

**Kenosha Harbor Dredging
and
Kenosha Dunes Nourishment Project**

Wisconsin

**Environmental Assessment
Appendix 3 - Coordination**



U.S. Army Corps of Engineers
Chicago District

August 2020



DEPARTMENT OF THE ARMY
CHICAGO DISTRICT, U.S. ARMY CORPS OF ENGINEERS
231 SOUTH LA SALLE STREET, SUITE 1500
CHICAGO IL 60604

July 31, 2020

CELRC-PMD-EF

Dear Recipient:

The U.S. Army Corps of Engineers, Chicago District, has prepared a draft Environmental Assessment (EA) titled, Kenosha Harbor Dredging and Kenosha Dunes Nourishment Project. The EA evaluates the potential effects of dredging clean littoral sand from the channel of Kenosha Harbor in Kenosha, Wisconsin with its placement on or along the Lake Michigan Shoreline at Kenosha Dune in Pleasant Prairie, Wisconsin. As part of the 30-day agency and public review period, the Chicago District would appreciate any comments or concerns you might have associated with this work. Comments could be made on any potential environmental effects of the Kenosha Harbor dredging from the project area and its placement along or on the Lake Michigan Shoreline. This document is available at:

<https://www.lrc.usace.army.mil/Missions/Civil-Works-Projects/>

The project EA is located under "Projects in Alphabetical Order" on the left side of the page, titled "Kenosha Harbor" on the Civil Works Project Page.

A draft Finding of No Significant Impact (FONSI) along with the Section 404(b)(1) evaluation for the dredging and placement of material into the waters of the United States, and a contaminate determination have been prepared to accompany the draft EA. The draft FONSI concludes that implementing the maintenance dredging from the area and its placement on or along the Lake Michigan Shoreline does not constitute a major Federal action that significantly affects the quality of the human environment. Any comments you may have concerning the proposed project should be made within fifteen (15) days from the date of receipt of this letter, but not later than August 15, 2020 Please direct your comments to: ATTN: CELRC-PMD-EF (John Belcik) at the address located at the top of this letter or by email to John.T.Belcik@usace.army.mil.

Any person who has an interest that may be affected by the dredging of the clean sand from the area with the placement on or along the Lake Michigan Shoreline may request a public hearing. To be considered, the request must be submitted in writing to the above contact within the comment period of this notice, but not later than (August 15, 2020). The request must clearly state the interest that may be affected and the manner in which the interest may be affected by this activity.

Following the public review period and a Corps of Engineers review of the comments received, the District Engineer will make a final decision regarding the necessity of preparing an Environmental Impact Statement (EIS) for the proposed project. Based on the preliminary analyses completed to date, it does not appear that the proposed

action will result in significant impacts which would require the preparation of an EIS.

Sincerely,

Susanne J. Davis

Susanne J. Davis, P.E.
Chief, Planning Branch

Jim Killian
Wisconsin DNR
P.O. Box 7921
Madison, WI 53707

Kenneth Westlake
US Environmental Protection Agency, Region 5
77 West Jackson Boulevard
Chicago, IL 60604-3590

Shauna Marquardt
US Fish and Wildlife Service
4101 American Boulevard East
Bloomington, MN 55425

Andrew Werk
Fort Belknap Indian Community of the Fort Belknap
Reservation of Montana
RR 1, Box 66
Harlem, MT 59526

Liana Onnen
Prairie Band of Potawatomi Nation
16281 Q Road
Mayetta, KS 66509

Joan Delabreau
Menominee Indian Tribe of Wisconsin
P.O. Box 910
Keshena, WI 54135

John Barrett
Citizen Potawatomi Nation, Oklahoma
1601 South Gordon Cooper Dr
Shawnee, OK 74801

Regina Gasco-Bentley
Little Traverse Bay Bands of Odawa
7500 Odawa Circe
Harbor Springs, MI 49740

Joseph Wildcat
Lac du Flambeau Band of Lake Superior Chippewa Indians of
the Lac du Flambeau
P.O. Box 67
Lac du Flambeau, WI 54538

Ned Daniels
Forest County Potawatomi Community of Wisconsin
P.O. Box 340
Crandon, WI 54520

Sharon Fandel
Wisconsin DNR
3911 Fish Hatchery Road
Fitchburg, WI 53711

Sarah Quamme
US Fish and Wildlife Service
4101 American Boulevard East
Bloomington, MN 55425

Kathleen Angel
State of WI Dept. of Administration
101 E. Wilson Street, 9th Floor
Madison, WI 53708-8944

Michael Blackwolf
Fort Belknap Indian Community of the Fort Belknap
Reservation of Montana
656 Agency Main Street
Harlem, MT 59526

Thomas Wabmum
Prairie Band of Potawatomi Nation
16281 Q Road
Mayetta, KS 66509

David Grignon
Menominee Indian Tribe of Wisconsin
P.O. Box 910
Keshena, WI 54135

Kelly Mosteller
Citizen Potawatomi Nation, Oklahoma
1601 South Gordon Cooper Dr
Shawnee, OK 74801

Melissa Wiatrolik
Little Traverse Bay Bands of Odawa
7500 Odawa Circe
Harbor Springs, MI 49740

Melinda Young
Lac du Flambeau Band of Lake Superior Chippewa Indians of
the Lac du Flambeau
P.O. Box 67
Lac du Flambeau, WI 54538

Michael LaRonge
Forest County Potawatomi Community of Wisconsin
P.O. Box 340
Crandon, WI 54520

Douglas Lankford
Miami Tribe of Oklahoma
P.O. Box 1326
Miami, OK 74355

Diane Hunter
Miami Tribe of Oklahoma
P.O. Box 1326
Miami, OK 74355

Ethel Cook
Ottawa Tribe of Oklahoma
13 South 69A
Miami, OK 74355

Rhonda Dixon
Ottawa Tribe of Oklahoma
13 South 69A
Miami, OK 74355

Eric Haugaard
City of Kenosha Common Council
3818 5th Avenue
Kenosha, WI 53140

Bill Siel
City of Kenosha Common Council
5953 5th Ave
Kenosha, WI 53140

Jan Michalski
City of Kenosha Common Council
416 71st Street
Kenosha, WI 53143

Holly Kangas
City of Kenosha Common Council
4024 15th Street
Kenosha, WI 53144

Rocco Lamacchia
City of Kenosha Common Council
2114 25th Avenue
Kenosha, WI 53140

Dave Paff
City of Kenosha Common Council
1606 35th Place
Kenosha, WI 53140

Bruce Fox
City of Kenosha Common Council
6618 32nd Avenue
Kenosha, WI 53142

Keith Rosenberg
City of Kenosha Common Council
8709 34th Avenue
Kenosha, WI 53142

Anthony Kennedy
City of Kenosha Common Council
4223 29th Avenue
Kenosha, WI 53140

Rollin Pizzala
City of Kenosha Common Council
5303 43rd Avenue
Kenosha, WI 53144

Mitchell Pedersen
City of Kenosha Common Council
7838 8th Avenue
Kenosha, WI 53143

Curt Wilson
City of Kenosha Common Council
7525 28th Avenue
Kenosha, WI 53143

Daniel Prozanski
City of Kenosha Common Council
4429 88th Place
Kenosha, WI 53142

Jack Rose
City of Kenosha Common Council
4315 68th Street
Kenosha, WI 53142

Dominic Ruffalo
City of Kenosha Common Council
8200 75th Street, #61
Kenosha, WI 53142

David Bogdala
City of Kenosha Common Council
7101 96th Avenue
Kenosha, WI 53142

John Steinbrink
Village of Pleasant Prairie
8640 88th Avenue
Pleasant Prairie, WI 53158

Kristopher Keckler
Village of Pleasant Prairie
8405 Cooper Road
Kenosha, WI 53142

Michael Pollocoff
Village of Pleasant Prairie
5300 86th Place
Pleasant Prairie, WI 53158

Dave Klimisch
Village of Pleasant Prairie
11218 86th Street
Pleasant Prairie, WI 53158

Brock Williamson
Village of Pleasant Prairie
10571 59th Avenue
Pleasant Prairie, WI 53158

Honorable Robert Wirsch
Wisconsin State Legislature
State Capitol
PO Box 7882, Room 127 South
Madison, WI 53707

Steven Gillitzer
Wisconsin State Legislature
State Capitol
PO Box 7882, Room 127 South
Madison, WI 53707

Paula McGuire
Wisconsin State Legislature
State Capitol
PO Box 7882, Room 127 South
Madison, WI 53707

Nate Olson
Wisconsin State Legislature
State Capitol
PO Box 7882, Room 127 South
Madison, WI 53707

Honorable Tod Ohnstad
Wisconsin State Legislature
State Capitol
PO Box 8953, Room 128 North
Madison, WI 53708

Matt Egerer
Wisconsin State Legislature
State Capitol
PO Box 8953, Room 128 North
Madison, WI 53708

Baily Remiker
Wisconsin State Legislature
State Capitol
PO Box 8953, Room 128 North
Madison, WI 53708

Honorable Van Wanggaard
Wisconsin State Legislature
State Capitol
PO Box 7882, Room 313 South
Madison, WI 53708

Eric Barbour
Wisconsin State Legislature
State Capitol
PO Box 7882, Room 313 South
Madison, WI 53708

Scott Kelly
Wisconsin State Legislature
State Capitol
PO Box 7882, Room 313 South
Madison, WI 53708

Valirie Maxim
Wisconsin State Legislature
State Capitol
PO Box 7882, Room 313 South
Madison, WI 53708

Michelle Osdene
Wisconsin State Legislature
State Capitol
PO Box 7882, Room 313 South
Madison, WI 53708

Honorable Samantha Kerkman
Wisconsin State Legislature
State Capitol
PO Box 8952, Room 315 North
Madison, WI 53708

Nathan Butzlaff
Wisconsin State Legislature
State Capitol
PO Box 8952, Room 315 North
Madison, WI 53708

Tami Rongstad
Wisconsin State Legislature
State Capitol
PO Box 8952, Room 315 North
Madison, WI 53708

Honorable Bryan Steil
U.S. House of Representatives
1408 Longworth HOB
Washington, DC 20515

Honorable Bryan Steil
U.S. House of Representatives
20 S. Main Street, Suite 10
Janesville, WI 53545

Honorable Bryan Steil
U.S. House of Representatives
7511 12th Street
Somers, WI 53171

Honorable Bryan Steil
U.S. House of Representatives
730 Wisconsin Avenue
Racine, WI 53403

Honorable Ron Johnson
U.S. Senate
517 East Wisconsin Avenue
Milwaukee, WI 53202

Honorable Ron Johnson
U.S. Senate
219 Washington Avenue, Suite 100
Oshkosh, WI 54901

Honorable Ron Johnson
U.S. Senate
5315 Wall Street
Madison, WI 53718

Honorable Ron Johnson
U.S. Senate
328 Hart Senate Office Building
Washington, DC 20510

Honorable Tammy Baldwin
U.S. Senate
500 South Barstow Street, Suite LL2
Eau Claire, WI 54701-3608

Honorable Tammy Baldwin
U.S. Senate
30 West Mifflin Street, Suite 700
Madison, WI 53703

Honorable Tammy Baldwin
U.S. Senate
PO Box 61
Ashland, WI 54806

Honorable Tammy Baldwin
U.S. Senate
1039 West Mason, Suite 119
Green Bay, WI 54303

Honorable Tammy Baldwin
U.S. Senate
633 West Wisconsin Avenue, Suite 1300
Milwaukee, WI 53203

Honorable Tammy Baldwin
U.S. Senate
709 Hart Senate Office Building
Washington, DC 20510

Honorable Tammy Baldwin
U.S. Senate
205 5th Avenue South, Room 216
La Crosse, WI 54601

Governor Tony Evers
State of Wisconsin
Office of the Governor
115 East State Capital
Madison, WI 53707

Wisconsin Sea Grant
1975 Willow Drive
Madison, WI 53706-1103

Chin Wu
Coastal Sustainability & Environmental Fluid Mechanics Lab

Southeastern Wisconsin Regional Planning Commission
W239 N1812 Rockwood Drive
PO Box 1607
Waukesha, WI 53187-1607

Wisconsin Historical Society
816 State Street
Madison, WI 53706

Theresa Szabelski
Wisconsin DNR
2300 N Dr Martin Luther King Jr Dr
Milwaukee , WI 53212

Ian Bagley
City of Kenosha
100 51st Place
Kenosha, WI 53140

Ashley Beranek
Wisconsin DNR
PO Box 7921
Madison, WI 53707-7921

Christopher Durgin
Wisconsin DNR
2300 N Dr Martin Luther King Jr Dr
Milwaukee, WI 53212-3128

Wisconsin DNR
2300 N Dr Martin Luther King Jr Dr
Milwaukee, WI 53212-3128

Madeline Magee
Wisconsin DNR
PO Box 7921
Madison, WI 53707-7921



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

June 3, 2020

REPLY TO THE ATTENTION OF:
Mail Code RM-19J

VIA ELECTRONIC MAIL

Charlie Uhlarik
U.S. Army Corps of Engineers – Detroit District
477 Michigan Avenue
Detroit, Michigan 48226

RE: EPA scoping comments – Kenosha Harbor Dredging and Dredged Material Placement as Shoreline Nourishment at Kenosha Dunes; Kenosha County, Wisconsin

Dear Mr. Uhlarik:

The U.S. Environmental Protection Agency has reviewed U.S. Army Corps of Engineers (USACE) correspondence dated May 12, 2020, requesting scoping comments on the proposed maintenance dredging of Kenosha Harbor (Harbor) and use of the dredged material as shoreline nourishment at the Kenosha Dunes (approximately two miles south of the Harbor) in Kenosha County, Wisconsin. This letter provides our comments on the proposal, pursuant to the National Environmental Policy Act (NEPA), the Council on Environmental Quality's NEPA Implementing Regulations (40 CFR 1500-1508), and Section 309 of the Clean Air Act.

Continual and rapid erosion is threatening the Kenosha Dunes at Chiwaukee Prairie State Natural Area. The Chiwaukee Prairie is a unique natural area with dunes, coastal wetlands and the largest prairie complexes in the state, and it is home to a host of rare, threatened, and endangered plant and animal species. As a whole, the Chiwaukee Prairie State Natural Area is recognized as a Conservation Opportunity Area of global significance by the Wisconsin Wildlife Action Plan and a Wetland of International Importance by the Ramsar Convention.

Kenosha Dunes has experienced severe erosion in recent years that has resulted in the loss of up to 25 feet per year of the dunes since 2014. While coastal erosion is an ongoing natural process, since 2014 a number of large storms have created extreme waves that, combined with above average water levels on Lake Michigan, have battered the shoreline. Kenosha Dunes was protected by a degraded rock revetment that has been significantly damaged by these storms and no longer provides protection to the coastline. As a result, Kenosha Dunes has been eroding at a rate as high as 25 feet per year for the past few years. With Lake Michigan water levels projected to remain above average for the foreseeable future, this rapid erosion is expected to continue without any intervention. Wisconsin Department of Natural Resources (WDNR) staff have stated the Kenosha Dunes will likely disappear within five years if nothing is done to address erosion.

The scoping document states that approximately 20,000 cubic yards of material would be dredged within Kenosha Harbor by either hydraulic or mechanical means in 2021. The material would be transported by hydraulic pipeline or by barge, and then placed within approximately 2240 feet of Kenosha Dunes shoreline between the Ordinary High Water Mark (OHWM) to the 8-foot depth contour below Low Water Datum (LWD). Material could also potentially be placed above the OHWM to the toe of the eroded bluff. Based on the sandy nature of the dredged material and concerns of ongoing habitat loss due to high water levels, the proposed project would help to restore and preserve shoreline and upland habitat along the beach front at this State Natural Area.

EPA offers the following comments as the Draft EA is developed.

LITTORAL DRIFT MODIFICATIONS

- Along most of the Wisconsin shore of Lake Michigan, the prevailing littoral drift is southward. Thus, in-water structures north of the Kenosha Dunes act as a nearly complete barrier to the natural movement of sand and sediment, leading to sand starved conditions at the Kenosha Dunes. Because the sand and sediment supply has been cut off, beach widths continue to erode away, allowing increased erosion at the toe of the bluffs. The forthcoming EA should discuss the littoral drift in the vicinity of the Harbor and Kenosha Dunes and explain how the current conditions have come to exist.

DREDGING, SAND BYPASS AND LONG-TERM SOLUTIONS

- Kenosha Harbor is a federal deep draft harbor. The Draft EA should discuss efforts USACE has undertaken in the past decade to address the issues caused by the Harbor's construction. Long term solutions should be discussed, such as whether a sand bypass system has ever been considered, and if so, the results of that consideration.
- EPA recommends that USACE utilize barge transport of sediments and that the barge attempt to release the dredged material as close into shore as feasible, so that the sand is most accessible to wave action and downdrift transport.

CUMULATIVE IMPACTS AND FUTURE PROJECTS

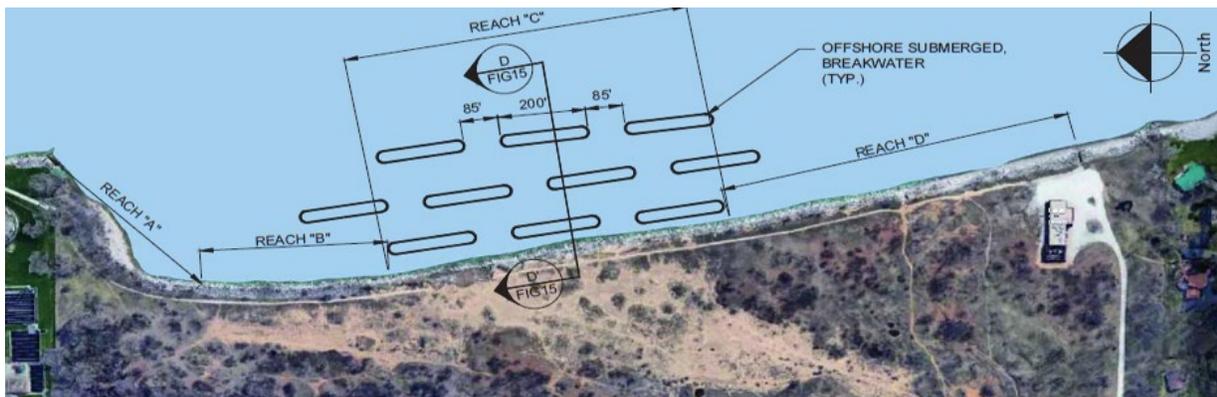
- The Draft EA should discuss any previous beach nourishment projects that have been undertaken at Kenosha Dunes, the entities that undertook them, and the longevity and success (or failure) of those nourishment activities.
- The forthcoming EA should include a robust cumulative impact analysis. Cumulative impacts are those that result from the proposed action's incremental impacts when these impacts are added to the impacts of other past, present, and reasonably foreseeable similar future actions, including those under the control of other entities.

“Reasonably foreseeable future” actions are those that are currently proposed and not speculative. They can result from individually minor but collectively significant actions taking place over a period of time. This analysis is best done on an areawide, watershed, or larger-area level to put the proposal into perspective.

- Effects can be ecological (such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems), aesthetic, historic, cultural, economic, social, or health related.
- Effects include those resulting from actions that may have both beneficial and detrimental effects, even if on balance the effect will be beneficial.

EPA is aware of a current proposal to install system of submerged sills to protect the Kenosha Dunes from future erosion and improve coastal and marine habitats¹. The submerged sills, shown below in an image taken from the website referenced, will be a series of underwater structures that “trip” large waves before they reach the shore, which reduces the amount of wave energy that impacts the coast. Additionally, the submerged sill project will also identify nearby beaches where a similar approach may be a suitable method to manage shoreline erosion while providing habitat connectivity benefits.

The forthcoming EA should analyze cumulative impacts of this proposed submerged sill project along with USACE’s proposed nourishment project.



SEDIMENT TESTING

- The Draft EA should discuss what sediment testing has been/will be undertaken. The EA should describe, particularly since near-shore disposal is proposed, how state water quality standards will be met. During the design phase, and prior to final design and permitting, sediment testing and characterization should be completed. Direct communication with the WDNR regarding effluent testing and compliance requirements should be initiated.

COORDINATION WITH AFFECTED PARTIES

- The Draft EA should discuss coordination and planning undertaken with other government agencies including WDNR, USFWS, the Village of Pleasant Prairie and the City of Kenosha.

¹ <https://sewicoastalresilience.org/local-initiatives/restoring-kenosha-dunes/> (accessed June 2, 2020)

Thank you for the opportunity to provide scoping comments on this project. Please send us a copy of the Draft Environmental Assessment once issued. If you have any questions about this letter, please contact the project lead, Ms. Liz Pelloso, PWS, at 312-886-7425 or via email at pelloso.elizabeth@epa.gov.

Sincerely,

Kenneth A. Westlake, Deputy Director
Tribal and Multimedia Programs Office

cc (via email):

Paul Allarding, USACE-Detroit District (Paul.H.Allarding@usace.army.mil)

Jim Killian, WDNR (James.Killian@wisconsin.gov)

Sharon Fandel, WDNR (sharon.fandel@wisconsin.gov)

Theresa Szabelski, WDNR (Theresa.Szabelski@wisconsin.gov)

Sarah Quamme, U.S. Fish and Wildlife Service (Sarah_quamme@fws.gov)



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

August 6, 2020

REPLY TO THE ATTENTION OF:
Mail Code RM-19J

VIA ELECTRONIC MAIL

Charlie Uhlarik
U.S. Army Corps of Engineers – Detroit District
477 Michigan Avenue
Detroit, Michigan 48226

RE: Draft Environmental Assessment for the Kenosha Harbor Dredging and Kenosha Dunes Nourishing Project; Kenosha County, Wisconsin

Dear Mr. Uhlarik:

The U.S. Environmental Protection Agency reviewed U.S. Army Corps of Engineers' (USACE) draft environmental assessment (Draft EA) dated August 2020 analyzing potential impacts of maintenance dredging of Kenosha Harbor (Harbor) and use of the dredged material as shoreline nourishment at Kenosha Dunes (Dunes). This letter provides EPA's comments pursuant to the National Environmental Policy Act (NEPA), the Council on Environmental Quality's NEPA Implementing Regulations (40 CFR 1500-1508), and Section 309 of the Clean Air Act.

The proposed project is designed to address two issues: support the navigability of the Harbor to maintain current uses and protect Wisconsin's public shoreline. Discontinuing maintenance dredging within the Harbor would result in restricting access of deep draft vessels and impacting the commercial operations that use the Harbor. Additionally, due to current high water levels of Lake Michigan, the Dunes are eroding at an accelerated rate. The proposed action of placing dredged material near the Dunes will help to restore and preserve shoreline and upland habitat along the beach front.

The Draft EA analyzed three alternatives: No Action, Shoreline at Kenosha Dunes, and Shoreline along 1st Avenue in Kenosha. The preferred alternative is shoreline placement of dredged material at the Dunes.

Pursuant to our review of the Draft EA, EPA offers the following comments.

Future Projects

EPA's scoping letter dated June 4, 2020 indicated a proposal exists to install a system of submerged sills to protect the Dunes from future erosion and improve coastal and marine habitats¹. The submerged sills will be a series of underwater structures that "trip" large waves before they reach the shore, thereby reducing the amount of wave energy that impacts the coast.

¹ <https://sewicoastalresilience.org/local-initiatives/restoring-kenosha-dunes/> (accessed June 2, 2020)

The submerged sill project will also identify nearby beaches where a similar approach may be a suitable method to manage shoreline erosion while providing habitat connectivity benefits.

EPA requested the Draft EA analyze the cumulative impacts of the proposed submerged sill project along with the proposed beach nourishment project. After reviewing the Draft EA, it does not appear that our previous comment was addressed. We ask USACE to analyze the cumulative impacts of the proposed submerged sill project before reaching a conclusion concerning the proposed dredging/beach nourishment project.

Air Quality

EPA acknowledges the air analysis found in the Draft EA. Nonetheless, diesel emissions and fugitive dust from project construction may pose environmental and human health risks and should be minimized. In 2002, EPA classified diesel emissions as a likely human carcinogen, and in 2012 the International Agency for Research on Cancer concluded that diesel exhaust is carcinogenic to humans. Acute exposures can lead to other health problems, such as eye and nose irritation, headaches, nausea, asthma, and other respiratory system issues. Longer-term exposure may worsen heart and lung disease. Therefore, EPA recommends USACE consider the protective measures outlined in the enclosed “Construction Emission Control Checklist” and commit to applicable measures in the Finding of No Significant Impact (FONSI).

Thank you for the opportunity to provide scoping comments on this project. Please send us an electronic copy of the FONSI once it is signed. If you have any questions about this letter, please contact Kathy Kowal at 312-353-5206 or via email at kowal.kathleen@epa.gov.

Sincerely,

Kenneth A. Westlake, Deputy Director
Tribal and Multimedia Programs Office

Enclosure: Construction Emission Control Checklist

cc (via email):

Paul Allerding, USACE-Detroit District (Paul.H.Allerding@usace.army.mil)

Jim Killian, WDNR (James.Killian@wisconsin.gov)

Sharon Fandel, WDNR (sharon.fandel@wisconsin.gov)

Theresa Szabelski, WDNR (Theresa.Szabelski@wisconsin.gov)

Sarah Quamme, U.S. Fish and Wildlife Service (Sarah_quamme@fws.gov)

U.S. Environmental Protection Agency
Construction Emission Control Checklist

Diesel emissions and fugitive dust from project construction may pose environmental and human health risks and should be minimized. In 2002, EPA classified diesel emissions as a likely human carcinogen, and in 2012 the International Agency for Research on Cancer concluded that diesel exhaust is carcinogenic to humans. Acute exposures can lead to other health problems, such as eye and nose irritation, headaches, nausea, asthma, and other respiratory system issues. Longer term exposure may worsen heart and lung disease.² We recommend U.S. Army Corps of Engineers consider the following protective measures and commit to applicable measures in the Draft Environmental Assessment for the Kenosha Harbor Dredging and Kenosha Dunes Nourishing Project.

Mobile and Stationary Source Diesel Controls

Purchase or solicit bids that require the use of vehicles that are equipped with zero-emission technologies or the most advanced emission control systems available. Commit to the best available emissions control technologies for project equipment in order to meet the following standards.

- On-Highway Vehicles: On-highway vehicles should meet, or exceed, the EPA exhaust emissions standards for model year 2010 and newer heavy-duty, on-highway compression-ignition engines (e.g., long-haul trucks, refuse haulers, shuttle buses, etc.).³
- Non-road Vehicles and Equipment: Non-road vehicles and equipment should meet, or exceed, the EPA Tier 4 exhaust emissions standards for heavy-duty, non-road compression-ignition engines (e.g., construction equipment, non-road trucks, etc.).⁴
- Marine Vessels: Marine vessels hauling materials for infrastructure projects should meet, or exceed, the latest EPA exhaust emissions standards for marine compression-ignition engines (e.g., Tier 4 for Category 1 & 2 vessels, and Tier 3 for Category 3 vessels).⁵
- Low Emission Equipment Exemptions: The equipment specifications outlined above should be met unless: 1) a piece of specialized equipment is not available for purchase or lease within the United States; or 2) the relevant project contractor has been awarded funds to retrofit existing equipment, or purchase/lease new equipment, but the funds are not yet available.

Consider requiring the following best practices through the construction contracting or oversight process:

- Establish and enforce a clear anti-idling policy for the construction site.
- Use onsite renewable electricity generation and/or grid-based electricity rather than diesel-powered generators or other equipment.
- Use electric starting aids such as block heaters with older vehicles to warm the engine.
- Regularly maintain diesel engines to keep exhaust emissions low. Follow the manufacturer's recommended maintenance schedule and procedures. Smoke color can signal the need for maintenance (e.g., blue/black smoke indicates that an engine requires servicing or tuning).

² Carcinogenicity of diesel-engine and gasoline-engine exhausts and some nitroarenes. *The Lancet*. June 15, 2012

³ <http://www.epa.gov/otaq/standards/heavy-duty/hdci-exhaust.htm>

⁴ <http://www.epa.gov/otaq/standards/nonroad/nonroadci.htm>

⁵ <http://www.epa.gov/otaq/standards/nonroad/marineci.htm>

- Where possible, retrofit older-tier or Tier 0 nonroad engines with an exhaust filtration device before it enters the construction site to capture diesel particulate matter.
- Replace the engines of older vehicles and/or equipment with diesel- or alternatively-fueled engines certified to meet newer, more stringent emissions standards (e.g., plug-in hybrid-electric vehicles, battery-electric vehicles, fuel cell electric vehicles, advanced technology locomotives, etc.), or with zero emissions electric systems. Retire older vehicles, given the significant contribution of vehicle emissions to the poor air quality conditions. Implement programs to encourage the voluntary removal from use and the marketplace of pre-2010 model year on-highway vehicles (e.g., scrappage rebates) and replace them with newer vehicles that meet or exceed the latest EPA exhaust emissions standards, or with zero emissions electric vehicles and/or equipment.

Fugitive Dust Source Controls

- Stabilize open storage piles and disturbed areas by covering and/or applying water or chemical/organic dust palliative, where appropriate. This applies to both inactive and active sites, during workdays, weekends, holidays, and windy conditions.
- Install wind fencing and phase grading operations where appropriate, and operate water trucks for stabilization of surfaces under windy conditions.
- When hauling material and operating non-earthmoving equipment, prevent spillage and limit speeds to 15 miles per hour (mph). Limit speed of earth-moving equipment to 10 mph.

Occupational Health

- Reduce exposure through work practices and training, such as maintaining filtration devices and training diesel-equipment operators to perform routine inspections.
- Position the exhaust pipe so that diesel fumes are directed away from the operator and nearby workers, reducing the fume concentration to which personnel are exposed.
- Use enclosed, climate-controlled cabs pressurized and equipped with high-efficiency particulate air (HEPA) filters to reduce the operators' exposure to diesel fumes. Pressurization ensures that air moves from inside to outside. HEPA filters ensure that any incoming air is filtered first.
- Use respirators, which are only an interim measure to control exposure to diesel emissions. In most cases, an N95 respirator is adequate. Workers must be trained and fit-tested before they wear respirators. Depending on the type of work being conducted, and if oil is present, concentrations of particulates present will determine the efficiency and type of mask and respirator. Personnel familiar with the selection, care, and use of respirators must perform the fit testing. Respirators must bear a NIOSH approval number.



U. S. ARMY CORPS OF ENGINEERS
CHICAGO DISTRICT
231 S. LASALLE STREET, SUITE 1500
CHICAGO, ILLINOIS 60604

August 19, 2020

Dear Mr. Westlake:

Thank you for your interest in the Kenosha Harbor Dredging project and providing comments on the Environmental Assessment. The intent of this letter is to respond to the issues raised in your letter dated August 6, 2020.

Your letter recommended the inclusion of cumulative impacts of the proposed submerged sill project before reaching a conclusion concerning the proposed dredging/beach nourishment project. Based upon coordination with the Detroit District we understand that the sill structures are still under design by the Wisconsin DNR. Further, there is uncertainty regarding future funding for construction. Due to the level of uncertainty associated with both the sill design and sill construction, we felt it was premature to include consideration of the sill project in the cumulative effects assessment for this environmental assessment.

In regard to your recommendations related to construction emissions, we want to emphasize that all equipment operation, activities, or processes performed by USACE or its Contractors will comply with all Federal, State, and local air emission and performance laws and standards during construction. The temporary, mobile source emissions from this project are expected to be *de minimis* in nature according to the terms of the National Ambient Air Quality Standards. The standards provided are consistent with USACE practices.

We thank you for your interest in this project and for submitting your concerns. The final Finding of No Significant Impact will also be sent to your office when it has been signed. If you have further questions please contact John Belcik at 312-846-5595 or at john.t.belcik@usace.army.mil.

Sincerely,

Susanne J. Davis

Susanne J. Davis, P.E.
Chief, Planning Branch
Chicago District

CC: Charles Uhlarik
Detroit District

REQUEST FOR SHPO COMMENT AND CONSULTATION ON A FEDERAL UNDERTAKING

Submit one copy with each undertaking for which our comment is requested. Please print or type. Return to:
Wisconsin Historical Society, State Historic Preservation Office, 816 State Street, Madison, WI 53706
Please Check All Boxes and Include All of the Following Information, as Applicable.

I. GENERAL INFORMATION

- This is a new submittal.
- This is supplemental information relating to Case #: _____, and title: _____
- This project is being undertaken pursuant to the terms and conditions of a programmatic or other interagency agreement. The title of the agreement is _____
- a. Federal Agency Jurisdiction (Agency providing funds, assistance, license, permit): United States Army Corps of Engineer
- b. Federal Agency Contact Person: Curtis Sedlacek, District Archeologist Phone: 313-226-3510
- c. Project Contact Person: Jeffery Zeucher, Project Manager Phone: (312) 846-5558
- d. Return Address: 7th Floor, 477 Michigan Ave City: Detroit Zip Code: 48226
- e. Email Address: curtis.h.sedlacek@usace.army.mil
- f. Project Name: Kenosha Dredged Material Placement
- g. Project Street Address: 8228 7th Avenue
- h. County: Kenosha City: Pleasant Prairie Zip Code: 53158
- i. Project Location: Township 1N, Range 23E, East or West , Section 8, Quarter Sections _____
- j. Project Narrative Description—Attach Information as Necessary.
- k. Area of Potential Effect (APE). Attach Copy of U.S.G.S. 7.5 Minute Topographic Quadrangle showing APE.

II. IDENTIFICATION OF HISTORIC PROPERTIES

- Historic Properties are located within the project APE per 36 CFR 800.4. Attach supporting materials, per 36 CFR 800.11.
- Historic Properties are not located within the project APE per 36 CFR 800.4. Attach supporting materials, per CFR 800.11.

III. FINDINGS

- No historic properties will be affected (i.e., none is present or there are historic properties present but the project will have no effect upon them). Attach necessary documentation, as described at 36 CFR 800.11.
- The proposed undertaking will have no adverse effect on one or more historic properties located within the project APE under 36 CFR 800.5. Attach necessary documentation, as described at 36 CFR 800.11.
- The proposed undertaking will result in an adverse effect to one or more historic properties and the applicant, or other federally authorized representative, will consult with the SHPO and other consulting parties to resolve the adverse effect per 36 CFR 800.6. Attach supporting documentation as described at 36 CFR 800.11.

Authorized Signature: UHLARIK.CHARLES.A.1230382715 Digitally signed by UHLARIK.CHARLES.A.1230382715 Date: 2020.08.04 11:35:34 -04'00' Date: 4 Aug 2020

Type or print name: Charles A. Uhlarik

IV. STATE HISTORIC PRESERVATION OFFICE COMMENTS

- Agree with the finding in section III above.
- Object to the finding for reasons indicated in attached letter.
- Cannot review until information is sent as follows: _____

Authorized Signature: [Signature] Date: 11 August 2020
HP-05-07 (9-28-18)



Miami Tribe of Oklahoma

3410 P St. NW, Miami, OK 74354 • P.O. Box 1326, Miami, OK 74355
Ph: (918) 541-1300 • Fax: (918) 542-7260
www.miamination.com



Via email: Charles.A.Uhlarik@usace.army.mil

May 20, 2020

Charles A. Uhlarik, Chief
Environmental Analysis Branch
US Army Corps of Engineers, Detroit District
477 Michigan Avenue, 7th Floor
Detroit, MI 48226

Re: Kenosha Dunes Shore Nourishment – Comments of the Miami Tribe of Oklahoma

Dear Mr. Uhlarik:

Aya, kikwehsitoole – I show you respect. My name is Diane Hunter, and I am the Tribal Historic Preservation Officer for the Federally Recognized Miami Tribe of Oklahoma. In this capacity, I am the Miami Tribe's point of contact for all Section 106 issues.

The Miami Tribe offers no objection to the above-referenced project at this time, as we are not currently aware of existing documentation directly linking a specific Miami cultural or historic site to the project site. However, as this project is within the aboriginal homelands of the Miami Tribe, if any human remains or Native American cultural items falling under the Native American Graves Protection and Repatriation Act (NAGPRA) or archaeological evidence is discovered during any phase of this project, the Miami Tribe requests immediate consultation with the entity of jurisdiction for the location of discovery. In such a case, please contact me at 918-541-8966 or by email at dhunter@miamination.com to initiate consultation.

The Miami Tribe accepts the invitation to serve as a consulting party to the proposed project. In my capacity as Tribal Historic Preservation Officer I am the point of contact for consultation.

Respectfully,

Diane Hunter
Tribal Historic Preservation Officer

cc: Paul Allerding Paul.H.Allerding@usace.army.mil

Allerding, Paul H CIV USARMY CELRE (USA)

From: Michael LaRonge <Michael.LaRonge@fcpotawatomi-nsn.gov>
Sent: Saturday, June 13, 2020 12:41 AM
To: Allerding, Paul H CIV USARMY CELRE (USA)
Subject: RE: Kenosha Dunes Shore Nourishment NEPA Early Coordination Notice

Re: USACE Detroit, Proposed Shore Nourishment of Kenosha Dunes, Kenosha County, Wisconsin.

Dear Mr. Allerding,

Pursuant to consultation under Section 106 of the National Historic Preservation Act (1966 as amended) the Forest County Potawatomi Community (FCPC), a Federally Recognized Native American Tribe, reserves the right to comment on Federal undertakings, as defined under the act.

The Tribal Historic Preservation Office (THPO) has reviewed the information you provided for the project. The project is coincident with pre-contact archaeological site (47KN-0083) which is roughly the northern most quarter of the project shoreline. The remainder of the shoreline is unsurveyed, but archaeological sites to the north and south suggest the likely hood of additional historic properties in that area. Given the state of erosion along the Lake Michigan shoreline at this time the place of the dredged material may ameliorate the process of erosion that could be damaging both the known and unknown historic properties in the APE. However, the placement of the material may also damage exposed archaeological materials and human remains. Thus the FCPC THPO would like a more detailed explanation of the placement of the dredged materials and a map showing the work are in relation to the shoreline and exposed eroded areas.

Your interest in protecting cultural and historic properties is appreciated. If you have any questions or concerns, please contact me at phone number or email listed below.

Respectfully,

Michael LaRonge
Tribal Historic Preservation Officer
Cultural Preservation Division
Forest County Potawatomi Community
8130 Mish ko Swen Drive
P.O. Box 340
Crandon, Wisconsin 54520
Phone: 715-478-7354
Email: Michael.LaRonge@FCPotawatomi-nsn.gov

-----Original Message-----

From: Allerding, Paul H CIV USARMY CELRE (USA) <Paul.H.Allerding@usace.army.mil>
Sent: Tuesday, May 12, 2020 1:20 PM
To: Ned Daniels Jr. <Ned.DanielsJr@fcpotawatomi-nsn.gov>
Cc: Michael LaRonge <Michael.LaRonge@fcpotawatomi-nsn.gov>; Uhlarik, Charles A CIV USARMY CELRE (USA) <Charles.A.Uhlarik@usace.army.mil>; Sedlacek, Curtis H CIV USARMY CELRE (USA) <Curtis.H.Sedlacek@usace.army.mil>
Subject: Kenosha Dunes Shore Nourishment NEPA Early Coordination Notice

Dear Chairman Daniels,

Please see attached early National Environmental Policy Act coordination for subject proposal.

All comments should be submitted by email or, if hard copy comments are provided, a copy of those comments should be provided by email, since most of us here in Detroit are currently not in the office to receive hard copy.

Send your comments direct to Charles Uhlarik, Chief, Environmental Analysis Branch, at Charles.A.Uhlarik@usace.army.mil, and courtesy copy me at Paul.H.Allerding@usace.army.mil.

Thanks, Paul

Paul Allerding

Planning Office, Environmental Analysis Branch U.S. Army Corps of Engineers, Detroit District Office (leave message):
313-226-7590 Work-at-Home Phone: 313-532-5727

-----Original Message-----

From: Sedlacek, Curtis H CIV USARMY CELRE (USA)

Sent: Monday, July 20, 2020 9:42 AM

To: Michael LaRonge <Michael.LaRonge@fcpotawatomi-nsn.gov>; Allerdig, Paul H CIV USARMY CELRE (USA) <Paul.H.Allerdig@usace.army.mil>

Cc: Kubicek, Richard H - DNR <richard.kubicek@wisconsin.gov>; Andersen, Eric S CIV USARMY CELRE (USA) <Eric.S.Andersen@usace.army.mil>; Garrett, Laura A CIV USARMY CELRE (USA)

<Laura.A.Garrett@usace.army.mil>

Subject: RE: Kenosha Material Placement

Mike, I just wanted to clarify, below you stated " were described as occurring around 1300 feet from the existing high water mark".

The material will be placed along the shore within a 1300 foot area and placed UP to the ordinary high water mark and out to the 8 foot depth contour. So width wise, OHWM (base of cliff) out to 8 foot depth contour (out into the lake). Length wise 1300 feet parallel to shoreline

Does that clarification change your concurrence? Or did I just make it more confusing?

Thank you,

Curtis Sedlacek

District Archeologist and Tribal Liaison US Army Corps of Engineers, Detroit District

477 Michigan Avenue, 7th Floor

Detroit, MI 48226

Office: (313) 226-3510

Cell: (313) 588-0148

Curtis.h.sedlacek@usace.army.mil

-----Original Message-----

From: Michael LaRonge [<mailto:Michael.LaRonge@fcpotawatomi-nsn.gov>]

Sent: Saturday, July 18, 2020 12:20 AM

To: Allerdig, Paul H CIV USARMY CELRE (USA) <Paul.H.Allerdig@usace.army.mil>; Sedlacek, Curtis H CIV USARMY CELRE (USA) <Curtis.H.Sedlacek@usace.army.mil>

Cc: Kubicek, Richard H - DNR <richard.kubicek@wisconsin.gov>; Andersen, Eric S CIV USARMY CELRE (USA) <Eric.S.Andersen@usace.army.mil>; Garrett, Laura A CIV USARMY CELRE (USA)

<Laura.A.Garrett@usace.army.mil>

Subject: [Non-DoD Source] RE: Kenosha Material Placement

Dear Mr. Allerdig,

Pursuant to consultation under Section 106 of the National Historic Preservation Act (1966 as amended) the Forest County Potawatomi Community (FCPC), a Federally Recognized Native American Tribe, reserves the right to comment on Federal undertakings, as defined under the act.

The Tribal Historic Preservation Office (THPO) participated in a phone call with you on July 7, 2020 providing a better description of the project plans and current restrictions under the proposed permit. Per that discussion the planned activities to place the dredged materials were described as occurring around 1300 feet from the existing high water mark, will be executed from offshore, and will not directly affect the existing shoreline. Further, if in the future any erosion control activities are planned using land access the USACE-Detroit District Staff and the WisDNR Archaeologist on the call agreed that archaeological survey will be conducted to identify the potential impact on currently unidentified historic properties.

Based on this discussion and assurances the FCPC THPO is pleased to offer a finding of no historic properties affected, with two conditions. First, should the SHPO comments differ the Tribe reserves the right to reconsider based on the new information provided. Second, in the event that human remains or archaeological materials are exposed as a result of project activities work must halt and the Tribe must be included in any consultation regarding treatment and disposition of the find prior to removal.

Your interest in protecting cultural and historic properties is appreciated. If you have any questions or concerns, please contact me at phone number or email listed below.

Respectfully,

Michael LaRonge
Tribal Historic Preservation Officer
Cultural Preservation Division
Forest County Potawatomi Community
8130 Mish ko Swen Drive
P.O. Box 340
Crandon, Wisconsin 54520
Phone: 715-478-7354
Email: Michael.LaRonge@FCPotawatomi-nsn.gov

-----Original Message-----

From: Sedlacek, Curtis H CIV USARMY CELRE (USA)
Sent: Thursday, June 18, 2020 1:09 PM
To: Michael.LaRonge@FCPotawatomi-nsn.gov
Cc: Allerding, Paul H CIV USARMY CELRE (USA) <Paul.H.Allerding@usace.army.mil>; Kubicek, Richard H - DNR <richard.kubicek@wisconsin.gov>; Andersen, Eric S CIV USARMY CELRE (USA) <Eric.S.Andersen@usace.army.mil>; Garrett, Laura A CIV USARMY CELRE (USA) <Laura.A.Garrett@usace.army.mil>
Subject: Kenosha Material Placement

Michael, we received your email regarding the proposed Kenosha dredged material placement and concerns about possible impacts to prehistoric sites.

If you have any maps or information that you think we would be helpful to us in considering potential impacts that you are comfortable sharing with me, I would be happy to take a look that them.

I could incorporate that information into our project design and we could have a webinar to discuss the project as it has changed slightly from when it was coordinated in the public notice and go over your concerns and determine the best path forward.

Right now, we are proposing to do the material placement from the water to avoid any impacts to the natural resources in the protected area and we were not intending to do archeological surveys on the shoreline, however, we could reevaluate the need for surveys based on the information you provide and through consultation.

Please feel free to give me a call or send me an email to further discuss this project.

Thank you,

Curtis Sedlacek
District Archeologist and Tribal Liaison US Army Corps of Engineers, Detroit District
477 Michigan Avenue, 7th Floor
Detroit, MI 48226

Office: (313) 226-3510
Cell: (313) 588-0148
Curtis.h.sedlacek@usace.army.mil
CLASSIFICATION: UNCLASSIFIED

Allerding, Paul H CIV USARMY CELRE (USA)

From: Utrup, Nick J <nick_utrup@fws.gov>
Sent: Monday, July 20, 2020 11:12 AM
To: Allerding, Paul H CIV USARMY CELRE (USA)
Subject: Re: Proposed Shore Nourishment at Kenosha Dunes, Wisconsin

Hi Paul,

We have reviewed your proposal for maintenance dredging at Kenosha Harbor, Kenosha County, Wisconsin. We concur that the activities may affect, but are not likely to adversely affect the rufa red knot. Our concurrence is based on information in the project materials provided.

Please let me know if you have any questions

Nick

Nick Utrup

U.S. Fish and Wildlife Service
4101 American Boulevard East
Bloomington, MN 55425

Office: (952) 252-0092 ext. 204

Email: Nick_Utrup@fws.gov <mailto:Nick_Utrup@fws.gov>

Allerding, Paul H CIV USARMY CELRE (USA)

From: Garrett, Laura A CIV USARMY CELRE (USA)
Sent: Wednesday, June 3, 2020 9:42 AM
To: sarah_quamme@fws.gov
Cc: Allerding, Paul H CIV USARMY CELRE (USA); Uhlarik, Charles A CIV USARMY CELRE (USA)
Subject: Section 7 on Proposed Shoreline Nourishment at Kenosha Dunes, Kenosha, Wisconsin
Attachments: Kenosha Dunes Erosion Progression.JPG; Kenosha Harbor and Dunes Vicinity.pdf; 20180424_134602.jpg; Photos from Geotech Investigation.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Dear Ms. Quamme -

Re: Consultation Code: 03E17000-2020-SLI-1208 Event Code: 03E17000-2020-E-03831 Project Name: Kenosha Dunes Shoreline Nourishment

The U.S. Army Corps of Engineers (USACE), Chicago District, will be conducting maintenance dredging of Kenosha Harbor, Kenosha County, Wisconsin. The material to be dredged is primarily sand that has been tested and found to be suitable for upland or in-water placement for beneficial use. We propose to use the dredged material as shoreline nourishment at the Kenosha Dunes, which are approximately two miles south of the harbor.

The Kenosha Dunes are within the Chiwaukee Prairie State Natural Area. The proposed placement of the dredged material at the Kenosha Dunes would help alleviate erosion at the dunes shoreline and the subsequent loss of rare plants and unique dune habitat (see attached map and photographs). Approximately 20,000 – 32,000 cubic yards of material would be dredged within Kenosha Harbor by either hydraulic or mechanical means in 2021. The material would be transported to the disposal site either by hydraulic pipeline or by barge, and then placed on site by hydraulic or mechanical means. In 2021, placement of the dredged material would occur within approximately 1400 feet of the Kenosha Dunes shoreline owned by the Wisconsin Department of Natural Resources. The material will be placed between the Ordinary High Water Mark (OHWM) and the 8-foot contour below the Low Water Datum (LWD) along that reach of shoreline. If real estate approvals are necessary and are secured, material would also be placed above the OHWM to the toe of the eroded bluff. We anticipate the dredging and placement activity will occur in spring or early summer 2021. Nourishment may be repeated in future years if needed and suitable material is available.

Using the USFWS IPaC website, a species list was created for the proposed dredged material placement area. The list includes the northern long-eared bat (threatened), eastern prairie fringed orchid (threatened), whooping crane (experimental population, non-essential), and the rufa red knot (threatened). There are no designated critical habitats in the project vicinity.

We have determined that the project activities, as proposed, would have no effect on the northern long-eared bat, whooping crane, and eastern prairie fringed orchid as the activities are planned to take place along the eroding shoreline away from coastal wetlands, prairies, and woodlands, which are the preferred habitats for these species.

The nearshore area where the nourishment material is to be placed varies from shallow water to wet sandy flats which may provide feeding habitat for red knots passing through the area. We have determined that the project activities, as proposed, are not likely to adversely affect the rufa red knot because individuals stopping over at the Kenosha Dunes area would be minimally disturbed by project activities. At the onset of work, any red knots present in the nearshore area would vacate the area ahead of the construction activity. Suitable locations for red knots to resume their activities would be available elsewhere along the coast. Therefore, the proposed placement of dredged material as shoreline nourishment along Kenosha Dunes may affect, but is not likely to adversely affect, the rufa red knot.

Please note, the harbor dredging area and pipeline path to the dredged material placement area have the same species listings as the placement area. We have determined that these activities would have no effect on the listed species as the proposed work would all be accomplished in open water which is not the preferred habitat for any of the species.

Respectfully,

Laura A. Garrett
Regulatory Project Manager
Compliance & Enforcement Branch, Regulatory Office US Army Corps of Engineers, Detroit District
E-Mail: Laura.A.Garrett@usace.army.mil
Main: (313) 226-1327
Cell: (313) 806-6287
Fax: (313) 226-6763

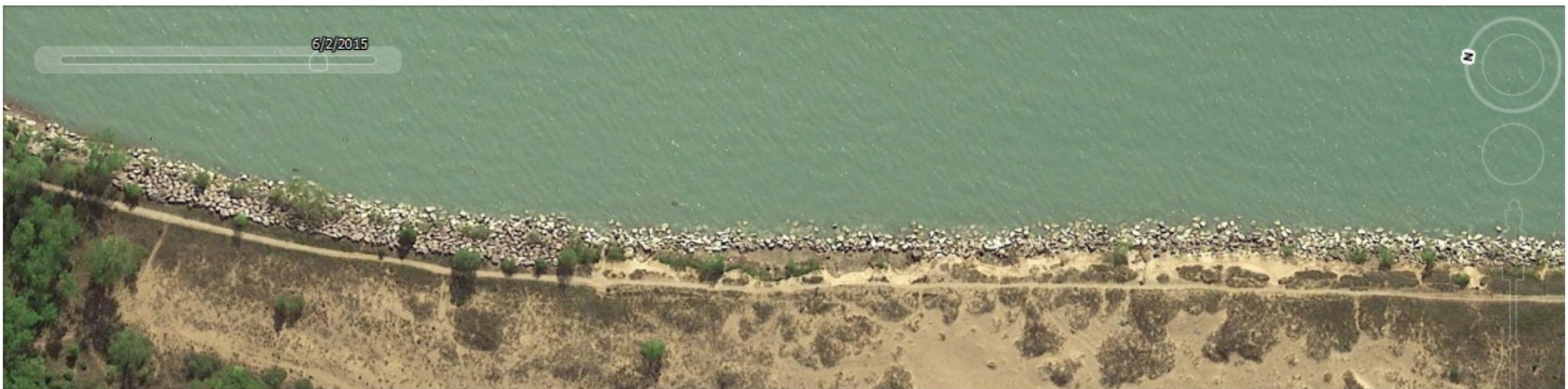
Please visit our Detroit District Regulatory website at
<http://www.lre.usace.army.mil/Missions/RegulatoryProgramandPermits.aspx>

We would appreciate your feedback. Our National Customer Service Survey is located at
http://corpsmapu.usace.army.mil/cm_apex/f?p=regulatory_survey

5/27/2010



6/2/2015



7/6/2018

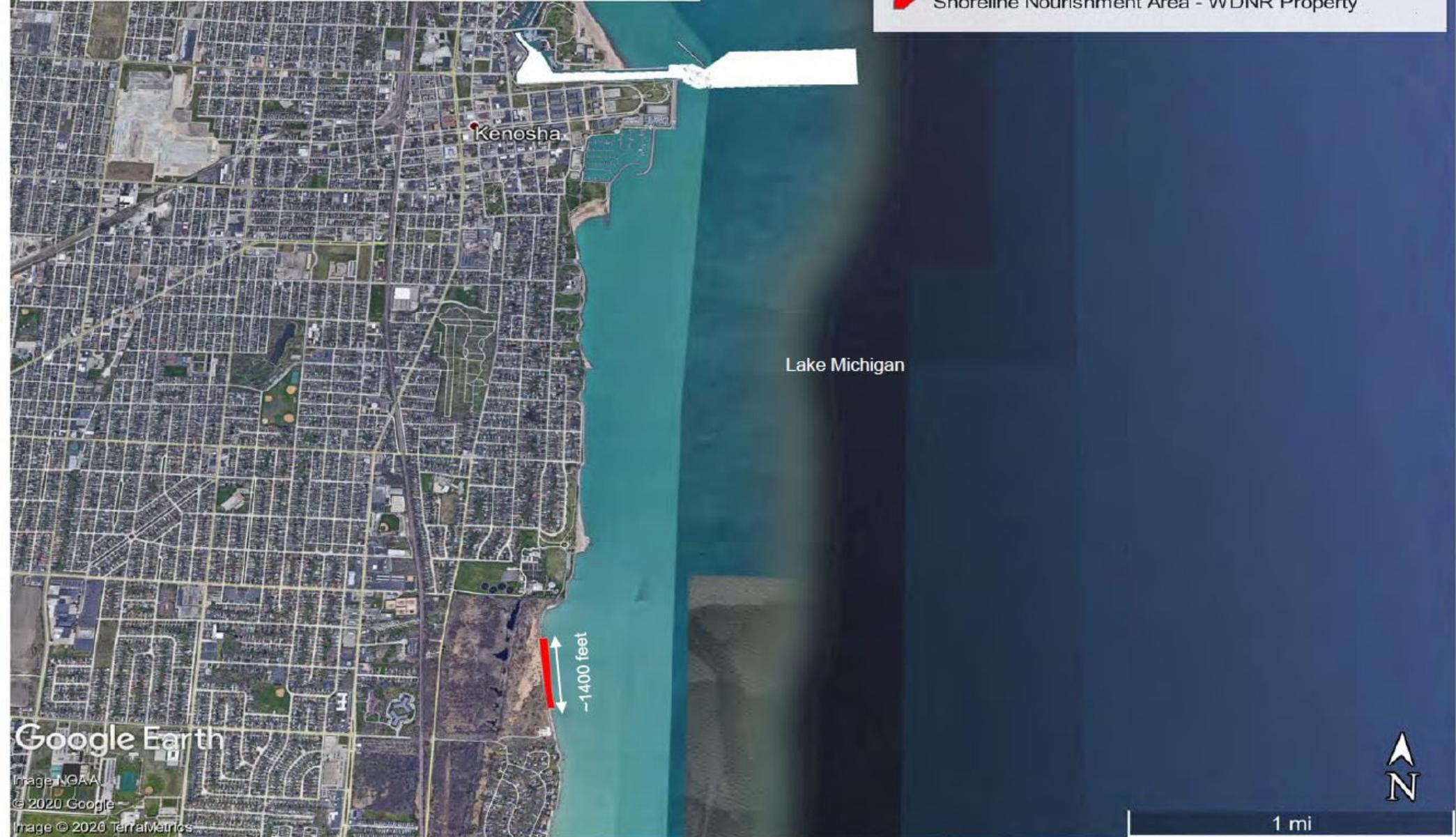


Kenosha Harbor and Kenosha Dunes, Kenosha, Wisconsin

Kenosha County

Legend

- Kenosha
- ▭ Kenosha Harbor
- ▭ Shoreline Nourishment Area - WDNR Property



Kenosha

Lake Michigan

~1400 feet

Google Earth

Image © 2020 NOAA
© 2020 Google
Image © 2020 TerraMetrics

1 mi





STATE
NATURAL
AREA

Photography Log

Kenosha Dunes Restoration/Rehabilitation Project

Kenosha, Wisconsin

October 28, 2019 ■ Terracon Project No. N619P133



Terracon



Photo 21: View of the shoreline near project site facing north.



Photo 22: View of shoreline erosion near the project site. Existing rock armor stops directly behind the tree in the upper center portion of the photo.