

Landscape Architecture

Engineering

Construction

PROJECT

Stony Creek Dam Removal and Creek Restoration

Location: Oceana County, Michigan
Client: West Michigan Shoreline Regional Development Commission, Conservation Resource Alliance

Service Dates

Start: January 2022

Completion: Ongoing

Fees

- GEI Initial Fee: $301,350

Key Elements

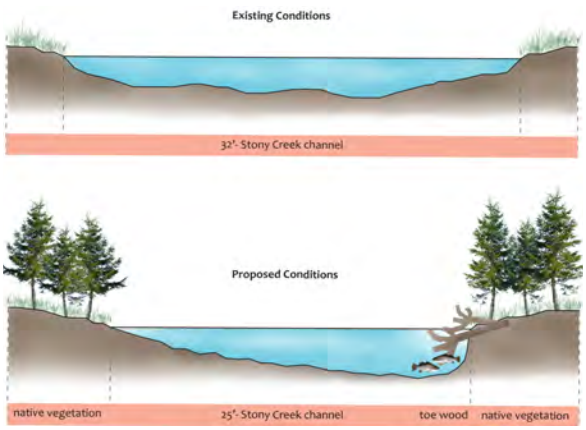
- Fish and wildlife habitat restoration
- Engineered ecological restoration design
- NEPA document support
- Vegetation surveys
- Contaminated sediments
- Threatened and endangered species surveys
- Construction management and oversight

GEI worked with the West Michigan Shoreline Regional Development Commission (WMSRDC), Conservation Resource Alliance (CRA), and Oceana County to develop plans to remove the Marshville Dam and restore 2,000 linear feet of Stony Creek.

Stony Creek is a groundwater-fed coldwater stream located in Oceana County, Michigan and is regarded as one of the best trout streams in lower Michigan. The creek has a 57-square-mile watershed that is contained entirely in Oceana County, where the creek drains into Stony Lake and eventually into Lake Michigan.

With funding from the National Oceanic and Atmospheric Administration, Michigan Department of Natural Resources, U.S. Fish and Wildlife Service, and Great Lakes Fishery Trust, GEI was jointly contracted by WMSRDC and CRA to develop plans to remove the historic Marshville Dam and restore Stony Creek at Marshville Dam County Park. Haven fallen into a state of disrepair, the dam provided a blockage to fish passage and was also a safety concern. To develop project designs, GEI worked with project partners to assess existing conditions at the site, which included a depth to refusal study, assessment of woody debris in the channel and nearby reference reach, mapping of existing vegetation, topographic and bathymetric surveys, sediment sampling, and hydrologic/hydraulic modeling.

Project designs include the removal of the dam and restoration of the stream channel, using natural channel design principles and the Michigan Stream Quantification Tool (SQT) to establish restoration metrics. The design includes active sediment management and bioengineering along the riverbanks, as well as the installation of large woody debris. Plans also include the installation of a new ADA accessible path and viewing platform near the creek. The plans were developed jointly with the Oceana County Road Commission, who will be replacing existing stream culverts with a clear span timber bridge as part of the restoration effort.



PROJECT

St. Clair River Shoreline Restoration

Location: Marysville, Michigan
Client: City of Marysville, Michigan

GEI worked with the City of Marysville and stakeholders to develop plans to create 2,500 linear feet of living shoreline, restore submerged and fringe wetlands, develop gravel substrate for fish spawning, restore adjacent shoreline and upland habitat, and remove debris and soft sediment.

Service Dates

Start: 2011

Completion: 2012

Fees

- GEI Fee: $125,000

Key Elements

- Geotechnical assessment
- Debris and sediment removal
- Living shoreline restoration
- Critical fringe wetland restoration
- Boardwalk design
- Gravel substrate installation
- Floodplain modeling
- Stakeholder outreach
- GLRI grant reporting

The City of Marysville was awarded a Great Lakes Restoration Initiative grant for habitat improvements along 2,800 linear feet of an existing, failing, sheet piling seawall. Project design posed several challenges including, balancing public and City opinions of aesthetics and public access while meeting regulatory requirements associated with proposed shoreline softening techniques. GEI worked through an exhaustive alternatives analysis and developed a stepped slope design which included a new sidewalk and 400 linear feet of boardwalk cantilevered over the river. The design team was able to reconfigure the original grant proposal concept to meet all the grant goals, the City's goals, and meet regulatory requirements.

Construction posed challenges as well. Excavation behind the sheet piling sea wall revealed: missing wall tie-backs; a buried, secondary sea wall; concrete rubble fill, and exceptionally poor soils for boardwalk piling support. The team was able to negotiate reasonable changes to the construction scope and complete the project on time and within budget.

An additional goal of this project was to contribute to the lifting of existing habitat beneficial use impairment on the St. Clair River. Post-construction monitoring of the site show that of the seven separate monitoring locations, the Marysville location shows the third highest fish diversity, with 17 separate species utilizing the habitat, including mottled sculpin, pike, bass, and brown trout, among others.

The project was awarded the "2014 James L. Bliskey Quality of Life Project of the Year" award from the Southeast Michigan and State of Michigan branches of the American Society of Civil Engineers in recognition of the shoreline restoration that has helped improve aquatic and wildlife habitat.

Discovery Center Great Lakes

Renovation of a Historic Waterfront for Porting and Community Benefit.

The Discovery Center Pier is a retired earthen retained pier built into Traverse Bay. It was initially used to offload coal to the local utility. Over the decades, the pier was modified and reinforced but then primarily left to degrade. Edgewater was consulted to repurpose the pier for its current purpose: berthing larger, heavier vessels and functioning as a marine museum.

Edgewater provided a design that allowed for the berthing of a large vessel, including mooring bollards, dolphins, fenders, and reinforced wall sections. This project created a completely renovated waterfront attraction and marina to provide home porting for several tall historic ships, wooden sailing vessels, and the Traverse Area Community Sailing program.

Edgewater resources

Client

Discovery Center Great Lakes

Location

Traverse City, Michigan

Services

Marina Design

Master Planning

Shoreline Protection

PROJECT

Muskegon Lake Nature Preserve Fish and Wildlife Habitat Restoration

Location: Muskegon County, Michigan
Client: West Michigan Shoreline Regional Development Commission

The Muskegon Lake Nature Preserve is a 17-acre mosaic of Great Lakes coastal emergent marsh, sedge meadow, scrub-shrub, forested wetland, upland forest, and upland prairie habitats located on Muskegon Lake. In addition to preserving multiple plant communities, the preserve is used extensively for recreation such as bird watching, hiking, fishing, and bicycling, while also serving as an outdoor classroom for numerous schools in the greater Muskegon area.

Within the preserve, ecological and human elements integrate to create a facility that is unique along the Muskegon Lake shoreline. However, the historic and past use of the property led to the disturbance of the natural communities. The preserve was degraded through the historic placement of fill, the establishment of invasive plant species, and the alteration of the existing plant communities.

GEI worked with the Muskegon Lake Nature Preserve and West Michigan Shoreline Regional Development Commission to design ecological restoration and public improvements at the preserve. GEI's role included community engagement, project site assessments, pre- and post-restoration wildlife surveys, design, and construction administration and oversight.

Completed in 2023, this project restored, enhanced, and created wildlife habitat within approximately 7.9 acres of the preserve. A post-restoration herpetofauna assessment was conducted using the Great Lakes Marsh Monitoring Program protocol, such as acoustic surveys for frog species during their respective mating seasons, dip netting for aquatic amphibian larvae, meander surveys for terrestrial herpetofauna, and visual surveys for basking turtle and snake species present on the preserve. The combined survey results indicated a 300% increase in herpetofauna presence compared to pre-restoration surveys.

The efforts made also enhanced educational opportunities that are in support of both the goals of the Muskegon Lake Nature Preserve and the eventual delisting of the Muskegon Lake Area of Concern.

Service Dates

Start: 2019

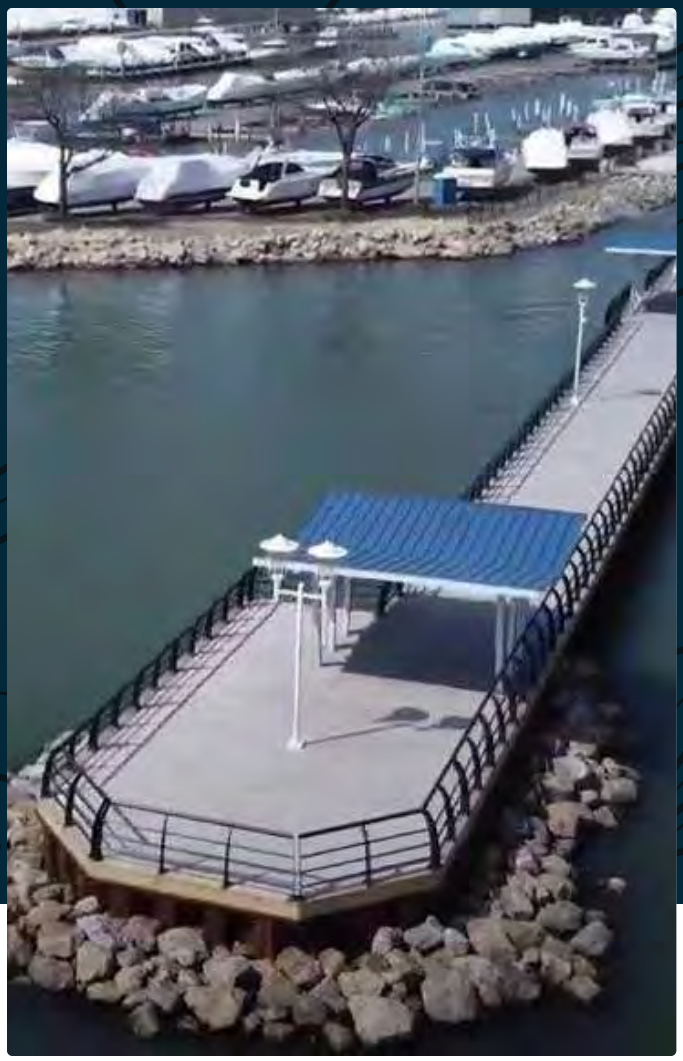
Completion: 2023

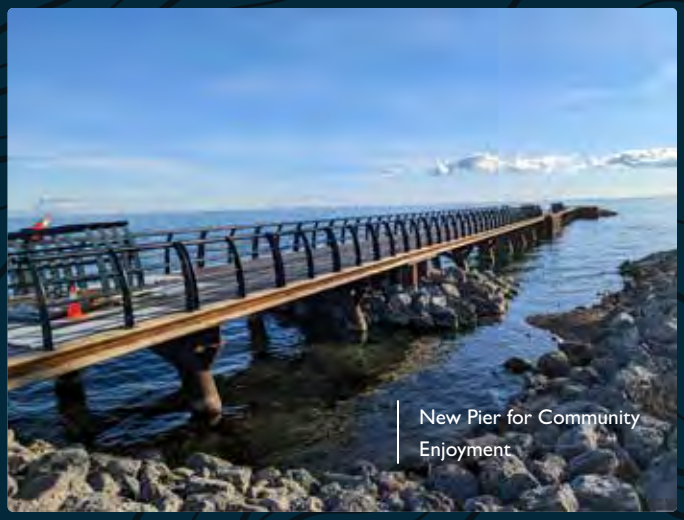
Fees

- GEI Fee: $120,159

Key Elements

- Fish and wildlife habitat restoration
- Shoreline stabilization design
- Hydrologic reconnection of wetlands to the Muskegon River and Muskegon Lake
- Contaminated sediments
- Stakeholder coordination
- Engineered ecological restoration design
- Construction design plan and specification development
- Construction management and oversight
- Management of invasive plant species
- Native plant relocation
- Removal of historic fill to create new wetlands
- Installation of over 30,000 native grasses, forbs, shrubs, and trees
- Installation of large woody habitat structures
- Enhancement of aesthetics and access to natural areas on the preserve
- Creation of ephemeral wetlands for herpetofauna habitat





New Pier for Community Enjoyment

Blossom Heath Park and Pier

Creation of a Deep Community Connection with Lake St. Clair.

The City of St. Clair Shores is a community located on the shoreline of Lake St. Clair. It has great connectivity to the shoreline and one of the connection points, Blossom Heath Park. The park has many landside elements at the end of its life cycle that needed improvements or replacement. The city wanted to improve these elements and create a pier out into the lake so that its citizens could enjoy a deeper connection to the lake. The biggest challenges with the pier design is the ice environment, wind, and current. A pier design needed to be developed with these conditions in mind.

Edgewater developed the structural design of the pier. Through the design evolution, Edgewater explored multiple pier geometry options and performed value analyses to capture the community's preferences in the final plan.

Edgewater resources

Client

City of St. Clair Shores

Location

St. Clair Shores, Michigan

Services

Surveying

Conditions Assessment

Wave Modeling

Design

Bid Solicitation

Nelson Park Master Plan

Revitalizing a City's waterfront and providing an economic catalyst for the long term success of the City of Decatur.

The Nelson Park Master Plan project has created a new vision for the 180 acre Nelson Park and adjacent parkland along the shores of Lake Decatur in Decatur, Illinois, with the goal of achieving both financial sustainability for the park and spurring economic growth within the greater Decatur economy. In addition to the reconstruction of over two hundred boat slips, the project includes a waterside restaurant entertainment district, regional destination water park, and pedestrian loop around Basin Two of Lake Decatur. The design effort included a public involvement process and the development of strategies to expand biologically diverse native habitats, improve the durability of the built environment, and apply improved stormwater management while reducing maintenance and environmental impacts.

Edgewater resources

Client

Decatur Park District

Location

Decatur, Illinois

Services

Shoreline Planning and Design

Community Engagement

Landscape Architecture

Final Engineering

Construction Oversight

PROJECT

Lower Grand River Assessment and Phragmites Control

Location: Ottawa County, Michigan
Client: Ottawa County Parks and Recreation Commission/Ottawa Conservation District

GEI Consultants has provided habitat assessment, nvasive species surveys, landowner coordination, and invasive species treatments for Phragmites and flowering rush populations throughout the lower Grand River and its adjacent wetlands and bayous.

GEI worked with the Ottawa Conservation District, Ottawa County Parks and Recreation Commission, and a variety of local stakeholders to plan and implement this landscape scale restoration project. GEI began by assessing approximately 3,000 acres of wetlands and river corridor in the lower Grand River throughout Ottawa County for invasive species, specifically Phragmites and flowering rush. Assessments were completed using ground surveys, boat surveys, and unmanned aircraft systems (UAS).

Following assessments, GEI coordinated with project stakeholders and landowners to obtain permission to treat identified invasive species populations. When approval was obtained, GEI treated invasive species with aquatic approved herbicides using amphibious vehicles, boats, and backpack sprayers.

From 2013 to present, GEI staff have repeated surveys and treatments to dramatically reduce invasive species populations and reach near eradication in some portions of the river.

Service Dates

Start: 2013

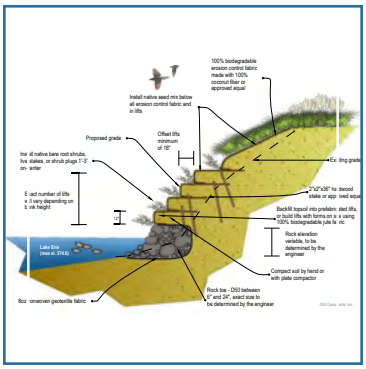
Completion: Ongoing

Fees

- GEI Fee: $180,000+

Key Elements

- Property management & planning
- Habitat management
- Invasive species mapping & control
- Botanical assessments



Service Dates

Start: November 2020
Completion: June 2022

Fees

- GEI Fee: $40,860

PROJECT

Old Woman Creek Natural Shoreline Protection Design and Training Materials

Location: Huron, Ohio
Clients: KS Associates, Inc. and
Ohio Department of Natural Resources (ODNR) Office of Coastal Management

GEI teamed with KS Associates to develop natural shoreline training materials for Lake Erie's coasts for the Ohio Department of Natural Resources Office of Coastal Management.

Throughout the Great Lakes, natural and nature-based shorelines are becoming common practice due to their ability to use natural methods to stabilize eroding shorelines while incorporating ecological benefits into a given project. To meet their goals of promoting natural shorelines along the Lake Erie coast, the ODNR Office of Coastal Management hired the team of GEI Consultants and KS Associates to develop a training program for the design and construction of natural shorelines. GEI and KS were hired due to our extensive experience in the design and construction of natural shorelines throughout the Great Lakes, as well as our experience in the development and implementation of training programs for nature shorelines and ecological restoration.

GEI and KS worked collaboratively with ODNR to develop a training program to instruct contractors, designers, and landowners in the design, construction, permitting, and maintenance of natural shorelines along Lake Erie. The program contains a series of fact sheets that contain information on site selection, design considerations, native plants, permitting, various natural shoreline techniques, site maintenance, and monitoring. For the fact sheets, GEI developed graphics and instructional information that provide detailed and practical information guiding the use of natural shorelines, including site selection, background information, and natural shoreline restoration techniques. Additionally, the team developed PowerPoint presentations and exam materials to create the training program. GEI and KS will work with ODNR to implement the training program, which will include a combination of classroom and field-based instruction.

In conjunction with the training materials, the project team developed project designs and permit applications for a natural shoreline demonstration project at the Old Woman Creek State Nature Preserve. The project will be constructed by attendees of the natural shoreline training program as part of the course that will be taught in 2022.

PROJECT

Riverside Park

Location: Riverside Park, Ottawa County, Michigan
Client: Ottawa County Parks and Recreation Commission

Service Dates

Start: 2019

Completion: Ongoing

Fees

- GEI Fee: $110,000

Key Elements

- Engineered bank stabilization design and implementation
- Construction oversight and management
- Installation of toewood
- Soil lift installation
- Volunteer coordination

GEI Consultants provided ecological restoration services to assist the Ottawa County Parks and Recreation Commission (OCP) in restoring the bank of the Grand River while enhancing the hydrologic connection between the river and Kirby Bayou.

In 2016, GEI was hired by OCP to develop a conceptual feasibility study of the park to stabilize the riverbank and increase the hydrologic connectivity between Kirby Bayou and the Grand River. Using the feasibility study, OCP was able to obtain a state and federal grant to improve the park and increase the overall ecological value.

At the request of OCP, GEI Consultants was hired to design and permit the restoration measures, which included installation of three new culverts for fish passage and the stabilization of over 700 of riverbank using toewood and bioengineered measures. The design included and ecological, fluvial geomorphological, and hydrological assessment of the river and park using the Bank Erosion Hazard Index (BEHI), HEC-RAS modeling, Rosgen stream classification, and natural channel design (NCD) principles.

Following design, GEI completed the construction administration and oversight of the culvert installation. Additionally, GEI's restoration team was hired to construct over the installation of bioengineered bank stabilization along the river, including 500 linear feet of toewood and 255 linear feet of bioengineered soil lifts along the riverbank. GEI oversaw the construction process, but coordinated closely with the Ottawa County Park staff and volunteers to implement the designs. Following construction, the impacted areas were seeded with native seed, planted with native shrubs, and covered with erosion control blanket to further prevent bank erosion. GEI followed up to assure the erosion control methods prevailed against river flows.

PROJECT

Red Cedar River Bank Stabilization and Floodplain Naturalization

Location: East Lansing, Michigan
Client: Michigan State University Infrastructure Planning and Facilities (MSUIPF)

GEI partnered with the Michigan State University (MSU) Infrastructure, Planning, and Facilities department to assess habitat and bank erosion along the Red Cedar River through campus, in support of MSU's broader goal of restoring the river throughout campus. The assessment used multiple techniques, including the Bank Erosion Hazard Index (BEHI), historic information, visual surveys, and Rosgen stream classification to characterize the stream and identify impairments and restoration measures in the *2018 Red Cedar River Streambank Stabilization and Restoration Feasibility Study.*

GEI worked with MSU to successfully obtain a grant to implement the first pilot project in the study, stabilization of 450' of the river in front of Spartan Stadium. To implement the project, the GEI team was hired to survey, design, permit, and construct the stabilization. The project incorporated large woody debris, brush bundles, and bioengineered lifts to stabilize the streambank by using natural materials and native plants. Additionally, the project included removal of invasive plants species and installation of a native plant buffer along the river.

In conjunction with the restoration effort, GEI and MSU hosted two volunteer days in which MSU students and staff was encouraged to help and to learn about ecological restoration, bioengineering, and native landscaping techniques. Over 50 students and staff attended the sessions and helped construct the shoreline over the two day period.

Service Dates

Start: August 2019

Completion: September 2019

Fees

- $61,000

Key Elements

- Engineered bank stabilization design and implementation
- Construction design plan and specification development
- Construction management and oversight
- Native planting and seeding
- Erosion control installation

County of Ottawa

Fiscal Service-Purchasing

Exhibit B

12220 Fillmore Street• Room 331 • West Olive, MI, 49460

(616) 738-4844
Fax (616) 738-4897

VENDOR INSURANCE REQUIREMENTS/ REQUEST

Please be advised that before any vendor can begin work in a County facility, or before a purchase order can be processed, if applicable, the County requires that you provide evidence of insurance as follows:

COMMERCIAL GENERAL LIABILITY

Each Occurrence	$1,000,000
Personal & Advertising Injury	$1,000,000
General Aggregate	$2,000,000
Products/Completed Operations Aggregate	$2,000,000

There shall be no Products/Completed Operations or Contractual Liability exclusion.
The General Aggregate limit shall apply separately per location or project.

AUTOMOBILE (if applicable)

Residual Liability Limit	$1,000,000 Each Accident
Personal Injury Protection	Michigan Statutory
Property Protection	Michigan Statutory

PROFESSIONAL LIABILITY (if applicable)

Limit of Liability	$2,500,000 Aggregate Limit

WORKERS' COMPENSATION AND EMPLOYERS' LIABILITY

Workers' Compensation Limits	Michigan Statutory
Employers' Liability Limits	$500,000 Each Accident
	$500,000 Each Employee
	$500,000 Aggregate Injury by Disease

Please provide a **certificate of insurance** detailing your coverage which meets the above requirements. These coverages shall protect the vendor, its employees, agents, representatives, and subcontractors against claims arising out of the work performed or products provided.

These limits may be provided in single layers or by combinations of primary and excess/umbrella policy layers.

Additional Insured Endorsement to the Commercial General Liability policy **must accompany the certificate,** OR the **certificate must state** that the General Liability policy includes a blanket additional insured provision on the primary basis for any entity required by contract or agreement to be an additional insured.

Please forward your evidence of insurance to; OTTAWA COUNTY PURCHASING, 12220 Fillmore St Rm 331, West Olive, MI 49460, purchasing@miottawa.org, Fax Number 616-738-4897

Ottawa County

PROPOSAL SUMMARY
RFP 24-055 COASTAL RESILIENCE FEASIBILITY AND PRELIMINARY ENGINEERING SERVICES
RELEASED FOR PUBLICATION 03/07/2024 DUE ON 04/09/2024

		VENDOR	Peterson & VandenBerg Environmental LLC	SEH of Michigan	GEI	Ramboll Environment & Health	Viridis Design Group
		VENDOR LOCATION	Nunica, MI	St Paul, MN Muskegon, MI	Allendale, MI	Chicago, IL	Grand Rapids, MI
		DATE/TIME PROPOSAL RECEIVED	04/09/2024 @ 9:50AM	04/09/2024 @ 12:06PM	04/09/2024 @ 12:28PM	04/09/2024 @ 1:50PM	04/09/2024 @ 1:58PM
		ATTACHMENT A - COVER SHEET	X	X	X	X	X
		ATTACHMENT B - REFERENCES	X	X	X	X	X
ATTACHMENT C -PROPOSAL RESPONSE	1. COMPANY EXPERIENCE AND QUALIFICATIONS		Peterson and VandenBerg Environmental (PVE) was established in 2022 by Adrienne Peterson and Zach VandenBerg. PVE offers comprehensive project management services, specializing in wetland identification and delineation, critical dune and erosion site evaluations, shoreline stabilization, permit assistance from regulatory bodies like EGLE, Corps, MDNR, wetland mitigation, tree and vegetation surveys, and evaluations of threatened and endangered species habitats. Adrienne Peterson, with over 27 years of experience, co-founded PVE after founding Peterson Environmental and working with the U.S. Army Corps of Engineers. She excels in project management, particularly in obtaining permits for various complex projects. Zach VandenBerg, her co-founder, has significant experience in permitting processes, having previously worked at Peterson Environmental. PVE continues to grow its team to meet increasing demand, prioritizing expertise, client communication, and attention to detail to help clients achieve their project objectives.	Founded in 1927. Employing over 900 engineers, architects, scientists, and talented professionals. 80% of clients are repeat customers. SEH® is a fully employee-owned engineering, architectural, environmental, and planning firm dedicated to simplifying complex challenges worldwide. With integrated teams spanning 32 offices across ten states, SEH focuses on enhancing mobility, designing better environments, engineering clean water solutions, and renewing infrastructure. Their overarching goal is to contribute to "Building a Better World for All of Us®."	GEI offers engineering and scientific consulting services to both public and private clients across the United States. Their lower Michigan offices, located in Allendale, Lansing, Plymouth, and Traverse City, house a cohesive team of biologists, ecologists, landscape architects, and engineers. This integrated team has spearheaded numerous significant ecological restoration projects within the state, including coastal resiliency initiatives, natural shoreline developments, green infrastructure implementations, and recreational enhancement projects since the early 2000s.	Ramboll is a global consultancy firm established in 1945, specializing in engineering, design, environmental, and management solutions. With headquarters in Denmark, it operates in 35 countries with 18,500 employees across 300 offices, including six near Ottawa County. Their North American division boasts over 200 experts in sediment and ecology, offering services from site characterization to habitat restoration. Their team comprises seasoned professionals and subject matter experts, providing a cost-effective blend of expertise and local knowledge. Notable team members include Dr. Victor Magar, PE, and Craig Harley, PE, who have led various Great Lakes projects, such as Buffalo River AOC remediation and Otter Creek restoration. Dusty Tazelaar, a Grand Haven resident, brings 19 years of experience in fish and wildlife habitat restoration and environmental assessment, managing projects from design to construction oversight.	Viridis brings a diverse set of skills and experiences to the Ottawa County project: Expertise across multiple disciplines including landscape architecture, community engagement, engineering, ecology, aquatic biology, wetland management, and hydraulic and geotechnical engineering. Leadership roles in projects such as the MiOttawa Sands Master Plan and Phase 1 implementation, as well as park, waterfront, and trail projects in the Grand River Greenway corridor. Specialized knowledge in wetland delineation, permitting, and restoration, with involvement in NFWF-funded river restoration projects. Proficiency in landscape architecture, public waterfront design, non-motorized trails, public engagement, Green Stormwater Infrastructure (GSI), and sustainable site design. Capabilities in hydraulic and hydrologic modeling. Experience in wetland design and shoreline restoration, including the design and permitting of wetland mitigation banks and river shoreline projects. Thorough understanding of project environmental regulations and requirements. Successful track record in securing funding from Federal and State programs, totaling over $300M. Contributions to numerous GLRI-funded habitat restoration projects and representation on the Great Lakes Advisory Board. Recognized expertise in EPA's Quality Assurance Project Plan (QAPP) development, with 18 Approved GLRI QAPPS in the past 5 years.
	2. PROPOSAL RESPONSE		A team of experts has been assembled to address various aspects of the project. Peterson & VandenBerg Environmental, LLC, led by Adrienne Peterson & Zach VandenBerg, will serve as the Team Leader and main point of contact. They will oversee the project's feasibility and design, ensuring cohesive and efficient progress. Their scope of work includes natural features assessments, wetland recommendations, permit-ready design documents, shoreline assessments, groundwater analysis, shoreline enhancements, community engagement, and project reporting. Eng., Inc., led by Ryan McEnhill, will provide permit-ready design documents such as conceptual design, grading plans, planting plans, and shoreline solutions. Herpetological Resource & Management, LLC, led by David Mifsud, will conduct herpetological assessments, including baseline inventory and recommendations for habitat restoration and best management practices for amphibians and reptiles on Harbor Island.	Restoration of wetlands at the designated sites presents an opportunity to increase water storage capacity during flooding events and enhance wildlife habitat. Additionally, it is expected that the restoration will attract more tourism to the area. Properly executed, this restoration will improve site accessibility while preserving its natural features. Harbor Island's restoration holds particular significance as it is a central attraction in Grand Haven, serving as a focal point for both tourists and boaters navigating the Grand River. Both Harbor Island and Ottawa Sands are experiencing shoreline erosion due to boating traffic and river flow fluctuations. One of the initial project steps involves conducting a wind and wave analysis of the area, focusing on the Grand River and adjacent channels. Although not initially requested, this analysis will provide essential data for designing sustainable shoreline protection measures using nature-based solutions for both sites.	OSCP, a 345-acre park managed by the Ottawa County Parks and Recreation Commission (OCPR), is located near the Grand River mouth in Ferrysburg. It offers a unique blend of critical habitat preservation and recreational opportunities. In 2020, OCPR published the miOttawa Sands plan, a community-guided master plan outlining various improvements for the park. The current RFP seeks assessments and plans for wetland restoration and Grand River shoreline stabilization, aligned with the master plan's recreational amenities. The integration of habitat restoration with recreational enhancements aims to connect visitors with nature while safeguarding critical habitat. The park aims to cater to both passive and active recreational activities, including motorized and non-motorized boating and designated play areas. It also serves as a trailhead with connections to regional land and water-based trails, catering to the growing cultural movement towards car-free outdoor enjoyment.	The Ottawa Sands project overseen by Ramboll involves wetland creation and shoreline enhancements. Ramboll will conduct thorough site investigations, considering factors like groundwater interactions, invasive species, and future water level changes. For shoreline enhancements, they will analyze historical water levels and develop nature-based erosion control solutions, integrating recreational amenities. Ramboll will develop preliminary concepts, recommend alternatives, and proceed with a preliminary design phase aiming for 60% completion, including wetland creation and shoreline stabilization plans. They will also coordinate pre-permit applications. Similarly, the Harbor Island Wetland Enhancements project aims for suitable water levels, stress management, and diverse habitats. Ramboll will collaborate with Ottawa County, conducting thorough reviews and field surveys, including Natural Features Inventory and wetland assessment. For shoreline enhancements, they will evaluate restoration alternatives, considering nature-based solutions and collaboration for hardened shoreline sections. Ramboll will offer preliminary engineering services, including plans and cost estimates to a 50% level of design, and coordinate pre-permit applications.	For both Ottawa Sands Park and Harbor Island, the team plans to: Review existing data to understand previous work and decisions made by relevant authorities. Conduct field assessments of natural features, including wetlands, herpetological, and plant assessments, potentially including additional assessments such as for freshwater mussels and soil types. Complete the assessments over a period of two days with up to four field staff, possibly including surveys via a boat. Assess shoreline habitats, including areas of hardened shoreline techniques, and classify them using similar categories as used for Ottawa Sands Park. Review bathymetric maps and may collect targeted depth readings in certain areas to understand options for softening the shoreline.
	3. PAST PROJECTS		Listed on Pages 6-7	Listed on Pages 2-13 - 2-19.	Listed on Page 15. Examples on Page 72-88.	Listed on Page 15. Examples on Page 65-78.	Listed on Page 25. Examples on Pages 16-
	4. COST AND FEES PROPOSED		Ottawa Sands: $58,900 Harbor Island: $75,000 Other Deliverables: $16,200 Total: $150,100 Not-to-exceed: $165,000 Alternatives: $129,250 **TOTAL: $279,350 Not-to-exceed: $294.250**	Ottawa Sands: $153,000 Harbor Island: $98,000 Other Deliverables: $23,749 **Not-to-exceed Total: $274,749** Alternate: $105,000 Ottawa Sands Alternates: $37,759 **Not-to-exceed w/ Alternates Total: $417,508**	Ottawa Sands: $136,852 Harbor Island: $71,692 Other Deliverables: $30,784 **Not-to-exeed Total: $239,368** Alternates: $160,266 **Not-to-exceed w/ Alternates Total: $399,634**	Ottawa Sands: $ 122,881 Harbor Island: $91,241 Other Deliverables: $29,662 Project Management: $30,968 **Total (estimated): $274,752** Alternates: $213,225 **Total (estimated) w/ Alternates: $487,977**	Phase I (Ottawa Sands & Harbor Island): $102,150 Phase II (Ottawa Sands and Harbor Island): $165,250 **Total: $267,400** Alternate: $44,400 **Total w/ Alternate: $311,800**
	5. OTHER INFORMATION		Timeline included	Project Schedule included. Page 2-28 Other Information.	Project Schedule included.	Project Schedule included.	Project timeline and milestones included.
		COMMENTS:					

RFP Distribution Info
Downloaded from BidNet / MITN = 34
Number of "hits" on the MiOttawa Page = 29 to 5 Hits on each of the documents posted
Number of vendors sent to directly = 3

Not Awarded
Awarded

Evaluation Committee:
Jason Shamblin, Parks and Recreation Director
Curt TerHaar, Coordinator of Parks Planning and Development
Aaron Bodbyl-Mast, Parks Planner

Action Request

Electronic Submission – Contract # 2324

Ottawa County
Where Freedom Rings

Committee: PLANNING AND POLICY

Meeting Date: 6/4/2024

Vendor/3rd Party: JOSELYN PAOLA VALLEJO

Requesting Department: PARKS AND RECREATION

Submitted By: CURT TERHAAR

Agenda Item: IDEMA EXPLORERS TRAIL EASTMANVILLE BAYOU SEGMENT EASEMENT

Suggested Motion:

To purchase an easement from Joselyn Paola Vallejo for trail construction of the Eastmanville Bayou segment of the idema Explorers Trail for a cost of $3690.00.

Summary of Request:

As part of on-going efforts to improve the alignment and constructability of the Idema Explorers Trail, this easement allows for the trail to be located further from the road, avoids an existing ditch, and allows for the earthwork necessary to construct the trail along a steep slope.

Financial Information:

Total Cost: $3,690.00	General Fund Cost: $0.00	Included in Budget: Yes

If not included in Budget, recommended funding source:

Action is Related to an Activity Which Is: Non-Mandated

Action is Related to Strategic Plan:

Goal 2: To Contribute to the Long-Term Economic, Social and Environmental Health of the County.

Administration:

Recommended by County Administrator: *5/21/2024 2:10:01 PM*

Committee/Governing/Advisory Board Approval Date: 6/4/2024

TRAILWAY EASEMENT

12376 60th Avenue
Eastmanville Bayou Segment
Non-Motorized Trail Project

Joselyn Paola Vallejo, an unmarried individual who resides at 12376 60th Avenue, Allendale, MI 49401 (the "Grantor"), is the record title owner of the property in which she resides, which is more particularly described on the attached **Exhibit A** (the "Premises"). For the consideration of three thousand six hundred ninety dollars ($3,690.00), the receipt and sufficiency of which is acknowledged, the Grantor hereby grants, warrants, and conveys to the County of Ottawa, a Michigan public body corporate, acting by and through its Parks & Recreation Commission, which has an address of 12220 Fillmore Street, West Olive, Michigan 49460 (the "County"), a perpetual and permanent easement and right-of-way over and across the westernmost 15 feet of the Premises, which totals approximately 3,000 square feet, as depicted on the attached **Exhibit B** (the "Easement Area") for use as a public trailway for bicycle, pedestrian, and other non-motorized travel (the "Easement"). The Grantor further grants a temporary grading easement over the next westernmost 20 feet of the Premises, which is also depicted on Exhibit B ("Temporary Easement Area"), all subject to the following terms and conditions.

TERMS AND CONDITIONS

1. The County (which, for purposes of this document, shall be deemed to include the County's agents and assigns) has the right to enter upon the Easement Area and, to the extent necessary, the land immediately adjacent thereto, to construct, install, maintain, repair, replace, inspect, and keep in good working order a trailway (which may include sidewalks and boardwalks) for the general public to use for biking, walking and other non-motorized travel (the "Work"). The Work includes excavating a foundation for the trailway as well as the removal of trees, brush, undergrowth and other obstructions situated within the Easement Area which may interfere with the location, construction, maintenance, repair or upkeep of the trailway.

2. The County may enter upon the Temporary Easement Area during the initial construction period to perform grading and sloping work as the County reasonably deems necessary.

3. Any Work performed by or on behalf of the County shall be performed (i) in a good and workmanlike manner, (ii) in compliance with all applicable laws, rules, orders, and ordinances, (iii) so as not to unreasonably interfere with the use of the Easement Area or Temporary Easement Area by the Grantor, and (iv) without cost to the Grantor.

4. Upon completion of the initial construction of the trailway, any portions of the Easement Area and Temporary Easement Area not improved shall be restored to the same general condition as existed before that Work without cost to Grantor.

5. The general public shall have the right to use the trailway for the recreational purposes described herein. Further, the trailway may be used for ingress and egress by the County or any emergency service agency to provide, without limitation, access for fire and police vehicles, ambulances and rescue vehicles, and other lawful governmental or private emergency services.

6. The Grantor shall not construct any building, structure or improvement in the Easement Area without first obtaining the written consent of the County, and shall not impede the access or use of anyone on the trailway.

7. The Grantor hereby releases any and all claims to damage arising from or incidental to the exercise of any of the foregoing powers, except as above provided. The County, for its part, agrees to fully indemnify and hold harmless the Grantor from any and all claims for damage to real and personal property and injuries or death suffered by persons in any manner caused by or arising out of the construction, installation, repair, upkeep, maintenance or presence of the trailway, except where caused by the negligence or intentional acts of the Grantor, or the Grantor's heirs, representatives, successors or assigns.

8. This instrument shall run with the land and be binding upon and inure to the benefit of the parties and their representatives, successors and assigns. If the Burdened Property is subdivided or split and results in additional parcels, then any additional owners of such new parcels will hold title to such parcels subject to the terms of the Easement.

9. Non-use or limited use of the Easement shall not prevent the County or its successors or assigns from later use of the same to the fullest extent authorized in this Indenture.

10. The Easement may be amended, altered, modified, or terminated by, and only by, the mutual written agreement of all parties, or their respective successors or assigns.

11. If any term, covenant, or condition of the Easement is determined to be invalid or unenforceable, all other terms, covenants, and conditions shall remain in effect to the fullest extent permitted by law.

The Grantor has caused these presents to be signed the day and year first above written.

[Signature on Next Page]

Vallejo J.V.

JOSELYN PAOLA ~~VEGA-CRUZ~~

~~Joselyn P. Vega Cruz~~ Joselyn P. Vallejo.

STATE OF MICHIGAN)
ss.
COUNTY OF OTTAWA)

On May 14 J.V., 2024, before me in Ottawa County, Michigan, personally appeared Joselyn Paola ~~Vega-Cruz~~ Vallejo.

RACHEL SANCHEZ
Notary Public, State of Michigan
County of Muskegon
My Commission Expires 18-Jul-2028
Acting in the County of Ottawa

Notary Public, Muskegon County, Michigan
Acting in Ottawa County
My commission expires: 7/18/28

Drafted By:
C. Nicholas Curcio
Curcio Law Firm PLC
16905 Birchview Drive
Nunica, MI 49448

When Recorded Return To:
Grantee

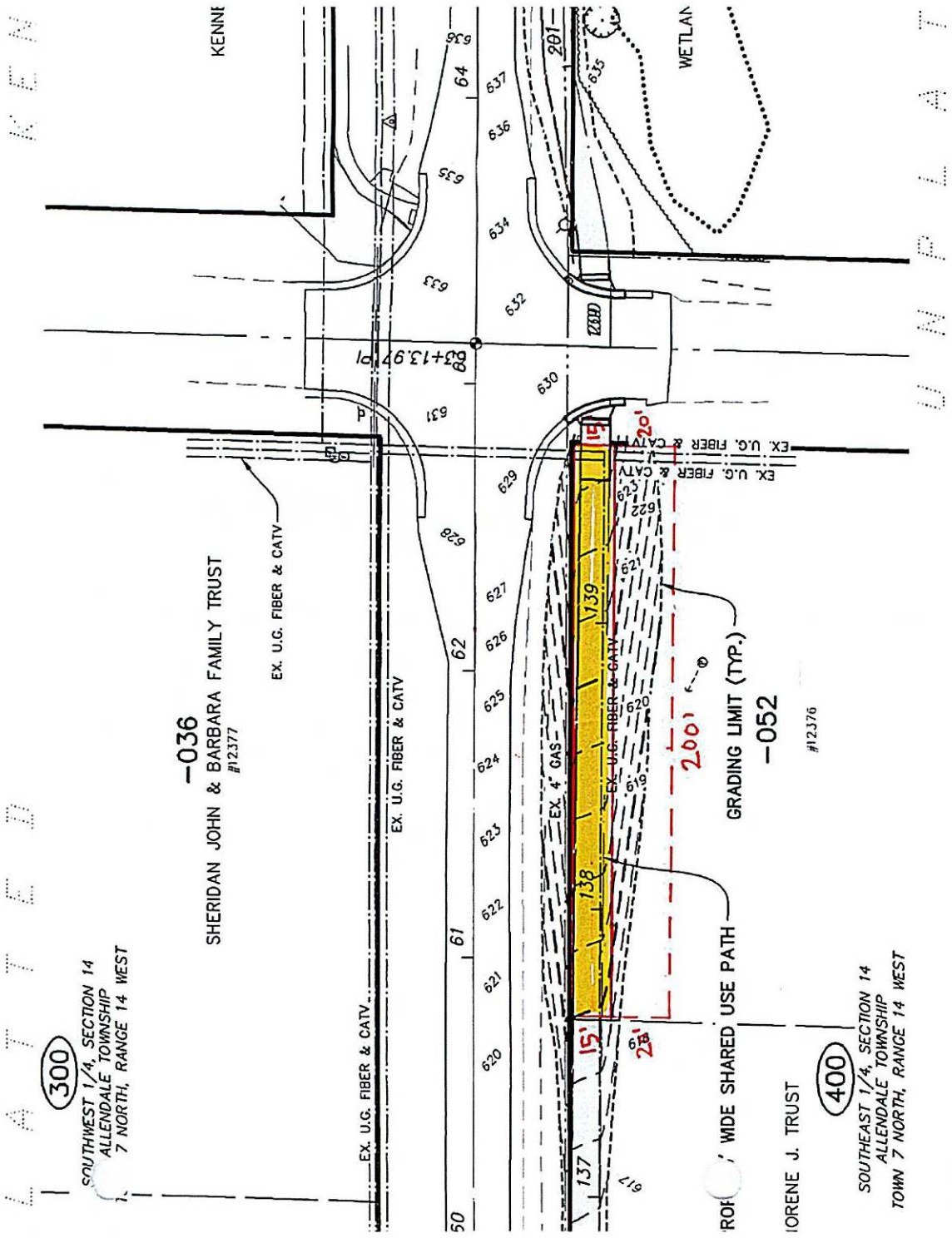
Exhibit A
Description of the Premises

The following described real property in the Charter Township of Allendale, County of Ottawa, State of Michigan:

PART OF SE 1/4 COM S 0D 22M 06S E 234.56 FT & S 89D 01M 56S E 33.01 FT FROM CEN 1/4 COR, TH N 0D 22M 06S W 201.55 FT ALG E LI OF 60TH AVE, S 89D 01M 56S E 328.19 FT ALG S LI OF WARNER ST, S 0D 22M 06S E 281.55 FT, N 89D 01M 56S W 60 FT, N 0D 22M 06S W 80 FT, TH N 89D 01M 56S W 268.19 FT TO BEG. SEC 14 T7N R14W 1.63 AC M/L

Commonly known as: 12376 60th Avenue
Tax I.D. No: 70-09-14-400-052

Exhibit B
Easement Area Drawing



OTTAWA COUNTY

By: _____ _____
Joe Moss, Chairperson Date
Board of Commissioners

By: _____ _____
Justin F. Roebuck, Clerk/Register Date

SUMMARY AND CONSISTENCY REPORT

Liquid Industrial By-Products, Inc.

Liquid Industrial By-Products, Inc.- Summary of Consistency with the Ottawa County Solid Waste Management Plan

Submitted to:

Ottawa County Environmental Health Division
12251 James Street
Suite 200
Holland, Michigan 49424

Submitted by:

WSP Michigan Inc.
400 136th Ave. Bldg. 100, Suite B, Holland, MI 49424

31407129.000

May 14, 2024

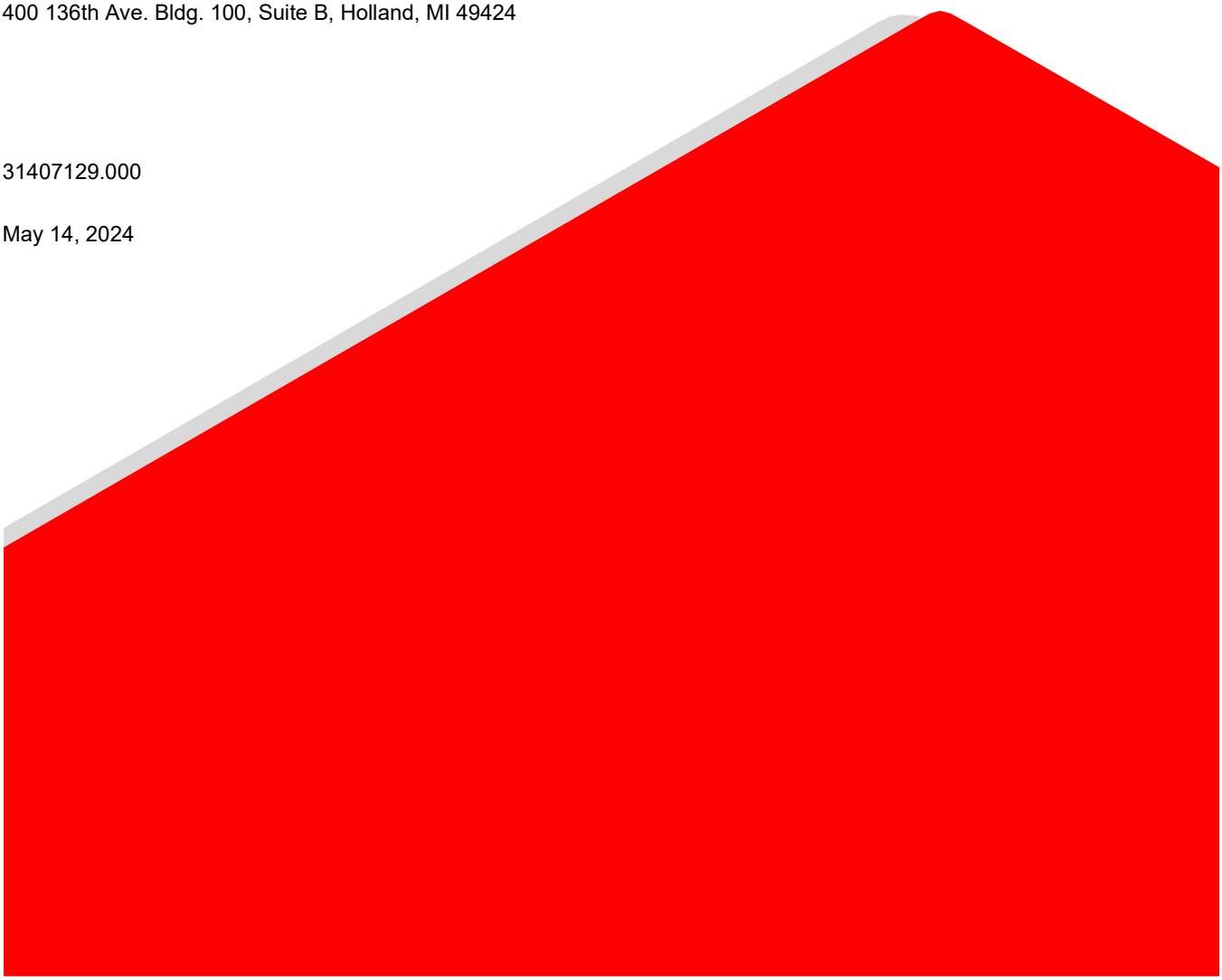


Table of Contents

LIST OF FIGURES

LIST OF APPENDICES

1.0 INTRODUCTION

This summary report has been prepared on behalf of Liquid Industrial By-Products, Inc. (LIBP) to meet the requirements of the Ottawa County (County) consistency review process. Specifically, this report documents site-specific information required for use in determining consistency with the April 2000 Ottawa County Solid Waste Management Plan (County Plan) and Plan Amendment Proposal approved by the Michigan Department of Environment, Great Lakes, and Energy (EGLE) in December 2015.

As part of the permit process, WSP Michigan Inc. (WSP) is updating technical documents for EGLE. The updated design will be consistent with current rules developed under Part 115 of the Natural Resources and Environmental Protection Act, P.A. 451 of 1994, as amended (Part 115).

Information needed for the County review process is provided in the following Sections. For ease of review, the items required under Section III.16.5 of the April 2000 Ottawa County Solid Waste Management Plan (and approved Plan amendment) are shown in *"italic print"* followed by the information requested.

2.0 APPLICANT INFORMATION

Applicant:
Liquid Industrial By-Products, Inc.
11325 East Lakewood Boulevard
Holland, Michigan 49424
Contact: Michael Pastoor
Phone: 616-499-0046

Property Owner:
Safe Services, LLC.
11325 East Lakewood Boulevard
Holland, Michigan 49424
Contact: Jim Rozeboom
Phone: 616-396-5994

Engineering Consultant:
WSP Michigan Inc.
400 136th Ave. Bldg. 100, Suite B
Holland, Michigan 49424
Contact: Blaine Litteral, P.E.
Phone: 616-566-4609

3.0 SITE INFORMATION

Site information needed for the County Plan review process is provided in the following sections.

3.1 Description of Proposed Site and Expansion Design / Final Design

Safe Services LLC owns and Liquid Industrial By-Products, Inc. operates on approximately two and one-half (2.5) acres between the C&O Railroad and East Lakewood Boulevard. A truck loadout building, and office building are situated on the premises. The existing facility currently receives non-hazardous by-products, such as coolants, lubricants, oily water, ground water, and liquid food-based waste. The existing facility was constructed with a 60-mil thick polyurethane liner system to provide secondary containment to the facility. All tanks are inside the buildings and all processing, loading, and unloading occur inside.

The proposed permit will not meaningfully change the existing facility infrastructure, only the processes that the site is permitted to perform. Sludges generated from onsite processes are thickened via a filter-press as currently authorized by EGLE. Currently, sludges generated offsite are not solidified at the facility. This proposed permit would allow for sludge solidification of materials received at the existing facility. However, for the purposes of this report, the existing infrastructure with proposed process changes will be collectively referred to as the "facility" or "site".

3.2 Site Location Information

A. A legal description of the project area:

The site is located in in the west 200 feet of the East 908 feet of the South ½ of the Northeast ¼ of Section 22, T5N, R15W, Holland Township, Ottawa County, Michigan laying South of the C&O Railroad Right-of-Way, except the South 500 feet, thereof.

Also, part of the Northeast ¼ of Section 22, T5N, R15W, Holland Township, Ottawa County, Michigan described as beginning at a point distant South 89 58' 14" West 908 feet along the East and West ¼ line of Section 22 and North 00 15' 02" East 500 feet from the East ¼ corner of Section 22 and proceeding thence South 89 58' 14" West 23.70 feet thence North 00 15' 02" East 44.88 feet parallel with the east line of Section 22 to the Southerly line of the C&O Railroad, thence North 74 40' 49" East 24.11 feet along the Southerly line of the C&O Railroad, thence South 00 15' 02" West 452.19 feet to the point of beginning.

B. *A site map showing all roadways and principal land features within two miles of the site,*

See Site Location map included as Figure 1 which depicts the surrounding roads and land features within a two-mile radius from the facility.

C. A topographic map with contour intervals of no more than ten feet for the site,

See Site Location map included as Figure 1 which depicts existing topography for the site and immediately surrounding areas.

D. A map and description of all access roads showing their location, and type of road surface material, proposed access point to the facility, haul route from access roads to nearest state truckline:

The site will be accessed using the existing paved driveway off Lakewood Boulevard, as shown on Figure 1. This will be the only access to the site from the public road system. The haul route from the site to the state trunkline Business I-196, is included on Figure 4. This route involves traffic leaving the site and heading east on Lakewood Boulevard, an asphalt road, then south on 112th Avenue, an asphalt road, to Business I-196 which is a concrete road in this location.

E. A current map showing the proposed site and surrounding zoning, domiciles, and present usage of all property within one mile of the site.

The surrounding zoning within one mile of the proposed site is shown in Figure 2. Existing land uses and structures within one mile of the site are also included in Figure 2.

3.3 Site Information

A. Description of current site use and ground cover:

The site is approximately 2.5 acres located on the north side of Lakewood Boulevard south of the C&O Railway right-of-way. The site is currently developed as an industrial area and contains steel framed structures including a shop and office building. The site entrance and parking lot are concrete, and a gravel yard area exists for maneuvering and staging trucks and equipment.

B. A map showing the locations of all structures within 1200 feet of the perimeter of the site:

A map depicting the surrounding structures and land uses within a 1-mile buffer is included as Figure 2.

C. The location of all existing utilities:

Existing public and private utilities are depicted on the site plan included as Figure 4.

D. The location of 100-year floodplain as defined by Rule 323.311 of the administrative rules of Part 31, Water Resources Protection, of Act 451, as amended within 1200 feet of the site:

The current FEMA flood map for this area is number 26139C0316E with an effective date of December 16, 2011 as shown in Figure 3. The map indicates the site and all surrounding areas up to 1,200 feet from the site are in Zone X, which is defined as areas of less than a 0.2% annual chance of flood hazard.

E. The location of all wetlands as defined by part 303, Wetlands Protection, of Act 451 within 1200 feet of the site:

Figure 5 includes the surrounding wetland areas as identified on the national wetland inventory. These wetlands are located outside of the project property and will not be impacted by the proposed changes at the site.

F. The site soil types and general geological characteristics:

The map included as Figure 3 depicts the on-site and adjacent soils based on the USDA soil survey. The existing site and surrounding area generally consist of loam or sandy loam soils.

4.0 SITE OPERATIONS AND SOURCES OF WASTE

A. *Days and Hours of Operation:* The facility is operated Monday through Friday, 7:00 am to 5:00 pm.

B. *Ingress/Egress:* The existing entrance off East Lakewood Boulevard will continue to be utilized for inbound and outbound vehicles. The truck staging and parking areas are more than adequate and effectively manage the current and expected future truck volume.

C. *Daily Truck Volume:* The current volume is 12 to 14 trucks per day, with 0 to 2 additional trucks expected following permit approval.

D. *Personnel:* The current facility utilizes 16 full-time staff and 6 part-time staff. No additional staff are anticipated at this time.

E. *Equipment:* A filter-press is utilized to separate liquids from waste streams generated at the facility, and a front-end loader is used in the sludge thickening process. Thickened sludge is loaded on outbound trucks for landfilling.

F. *Materials to Recover:* Treated wastewater is sent to the local publicly owned treatment works, the Holland Water Reclamation Facility. The sludge from processing is sent to one of the local landfills, while recyclable oils are segregated and picked up by a recycling facility. Other waste streams of value may be considered in the future depending on market conditions and customer demand.

G. *Housekeeping:* All storage of materials, processing, loading, and unloading is performed inside the facility. To prevent trackout, outbound vehicle tires are visually inspected prior to departure. If sludge or oils are present on the tires, they are pressure washed prior to leaving the facility.

H. *Potential Dust Control:* All processing is done within the facility. When processing takes place, it is confined to one area. All doors and vents are closed when unloading or when dust may be present. Currently, no exterior parking or staging areas experience dust issues.

I. *Annual Volumes:* Approximately 5,000 tons of sludge are thickened and shipped for landfilling annually. Volumes are expected to grow at a rate of up to 10 percent annually.

J. *Sources of Waste:* Over 90 percent of sludge that is thickened comes from the onsite treatment process. The remaining 10 percent of sludges are received directly from customers, processed at the facility, and the final material is thickened. Material is received predominately from Ottawa, Kent, Allegan, and VanBuren counties, but could be received from any county allowed by the Ottawa County Solid Waste Management Plan.

K. *Life Expectancy:* The existing facility and equipment will receive maintenance as needed, and operations are intended to continue for the next 50 years.

L. *Recordkeeping:* Incoming loads are received with shipping manifests reporting the estimated volume and origin of waste. Outgoing loads are weighed at the landfill to track billing. Reporting to the county, state, and local government will be performed as needed.

M. *Road Improvements:* Traffic and truck volume is not anticipated to change and will not require any improvements to the existing road surfaces, drive size, or warrant any other improvements.

5.0 OTTAWA COUNTY PLAN CONSISTENCY CRITERIA

Page III-54 of the Ottawa County Solid Waste Management Plan (County Plan) identifies the requirements for a proposed facility or expansion. The following information demonstrates the proposed facility is consistent with the current County Plan.

1. *The active work area for a new landfill or an expansion of an existing landfill shall not be located closer than 100 feet from adjacent property lines and rights-of-ways, or 400-feet from lakes, and perennial streams.*

   The proposed site is a liquid industrial wastewater treatment facility, not a landfill, and this criterion is not applicable. However, the nearest lake, a stormwater runoff basin servicing the properties to the north, is 650-feet away as shown on Figure 3. The nearest stream is approximately 1,950 feet from the proposed active area. Due to the parcel's small size of 2.5 acres, the facility is located less than 100 feet from adjacent property lines. However, all waste handling activities will be conducted within the existing facility structure and will be screened from public view and access. The only activities that will occur outside of the facility will be staging of trucks and equipment, which will not negatively impact the adjacent landowners. Therefore, this Consistency Requirement is met.

2. *The active work area for a new landfill or an expansion of an existing landfill shall not be located closer than 1,000 feet from domiciles or public schools existing at the time of submission of the application.*

   The proposed site is a liquid industrial wastewater treatment facility, not a landfill, and this criterion is not applicable. However, the nearest school is New Groningen Elementary School, approximately 1-mile to the east of the facility. The existing homes to the northeast are greater than 1,000 feet from the facility as shown on Figure 2. Therefore, this Consistency Requirement is met.

3. *A sanitary landfill shall not be constructed within 10,000 feet of a licensed airport runway.*

   The proposed site is a liquid industrial wastewater treatment facility, not a landfill, and this criterion is not applicable. However, the nearest airport runway is the Curt's Place Airport – 6MI3 which is approximately 25,000 feet from the facility. Therefore, this Consistency Requirement is met.

4. *An expansion of an existing facility shall not be located in a 100-year floodplain as defined by Rule 323.311 of the administrative rules of Part 31, Water Resources Protection, of Act 451.*

   As stated in Section 3.3.D above, the facility and immediate area surrounding it are not within a 100-year floodplain. Therefore, this Consistency Requirement is met.

5. *An expansion of an existing facility shall not be located in a wetland regulated by Part 303, Wetlands Protection, of Act 451, unless permit is issued.*
   As stated in Section 3.3.E above, the facility and immediate area surrounding it are not within a regulated wetland. Therefore, this Consistency Requirement is met.

6. *An expansion of an existing facility shall not be constructed in lands enrolled under Part 361, Farmland and Open Space Preservation, of Act 451.*

   The facility is not enrolled under Part 361 according to a data base search conducted on the Ottawa County Register of Deeds documents databases. Therefore, this Consistency Requirement is met.

7. *An expansion of an existing facility shall not be located in an environmental area as defined in Part 323, Shorelands Protection and Management, Of Act 451, or in areas of unique habitat as defined by the Department of Natural Resources, Natural Features Inventory.*

   The facility is in an industrial area that has already been developed. The area is not located in an environmental area as defined by Part 323 and does not include habitat meeting the definition of natural features. Therefore, this Consistency Requirement is met.

8. *An expansion of an existing facility shall not be located in an area of groundwater recharge as defined by the United States Geological Survey or in a wellhead protection area as approved by the Michigan Department of Environmental Quality.*

   The facility is not located in an area of groundwater recharge or wellhead protection area per data contained on the Michigan Department of Environment, Great Lakes, and Energy GIS database. Therefore, this Consistency Requirement is met.

9. *An expansion of an existing facility shall not be located in a designated historic or archaeological area defined by the State Historical Preservation Officer.*

   The facility is not located within a designated historic or archaeological area. There are no historical markers located on the property. Therefore, this Consistency Requirement is met.

10. *An expansion of an existing facility shall not be located or permitted to expand on land owned by the United States of America or the State of Michigan.*

    The facility exists on lands wholly owned by Safe Services, LLC. and its affiliates, and not on any State or Federal lands. Therefore, this Consistency Requirement is met.

11. *Facilities may only be located on property zoned as agricultural, industrial, or commercial at the time the facility developer applies to the county for a determination of consistency under the Plan.*

The facility is contained on portions of land which are currently zoned General Industrial (I-2) according to the Holland Township Zoning Map dated January 1, 2023, from Prein & Newhof. Therefore, this Consistency Requirement is met.

12. *The owner and operator of a facility shall submit a statement to cooperate with the County on recycling and composting activities.*

    Liquid Industrial By-Products, Inc. and its affiliates agree to cooperate with Ottawa County for recycling and composting activities. A statement of cooperation is attached in Appendix A.

13. *An expansion of an existing facility shall be located on a paved, all weather "Class A" road.*

    Access to the site is from East Lakewood Boulevard, which is a paved, all weather "Class A" road. Therefore, this Consistency Requirement is met. Figure 2 shows the site access point and the surface conditions of nearby roadways.

14. *Proposed expansion of landfills and transfer stations must establish recycling drop-off centers and/or composting facilities, open to the public, unless it can be demonstrated to the Facility Review Subcommittee that such a facility or center is not feasible or practical.*

    The facility is not a landfill or transfer station and is not open for public municipal solid waste disposal. Therefore, this criterion does not apply.

15. *The intersection of any facility access road with an existing highway must be designed to provide sufficient sight distance and minimum interference with traffic on the highway in accordance with American Association of State Highway and Transportation Organization – Policy of Geometric Design of Highways design guidelines.*

    The facility will use the same access point off East Lakewood Boulevard that the existing operations uses. The existing driveway was constructed in accordance with the Ottawa County Road Commissions standards for commercial driveways. Figure 2 shows the site access point and the conditions of nearby roadways.

16. *There must be waiting space for vehicles using the facility, so that the access road remains free of waiting vehicles, and there must also be parking space for stand-by vehicles, facility employees, and visitors.*

    There is sufficient space on-site for vehicles to maneuver and stage as to not impede the access driveway. The existing facility has both passenger vehicle and large truck parking areas which allow stand-by vehicles, employees, and visitors to park out of the way of the work area. The process modification is not expected to increase the vehicle volume beyond that which the existing space can accommodate. Therefore, this Consistency Requirement is met.

17. *The facility shall have a water supply and equipment at the site for the purpose of extinguishing fires.*

    A public water main with fire hydrants exists within the East Lakewood Boulevard right-of-way, with one hydrant approximately 15-feet from the facility's front entrance and the first bay door. The existing facility is equipped with the necessary fire suppression equipment in accordance with the requirements of the Township, County, and insurance carrier. Therefore, this Consistency Requirement is met.

6.0 CONCLUSION

The data presented in this report documents that the proposed processing facility by Liquid Industrial By-Products, Inc. is consistent with the requirements of the April 2000 Ottawa County Solid Waste Management Plan (SWMP) and Plan Amendment Proposal approved by the Michigan Department of Environment, Great Lakes, and Energy (EGLE) in December 2015.

Signature Page

This summary report has been prepared on behalf of Liquid Industrial By-Products, Inc. to meet the requirements of the Ottawa County consistency review process for the proposed facility. We trust that the information contained herein meets those requirements. Please contact the undersigned with any questions.

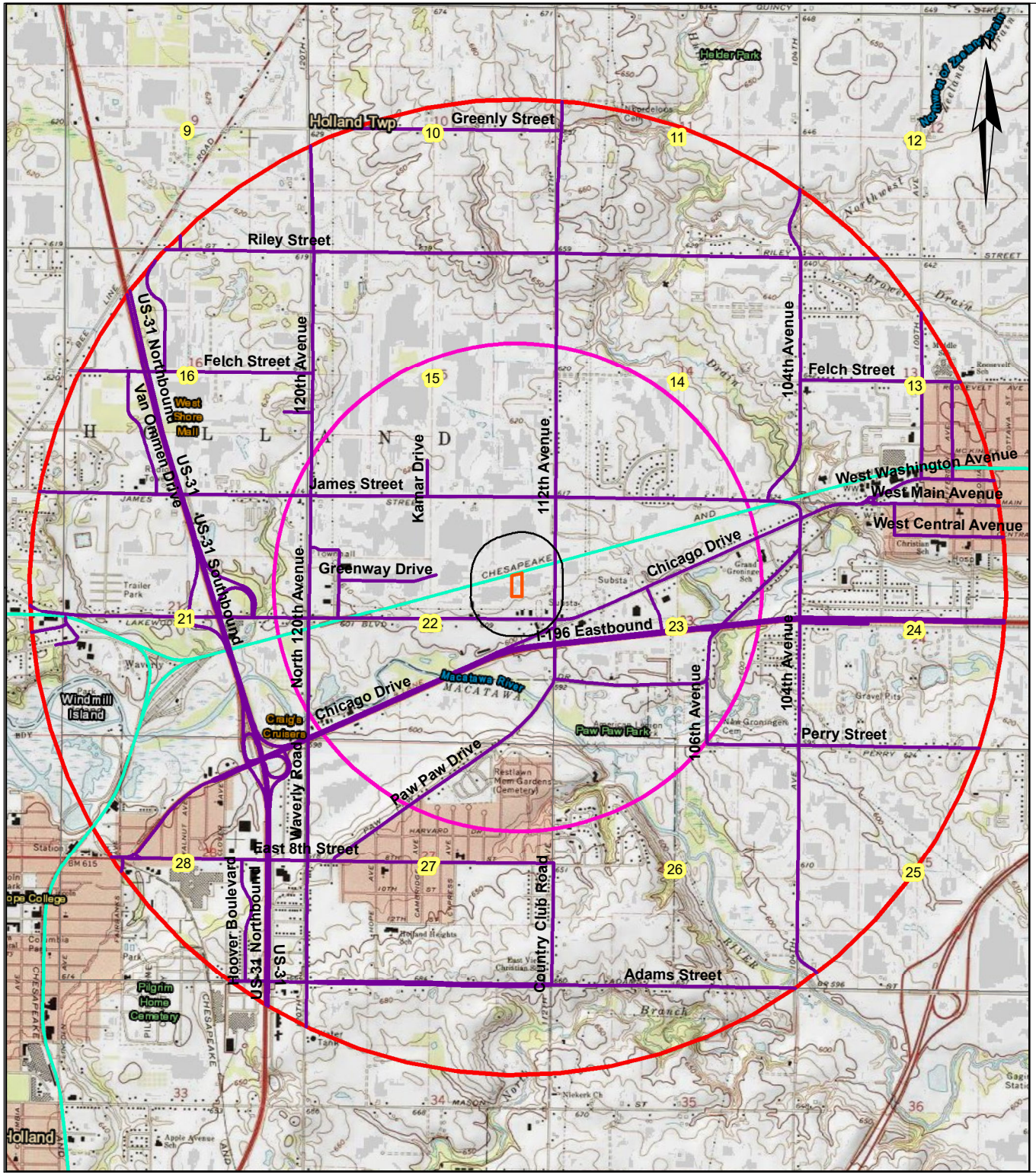
Sincerely,

WSP Michigan Inc.

Brian Brown, P.E.
Consultant

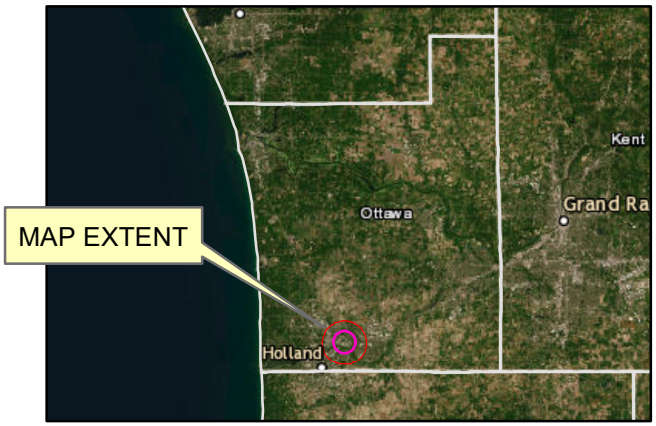
Blaine Litteral, P.E.
Vice President

Figures



Legend

- Property Boundary
- 1200 Foot Buffer
- 1 Mile Setback
- 2 Mile Setback
- 2 Mile Setback Roads
- Railroad Tracks



LEGAL DESCRIPTION

The site is located in in the west 200 feet of the East 908 feet of the South ½ of the Northeast ¼ of Section 22, T5N, R15W, Holland Township, Ottawa County, Michigan laying South of the C&O Railroad Right-of-Way, except the South 500 feet, thereof. Also, part of the Northeast ¼ of Section 22, T5N, R15W, Holland Township, Ottawa County, Michigan described as beginning at a point distant South 89 58' 14" West 908 feet along the East and West ¼ line of Section 22 and North 00 15' 02" East 500 feet from the East ¼ corner of Section 22 and proceeding thence South 89 58' 14" West 23.70 feet thence North 00 15' 02" East 44.88 feet parallel with the east line of Section 22 to the Southerly line of the C&O Railroad, thence North 74 40' 49" East 24.11 feet along the Southerly line of the C&O Railroad, thence South 00 15' 02" West 452.19 feet to the point of beginning.

0 0.25 0.5 1 Miles

CLIENT
LIQUID INDUSTRIAL BY-PRODUCTS, INC.

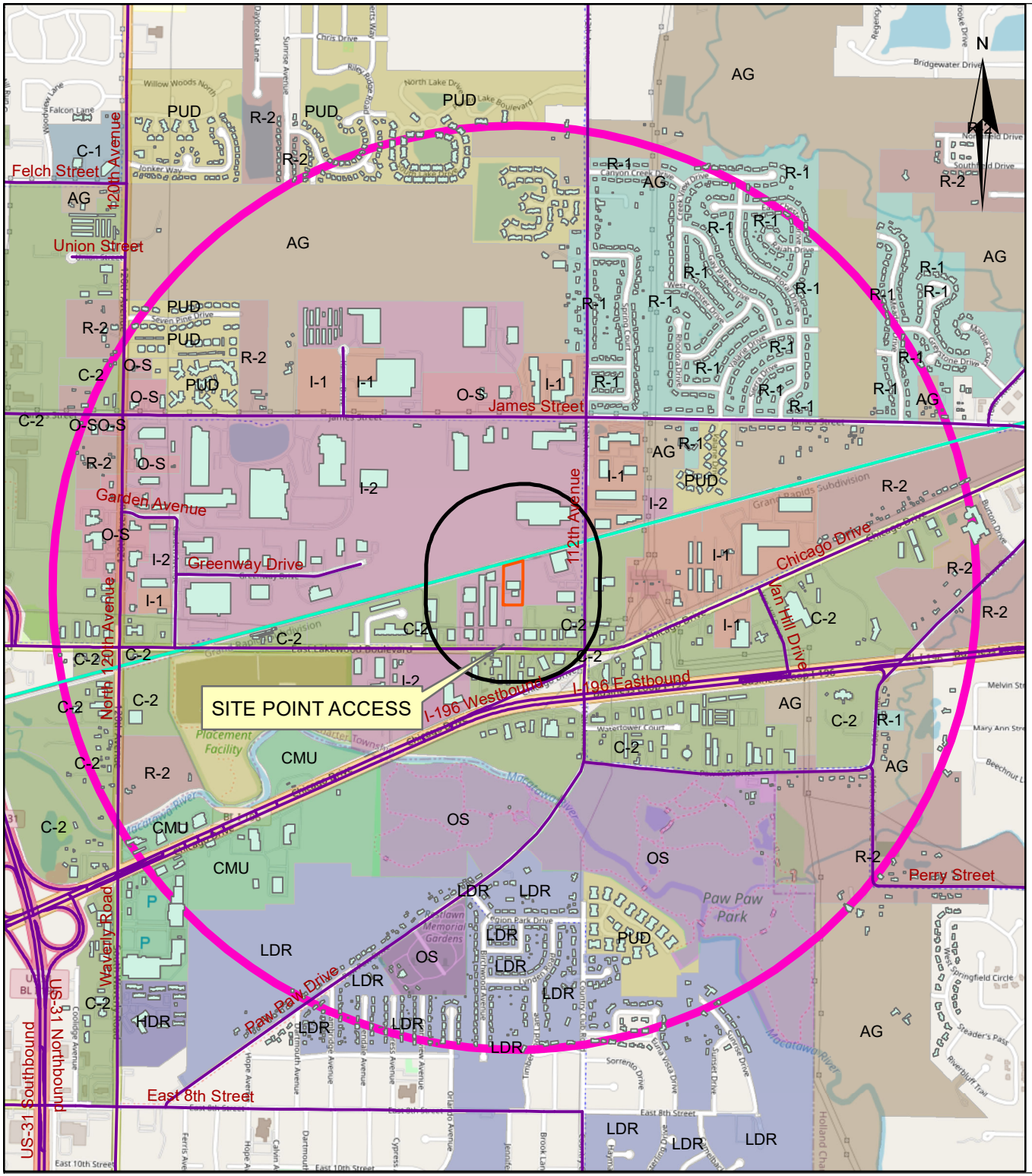
PROJECT
LIQUID INDUSTRIAL BY-PRODUCTS, INC.- SUMMARY OF CONSISTENCY

TITLE
SITE LOCATION

CONSULTANT
wsp

YYYY-MM-DD	2024-04-12
PREPARED	WDH
DESIGN	BY OTHERS
REVIEW	BAB
APPROVED	BAL

PROJECT NO.	CONTROL	REVISION	FIGURE
31407129.000	1	0	**1**



Legend

- Property Boundary
- 1200 Foot Buffer
- Building Footprints Within 1 Mile
- 1 Mile Setback
- Paved Roads
- Railroad Tracks

Zone Classification

- Agriculture District (AG)
- Corridor Mixed Use (CMU)
- General Commercial (C-2)
- General Industrial District (I-2)
- High Density Residential (HDR)
- Light Industrial District (I-1)
- Low Density Residential (LDR)
- Low Density Residential District (R-1)
- Moderate Density Residential District (R-2)
- Neighborhood Commercial (C-1)
- Office and Service District (O-S)
- Open Space (OS)
- Planned Unit Development (PUD)

0 0.125 0.25 0.5 Miles

CLIENT
LIQUID INDUSTRIAL BY-PRODUCTS, INC.

PROJECT
LIQUID INDUSTRIAL BY-PRODUCTS, INC.- SUMMARY OF CONSISTENCY

TITLE
SITE ZONING AND EXISTING STRUCTURES

CONSULTANT
wsp

YYYY-MM-DD	2024-04-19
PREPARED	WDH
DESIGN	BY OTHERS
REVIEW	BAB
APPROVED	BAL

PROJECT NO.	CONTROL	REVISION	FIGURE
31407129.000	1	0	**2**

Legend

- Property Boundary
- 1200 Foot Buffer
- Building Footprints
- 0.2% Annual Chance Flood Hazard

Soils

- GeB-Gladwin sandy loam, 2 to 6 percent slopes
- KnA-Kawkawlin loam, 0 to 2 percent slopes
- MmB-Menominee loamy sand, 2 to 6 percent slopes
- MnA-Metamora sandy loam, 0 to 2 percent slopes
- MnB-Metamora sandy loam, 2 to 6 percent slopes
- W-Water

Service Layer Credits: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Soils Data provided by USDA NRCS

0 125 250 500
Feet

CLIENT
LIQUID INDUSTRIAL BY-PRODUCTS, INC.

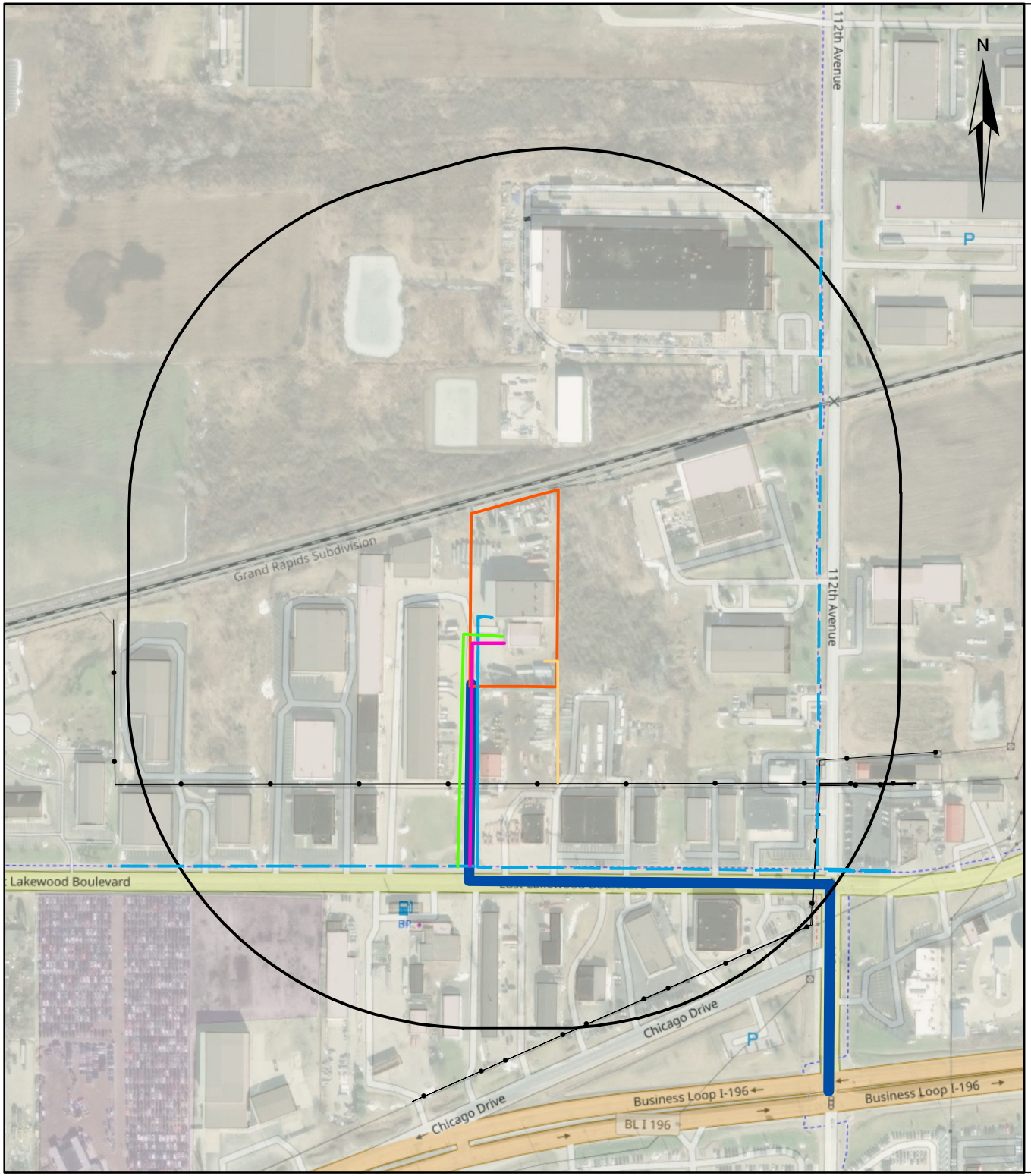
PROJECT
LIQUID INDUSTRIAL BY-PRODUCTS, INC.- SUMMARY OF CONSISTENCY

TITLE
SITE VICINITY, SOILS AND SITE FEATURES

CONSULTANT
wsp

YYYY-MM-DD	2024-04-12
PREPARED	WDH
DESIGN	BY OTHERS
REVIEW	BAB
APPROVED	BAL

PROJECT NO.	CONTROL	REVISION	FIGURE
31407129.000	1	0	**3**



Legend

- Property Boundary
- 1200 Foot Buffer
- Treated Water to POTW
- Sewer
- Water Line
- Electric
- Haul Route
- Overhead Power Lines

Service Layer Credits: © OpenStreetMap (and) contributors, CC-BY-SA
Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Note: All utility locations are approximate

0 150 300 600
Feet

CLIENT
LIQUID INDUSTRIAL BY-PRODUCTS, INC.

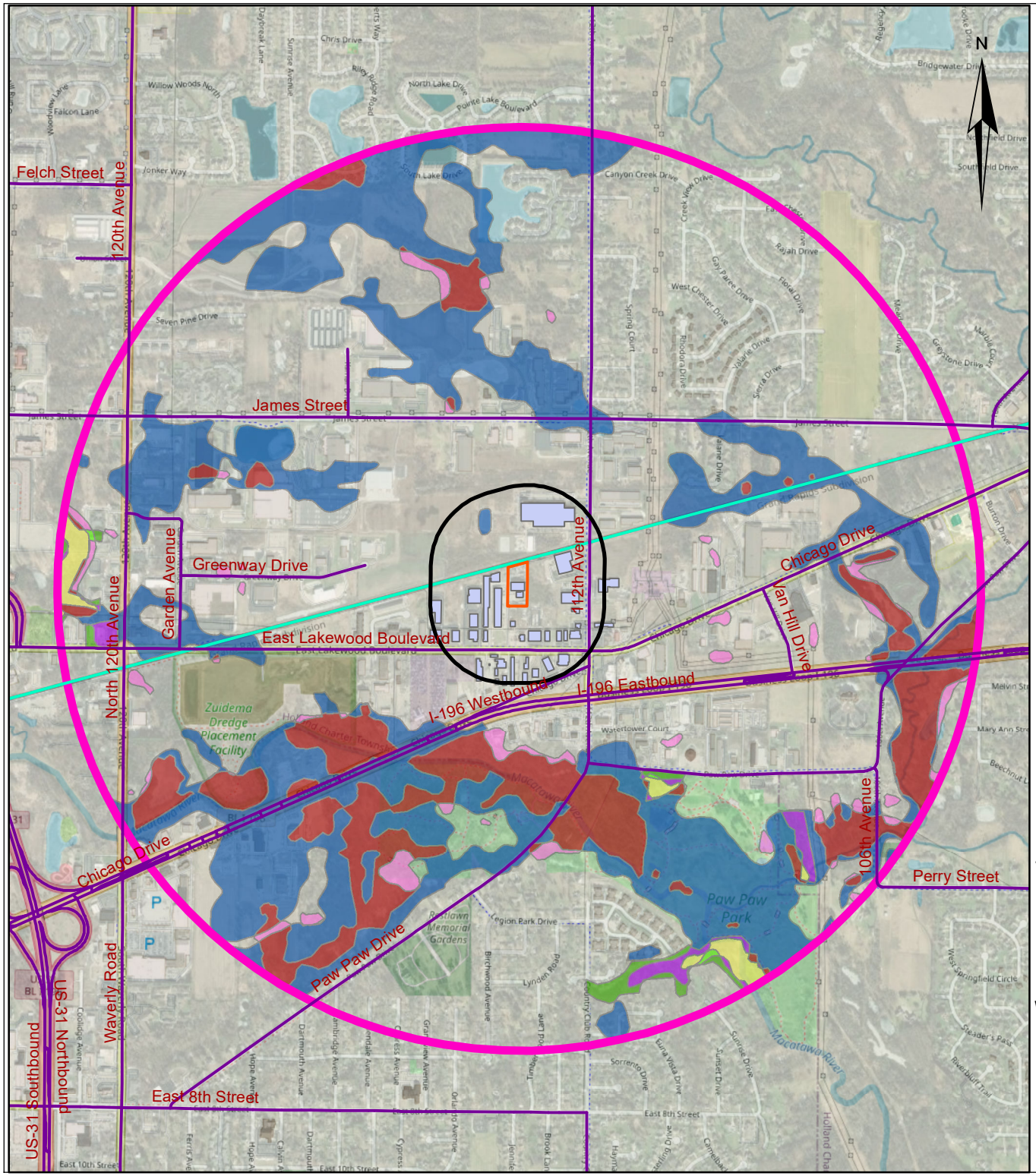
PROJECT
LIQUID INDUSTRIAL BY-PRODUCTS, INC.- SUMMARY OF CONSISTENCY

TITLE
HAUL ROUTE AND UTILITY MAP

CONSULTANT
wsp

YYYY-MM-DD	2024-05-09
PREPARED	WDH
DESIGN	BY OTHERS
REVIEW	BAB
APPROVED	BAL

PROJECT NO.	CONTROL	REVISION	FIGURE
31407129.000	1	0	**4**



Legend

- Property Boundary
- 1200 Foot Buffer
- Building Footprints
- 1 Mile Setback
- Paved Roads
- Railroad Tracks

Wetlands

- 78 DNR only
- Hydric Soils & 78 DNR
- Hydric Soils & NWI
- Hydric Soils & NWI & 78 DNR
- Hydric Soils only
- NWI & 78 DNR
- NWI only

0 0.125 0.25 0.5
Miles

CLIENT
LIQUID INDUSTRIAL BY-PRODUCTS, INC.

PROJECT
LIQUID INDUSTRIAL BY-PRODUCTS, INC.- SUMMARY OF CONSISTENCY

TITLE
WETLANDS

CONSULTANT
WSP

YYYY-MM-DD	2024-04-25
PREPARED	WDH
DESIGN	BY OTHERS
REVIEW	BAB
APPROVED	BAL

PROJECT NO.	CONTROL	REVISION	FIGURE
31407129.000	1	0	**5**

APPENDIX A

Statement of Cooperation

LIQUID INDUSTRIAL BY-PRODUCTS, INC.

11325 East Lakewood Blvd. Holland, MI 49424
616-396-5994 • 800-396-5994 • Fax 616-396-8778 www.LiquidIndustrial.com

To: Kim Wolters, Supervisor
Department of Environmental Health
Ottawa County Government

From: Liquid Industrial By-Products, Inc.
Holland, Michigan 49424

RE: Statement of Cooperation for Solid Waste Management Plan

The Ottawa County Solid Waste Management Plan (the Plan) outlines seventeen criteria for a proposed facility to be deemed consistent with the Plan. Item 12 of the Plan states, "The owner and operator of a facility shall submit a statement to cooperate with the County on recycling and composting activities."

Please accept this Statement of Cooperation to serve as our commitment to cooperate with the County on recycling and composting activities at our facility in Holland, Michigan.

Please contact me, Jim Rozeboom, at 616-396-5994, if you have any questions regarding this matter.

Thank you -

COMPANY:

Liquid Industrial By-Products, Inc.

By: James E. Rozeboom

Printed Name: Jim Rozeboom

Title: Owner / President

WSP.com

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING

RICK SNYDER
GOVERNOR

DAN WYANT
DIRECTOR

December 2, 2015

Mr. Joseph Baumann, Chairperson
Ottawa County Board of Commissioners
12220 Fillmore Street
West Olive, Michigan 49460

Dear Mr. Baumann:

The locally approved amendment to the Ottawa County Solid Waste Management Plan (Plan Amendment) received by the Department of Environmental Quality (DEQ), dated October 7, 2015; is hereby approved.

The Plan Amendment makes the following changes:

- Changes the isolation distances required for a new landfill or an expansion at an existing landfill; specifically, 100 feet from adjacent property lines, road right-of-way, and 400 feet from lakes, and perennial streams or minimum state isolation distances, whichever is greater.
- Clarifies that the active work area for a new landfill or an expansion of an existing landfill shall not be located closer than 1,000 feet from domiciles or public schools existing at the time of submission of the application.

The DEQ would like to thank Ottawa County for its efforts in addressing its solid waste management issues. If you have any questions, please contact Ms. Christina Miller, Solid Waste Planning, Reporting and Surcharge Coordinator, Sustainable Materials Management Unit, Solid Waste Section, Office of Waste Management and Radiological Protection, at 517-614-7426; millerc1@michigan.gov; or DEQ, P.O. Box 30241, Lansing, Michigan 48909-7741.

Sincerely,

Bryce Feighner, P.E., Chief
Office of Waste Management and
Radiological Protection
517-284-6551

cc: Senator Arlan B. Meekhof
Representative Amanda Price
Representative Daniela Garcia
Mr. Stew Whitney, Ottawa County DPA
Mr. Dan Wyant, Director, DEQ
Mr. Jim Sygo, Chief Deputy Director, DEQ
Ms. Maggie Pallone, Director of Legislative Affairs, DEQ
Mr. Fred Sellers, DEQ
Mr. Duane Roskoskey, DEQ
Ms. Rhonda S. Oyer/Ms. Christina Miller, DEQ/Ottawa County File

miOttawa Department of Public Health

Lisa Stefanovsky, M.Ed.
Health Officer

Paul Heidel, M.D., M.P.H.
Medical Director

October 7, 2015

Christina Miller
Solid Waste Planning, Reporting and Surcharge Coordinator
Office of Waste Management and Radiological Protection
Department of Environmental Quality
Constitution Hall
P.O. Box 30241
Lansing, MI 48933

Dear Ms. Miller,

Enclosed is a copy of the Ottawa County Solid Waste Management Plan Amendment.

In 2014, Republic Services requested that the Ottawa County Solid Waste Management Committee look at amending the siting criteria in the Ottawa County Solid Waste Management Plan to maximize a future landfill expansion.

Page III-55 (attached) – Ottawa Solid Waste Management Plan
Original wording:

1. The active work area for a new facility or an expansion of an existing facility shall not be located closer than 500 feet from adjacent property lines, road rights-of-way, lakes, and perennial streams.
2. The active work area for a new facility or an expansion of an existing facility shall not be located closer than 1,000 feet from domiciles or public schools existing at the time of submission of the application.

Amended language:

1. The active work area for a new **landfill** or an expansion of an existing **landfill** shall not be located closer than **100** feet from adjacent property lines, road rights-of-way, **and 400 feet from** lakes, and perennial streams **or minimum state isolation distances, whichever is greater.**

2. The active work area for a new **landfill** or an expansion of an existing **landfill** shall not be located closer than 1,000 feet from domiciles or public schools existing at the time of submission of the application.

Timeline

- On December 9, 2015 the Ottawa County Solid Waste Planning Committee convened and approved the proposed amendment allowing for the 90 day public comment period to commence.
- The public hearing was held on March 3, 2015 and the amendment was modified based on comments made by the Michigan Department of Environmental Quality.
- The amendment was then approved by the Solid Waste Management Planning Committee on May 27, 2015.
- The Ottawa County Board of Commissioners approved the revised amendment on June 23, 2015, and the amendment was then sent to all municipalities in Ottawa County for approval.

Copies of the summary report will be provided as follows:

- three copies to the host community; and
- one copy to each member of the Facility Review Subcommittee.

The remaining copies will be maintained by the Ottawa County Environmental Health Division. At least one copy will be made available to the public at the County Building. The Ottawa County Environmental Health Division will advertise the report's availability. The Ottawa County Environmental Health Division will provide a copy of the summary report to an interested individual on no less than 48 hours notice.

The Ottawa County Environmental Health Division will request that the host community review the summary report for compliance with local ordinances and present their determination in writing at the first meeting of the Facility Review Subcommittee. The determination must include a discussion of how to cure any noncompliance issues.

Facility Review Subcommittee

The members of the Facility Review Subcommittee will be selected by the Solid Waste Planning Committee upon the receipt of an administratively complete summary report.

The membership will be comprised of five individuals representing the following:

- A member of the Ottawa County Board of Commissioners who also serves on the Solid Waste Planning Committee but does not represent the district of the host community (an alternate commissioner will be selected when a conflict in district representation results);
- An elected official of the host community's government recommended by its board or council;
- A local government representative from the Solid Waste Planning Committee not from the host community but representing the type (city or township) of host community;
- A general public representative who is a member of the Solid Waste Planning Committee but not a resident of the host community; and
- An environmental representative who is a member of the Solid Waste Planning Committee.

Membership of the Facility Review Subcommittee of the Solid Waste Planning Committee will be selected in a manner that minimizes the potential for any conflicts regarding the objective review of proposed solid waste facilities in the County.

The Environmental Health Division will also serve as staff to the Subcommittee to ensure that the requirements and procedures of the facility review process are satisfied. Other County

departments and local units of government in the County will be consulted during the review process whenever issues require their expertise and input into the process.

The Facility Review Subcommittee will convene its first meeting within 60 calendar days after the determination that the summary report is administratively complete. The Facility Review Subcommittee will, at its first meeting, select a chairperson from its membership who will be responsible for implementing the requirements of the solid waste facility review process. The chairperson will conduct the meetings of the Facility Review Subcommittee.

The Environmental Health Division will publish a public notice of a public meeting in a widely distributed newspaper that includes the host community in which the proposed facility is to be located at least 15 calendar days prior to the first meeting of the Facility Review Subcommittee. The public notice will include the date, time, location, and purpose of the meeting and advise the public that a copy of the summary report is available for inspection and copying at the Environmental Health Division.

Public Meetings of Facility Review Subcommittee

All meetings of the Facility Review Subcommittee will be held in accordance with the Open Meetings Act which include the requirements that the meeting be open to the public, minutes be kept and filed, a quorum must be present for decision-making, and the purpose of the meeting be stated. The meetings will be conducted as follows:

- Purpose and agenda of meeting;
- Names and roles of those conducting the meeting;
- Requirements of Part 115 and local solid waste facility review process;
- Time limit for presentations and remarks from members of the audience;
- Summary of meeting, decisions made, and further actions to be taken; and
- Any other matters deemed appropriate by the Facility Review Subcommittee.

The first meeting will serve the following purposes:

- Public presentation of the proposal for developing a solid waste facility;
- Information-gathering for decision-making by the Facility Review Subcommittee;
- Recommendations from the host community's Planning Commission regarding proposed facility's compliance with local ordinances, including zoning and land use plans;
- Statement of any concerns and issues, as raised by interested parties;

- Presentation of a report on the proposed facility from the independent consultant hired to assist in the facility review process;

- Identification of any conditions or variances that are necessary to address special local concerns; and

- Determination of the ability of the proposed site to meet County Plan requirements.

If the Facility Review Subcommittee can determine that the proposed expansion is consistent and complies with the County Plan during the first meeting, then a further meeting need not be scheduled. If this determination cannot be made at the first meeting, then additional meetings may be scheduled with no less than seven calendar day public notice.

Subcommittees of the Facility Review Subcommittee can be formed to deal with specific issues at the discretion of the Facility Review Subcommittee.

If the County's staff fails to communicate any deficiencies in the application to the developer within ninety (90) days of the application's submission, the application will be deemed "administratively complete," and staff must submit the application to the Facility Review Subcommittee upon the further request of the developer. The fact that an application has been deemed administratively complete at the staff level; however, shall not preclude the Facility Review Subcommittee or Solid Waste Planning Committee from subsequently recommending or deciding that the proposed facility or facility expansion is not consistent with the County's Plan in whole or in part because the application is incomplete.

The Facility Review Subcommittee must complete its review and take final action on the application within 120 calendar days after the application's summary report is determined to be administratively complete.

Final Action

Within one hundred twenty (120) days after an application is found or deemed administratively complete, the Facility Review Subcommittee will recommend to the Solid Waste Planning Committee one of the following actions:

- Recommend that the Solid Waste Planning Committee find that the facility or facility expansion is not consistent with the County Plan. The Facility Review Subcommittee must include the reasons why it is recommending that the facility or facility expansion is not consistent with the County's Plan.

- Recommend that the Solid Waste Planning Committee find that the expansion is consistent with the County Plan; or

- Recommend that the Solid Waste Planning Committee find that the expansion is consistent with the County Plan, subject to the conditions, agreements, and/or variances recommended by the Facility Review Subcommittee.

If the Facility Review Subcommittee fails to make its recommendation to the Solid Waste Planning Committee within one hundred twenty (120) days of submission, the proposed facility or facility expansion will be deemed to be recommended by the Facility Review Subcommittee as "consistent with the County's plan," and the application submitted to the Solid Waste Planning Committee upon the further written request of the developer. The fact that the proposed facility or facility expansion has been deemed recommended as consistent with the County's Plan; however, shall not preclude the Solid Waste Planning Committee from subsequently deciding that the proposed facility or facility expansion is not consistent with the County's Plan.

If the Facility Review Subcommittee recommends that the Solid Waste Planning Committee find that the proposed expansion is not consistent with the County Plan, the facility developer shall have thirty (30) days to cure any noted deficiencies by submitting an amended application within that time period.

The Solid Waste Planning Committee shall have ninety (90) days from the date it receives a recommendation from the Facility Review Subcommittee in which to make a decision on the Facility Review Subcommittee's recommendation.

The Solid Waste Planning Committee shall take one of the following actions:

- Determine that the facility or facility expansion is not consistent with the County Plan. The Solid Waste Planning Committee must include the reasons why it is determining that the facility or facility expansion is not consistent with the County's Plan.

- Determine that the expansion is consistent with the County Plan; or

- Determine that the expansion is consistent with the County Plan subject to the conditions, agreements, and/or variances that the Solid Waste Planning Committee establishes.

If the Solid Waste Planning Committee fails to make a determination within ninety (90) days of its receipt of the recommendation of the Facility Review Subcommittee, the facility or facility expansion shall be deemed consistent with the County's Plan and the application shall be submitted to the Solid Waste Planning Committee upon the further written request of the developer.

The letter of consistency is in effect for one (1) year from the date of issuance. If the construction permit is not issued by the MDEQ within this one (1) year period, the letter of consistency becomes null and void. This limitation should be stated on the letter of consistency, although the failure of the letter to contain this limitation shall not extend the life of the letter.

The fact that a facility or facility expansion is determined or deemed "consistent with the County Plan" shall not be binding on the MDEQ, which shall review the decision or deemed decision of the Solid Waste Planning Committee to ensure compliance with the Plan criteria and review procedures and may determine that the facility or facility project is not consistent with the Plan.

The letter of consistency is in effect for one year from the date of issuance. If the construction permit is not issued by the MDEQ within this one year period, the letter of consistency becomes null and void. This limitation will be clearly stated on the letter of consistency.

The final determination of consistency with the Plan shall be made by the MDEQ upon submittal by the developer of an application for a construction permit. The MDEQ shall review the determination made by the County to ensure that the criteria and review procedures have been properly adhered to by the County.

Contents of the Summary Report

The summary report shall include a name, address, and telephone number for: the applicant (including partners and other ownership interests), the property owner(s) of the site, any consulting engineers and geologists that will be involved in the project, a designated contact person for the facility developer (if different than the applicant) and shall specify the type of expansion being proposed.

The summary report shall contain information on the site location and orientation. This shall include a legal land description of the project area, a site map showing all roadways and principal land features within two miles of the site, a topographic map with contour intervals of no more than ten feet for the site, a map and description of all access roads showing their location, type of surface material, proposed access point to facility, haul route from access roads to nearest state truckline, and a current map showing the proposed site and surrounding zoning, domiciles, and present usage of all property within one mile of the site.

The summary report shall contain a description of the current site use and ground cover, a map showing the locations of all structures within 1200 feet of the perimeter of the site, the location of all existing utilities, the location of the 100 year floodplain as defined by Rule 323.311 of the administrative rules of Part 31, Water Resources Protection, of Act 451, as amended within 1200 feet of the site, location of all wetlands as defined by Part 303, Wetlands Protection, of Act 451 within 1200 feet of the site, and the site soil types and general geological characteristics.

The summary report shall contain a description of the proposed site and expansion design. This shall consist of a written proposal including the final design capacity of the expansion.

The summary report shall contain a description of the operations of the facility and shall provide information indicating the planned annual usage, anticipated sources of solid waste, and the facility life expectancy of the proposed facility or facility expansion.

A signed statement may be required from the developer concerning necessary road improvements and/or road maintenance as they relate to the proposed facility.

Consistency with County Plan

Requirements to be found consistent with the Plan, a proposed solid waste disposal area must comply with all the criteria and requirements described below:

1. The active work area for a new facility or an expansion of an existing facility shall not be located closer than 500 feet from adjacent property lines, road rights-of-way, lakes, and perennial streams.

2. The active work area for a new facility or an expansion of an existing facility shall not be located closer than 1,000 feet from domiciles or public schools existing at the time of submission of the application.

3. A sanitary landfill shall not be constructed within 10,000 feet of a licensed airport runaway.

4. An expansion of an existing facility shall not be located in a 100 year floodplain as defined by Rule 323.311 of the administrative rules of Part 31, Water Resources Protection, of Act 451.

5. An expansion of an existing facility shall not be located in a wetland regulated by Part 303, Wetlands Protection, of Act 451, unless a permit is issued.

6. An expansion of an existing facility shall not be constructed in lands enrolled under Part 361, Farmland and Open Space Preservation, of Act 451.

7. An expansion of an existing facility shall not be located in an environmental area as defined in Part 323, Shorelands Protection and Management, of Act 451, or in areas of unique habitat as defined by the Department of Natural Resources, Natural Features Inventory.

8. An expansion of an existing facility shall not be located in an area of groundwater recharge as defined by the United State Geological Survey or in a wellhead protection area as approved by the Michigan Department of Environmental Quality.

9. An expansion of an existing facility shall not be located in a designated historic or archaeological area defined by the State Historical Preservation officer.

10. An expansion of an existing facility shall not be located or permitted to expand on land owned by the United States of America or the State of Michigan. Disposal areas may be located on state land only if both of the following conditions are met:

    a) Thorough investigation and evaluation of the proposed site by the facility developer indicates, to the satisfaction of the MDEQ, that the site is suitable for such use.
    b) The State determines that the land may be released for landfill purposes and the facility developer acquires the property in fee title from the State in accordance with State requirements for such acquisition.

11. Facilities may only be located on property zoned as agricultural, industrial or commercial at the time the facility developer applies to the county for a determination of consistency under the Plan. Facilities may be located on unzoned property, but may not be located on property zoned residential.

12. The owner and operator of a facility shall submit a statement to cooperate with the County on recycling and composting activities.

13. An expansion of an existing facility shall be located on a paved, all weather "Class A" road. If a facility is not on such a road, the developer shall submit a statement to provide for upgrading and/or maintenance of the road serving the facility.

14. Proposed expansions of landfills and transfer stations must establish recycling drop-off centers and/or composting facilities, open to the public, unless it can be successfully demonstrated to the Facility Review Subcommittee that such a facility or center is not feasible or practical.

15. The intersection of any facility access road with an existing highway must be designed to provide sufficient sight distance and minimum interference with traffic on the highway in accordance with the American Association of State Highway and Transportation Organization - Policy of Geometric Design of Highways design guidelines.

16. There must be waiting space for vehicles using the facility, so that the access road remains free of waiting vehicles, and there must also be parking space for stand-by vehicles, facility employees, and visitors.

17. The facility shall have a water supply and equipment at the site for the purpose of extinguishing fires.

The following paragraph is no longer valid - see page 2

The Facility Review Subcommittee may recommend that those isolation distances and design and operating standards established by this plan, but that are greater than Part 115 requirements, may be waived or modified if the applicant demonstrates and the Board finds, in writing, that the following conditions have been met: the Facility Review Subcommittee may authorize exemptions or variances from the County's criteria and standards upon a demonstration by the applicant that the County's requirement is not feasible and prudent, and that the substitute requirement will provide an equivalent degree of protection for the public health and environment, or that the public health, welfare, and environment will not be additionally impaired. The applicant must show that exception circumstances exist and that no impairment of current and future uses of natural resources will result.

III.17 Solid Waste Management Components

The following identifies the management responsibilities and institutional arrangements necessary for the implementation of the Selected Waste Management System. Also included is a description of the technical, administrative, financial and legal capabilities of each identified existing structure of persons, municipalities, counties and state and federal agencies responsible for solid waste management including planning, implementation, and enforcement.

The roles of U.S. EPA and MDEQ in the implementation of County Solid Waste Management systems is well documented elsewhere. The MDEQ has the authority under Part 115 of Act 451 and the associated administrative rules to regulate the collection, transportation and disposal of solid waste. The County relies upon the MDEQ for technical guidance and enforcement. The primary enforcement mechanism for the land disposal facilities operating

Action Request

Committee:	Planning and Policy Committee
Meeting Date:	06/04/2024
Requesting Department:	Fiscal Services Department
Submitted By:	Karen Karasinski
Agenda Item:	Probate Court: Grand Haven Courthouse Alterations

Suggested Motion:

To create a capital project for Probate Court alterations in the Grand Haven Courthouse

Summary of Request:

The Probate Court will occupy Courtroom 2A in the Grand Haven Courthouse after the Family Justice Center is operational. With this move, Probate Court will require a public service window in the main hallway, an e-filing area, and secure record storage.

This project was originally going to be completed in-house, but due to engineering and code requirements, Facilities will be consulting with an engineering firm to complete drawings and then hire contractors to complete the work. The initial budget ($72,520) for this project is a reallocation of funds that Probate Court originally included in the General Fund operating budget to purchase a filing system, fund the actual cost of the move, and savings from a seperate inititive.

After Facilities has an estimate for the construction, another budget adjustment will be submitted to the Board for consideration.

Financial Information:

Total Cost:	General Fund Cost:	Included in Budget:			
$72,520.00	$72,520.00		☑ Yes	☐ No	☑ N/A

If not included in budget, recommended funding source:

Action is Related to an Activity Which Is: ☐ Mandated ☐ Non-Mandated ☐ New Activity

Action is Related to Strategic Plan:

Goal: Goal 1: To Maintain and Improve the Strong Financial Position of the County.

Objective: Goal 1, Objective 3: Maintain or improve bond credit ratings.

Administration: ☑ Recommended ☐ Not Recommended ☐ Without Recommendation

County Administrator:

Committee/Governing/Advisory Board Approval Date: