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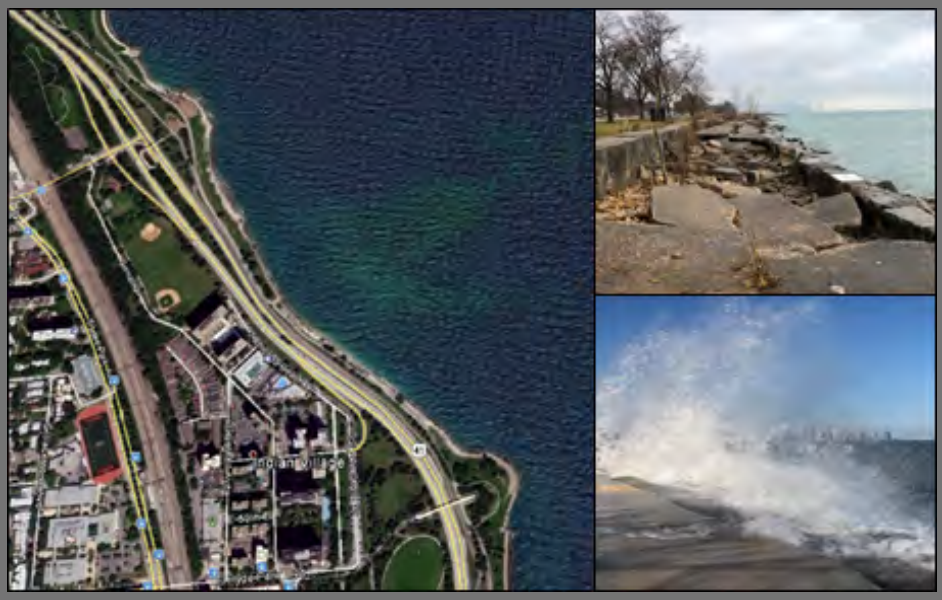
Appendix M – 2020 Supplemental Environmental Assessment of Chicago Shoreline 45th - 51st Street (Morgan Shoal) Storm Protection Emergency Repair

Draft Supplemental Environmental Assessment
Morgan Shoal Revetment Reconstruction (45th - 51st)

2020

Chicago Shoreline 45th to 51st Street (Morgan Shoal) Storm Protection Emergency Repair, Chicago, Illinois

Environmental Assessment



Chicago,
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CHICAGO SHORELINE 45TH TO 51ST STREET (MORGAN SHOAL)
STORM PROTECTION EMERGENCY REPAIR
CHICAGO, ILLINOIS

An Environmental Assessment was completed for the recommended project. The recommended project is in compliance with National Environmental Policy Act (NEPA) for emergency actions and will be accomplished prior to the emergency work if time allows or will be completed after the emergency action if the work needs to be accomplished prior to NEPA compliance. The Environmental Assessment has found that there would be no adverse effects resulting from implementation of the recommended plan.

The USACE has conducted an environmental analysis in accordance with the National Environmental Policy Act of 1969, as amended. The Environmental Assessment dated March 2020, for the Chicago Shoreline 45th Street to 51st Street (Morgan Shoal) Storm Protection Emergency Repair Project addresses temporary supplemental storm damage protection of Lake Shore Drive and Chicago Park District property in the face of near-record lake levels.

The Environmental Assessment, incorporated herein by reference, evaluated an alternative that would include the placement of protection features in the study area. The recommended plan includes:

- Placement of concrete blocks in the backshore,
- CLSM stabilization of undermined concrete slabs; and,
- Placement of riprap within eroded areas.

For the recommended plan, the potential effects were evaluated, as appropriate. A summary assessment of the potential effects of the recommended plan are listed in *Table 10* below:

Table 10: Summary of Potential Effects of the Tentatively Selected Plan

	Insignificant effects	**Insignificant effects as a result of mitigation***	**Resource unaffected by action**
Climate	☐	☐	☒
Geology & Soils	☐	☐	☒
Limnology	☐	☐	☒
Water Quality	☐	☐	☒
Air Quality	☒	☐	☐
Land Use	☐	☐	☒
Aquatic Communities	☐	☐	☒
Terrestrial Communities	☐	☐	☒
Threatened and Endangered Species	☐	☐	☒
Archaeological & Historical Properties	☐	☐	☒
Recreation – Positive Effects	☐	☐	☐
Social Setting	☐	☐	☒
Environmental Justice	☐	☐	☒

All practicable and appropriate means to avoid or minimize adverse environmental effects were analyzed and incorporated into the recommended plan. BMPs will be implemented, if appropriate, to minimize impacts. No compensatory mitigation is required as part of the recommended plan.

Pursuant to section 7 of the Endangered Species Act of 1973, as amended, the USACE determined that the recommended plan will have 'no effect' on federally listed species or their designated critical habitat. The USFWS concurred with the determination on February 14, 2020.

Pursuant to section 106 of the National Historic Preservation Act of 1966, as amended, the USACE determined that the recommended plan has no effect on historic properties. The SHPO concurred with the determination on March 11, 2020.

A determination of consistency with the Illinois Coastal Zone Management program pursuant to the Coastal Zone Management Act of 1972 was obtained from the Illinois Department of Natural Resources.

All applicable environmental laws have been considered and coordination with appropriate agencies and officials has been completed.

All applicable laws, executive orders, regulations, and local government plans were considered in evaluation of the alternatives. Based on this environmental assessment, the reviews by other Federal, State and local agencies, Tribes, input of the public, and the review by my staff, it is my determination that the recommended plan would not cause significant adverse effects on the quality of the human environment; therefore, preparation of an Environmental Impact Statement is not required.

Date: _____

_____

Aaron W. Reisinger
Colonel, U.S. Army
District Commander

CHICAGO SHORELINE 45TH TO 51ST STREET (MORGAN SHOAL)
STORM PROTECTION EMERGENCY REPAIR
CHICAGO, ILLINOIS

ENVIRONMENTAL ASSESSMENT

March 2020

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List of Acronyms

BCN	Bird Conservation Network
BMP	Best Management Practice
CLSM	Controlled Low Strength Material
CMAP	Chicago Metropolitan Agency for Planning
EcoCAT	Ecological Compliance Assessment Tool
ECOS-IPaC	Environmental Conservation Online System Information for Planning and Consultation
GFM	Government Furnished Material
GLERL	Great Lakes Environmental Research Laboratory
HTRW	Hazardous, toxic, and radioactive waste
ICMP	Illinois Coastal Management Program
IDNR	Illinois Department of Natural Resources
IGLD	International Great Lakes Datum
ILEPA	Illinois Environmental Protection Agency
LWD	Low Water Datum
NAAQS	National Ambient Air Quality Standards
NOAA	National Oceanic and Atmospheric Administration
NRHP	National Register of Historical Places
ROW	Right-of-Way
SHPO	State Historic Preservation Office
USACE	U.S. Army Corps of Engineers
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
WRDA	Water Resources Development Act

CHAPTER 1 – PURPOSE AND NEED

1.1 Purpose

The Chicago Shoreline project consists of reaches of the Lake Michigan coast in Chicago, Illinois that have been identified for Storm Damage Protection measures authorized by Congress in the Water Resources Development Act (WRDA 1996 and 1999). The portion of the shoreline referred to as Morgan Shoal or 45th to 51st Streets includes areas that have not been constructed and remain distressed in the face of near-record lake elevations and storms (*Figure 1* and *Figure 2*). The armored shoreline protection in this portion of the Chicago Shoreline consists of remnants of the earliest limestone block and timber crib revetment. In addition, the area includes portions of riprap support, concrete slab, and curb modifications that have been added at various times. Temporary and un-planned repair measures have been performed by the Chicago Park District over the years, as have modifications to the upland park areas including landscaping and addition of paved paths. Due to the proximity of the area to U.S. Highway 41 (Lake Shore Drive), a major transportation artery in the City of Chicago, and the near record lake levels combined with the deteriorated conditions make it necessary to perform emergency temporary storm damage construction consisting of:

- Demolition of concrete slab portions that have been undermined and rendered unstable;
- Injection of Controlled Low Strength Material (CLSM) under portions of the concrete protection that has been undermined but with this stabilization will support loads imposed by construction and placement of supplemental revetment;
- Supplementing existing and damaged areas of revetment with large riprap; and,
- Placement of large concrete block on paved areas to provide additional protection.

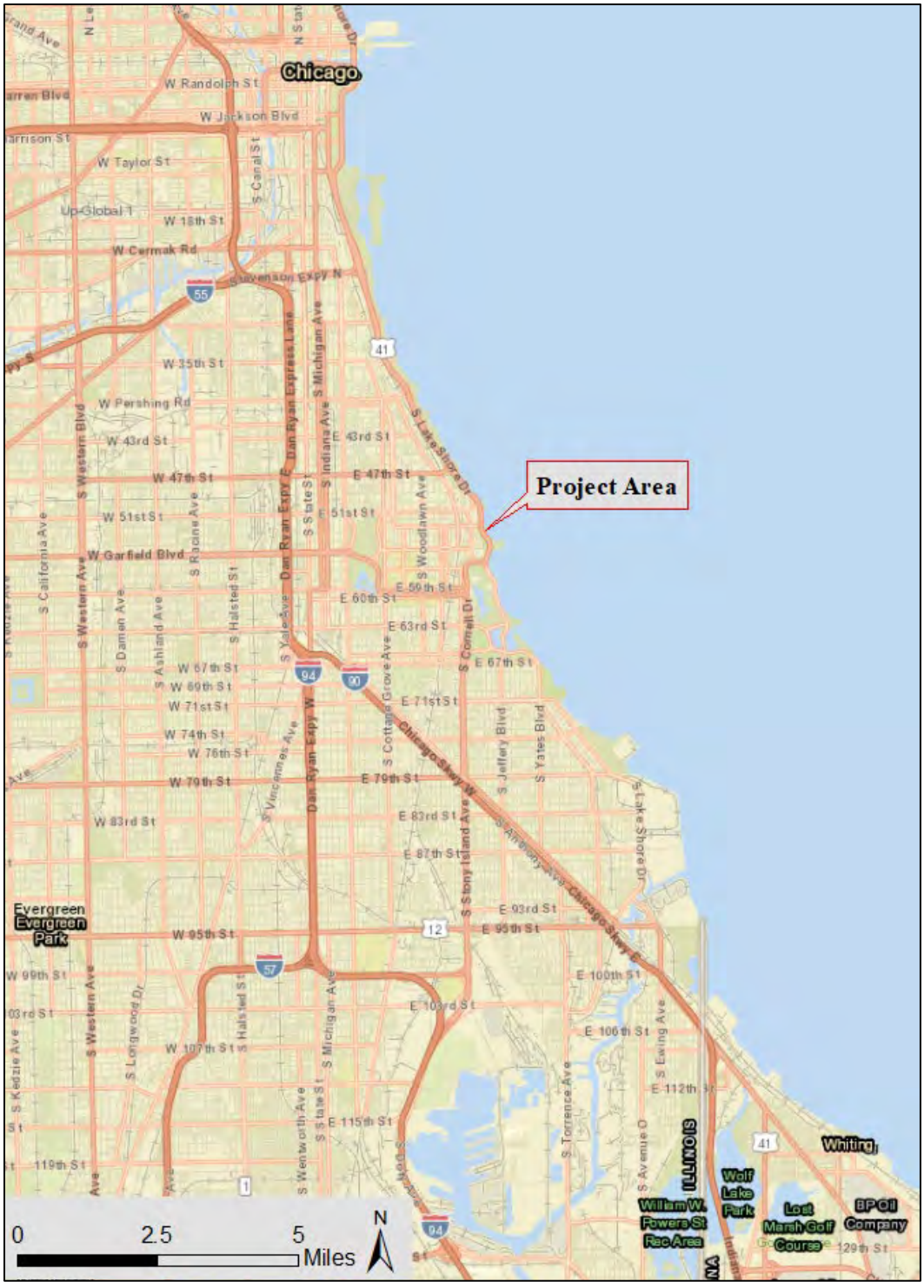


Figure 1: Location of Project Area within the Chicago Region.

Figure 2: Aerial of Project Area.

1.2 Need for Action

The action is necessary as a temporary supplemental storm damage protection of Lake Shore Drive and Chicago Park District property in the face of near-record lake levels. Existing erosion protection has deteriorated and the measures performed under this action are necessary to stabilize conditions until permanent shoreline protection is constructed (*Figure 3*).

Figure 3: View of Existing Deteriorated Erosion Protection.

1.3 Authority

Under resolutions adopted by the Committee on Public Works of the U.S. House (dated December 2, 1971 and April 11, 1974), the U.S. Army Corps of Engineers (USACE) was directed to study shore erosion problems and erosion control measures for the Illinois shore of Lake Michigan.

Section 101(a)(12) of the Water Resources Development Act of 1996 authorized construction of the Chicago Shoreline Project. A project cooperation agreement was executed on May 17, 1999, and provided for the non-Federal sponsor (the City of Chicago and the Chicago Park District) to build specific segments of the project.

1.4 Non-federal Partners

The project's non-federal partners are the Chicago Park District and the Chicago Department of Transportation.

CHAPTER 2 – ALTERNATIVES, INCLUDING THE RECOMMENDED PLAN

Two alternatives were considered to address the emergency storm damage protection problem in the Morgan Shoal area (i.e., 45th to 51st Streets).

1) **No Action Plan** – Under this alternative, no emergency repairs would be made to the Morgan Shoal area. Severe erosion would continue to be experienced by the existing revetment and recreational paths landward of the existing shoreline protection features, thereby threatening Lake Shore Drive and Chicago Park District property. The existing shoreline protection features would continue to be inadequate and erosion would continue.

2) **Supplementing and Stabilizing Existing Storm Damage Protection Features Plan** – Proposed activities include placement of concrete blocks on the backshore where degraded revetment currently exists, Controlled Low Strength Material (CLSM) stabilization of undermined concrete slabs, and placement of riprap within eroded areas.

2.1 Recommended Plan

The recommended plan is Alternative 2, the Supplementing and Stabilizing Existing Storm Damage Protection Features Plan. The recommended plan includes the placement of concrete blocks in the backshore, CLSM stabilization of undermined concrete slabs, and placement of riprap within eroded areas. All placement areas will be above water and are above +5 Great Lakes Low Water Datum (LWD).

The CLSM stabilization will be performed by USACE in-house manpower and equipment and purchased materials. Also, riprap, armor stone, and concrete blocks already in possession of USACE will be provided to an 8A Sole-Source Contractor as Government Furnished Material (GFM). Clearing and grubbing of a designated laydown area for the Contractor's use, tree trimming to mitigate tree damage, and removal of portions of the guardrail are planned to be provided by the City of Chicago and/or the Chicago Park District. Site restoration will be required of the Contractor to repair the impacts of storms, erosion, and construction activities. Restoration will include cleanup, removal of temporary ramps, roads and grading of parkland to the satisfaction of the Chicago Park District. The restoration work will also include the repair/construction of damaged bike and pedestrian paths, re-seeding and or sodding and replacement of any trees damaged in the course of the construction.

The initial contract work following mobilization will consist of demolishing designated areas of concrete platform that have been damaged to a level beyond which they can be made serviceable. The contract for the recommended plan is anticipated to be awarded in February 2020. Construction activities are anticipated to begin in mid-March 2020, with completion anticipated by the end of April 2020.

2.2 Compliance with Environmental Protection Statutes, Executive Orders, and Regulations

The recommended plan is in compliance with National Environmental Policy Act (NEPA) for emergency actions and will be accomplished prior to the emergency work if time allows or will be completed after the emergency action if the work needs to be accomplished prior to NEPA compliance. It will be in compliance with appropriate statutes, executive orders and regulations, including the National Historic Preservation Act of 1966, as amended, Fish and Wildlife Coordination Act, as amended, Endangered

Species Act of 1973, as amended, Section 10 of Rivers and Harbors Act of 1899, Clean Air Act of 1963, as amended, National Environmental Policy Act of 1969, as amended, Executive Order 12898 (Environmental Justice), Executive Order 11990 (Protection of Wetlands), Executive Order 11988 (Floodplain Management), and the Clean Water Act of 1972, as amended.

The Federal Consistency determination for the emergency project was filed for review under the Federal Consistency requirements for the Illinois Coastal Management Program on January 22, 2020. The public review period for the consistency determination closes February 24, 2020.

CHAPTER 3 – AFFECTED ENVIRONMENT

3.1 Project Area

The project area is within the metropolitan area of Chicago, Cook County, Illinois. The emergency action will take place landward along the portion of the Lake Michigan shoreline that extends from 45th Street to 51st Street.

3.2 Physical Resources

3.2.1 Climate

The climate of the study area is predominantly continental with some modification by Lake Michigan. The National Oceanic and Atmospheric Administration's (NOAA) Online Weather Data was queried for the Chicago Area. Daily and monthly normals for temperature, precipitation, and snowfall between 1981 and 2010 were available (NOAA 2019a). The mean winter high temperature is 31.0°F while the mean winter low temperature is 16.5°F (January) (*Table 1* and *Figure 4*). The mean summer high temperature is 84.1°F while the mean summer low temperature is 63.9°F (July) (*Table 1* and *Figure 4*). Annual total precipitation normal for the Chicago area is 36.9 inches (*Table 1* and *Figure 4*). In winter, total snowfall is generally heavy with an annual total snowfall normal of 36.3 inches (*Table 2* and *Figure 5*). The majority of snowfall occurs between December and February with total snowfall normals ranging from 8.2 inches (i.e., December) to 9.1 inches (i.e., February) during this timeframe.

Table 1: Precipitation and temperature Normals for the Chicago Area between 1981 and 2010 (NOAA 2019a).

Month	Total Precipitation Normal (inches)	Mean Max Temperature Normal (˚F)	Mean Min Temperature Normal (˚F)	Mean Avg Temperature Normal (˚F)
January	1.73	31.0	16.5	23.8
February	1.79	35.3	20.1	27.7
March	2.50	46.6	29.2	37.9
April	3.38	59.0	38.8	48.9
May	3.68	70.0	48.3	59.1
June	3.45	79.7	58.1	68.9
July	3.70	84.1	63.9	74.0
August	4.90	81.9	62.9	72.4
September	3.21	74.8	54.3	64.6
October	3.15	62.3	42.8	52.5
November	3.15	48.2	32.4	40.3
December	2.25	34.8	20.7	27.7
Annual	**36.89**	**59.0**	**40.7**	**49.8**

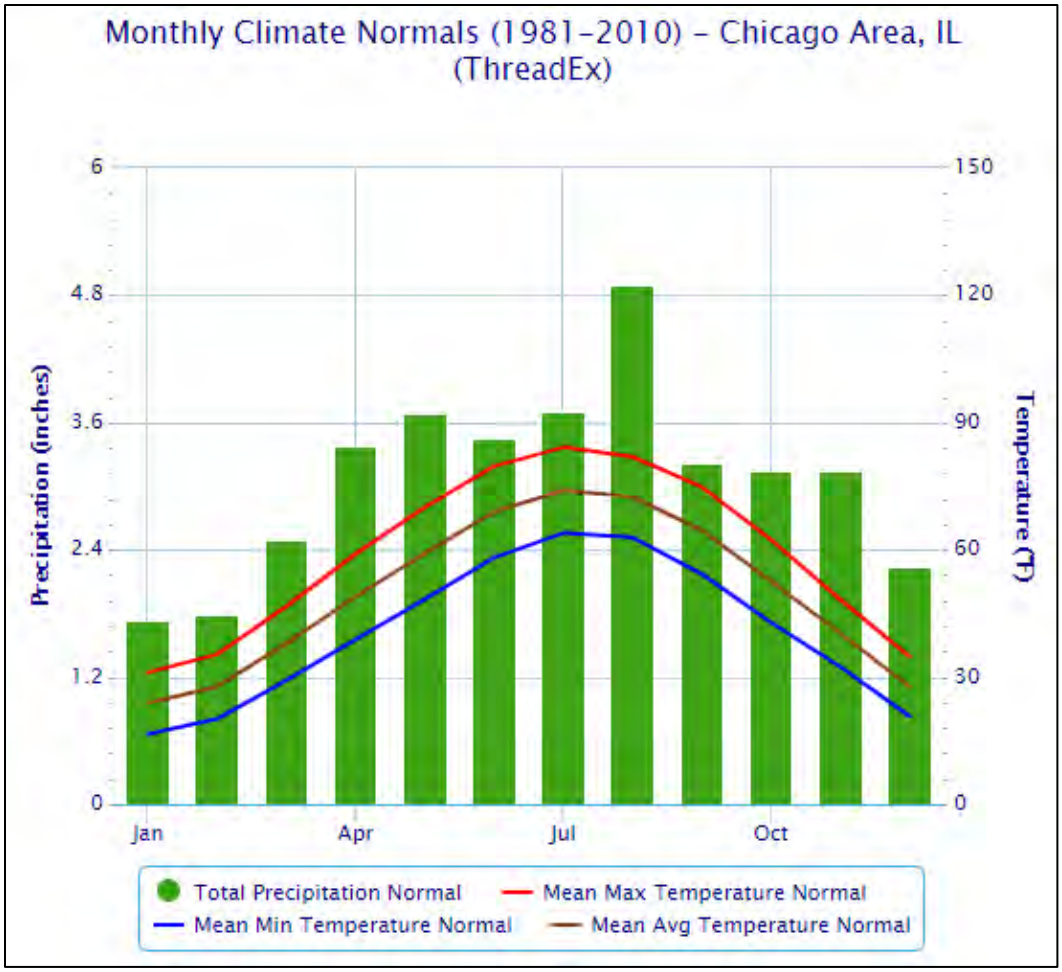


Figure 4: Precipitation and Temperature Normals for the Chicago Area between 1981 and 2010 (NOAA 2019a).

Table 2: Snowfall Normal for the Chicago Area Between 1981 and 2010 (NOAA 2019a).

Month	Total Snowfall Normal (inches)
January	10.8
February	9.1
March	5.6
April	1.2
May	0.0
June	0.0
July	0.0
August	0.0
September	0.0
October	0.2

Month	Total Snowfall Normal (inches)
November	1.2
December	8.2
Annual	**36.3**

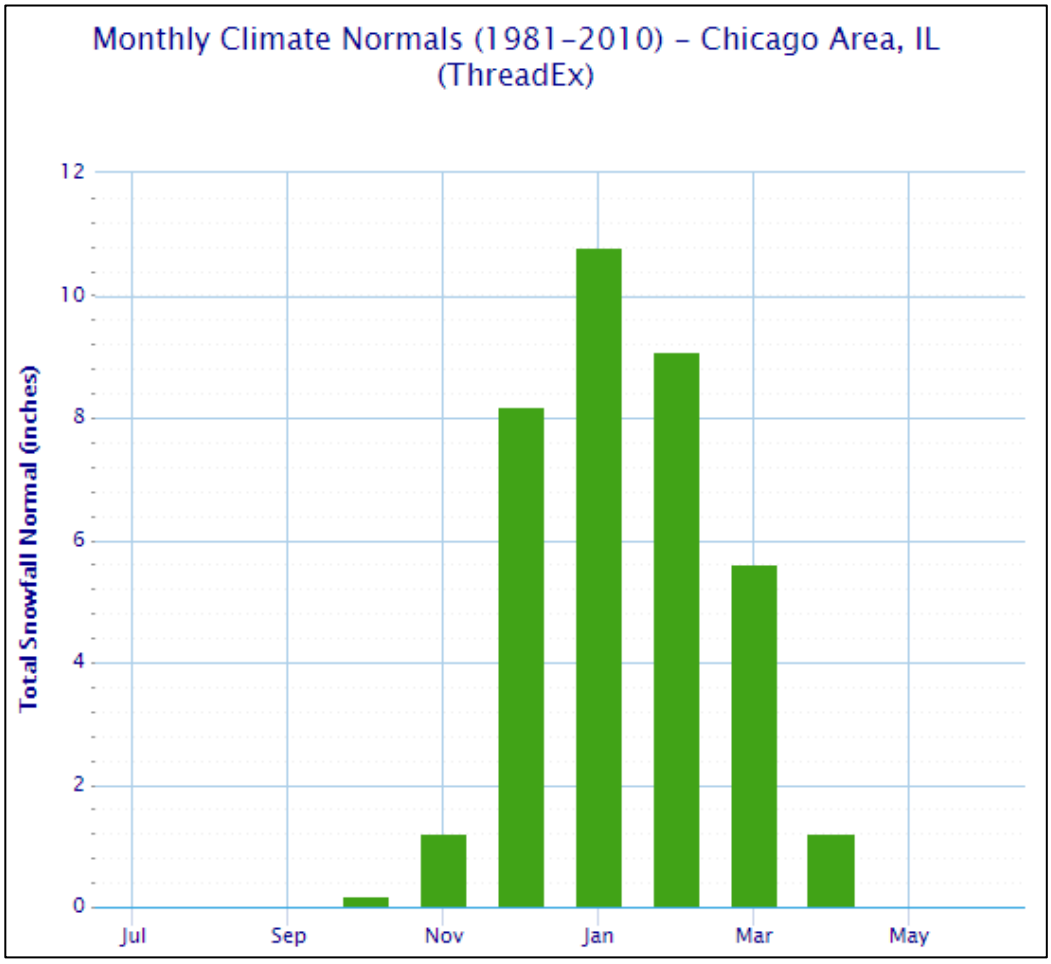


Figure 5: Snowfall Normal for the Chicago Area between 1981 and 2010 (NOAA 2019a).

3.2.2 Geology & Soils

Geology – Glaciation within the Chicago region ended about 13,000 years ago when the glaciers receded from the area for the last time. In the Chicago region, the most common type of bedrock is a magnesium-rich limestone called dolomite that was originally deposited on reefs set in shallow seas during the Silurian period about 400 million years ago. The youngest bedrock in the Chicago region dates from the Pennsylvania period about 300 million years ago. Surface features in the region are all made of material deposited by the glaciers or by the lakes that appeared as the glaciers melted. In some places, these deposits are nearly 400 feet thick.

Soils – Historically, this area was comprised of the Carmi Member of the Equality Formation. This member was largely formed from quiet-water lake sediments, beaches, bars, spits, and deltas. It is mostly comprised of medium-grained sands with occasional lenses of sandy gravel along where former beaches existed. Natural soils did not occur at the project site due to the constant disturbance of wave action.

The U.S. Department of Agriculture Natural Resource Conservation Service's web soil survey was queried for soils present within the project area. According to the web soil survey there are two soil types that comprise the project area (*Figure 6*): urban land (map unit 533) and psamments (map unit 800A). The majority of the area (i.e., 51.9%) is considered urban land. Urban land soils have been heavily disturbed due to development and typically contain unnatural fill. The psamments soil type comprises the remaining project area (33.7%). Psamments are non-hydric soils formed along beach ridges and lake plains, with a slope of 0 to 2 percent.

Figure 6: NRCS Map of Soils Within the Project Area (NRCS 2020).

3.2.3 Limnology

Lake Michigan's surface is approximately 577.5 feet above sea level (International Great Lakes Datum 1985 [IGLD85]) (*Table 3*). The lake has a total surface area of 22,300 mi^2, with an average depth of 279 feet and a maximum depth of 923 feet. At its greatest, Lake Michigan is 307 miles long and 118 miles across. Only a relatively small amount of water flows out the bottleneck straits between lakes Michigan and Huron, so Lake Michigan holds its water a long time, nearly 100 years. Lake Michigan is bordered by 1,640 miles of shoreline, of which 63 miles of shoreline are located in Illinois.
The natural hydrology and littoral hydraulic process have been completely altered from their natural state. Sand is now transported and trapped at much different points due to the numerous structures along the whole southern basin of Lake Michigan. The project area is subject to very large waves caused by storms moving from west to east.

Table 3: Characteristics of Lake Michigan.

Great Lake	Water Surface Area ($mile^2$)	Surface Elevation (feet)	Length (miles)	Breadth (miles)	Maximum Depth (feet)	Drainage Area ($mile^2$)
Lake Michigan	22,300	577.5	307	118	923	67,900

Water levels within Lakes Michigan and Huron have been recorded since 1918. The lake wide period of record average (1918 to present) is currently 176.43 (IGLD 85) (NOAA-GLERL 2019b). Figure 7 depicts the changes that have been observed since 1918 to present for the lake-wide monthly mean level (blue line) and the lake-wide long term average annual (red line). The data for these lakes (i.e., Michigan and Huron) are presented together since hydrologically they are considered one lake.

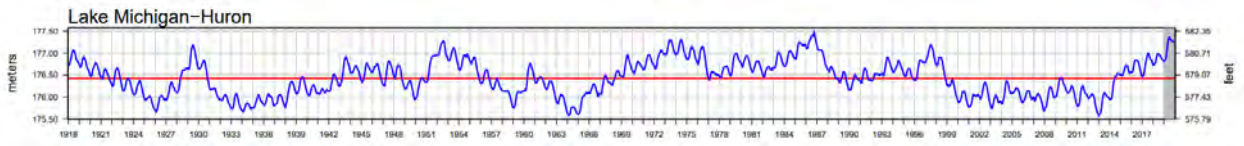


Figure 7: Water Levels for Lakes Michigan and Huron (USACE 2020).

3.2.4 Water Quality

Every two years, Section 303(d) of the Clean Water Act requires states to publish a list of all waters that are not meeting water quality standards. The 49th Street Beach which is located within the vicinity of the proposed project is listed on Illinois' 2018 impaired waters (Assessment ID IL_QR-01) (Illinois Environmental Protection Agency 2018). The beach is considered impaired due to fish consumption restrictions caused by high levels of mercury and polychlorinated biphenyls. The size of the area that is considered impaired is 1.43 acres (Illinois Environmental Protection Agency 2018).

3.2.5 Air Quality

The Federal Clean Air Act requires the U.S. Environmental Protection Agency (USEPA) to set national ambient air quality standards (NAAQS) for six criteria pollutants (carbon monoxide, lead, nitrogen dioxide, particulate matter, ozone, and sulfur oxides) which are considered harmful to public health and the environment. Areas not meeting the NAAQS for one or more of the criteria pollutants are designated as "nonattainment" areas by the USEPA. The proposed project is located in Cook County, Illinois. The

county is currently in non-attainment for 8-hour ozone and in maintenance status for lead and PM-10 (USEPA 2020). See *Table 4* for additional details.

Table 4: Cook County, Illinois Status for NAAQS Six Criteria Pollutants (USEPA 2020).

NAAQS	Area Name	Most Recent Year of Nonattainment	Current Status	Classification
8-Hour Ozone (2015)	Chicago, IL-IN-WI	2020	-	Marginal
Lead (2008)	Chicago, IL	2017	Maintenance (since 2018)	-
PM-10 (1987)	Southeast Chicago, IL	2004	Maintenance (since 2005)	Moderate

3.2.6 Land Use

To tabulate surrounding land use a 2 mile radius was drawn around the site and 2010 land use inventory data from the Chicago Metropolitan Agency for Planning (CMAP) was used (CMAP 2010). According to the 2010 land use inventory, the majority of land use within a 2 mile radius of the project site is water (67.6%). The second highest land use category was right-of-way (ROW) at 10.6%, with open space at a close third (10.15). See *table 5* for a complete breakdown of the land uses within a 2 mile radius of the project site. *Figure 8* depicts the various land use types within a 2 mile radius of the project site.

Table 5: Land Use Within a 2-mile Radius or the Project Site.

Land Use Category	Acres	Percent of Total Acres
Commercial	64.5	1.6%
Communications	0.84	0.0%
Industrial	0.6	0.0%
Institutional	197.7	5.0%
Open Space	403.0	10.1%
Residential	60.0	1.5%
ROW	424.0	10.6%
Transportation	84.7	2.1%
Utility	0.53	0.0%
Vacant Land	56.4	1.4%
Water	2,696.8	67.6%
Total	**3,989.07**	**100%**

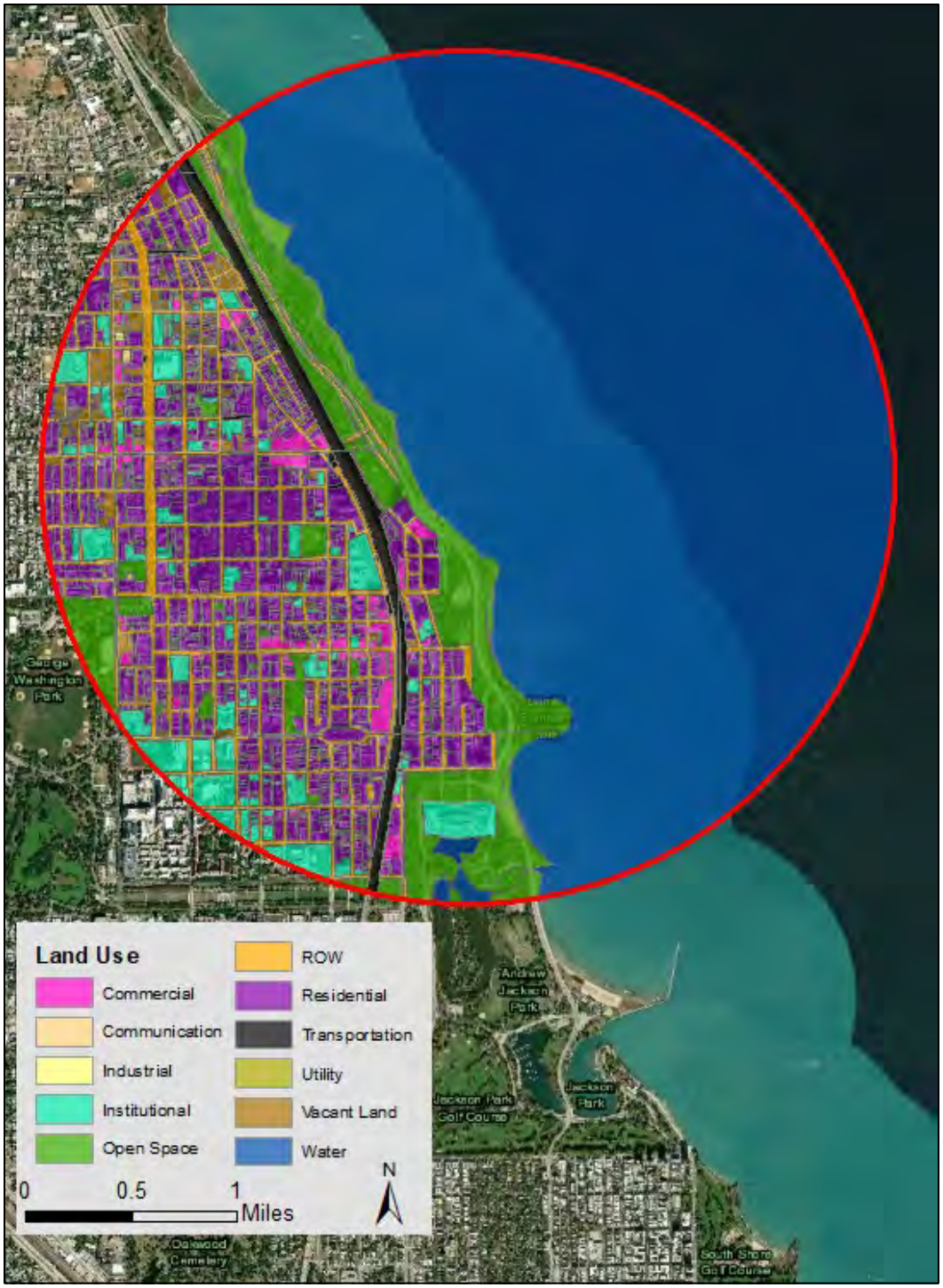


Figure 8: Land Use within a 2-Mile Radius of the Project Area.

3.3 Biological Resources

3.3.1 Aquatic Communities

Fish

All collections within a 2-mile radius of the project area were queried using the Fishes of the Chicago Region Database (Veraldi unpublished data). Two collections were made between 1981 and 2002 resulting in five native fish species collected within the area: longnose dace (*Rhinichthys cataractae*), sand shiner (*Notropis stramineus*), mottled sculpin (*Cottus bairdii*), smallmouth bass (*Micropterus dolomieu*), and pumpkinseed (*Lepomis gibbosus*). Nonnative fishes collected included alewife (*Alosa pseudoharengus*), round goby (*Neogobius melanostomus*), and steelhead (*Oncorhynchus mykiss*). In addition, MWH Americas, Inc. conducted a dive survey in the vicinity of Morgan Shoal in 2005. During the survey, the nonnative round goby was the most abundant fish species identified. A few individual adult bass and a few schools of unidentified small "bait fish" were also observed.

Macroinvertebrates

Taxonomic composition of invertebrates on rock substrates in Lake Michigan can be very diverse, but typically is dominated by amphipods, isopods, oligochaetes, and chironomids; accounting for 83% of organisms collected (Janssen et al. 2005). Additional invertebrate groups commonly collected on rock substrates, but not necessarily locally abundant, include mayflies, caddisflies, crayfish, and snails. The benthic fauna on rocks located at depths of 16-22 feet along the Illinois shoreline in southwestern Lake Michigan is represented by a diverse assemblage of aquatic insects including *Hydropsyche, Agraylea, Polycentropus, Setodes, Ceraclea*, and *Oecetis* (Trichopetera), *Epeorus, Stenonema* and *Stenacron* (Ephemeroptera), *Optioservus* (Coleoptera), and *Krenopelopia, Chaetocladius, Cricotopus*/*Orthocladius, Thienemanniella, Stilocladius, Paratanytarsus*, and *Rheotanytarsus* (Diptera) (Janssen et al. 2005).

3.3.2 Terrestrial Communities

Reptiles and Amphibians

Due to the highly urban nature of the project area, only common species of reptiles and amphibians would be expected to be present. Common species that may be in the general area include American bullfrog (*Rana catesbeiana*) and snapping turtle (*Chelydra serpentina*).

Birds

The western shoreline of Lake Michigan is recognized as "one of the most important flyways for migrant songbirds in the United States by many ornithologists and birdwatchers worldwide" (Shilling and Williamson, BCN) and is considered globally significant. An estimated 5 million songbirds use the north-south shoreline of Lake Michigan as their migratory sight line. The Cornell Lab of Ornithology e-Bird website was queried for observational bird data near the project area. On the e-Bird website there is a site called Burnham Park-Morgan Shoal Lakefront (Morgan Point to 53rd Street) for which 139 species of birds have been observed. *Table 6* provides a list of these species that have been observed within the vicinity of the project area.

Of the 139 species of birds that have been observed within the vicinity of the project site, a majority of the species are protected under the Migratory Bird Treaty Act, six are listed on Audubon's 2014 State of the Birds report (Audubon 2014) as common species that have lost more than half of their global population over the past four decades and five are state endangered species.

Table 6 – Nesting & Migratory Birds Recorded from Burnham Park-Morgan Shoal Lakefront (Morgan Point to 53rd Street) (eBird 2019)

Common Name	Scientific Name	Common Name	Scientific Name
American black duck	*Anas rubripes*	house sparrow	*Passer domesticus*
American coot	*Fulica americana*	house wren	*Troglodytes aedon*
American crow	*Corvus brachyrhynchos*	horned grebe	*Podiceps auritus*
American goldfinch	*Spinus tristis*	horned lark	*Eremophila alpestris*
American kestrel	*Falco sparverius*	Iceland gull	*Larus glaucoides*
American redstart	*Setophaga ruticilla*	indigo bunting	*Passerina cyanea*
American robin	*Turdus migratorius*	killdeer	*Charadrius vociferus*
American tree sparrow	*Spizella arborea*	Le Conte's sparrow	*Ammodramus leconteii*
American wigeon	*Mareca americana*	least flycatcher	*Empidonax minimus*
American woodcock	*Scolopax minor*	lesser scaup	*Aythya affinis*
Baltimore oriole	*Icterus galbula*	Lincoln's sparrow	*Melospiza lincolnii*
bank swallow[a]	*Riparia riparia*	long-tailed duck	*Clangula hyemalis*
barn swallow	*Hirundo rustica*	magnolia warbler	*Setophaga magnolia*
bay-breasted warbler	*Setophaga castanea*	mallard	*Anas platyrhynchos*
belted kingfisher	*Megaceryle alcyon*	marsh wren	*Cistothorus palustris*
black-capped chickadee	*Poecile atricapillus*	monk parakeet	*Myiopsitta monachus*
black-crowned night-heron[b]	*Nycticorax nycticorax*	mourning dove	*Zenaida macroura*
blackpoll warbler	*Setophaga striata*	mourning warbler	*Geothlypis philadelphia*
black-throated green warbler	*Setophaga virens*	mute swan	*Cygnus olor*
black scoter	*Melanitta americana*	northern cardinal	*Cardinalis cardinalis*
blue jay	*Cyanocitta cristata*	northern flicker	*Colaptes auratus*
Bonaparte's Gull	*Chroicocephalus philadelphia*	northern harrier[b]	*Circus cyaneus*
blue-winged teal	*Anas discors*	northern mockingbird	*Mimus polyglottos*
brown creeper	*Certhia americana*	northern parula	*Setophaga americana*
brown thrasher	*Toxostoma rufum*	northern rough-winged swallow	*Stelgidopteryx serripennis*
brown-headed cowbird	*Molothrus ater*	northern shoveler	*Anas clypeata*
bufflehead	*Bucephala albeola*	orange-crowned warbler	*Vermivora celata*
Canada goose	*Branta canadensis*	ovenbird	*Seiurus aurocapillus*
canvasback	*Aythya valisineria*	palm warbler	*Setophaga palmarum*
Canada warbler	*Cardellina canadensis*	peregrine falcon	*Falco peregrinus*
Cape May warbler[a]	*Setophaga tigrina*	Philadelphia vireo	*Vireo philadelphicus*
Caspian tern	*Hydroprogne caspia*	pied-billed grebe	*Podilymbus podiceps*
cedar waxwing	*Bombycilla cedrorum*	pine siskin	*Spinus pinus*
chestnut-sided warbler	*Setophaga pensylvanica*	red-breasted merganser	*Mergus serrator*
chimney swift[a]	*Chaetura pelagica*	red-eyed vireo	*Vireo olivaceus*
chipping sparrow	*Spizella passerine*	redhead	*Aythya americana*
common goldeneye	*Bucephala clangula*	red-tailed hawk	*Buteo jamaicensis*
common grackle[a]	*Quiscalus quiscula*	red-winged blackbird	*Agelaius phoeniceus*
common loon	*Gavia immer*	ring-billed gull	*Larus delawarensis*
common merganser	*Mergus merganser*	ring-necked duck	*Aythya collaris*
common redpoll	*Acanthis flammea*	rock pigeon	*Columba livia*
common tern[b]	*Sterna hirundo*	ruby-crowned kinglet	*Regulus calendula*
common yellowthroat	*Geothlypis trichas*	ruddy duck	*Oxyura jamaicensis*
dark-eyed junco	*Junco hyemalis*	sandhill crane	*Grus canadensis*
double-crested cormorant	*Phalacrocorax auritus*	savannah sparrow	*Passerculus sandwichensis*
downy woodpecker	*Picoides pubescens*	short-eared owl[b]	*Asio flammeus*
dunlin	*Calidris alpina*	snow bunting	*Plectrophenax nivalis*

Common Name	Scientific Name	Common Name	Scientific Name
eastern kingbird	*Tyrannus tyrannus*	song sparrow	*Melospiza melodia*
eastern meadowlark	*Sturnella magna*	spotted sandpiper	*Actitis macularius*
eastern phoebe	*Sayornis phoebe*	Swainson's thrush	*Catharus ustulatus*
eastern towhee	*Pipilo erythrophthalmus*	swamp sparrow	*Melospiza georgiana*
eastern wood-pewee	*Contopus virens*	surf scoter	*Melanitta perspicillata*
European starling	*Sturnus vulgaris*	snow goose	*Chen caerulescens*
field sparrow	*Spizella pusilla*	snowy owl	*Bubo scandiacus*
Forster's tern[b]	*Sterna forsteri*	tree swallow	*Tachycineta bicolor*
fox sparrow	*Passerella iliaca*	tundra swan	*Cygnus columbianus*
Franklin's Gull	*Leucophaeus pipixcan*	turkey vulture	*Cathartes aura*
glaucous Gull	*Larus hyperboreus*	vesper sparrow	*Pooecetes gramineus*
golden-crowned kinglet	*Regulus satrapa*	warbling vireo	*Vireo gilvus*
gray catbird	*Dumetella carolinensis*	western meadowlark	*Sturnella neglecta*
great black-backed gull	*Larus marinus*	white-crowned sparrow	*Zonotrichia leucophrys*
great blue heron	*Ardea herodias*	white-throated sparrow	*Zonotrichia albicollis*
greater scaup	*Aythya marila*	white-winged scoter	*Melanitta deglandi*
green heron	*Butorides virescens*	willet	*Tringa semipalmata*
harlequin Duck	*Histrionicus histrionicus*	Wilson's warbler[a]	*Cardellina pusilla*
Harris's sparrow	*Zonotrichia querula*	wood duck	*Aix sponsa*
hermit thrush	*Catharus guttatus*	yellow warbler	*Setophaga petechial*
herring gull[a]	*Larus argentatus*	yellow-bellied flycatcher	*Empidonax flaviventris*
hooded merganser	*Lophodytes cucullatus*	yellow-rumped warbler	*Setophaga coronate*
house finch	*Haemorhous mexicanus*		

[a] Common declining bird species
[b] Illinois state-listed endangered

Mammals

A list of mammals was assembled utilizing publications and available data that have potential to occur within the project area. Large mammal habitat is degraded or non-extant within the study area; however, coyote (*Canis latrans*) make up the large mammal potential for the area. Small mammals that have the potential to occur within the area include common urban species such as black rat (*Rattus rattus*), Norwegian rat (*Rattus norvegicus*), eastern gray squirrel (*Sciurus carolinensis*), fox squirrel (*Sciurus niger*), eastern chipmunk (*Tamias striatus*), Virginia opposum (*Didelphis viginiana*), striped skunk (*Mephitis mephitis*), eastern cottontail (*Sylvagius floridanus*), and raccoon (*Procyon lotor*).

3.3.3 Threatened and Endangered Species

Federal

A query of the U.S. Fish and Wildlife Service's (USFWS) Environmental Conservation Online System Information for Planning and Consultation (ECOS-IPaC) on January 16, 2020 resulted in an official species list of federally-listed species that may be present within the project area. The obtainment of the official species list from ECOS-IPaC fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action". Ten federally-listed threatened, endangered, or candidate species were identified as potentially occurring within the project area (*Table 7*). Critical habitat has been designated for the piping plover and the Hine's emerald dragonfly; however, the project location is outside the critical habitat area for both of these species.

Table 7: Federally-listed Species with the Potential of Occurring within the Project Area.

Species Name	Federal Status	Habitat	Potential to Occur
northern long-eared bat (*Myotis septentrionalis*)	Threatened	Hibernates in caves and mines – swarming in surrounding wooded areas in autumn. Roosts and forages in upland forests and woods during the summer.	**Not expected to occur**; lack of suitable habitat.
piping plover (*Charadrius melodus*)	Endangered	Found along Lake Michigan beaches.	**Not expected to occur**; lack of suitable habitat.
rufa red knot (*Calidris canutus rufa*)	Threatened	Found in coastal areas or large wetland complexes. Migratory window is May 1 through September 30.	**Not expected to occur**; lack of suitable habitat.
eastern massasauga (*Sistrurus catenatus*)	Threatened	Found in graminoid dominated plant communities (e.g., fens, sedge meadows, peatlands, wet prairies, open woodlands, and shrublands).	**Not expected to occur**; lack of suitable habitat.
Hine's emerald dragonfly (*Somatochlora hineana*)	Endangered	Found in spring fed wetlands, wet meadows and marshes. Critical habitat has been designated for this species within Cook County; however, it is not within the vicinity of the project footprint.	**Not expected to occur**; lack of suitable habitat.
rattlesnake-master borer moth (*Papaipema eryngii*)	Candidate	Found in undisturbed prairie and woodland openings that contain their only food plant, rattlesnake-master (*Eryngium yuccifolium*).	**Not expected to occur**; lack of suitable habitat.
rusty patched bumble bee (*Bombus affinis*)	Endangered	Found in grasslands with flowering plants from April through October, underground and abandoned rodent cavities or clumps of grasses above ground as nesting sites, and undisturbed soil for hibernating queens to overwinter.	**Not expected to occur**; lack of suitable habitat.
eastern prairie fringed orchid (*Platanthera leucophaea*)	Threatened	Found in mesic to wet prairies.	**Not expected to occur**; lack of suitable habitat.

prairie bush clover (*Lespedeza leptostachya*)	Threatened	Found in dry to mesic prairies with gravelly soil.	**Not expected to occur**; lack of suitable habitat.
leafy prairie-clover (*Dalea foliosa*)	Endangered	Found in prairie remnants along the Des Plaines River in Illinois, in thin soils over limestone substrate.	**Not expected to occur**; lack of suitable habitat.
Mead's milkweed (*Asclepias meadii*)	Threatened	Found in moderately wet to moderately dry upland tallgrass prairie or glade/barren habitat characterized by vegetation adapted for drought and fire. Persists in stable late-successional prairie.	**Not expected to occur**; lack of suitable habitat.

Northern Long-eared Bat
Status. The northern long-eared bat (*Myotis septentrionalis*) is federally listed as threatened.

Distribution and Habitat. The northern long-eared bat's range includes much of the eastern and north central United States. The species' range contains 37 states, including Illinois. During the summer, northern long-eared bats roost singly or in colonies underneath bark, in cavities or in crevices of both live trees and snags. Males and non-reproductive females may also roost in cooler places, like caves and mines. During the winter, northern long-eared bats hibernate in caves and mines (USFWS 2015).

Potential for Occurrence. There are no known hibernacula within the vicinity of the project. In addition, there is no suitable roosting habitat present at the project location. Therefore, this species is not expected to occur within the vicinity of the project location.

Piping Plover
Status. The piping plover (*Charadrius melodus*) is federally listed as endangered.

Distribution and Habitat. Piping plovers are migratory birds. In the spring and summer they breed in the northern United States and Canada. There are three locations where piping plovers nest in North American: the shorelines of the Great Lakes, the shores of rivers and lakes in the Northern Great Plains, and along the Atlantic Coast. In the fall, plovers migrate south and winter along the coast of the Gulf of Mexico or other southern locations. Piping plovers use wide, flat, open, sandy beaches with very little grass or other vegetation. Nesting territories often include small creeks or wetlands (USFWS 2001).

Potential for Occurrence. In 2018 a pair of piping plovers nested at Montrose Beach in Chicago. Montrose Beach is located approximately 11 miles north of the project location. With regard to the project location, there is no suitable nesting habitat present for the piping plover. Nearest suitable beach habitat is located approximately 1 mile north at 41st Street beach and 1 mile south at 57th Street beach. Since there is no suitable habitat for piping plover within the immediate vicinity of the project location, this species is not expected to occur.

Rufa Red Knot
Status. The rufa red knot (*Calidris canutus rufa*) is federally listed as threatened.

Distribution and Habitat. The rufa red knot nesting range centers in Canada north of the Arctic Circle. Range during the winter primarily is in southern South America. The rufa red knot is known to migrate along the Great Lakes Flyway which includes the Chicago area. The migratory period for the species extends from May 1 through September 30. The rufa red knot uses different habitats for breeding, wintering, and migration. Breeding habitats are elevated and sparsely vegetated ridges or slopes. They are often adjacent to wetlands and lake edges for feeding. Wintering and migration habitats are often muddy or sandy coastal areas, such as the mouths of bays and estuaries, and tidal flats (NatureServe 2019).

Potential for Occurrence. The rufa red knot, which could potentially migrate through the area, would primarily be utilizing sand and dune habitat. With regard to the project location, there is no suitable migration habitat present for the rufa red knot. Nearest suitable sand and dune habitat is located approximately 1 mile north at 41st Street beach and 1 mile south at 57th Street beach. Since there is no suitable habitat for rufa red knot within the immediate vicinity of the project location, this species is not expected to occur.

Eastern Massasaugua
Status. The eastern massasauga (*Sistrurus catenatus*) is federally listed as threatened.

Distribution and Habitat. Eastern massasaugas live in an area that extends from central New York and southern Ontario to southcentral Illinois and eastern Iowa. Historically, the snake's range covered this same area, but within this large area the number of populations and numbers of snakes within populations have steadily shrunk. Generally, only small, isolated populations remain. Massasaugas live in wet areas including wet prairies, marshes, and low areas along rivers and lakes. In many areas massasaugas also use adjacent uplands during part of the year. They often hibernate in crayfish burrows but may also be found under logs and tree roots or in small mammal burrows.

Potential for Occurrence. There is no suitable habitat (e.g., fens, sedge meadows, peatlands, wet prairies, open woodlands, and shrublands) within the vicinity of the project for this species. Therefore, the eastern massasauga is not expected to occur within the vicinity of the project location.

Hine's Emerald Dragonfly
Status. The Hine's emerald dragonfly (*Somatochlora hineana*) is federally listed as endangered.

Distribution and Habitat. Historically, the Hine's emerald dragonfly was found in Alabama, Indiana, and Ohio and probably has been extirpated in those states. Today the dragonfly can only be found in Illinois, Michigan, Missouri, and Wisconsin. The Hine's emerald dragonfly lives in calcareous (high in calcium carbonate) spring-fed marshes and sedge meadows overlaying dolomite bedrock (USFWS 2006).

Potential for Occurrence. There is no suitable habitat within the vicinity of the project for this species. Therefore, the Hine's emerald dragonfly is not expected to occur within the project area.

Rattlesnake-master borer moth
Status. The rattlesnake-master borer moth (*Papaipema eryngii*) is a federal candidate species for listing.

Distribution and Habitat. This species is endemic to the continental United States and its range includes Arkansas, Illinois, Indiana, Iowa, Kentucky, North Carolina, and Oklahoma. It is presumed to have occurred from Missouri and the states between the prairie region and North Carolina, although no records are known from these areas. Rattlesnake-master borer moths are obligate residents of undisturbed prairie and woodland openings that contain their only food plant, rattlesnake-master (Mankowski et al. 2014).

Potential for Occurrence. This species has been observed in Cook County since 2002, however, it was observed further south in the county and further west of the lake. In addition to having never been observed within the vicinity of the project, there is no suitable habitat for this species present in the area. Therefore, this species is not expected to occur within the project area.

Rusty Patched Bumble Bee
Status. The rusty patched bumble bee (*Bombus affinis*) is federally listed as endangered.

Distribution and Habitat. Historically, the rusty patched bumble bee was broadly distributed across the eastern United States and Upper Midwest, from Maine in the U.S. and southern Quebec and Ontario in Canada, south to the northeast corner of Georgia, reaching west to the eastern edges of North and South Dakota. The species has been reported from 13 states, including Illinois. Rusty patched bumble bees once occupied grasslands and tallgrass prairies of the Upper Midwest and Northeast (USFWS 2019).

Potential for Occurrence. The rusty patched bumble bee map (https://www.fws.gov/midwest/endangered/insects/rpbb/rpbbmap.html) was used to determine if there were any areas of high potential for this species within the vicinity of the project location. Per the mapper, the closest area with high potential for the rust patched bumble bee is approximately 10 miles northwest of the project location. In addition, there is no suitable habitat present at the site for the rusty patched bumble bee. Therefore, this species is not expected to occur within the project area.

Eastern Prairie Fringed Orchid
Status. The eastern prairie fringed orchid (*Platanthera leucophaea*) is federally listed as threatened.

Distribution and Habitat. The range of this species occurs mostly east of the Mississippi River in fewer than 60 sites in Illinois, Iowa, Maine, Michigan, Ohio, Virginia, Wisconsin, and in Ontario, Canada. The eastern prairie fringed orchid occurs in a wide variety of habitats, from mesic prairie to wetlands such as sedge meadows, marsh edges, even bogs. A symbiotic relationship between the seed and soil fungi, called mycorrhizae, is necessary for seedlings to become established (USFWS 2005a).

Potential for Occurrence. There is no suitable habitat within the vicinity of the project for this species. Therefore, the eastern prairie fringed orchid is not expected to occur within the project area.

Prairie Bush Clover
Status. The prairie bush clover (*Lespedeza leptostachya*) is federally listed as threatened.

Distribution and Habitat. The prairie bush clover is endemic to the tallgrass prairie region of the upper Mississippi River Valley in the Midwestern United States (USFWS 2009).

Potential for Occurrence. There is no suitable habitat within the vicinity of the project for this species. Therefore, the prairie bush clover is not expected to occur within the project area.

Leafy Prairie-Clover
Status. The leafy prairie-clover (*Dalea foliosa*) is federally listed as endangered.

Distribution and Habitat. This species is found in prairie remnants along the Des Plaines River in Illinois, in this soils over limestone substrate. It favors sites with a wet spring and fall and a dry summer (USFWS 1997).

Potential for Occurrence. There is no suitable habitat within the vicinity of the project for this species. Therefore, the leafy prairie-clover is not expected to occur within the project area.

Mead's Milkweed
Status. The Mead's milkweed (*Asclepias meadii*) is federally listed as threatened.

Distribution and Habitat. This milkweed formerly occurred throughout the eastern tallgrass prairie region of the central United States, from Kansas through Missouri and Illinois and north to southern Iowa and northwest Indiana. Mead's milkweed requires moderately wet to moderately dry upland tallgrass prairie or glade/barren habitat characterized by vegetation adapted for drought and fire. It persists in stable late-successional prairie (USFWS 2005b).

Potential for Occurrence. There is no suitable habitat within the vicinity of the project for this species. Therefore, Mead's milkweed is not expected to occur within the project area.

Based on the information listed above, the USACE has determined that the project will have "no affect" to the aforementioned federally listed species.

State

The Illinois Department of Natural Resources Ecological Compliance Assessment Tool (EcoCAT) was queried January 16, 2020 to determine the potential presence of any state protected resources that may be in the vicinity of the project location. The search identified black-crowned night heron (*Nycticorax nycticorax)*, yellow-crowned night-heron (*Nyctanassa violacea*), and longnose sucker (*Catostomus catostomus*) as state-listed species that could be within the vicinity of the project location. Based on data presented in Section 3.3.1 Aquatic Communities, Fish and Section 3.3.2 Terrestrial Communities, Birds, only the black-crowned night heron has been observed within the project area.

Black-crowned night-herons are common in wetlands across North American, including saltmarshes, freshwater marshes, swamps, streams, rivers, lakes, ponds, lagoons, tidal mudflats, canals, reservoirs, and wet agricultural fields. They require aquatic habitat for foraging and terrestrial vegetation for cover. The species spends the winter in southern and coastal portions of their breeding range as well as across Mexico and Central America. In Illinois, the species is only present during the spring/summer/early fall when the breeding season is occurring. Since the project is occurring during the non-breeding season, this species is not expected to be within the vicinity of the project area. In addition, the Illinois Department of Natural Resources (IDNR) was consulted with through their EcoCAT tool. The IDNR provided a letter to the USACE (dated January 17, 2020) stating that the department reviewed the submitted information and concluded that adverse effects are unlikely to protected resources that were identified. Therefore, consultation under 17 Ill. Adm. Code Part 1075 is terminated.

3.4 Cultural & Social Resources

3.4.1 Archaeological & Historical Properties

Within the project area of potential effect (APE), the Lake Michigan shoreline consists entirely of post-1920 landfill, armored with deteriorated limestone-block revetments (installed in 1925) and topped with a concrete walkway (built ca. 1946-1949). Burnham Park, of which Morgan Shoal is a component, is eligible for listing to the National Register of Historic Places (NRHP). It is included as a resource in the Historic Resources of the Chicago Park District Multiple Property Documentation Form approved by the National Park Service on May 21, 1990, and it was covered under the now-expired Memorandum of Agreement for the Illinois Shoreline Erosion Interim 3 Project, executed on August 16, 1993.A search of the National Register of Historic Places (NRHP) did not indicate that there are any NRHP listed properties within the project APE.

In addition to Burnham Park which is eligible for listing, the NRHP was queried for listed properties within a 0.25 mile radius of the project APE. The Hyde Park-Kenwood Historic District (Reference Number 79000824) is located just west of the project location across South Shore Drive. The Historic District is roughly bounded by 47th Street, Cottage Grove Avenue to 59th Street, and Lake Park Avenue in Chicago, Illinois. The Historic District includes multiple domestic dwellings, education buildings, religious buildings, and landscapes from the late 19th and early 20th centuries. The Narragansett (Reference Number 05000107) and the Chicago Beach Hotel (Reference Number 86001193) are historic places listed on the National Register that are also within a 0.25 mile radius of the project APE. The Narragansett is a historic apartment building located at 1640 E. 50th Street, Chicago, Illinois. The Chicago Beach Hotel is located at 5100 S. Cornell Avenue, Chicago, Illinois. The USACE could not find any reference to other historic places on the National Register, other than those listed above, within a 0.25 mile radius of the project APE.

Although not listed on the NRHP, the project APE is near the remains (e.g., the ship's metal boiler, propeller, etc.) of the Silver Spray wreck located in Lake Michigan at the Morgan Shoal area. The Silver Spray, a 109-foot passenger steamer, ran aground the Morgan Shoal in July 1914, just a few hundred feet off Hyde Park's 49th Street Beach (Thiel 2013).

3.4.2 Recreation

The study area lies within the Hyde Park neighborhood of Chicago. Within the vicinity of the project area there are several parks. Burnham Park extends from 1200 South Lake Shore Drive to 5700 South Lake Shore Drive, along Chicago's lakefront just south of Grant Park. The park totals 653.63 acres and features Promontory Point, designed by Alfred Caldwell, and a popular skate park at 31st Street. The Harold Washington Playlot Park is located at 5200 South Hyde Park Boulevard, between 51st and 53rd Streets within the vicinity of South Lakeshore Drive. The park totals 25.21 acres containing tennis courts, picnic areas, a motorboat pond, chess tables, and volleyballs polls. Public beaches in the area include 57th Street beach and 49th Street beach. Both of these beaches are located approximately one mile south and one mile north, respectively, of the project footprint. Also adjacent to the project is the Lakefront Trail, an 18 mile bike trail and an 18.5 mile pedestrian trail extending from Ardmore Street south to 71st Street.

3.4.3 Social Setting

The project area is located within the city limits of Chicago. Chicago is the 3rd most populous city in the United States with just under 3,000,000 people. The U.S. Census Bureau's American Fact Finder and Quick Facts (U.S. Census Bureau 2020) for Chicago, Cook County, and Illinois were reviewed for socioeconomic information presented in *Table 8*.

Table 8 - 2010 U.S. Census Data for the City of Chicago.

Category	Chicago	Cook County	Illinois
Total Population	2,695,598	5,194,675	12,830,632
Under 18 years	21.5%	22.4%	23.0%
Under 5 years	6.6%	6.3%	6.1%
White	51.2%	58.7%	73.9%
Black or African American	31.6%	24.7%	15.3%
American Indian and Alaska Native	0.8%	0.7%	0.8%
Asian	7.2%	7.9%	6.0%
Native Hawaiian and Other Pacific Islander	0.1%	0.1%	0.1%
Hispanic of Latino	29.0%	25.1%	16.8%
Some other race alone	0.2%	0.2%	0.1%
Two or more races	1.7%	1.6%	1.8%
High School Graduate or Higher	83.8%	86.2%	88.6%
Bachelor's Degree or Higher	37.5%	37.2%	33.4%
Median Household Income	$52,497	$59,426	$61,229
Below Poverty Level	20.6%	15.9%	13.5%

[a] 2013-2017 American Community Survey 5-year Estimates

3.5 Hazardous, Toxic, and Radioactive Waste (HTRW)

A limited review of regulated facilities suggests that there are five active conditionally exempt, or small quantity, hazardous waste generators adjacent to the project area. The facilities do not have a history of violations or compliance issues. In addition, the project area is not listed in Federal or state regulatory databases. Material used to provide erosion protection consists of quarried stone that is stored at the USACE Stone Dock, and quarried stone and commercially-purchased concrete blocks stored at the Calumet Port Authority property. The materials have been subjected to the weather elements and are unlikely to contain hazardous substances or be contaminated with site soils.

CHAPTER 4 – ENVIRONMENTAL CONSEQUENCES

4.1 Impacts of No Action Plan

Under the No Action plan, no emergency repairs would be made to the shoreline protection features between 45th and 51st Streets in the Morgan Shoal area of Lake Michigan. Severe erosion would continue to be experienced by the existing revetment and recreational paths landward of the existing shoreline protection features, thereby threatening Lake Shore Drive and Chicago Park District property. The existing shoreline protection features would continue to be inadequate and erosion would continue.

4.2 Impacts of the Recommended Plan

4.2.1 Physical Resources

Climate

Construction of the recommended plan would not have any short-term or long-term impacts to climate. Additional fossil fuels would be needed during the placement of the protection features for the operation of associated construction vehicles. However, there would be no measurable impact on climate, even though there may be localized increases in greenhouse gas emissions during construction. Once construction is complete, additional fossil fuels would not be needed for operation.

Geology & Soils

Construction of the recommended plan does not include excavation or ground disturbing activities that would impact local geologic features or soils. The recommended plan includes the breaking of existing concrete revetment that cannot be treated effectively by CLSM into pieces that would remain in place as a rough surface upon which large riprap stone will be placed. Therefore, stone would be placed on top of broken concrete, and there would be no physical disturbance of soils. Since there would be no physical disturbance of soils through excavation, the recommended plan would have no short-term or long-term adverse impact to local geologic features or soils.

Limnology

Construction of the recommended plan does not include the placement of protection features that would disrupt lacustrine processes. The recommended plan does not include the placement of shoreline protection features such as riprap or concrete in the lake. All placement of material would occur above water and above +5 LWD. Therefore, the recommended plan would have no short-term adverse impact to lacustrine processes. With regard to long-term impacts, the protection features would be expected to remain above the lake's still water level (SWL), given forecasting of lake levels for 6 months out by the USACE Detroit District (*Figure 9*). Therefore, there would be no long-term adverse impact to lacustrine processes.

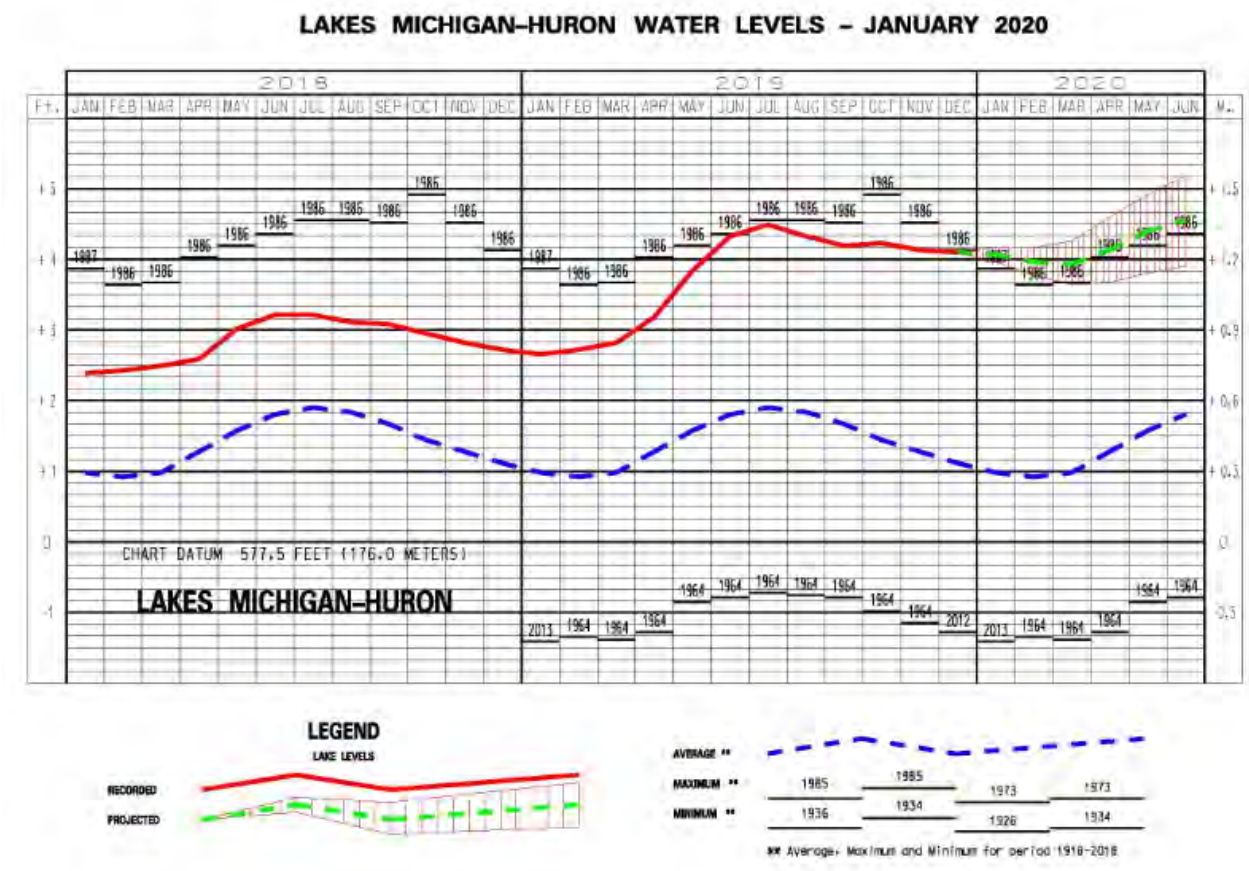


Figure 9 – Lakes Michigan-Huron Water Levels – January 2020 (USACE 2020)

Water Quality

Construction of the recommended plan does not include the placement of protection features in the lake. All placement of material would occur above water and above +5 LWD. The recommended plan also includes CLSM stabilization. CLSM will be pumped to fill voids beneath the revetment slab. Observers will be in place to assure any fugitive CLSM does not migrate beyond the revetment or into the lake. In addition, best management practices such as silt curtains and fencing would be used to further minimize any runoff of sediment into the lake during project construction. With the implementation of BMPs and construction occurring above water, the recommended plan would have no short-term adverse impacts to water quality. With regard to long-term impacts, the protection features would be expected to remain above the lake's SWL, given forecasting of lake levels for 6 months out by the USACE Detroit District (*Figure 9*). Therefore, there would be no long-term adverse impacts to water quality.

Air Quality

The project area, in Cook County, Illinois, is currently within a non-attainment area for only one of the six criteria pollutants for which standards have been established in the NAAQS, 8-hour ozone (2015). During project construction, heavy construction equipment would cause minor, temporary air quality impacts, however all equipment used will be in compliance with current air quality control requirements

for diesel exhaust, fuels, and similar requirements. Long-term, once constructed the project will be neutral in terms of air quality, with no features that either emit or sequester air pollutants to a large degree. Therefore, construction of the project would have minimal short-term and no long-term adverse impact on air quality within Cook County. Due to the short and temporary nature of any air quality impacts, a general conformity analysis was not conducted.

Land Use

Where the project is located, land use has been designated as open space (refer to Section 3.2.6). Construction of the recommended plan would not change the designation of the area from open space to another land use category. The project area is currently covered in broken concrete revetment that would remain in place with additional protection features (e.g., riprap) placed on top and around. Therefore, construction of the recommended plan would have no short-term or long-term adverse impact on land use within the project area.

4.2.2 Biological Resources

Aquatic Communities

The project is not anticipated to have an impact to aquatic communities. Although the project location is adjacent to Lake Michigan, construction of the recommended plan does not include the placement of protection features in the lake. All placement of material would occur above water and above +5 LWD. In addition to placement of protection features, the recommended plan includes CLSM stabilization. Observers will be in place while CLSM is being pumped in the revetment slab to ensure any fugitive CLSM does not migrate beyond the revetment or into the lake. In addition, best management practices such as silt curtains and fencing would be used to further minimize any potential runoff of sediment into the lake that could cause turbidity and potentially impact fish and aquatic invertebrates. Overall, construction of the recommended plan would have no short-term or long-term adverse impacts to aquatic communities.

Terrestrial Communities

The project is not anticipated to have an impact to terrestrial communities. The project location is within an urban environment that has limited wildlife present. Wildlife that may be present are common species such as squirrels. Construction activities could temporarily alter the behavior of these animals, but this would not be a substantial impact since these species are common and are not special status wildlife. Additionally, these common species are used to human activity in the area since Lake Shore Drive (i.e., Highway 41) and the Lakefront Trail are adjacent to the project site. Other wildlife that could be in the area primarily avian species. Although the Chicago area is part of the Lake Michigan Flyway route for migratory birds, there is limited resting or foraging habitat where the project is located. In addition, the project is being constructed during the winter when migratory birds are in their overwintering grounds that are further south in the United States, Mexico Central America or South America. Overall, construction of the recommended plan would have no short-term or long-term adverse impacts to terrestrial communities.

4.2.3 Cultural & Social Resources

Archaeological & Historical Properties

The recommended plan is not anticipated to have an impact to archaeological or historical properties. As discussed in Section 3.4.1, the closest historical properties listed on the NRHP are the Hyde-Park Kenwood Historic District (Reference Number 79000824) and the Narragansett (Reference Number 05000107). The project site is not located within the boundaries of the historic district and is located approximately 634 feet northeast of the Narragansett. Since the project site does not include either of these sites, nor is it adjacent to either of these sites; the project would have no impact. The wreckage of the Silver Spray would also not be impacted by the proposed project. Wreckage of the Silver Spray is located approximately 581 feet offshore. As stated in previous sections, the recommended plan does not include the placement of protection features in the lake. All placement material would occur above water and above +5 LWD.

Recreation

The project is anticipated to have a beneficial impact to recreation specifically on the Lakefront Trail. In the fall of 2019, the Chicago Department of Transportation placed jersey barriers at several locations along Lake Michigan in an effort to protect Chicago's beaches and lakefront trail from near record high water levels (Kozlarz 2019). Within the vicinity of the project location, jersey barriers were placed from 49th Street to 50th Street along the lakefront. Even with the jersey barriers in place, recent January 2020 storms caused high waves that damaged jogging paths near 47th Street along the lakefront (NBC Chicago, 2020). The recommended plan includes the placement of protection features along the lakefront that is expected to minimize the impact of future storm events to lakefront recreational trails as well as reduce flooding impacts to the nearby Lakeshore Drive. Placement of the protection features would not impact the accessibility of the lakefront for divers, since there is already broken revetment currently at the project location.

Social Setting

The recommended plan would have no impact to the social setting within the area. The placement of protection features would only benefit the area by minimizing storm induced impacts to the lakefront trail and Lake Shore Drive.

In terms of social justice and evaluating potential impacts, it was analyzed if construction of the recommended plan would have a disproportionate impact to minorities, low-income households, or children (i.e., under the age of 18). To evaluate potential disproportional impacts to minority populations or to low-income households, socioeconomic data from Cook County and the State of Illinois was compared to socioeconomic data for the City of Chicago. Approximately 70.6% of the total population in the City of Chicago is comprised of minority populations. This means that a minority population exists within the City of Chicago since the minority population exceeds 50 percent. The minority population of the City of Chicago also exceeds that of the County (60.3%) and the State of Illinois (40.9%). Although the recommended project would be implemented in an area where there is a significant minority population compared to the County and State, the recommended project is expected to have a beneficial impact by providing storm protection to Lake Shore Drive and Chicago Park District property, which is utilized by residents in the area.

In terms of poverty, 20.6% of households in the City of Chicago are below the poverty line, whereas an average of 15.9% of households in Cook County and 13.5% of households in the State of Illinois are below the poverty line. While these percentages indicate that more low-income households occur within the project area as compared to the County and State as a whole, the implementation of the recommended plan is not expected to have a disproportionate impact on low-income households. The recommended project is expected to have a beneficial impact overall by providing storm protection to Lake Shore Drive and Chicago Park District property, which is utilize by residents in the area.

Lastly, approximately 21.5% of the total population in the City of Chicago is comprised of children under the age of 18. In comparison, approximately 22.4% of the total population in Cook County and 23.0% of the total population in Illinois is comprised of children under the age of 18. These percentages indicate that there is a lower percentage of children under age 18 within the project area as compared to the County and State. Therefore, the recommended project would have no disproportionate impact on children.

4.2.4 HTRW

The recommended project is not expected to disturb HTRW that would cause an adverse impact to the surrounding environment. Standard best management practices will be implemented during construction activities to prevent the release of any hazardous materials that may be present into the environment. Overall, the project would have no short-term or long-term impact.

4.2.5 17 Points of Environmental Quality

The 17 points are defined by Section 122 of the Rivers, Harbors and Flood Control Act of 1970 (P.L. 91-611) from (ER 1105-2-240 of 13 July 1978). Effects to these points are discussed as follows:

Noise – The recommended plan includes the operation of construction equipment that would generate additional noises beyond ambient level, however, this would be short-term in duration lasting only as long as it takes to place the protection features. Construction equipment would not be operated during the night, only during the day so as not to exceed night-time residential noise levels. Once construction is complete, the ambient noise level would return to what it was prior to project construction.

Displacement of People – The recommended plan would not displace any residents.

Aesthetic Values – The recommended plan would not have any long term negative aesthetic values. There would be short term aesthetic impacts for some adjacent locations that can view the restoration site. However the area where the protection features would be placed is already degraded aesthetically by the present of broken revetment.

Community Cohesion – The recommended plan would not disrupt community cohesion. The recommended plan may actually benefit community cohesion by protecting recreation features (i.e., the Lakefront Trail) that the local community uses for passive recreation.

Desirable Community Growth – The recommended plan would have no adverse or beneficial effect on community growth.

Desirable Regional Growth – The recommended plan would have no adverse or beneficial effect on regional growth.

Tax Revenues – The recommended plan would have no adverse or beneficial effect on tax revenues.

Property Values – The recommended plan would have no adverse or beneficial effect on property values.

Public Facilities – The recommended plan would have no adverse effect on public facilities. The Plan includes the placement of protection features that would minimize storm related impacts to the Lakefront Trail and Lake Shore Drive, resulting in a beneficial impact to public facilities.

Public Services – The recommended plan would have no adverse or beneficial effect on public services.

Employment – The recommended plan would have only minor beneficial effect on employment in the area because some of the work will be accomplished with USACE in-house manpower and equipment and some other work will accomplished by a contractor.

Business and Industrial Activity – The recommended plan would have minor beneficial effect on business and industrial activity in the area.

Displacement of Farms – There are no farms within the project area; therefore, the recommended plan would not cause the loss of farmland.

Man-made Resources – The recommended plan includes the installation of protection features that would protect/enhance the manmade revetment along the lakefront. The installation of protection features would also minimize storm related impacts to the Lakefront Trail and Lake Shore Drive, resulting in a beneficial impact to man-made resources.

Natural Resources – The recommended plan would have no adverse or beneficial effect on natural resources. Protection features that would be installed are being installed above water and above +5 LWD. No material would be placed in the lake. Terrestrial resources would not be impacted since the area where protection features are being replaced is concrete revetment.

Air Quality – The recommended plan would have minor adverse effect on air quality. Construction of the recommended plan would be *de minimis* in terms of Clean Air Act compliance. Temporary vehicle emission impacts, due to construction activities, would meet current federal regulations.

Water Quality – The recommended plan would have no adverse effect on water quality. Protection features that would be installed as part of the recommended plan would all be above water and above +5 LWD. No material would be placed in the lake. In addition, BMPs such as silt fencing would be used to further minimize any potential impacts to water quality.

4.3 Cumulative Effects

The cumulative effects issues and assessment goals are established in this environmental assessment, the spatial and temporal boundaries are determined, and reasonably forseeable future actions are identified. Cumulative effects are assessed to determine if the sustainability of any of the resources are adversely

affected with the goal of determining the incremental impact to key resources that would occur should the proposal be permitted. The spatial boundary for the assessment encompasses the revetment, the lake, and the adjacent parkland. The temporal boundaries are:

- Past – 1840's, when sustained settlement and development of the area began.
- Present – 2020, when the recommended plan was being developed.
- Future – 2070, the year used for determining project life end.

Projecting the reasonably foreseeable future actions is difficult. The proposed action (emergency shoreline protection) is reasonably foreseeable; however, the actions by others that may affect the same resources are not as clear. Projections of those actions must rely on judgment as to what are reasonable based on existing trends and where available, projections from qualified sources. Reasonably foreseeable does not include unfounded or speculative projections. In this case, reasonably foreseeable future actions include:

- Future Chicago shoreline improvements between 45th to 51st Street

Improvements to the Chicago shoreline between 45th and 51st Street have been proposed, but have not yet been implemented. Reasonably foreseeable improvements that could occur include construction of a new concrete stair-step revetment, construction of offshore breakwaters for fish habitat, and restored prairie/savanna habitat within the adjacent parkland that is currently turf grass.

4.3.1 Cumulative Effects on Resources

Physical Resources

The combination of the recommended plan and the potential future shoreline improvements would have no cumulative impact on physical resources within the area. Construction of the recommended plan along with other potential future actions would not require the use of a large number of construction vehicles over a long period of time that would cumulatively have the potential to affect climate or significantly negatively impact air quality. The Recommended Project and future actions would not change the land use of the area which would remain open space. Future actions such as the shoreline improvement, could temporarily increase turbidity in the area, especially if offshore breakwaters for fish habitat are placed in the lake. However, this would only be a temporary increase and BMPs would be in place to minimize turbidity impacts. The Recommended Project is not expected to have any temporary impacts to turbidity since placement of the protection features would be above water and above +5 LWD.

Biological Resources

The combination of the recommended plan and the potential future shoreline improvements would have no cumulative impact on biological resources within the area. Construction activities of the Recommended Project and future actions would not overlap, therefore, there would be no cumulative temporal effect to biological resources, such as migratory birds or wildlife, in the area. Future actions such as the shoreline improvement, could temporarily impact aquatic resources through the placement of offshore breakwaters for fish habitat. This would be a short-term impact, and a long-term beneficial impact would be anticipated since these structures would provide additional in-water habitat for fish and aquatic macroinvertebrates. The Recommended Project is not expected to have any temporary or long-term impacts to fish or aquatic macroinvertebrates since placement of the protection features would be above water and above +5 LWD.

Cultural and Historic Resources

The combination of the recommended plan and the potential future shoreline improvements would have no cumulative impact on cultural and historic resources within the area. Construction activities for the recommended plan as well as any future actions would occur outside of the Hyde-Park Kenwood Historic District (Reference Number 79000824) which is just west of Lake Shore Drive.

Cumulative Effects Summary

Along with direct and indirect effects, cumulative effects of the recommended plan were assessed following the guidance provided by the Presidents' Council on Environmental Quality (*Table 9*). There have been numerous effects to resources from past and present actions, and reasonably foreseeable future actions can also be expected to produce both beneficial and adverse effects. The effects of the Recommended Project are expected to be relatively minor.

Table 9: Environmental Impact Summary

Potential Impact Area	Past Actions	Proposed Direct Impacts		Cumulative Impact
		Construction	Operation	
Climate	Adverse	No impact	No impact	No impact
Geology & Soils	Adverse	No impact	No impact	No impact
Limnology	Adverse	No impact	No impact	No impact
Water Quality	Adverse	No impact	No impact	No impact
Air Quality	Adverse	Minor short term negative	No impact	No impact
Land Use	Adverse	No impact	No impact	No impact
Aquatic Communities	Adverse	No impact	No impact	No impact
Terrestrial Communities	Adverse	No impact	No impact	No impact
Archaeological & Historical Properties	No impact	No impact	No impact	No impact
Recreation	No impact	Beneficial impact	Beneficial impact	Beneficial impact
Social Setting	No impact	No impact	No impact	No impact

CHAPTER 5 – COORDINATION

Coordination with Federal and state agencies and other stakeholders was conducted as set forth in policy for emergency actions. The following describes coordination that occurred. For correspondence regarding coordination refer to Appendix A.

5.1 U.S. Fish and Wildlife Service

The USFWS IPaC website was used to determine whether endangered, threatened, proposed, or candidate species could potentially be present in the action area, and if the action area overlapped with any designated or proposed critical habitat. The results of the IPaC search are shown Section 3.3.3 Threatened and Endangered Species under the subheading Federal. Using the list provided by IPaC, the USACE used best available information to evaluate whether the species on the IPaC list would be potentially affected by the action. Due primarily to lack of suitable habitat in the action area for the identified species, the USACE determined that the action will have "no affect" to federally listed species on the IPaC list. Although no further consultation is required when there is a finding of "no affect", the USACE prepared a letter documenting the finding of "no affect" and provided the letter to the USFWS via email and hardcopy on February 10, 2020. The USFWS provided their "no objection" dated February 14, 2020.

5.2 State Historic Preservation Office

The USACE followed guidance in 36 C.F.R. Section 800.12(b)(2) with regard to coordination with the Illinois State Historic Preservation Office (SHPO). The section allows the USACE to notify the SHPO, Advisory Council on Historic Preservation (ACHP), and tribal nations of the emergency action. The notification includes a brief description of the emergency action, a brief summary of potentially affected historic properties, a finding of effect, and if necessary any steps taken to avoid or minimize effects. All parties identified above have seven days to respond to the notification once received. The USACE prepared a notification as described above and provided the notification to the above identified parties via email and hardcopy on February 25, 2020.

A response to the USACE's notification was received from the SHPO via a letter dated March 2, 2020 (SHPO Log #005022520). The letter stated that in the opinion of the SHPO the "emergency project meets the Secretary of the Interior's 'Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings' and we [SHPO] concur in a finding of no adverse effect pursuant to 36 C.F.R. Part 800 provided that the following condition is met:

1. All historic limestone blocks must remain on the site. They must not be broken up or covered by the proposed new riprap. Because their positions have shifted over time, the historic blocks may be relocated as needed along the shoreline within Morgan Shoals."

The response letter from the SHPO then went on to state that "notifying our office [SHPO] of agreement with these conditions and their subsequent implementation constitutes compliance with Section 106 of the National Historic Preservation Act of 1996, as amended."

The USACE provided a response to the SHPO via email dated March 10, 2020 and via letter March 11, 2020. Both the email and the letter stated that the USACE agrees to take care to avoid breaking up the historic limestone blocks; however, it is impossible to avoid covering up the historic limestone blocks

with erosion prevention materials such as riprap (a requirement of the above condition). The USACE reiterated in the email and letter that the proposed project is an emergency interim action to temporarily protect Lake Shore Drive and preserve the status of the current shoreline. Future rehabilitation projects that may be planned for the area would still be coordinated with SHPO.

Following receipt of the email, the SHPO provided a response letter dated March 11, 2020 (SHPO Log #005022520). The letter states that since the USACE has agreed to retain the historic limestone blocks on the site and [SHPO] is now aware that the emergency undertaking is a temporary stabilization in advance of a permanent improvement whose scope of work will be submitted by USACE, [SHPO] concur in a finding of no adverse effect as defined in 36 C.F.R. Part 800.5(b).

5.2.1 Miami Tribe of Oklahoma

The Miami Tribe of Oklahoma provided a response to the USACE's notification on February 26, 2020. The response stated that 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".

5.3 Illinois Department of Natural Resources

The IDNR was consulted through their EcoCAT tool. The IDNR provided a letter to the USACE (dated January 17, 2020) stating that the department reviewed the submitted information and concluded that adverse effects are unlikely to protected resources that were identified. Therefore, consultation under 17 Ill. Adm. Code Part 1075 is terminated.

5.4 Illinois Coastal Management Program

A Federal Consistency Determination was prepared by the USACE and provided to the IDNR on January 22, 2020. The determination was available to the public for comment until February 24, 2020. No comments were received during the public review period for the coastal consistency determination. The IDNR provided a letter dated March 3, 2020 that stated IDNR staff had reviewed the Federal Consistency Determination and "concur that the proposed activity complies with the enforceable policies of the Illinois Coastal Management Program [ICMP] and will be conducted in a manner consistent with the ICMP."

CHAPTER 6 – BIBLIOGRAPHY

Chicago Metropolitan Agency for Planning (CMAP). 2010. Land Use Inventory for Northeast Illinois, 2010. Accessed at: https://datahub.cmap.illinois.gov/dataset/land-use

Illinois Environmental Protection Agency. 2018. Illinois Integrated Water Quality Report and Section 303(d) List, 2018. Accessed at: https://www2.illinois.gov/epa/topics/water-quality/watershed-management/tmdls/Documents/Draft-2018-Integrated-Report-11-14-2018.pdf

Kozlarz, J. 2019. City installs barriers to protect roads, beaches, and paths from rising water levels. Published in Curbed Chicago. Accessed at: https://chicago.curbed.com/2019/9/11/20861261/lake-michigan-flood-beaches-trail-barriers

Mankowski, A., T. Esker, and J. Walk. 2014. Final Recovery Planning Outline with Listing Status Review Triggers for the Illinois Endangered Eryngium Stem Borer (*Papaipema eryngii*). Accessed at: https://www.dnr.illinois.gov/ESPB/Documents/Recovery%20Docs/recovery_planning_outline_papaipema_eryngii_Final_062514.pdf

Natural Resources Conservation Service (NRCS), 2020. Custom Soil Resource Report for Cook County, Illinois.

NatureServe. 2019. Explorer: Calidris canutus rufa (Red Knot). Accessed at: http://explorer.natureserve.org/servlet/NatureServe?searchName=Calidris+canutus+rufa

NBC Chicago, 2020, High waves crumble asphalt, damage lakefront trails in Chicago. Accessed at: https://www.nbcchicago.com/weather/high-waves-crumble-asphalt-damage-lakefront-trails-in-chicago/2200331/

National Oceanic and Atmospheric Administration (NOAA), 2019a, NOWData – NOAA Online Weather Data. NOAA for the Chicago Area. National Weather Service Forecast Office, Chicago, IL. Accessed at: https://w2.weather.gov/climate/xmacis.php?wfo=lot

National Oceanic and Atmospheric Administration – Great Lakes Environmental Research Laboratory (NOAA-GLERL). 2019b. Great Lakes Dashboard Project (GLDP) - Great Lakes Water Levels. Accessed at: https://www.glerl.noaa.gov/data/dashboard/GLD_HTML5.html

Thiel, J. 2013. An endangered piece of history beneath Lake Michigan's surface. Article in the Chicago Reader. Accessed at: https://www.chicagoreader.com/chicago/lake-michigan-shipwrecks-silver-spray-eastland-disaster/Content?oid=8889155

U.S. Army Corps of Engineers (USACE). 2020. Great Lakes Hydraulics and Hydrology, Great Lakes Water Level Data, Monthly Mean Lakewide Average Water Levels. Accessed at: https://www.lre.usace.army.mil/Missions/Great-Lakes-Information/Great-Lakes-Information-2/Water-Level-Data/

USACE. 2020. Monthly Bulletin of Great Lakes Water Levels: Six-Month Forecast Bulletins. Accessed at: https://www.lre.usace.army.mil/Missions/Great-Lakes-Information/Great-Lakes-Water-Levels/Water-Level-Forecast/Monthly-Bulletin-of-Great-Lakes-Water-Levels/

U.S. Environmental Protection Agency (USEPA). 2020. USEPA Nonattainment Areas for Criteria Pollutants (Green Book). Accessed at: https://www3.epa.gov/airquality/greenbook/anayo_il.html

USFWS. 2019. Midwest Region Endangered Species: Fact Sheet Rusty Patched Bumble Bee (*Bombus affinis*). Accessed at: https://www.fws.gov/midwest/endangered/insects/rpbb/factsheetrpbb.html

USFWS. 2015. Midwest Region Endangered Species: Northern Long-Eared Bat (*Myotis septentrionalis*). Accessed at: https://www.fws.gov/midwest/endangered/mammals/nleb/nlebfactsheet.html

USFWS. 2009. Midwest Region Endangered Species: Prairie Bush Clover (*Lespedeza leptostachya*). Accessed at: https://www.fws.gov/midwest/endangered/plants/prairiebushclover/prairieb.html

USFWS. 2006. Midwest Region Endangered Species: Hine's Emerald Dragonfly (*Somatochlora hineana*). Accessed at: https://www.fws.gov/midwest/endangered/insects/hed/hins_fct.html

USFWS. 2005a. Midwest Region Endangered Species: Eastern Prairie Fringed Orchid (*Platanthera leucophaea*). Accessed at: https://www.fws.gov/midwest/endangered/plants/epfo/epfo.html

USFWS. 2005b. Midwest Region Endangered Species: Mead's Milkweed (*Asclepias meadii*). Accessed at: https://www.fws.gov/midwest/endangered/plants/meads/meadsmil.html

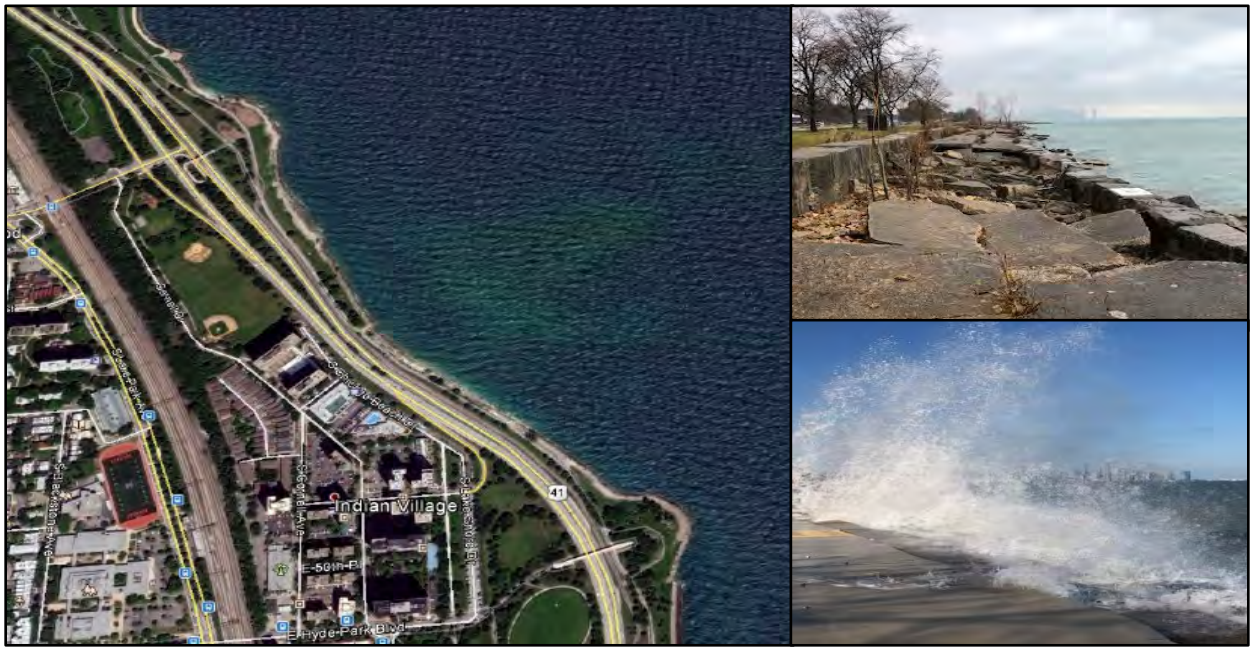
USFWS. 2001. Midwest Region Endangered Species: Piping Plover Fact Sheet. Accessed at: https://www.fws.gov/midwest/endangered/pipingplover/pipingpl.html

USFWS. 1997. Midwest Region Endangered Species: Leafy Prairie-clover (*Dalea foliosa*). Accessed at: https://www.fws.gov/midwest/endangered/plants/leafypra.html

APPENDIX A - Coordination

For

Chicago Shoreline 45th to 51st Street (Morgan Shoal) Storm Protection Emergency Repair, Chicago, Illinois



March 2020

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CHICAGO SHORELINE 45TH TO 51ST STREET (MORGAN SHOAL)
STORM PROTECTION EMERGENCY REPAIR
CHICAGO, ILLINOIS

APPENDIX A - COORDINATION

March 2020

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1.0 – U.S. Fish and Wildlife Service

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United States Department of the Interior

FISH AND WILDLIFE SERVICE
Chicago Ecological Service Field Office
U.s. Fish And Wildlife Service Chicago Ecological Services Office
230 South Dearborn St., Suite 2938
Chicago, IL 60604-1507
Phone: (312) 485-9337 Fax:
http://www.fws.gov/midwest/endangered/section7/s7process/7a2process.html

In Reply Refer To: January 16, 2020
Consultation Code: 03E13000-2020-SLI-0252
Event Code: 03E13000-2020-E-00576
Project Name: Chicago Shoreline Emergency Repairs (45th to 51st Streets)

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The attached species list identifies any federally threatened, endangered, proposed and candidate species that may occur within the boundary of your proposed project or may be affected by your proposed project. The list also includes designated critical habitat if present within your proposed project area or affected by your project. This list is provided to you as the initial step of the consultation process required under section 7(c) of the Endangered Species Act, also referred to as Section 7 Consultation.

Please note! For all **wind energy projects** and **projects that include installing towers that use guy wires or are over 200 feet in height**, please contact this field office directly for assistance, even if no federally listed plants, animals or critical habitat are present within your proposed project or may be affected by your proposed project.

For all other projects, continue the Section 7 Consultation process by going to our Section 7 Technical Assistance website at http://www.fws.gov/midwest/endangered/section7/s7process/index.html. If you are familiar with this website, you may want to go to Step 2 of the Section 7 Consultation process at http://www.fws.gov/midwest/endangered/section7/s7process/step2.html.

Under 50 CFR 402.12(e) (the regulations that implement Section 7 of the Endangered Species Act) the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally. You may verify the list by visiting the ECOS-IPaC website http://ecos.fws.gov/ipac/ at regular intervals during project planning and implementation and

completing the same process you used to receive the attached list. As an alternative, you may contact this Ecological Services Field Office for updates.

Although no longer protected under the Endangered Species Act, be aware that bald eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), as are golden eagles. Projects affecting these species may require measures to avoid harming eagles or may require a permit. If your project is near an eagle nest or winter roost area, see our Eagle Permits website at http://www.fws.gov/midwest/midwestbird/EaglePermits/index.html to help you determine if you can avoid impacting eagles or if a permit may be necessary.

We appreciate your concern for threatened and endangered species. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Chicago Ecological Service Field Office
U.s. Fish And Wildlife Service Chicago Ecological Services Office
230 South Dearborn St., Suite 2938
Chicago, IL 60604-1507
(312) 485-9337

Project Summary

Consultation Code: 03E13000-2020-SLI-0252

Event Code: 03E13000-2020-E-00576

Project Name: Chicago Shoreline Emergency Repairs (45th to 51st Streets)

Project Type: SHORELINE / BEACH PROTECTION / RENOURISHMENT

Project Description: Location of the project is the coastline of Lake Michigan (but not within the lake, just adjacent) between 45th and 51st Streets in Chicago, Cook County, Illinois. These are emergency repairs to the coastal protection that is already there due to the high lake levels.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/41.80657296135054N87.58491410611866W

Counties: Cook, IL

Endangered Species Act Species

There is a total of 10 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 1 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Birds

NAME	STATUS
Piping Plover *Charadrius melodus* Population: [Great Lakes watershed DPS] - Great Lakes, watershed in States of IL, IN, MI, MN, NY, OH, PA, and WI and Canada (Ont.) There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6039	Endangered
Red Knot *Calidris canutus rufa* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1864	Threatened

Reptiles

NAME	STATUS
Eastern Massasauga (=rattlesnake) *Sistrurus catenatus*	Threatened

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/2202

Insects

NAME	STATUS
Hine's Emerald Dragonfly *Somatochlora hineana*	Endangered

There is **final** critical habitat for this species. Your location is outside the critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/7877

Rattlesnake-master Borer Moth *Papaipema eryngii*	Candidate

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/7863

Flowering Plants

NAME	STATUS
Eastern Prairie Fringed Orchid *Platanthera leucophaea*	Threatened

No critical habitat has been designated for this species.
This species only needs to be considered under the following conditions:

- Follow the guidance provided at https://www.fws.gov/midwest/endangered/section7/s7process/plants/epfos7guide.html

Species profile: https://ecos.fws.gov/ecp/species/601
Species survey guidelines:
https://ecos.fws.gov/ipac/guideline/survey/population/984/office/31131.pdf

Leafy Prairie-clover *Dalea foliosa*	Endangered

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/5498

Mead's Milkweed *Asclepias meadii*	Threatened

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/8204

Prairie Bush-clover *Lespedeza leptostachya*	Threatened

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/4458

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

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

February 10, 2020

Planning Branch

Mr. Shawn Cirton
U.S. Fish and Wildlife Service
Chicago Illinois Field Office
230 South Dearborn St., Suite 2938
Chicago, IL 60604

Dear Mr. Cirton:

The U.S. Army Corps of Engineers (USACE), Chicago District, is undertaking emergency temporary storm damage protection construction between 45th and 51st Streets in Chicago, Cook County, Illinois (Enclosure 1). The shoreline in this area is a portion of the Chicago Shoreline project that had been identified for storm damage protection measures authorized by Congress in the Water Resources Development Act (WRDA 1996 and 1999). However, the portion of shoreline between 45th and 51st Streets (also known as the Morgan Shoal area) includes areas that have not been constructed and remain distressed in the face of near-record lake elevations and storms. Due to the proximity of the area to U.S. Highway 41 (i.e., Lake Shore Drive), a major transportation artery in the City of Chicago, and the near record lake levels combined with the deteriorated conditions make it necessary to perform emergency temporary storm damage protection construction.

The Proposed Emergency Project includes the following components (Enclosure 2):

- Demolition of concrete slab portions that have been undermined and rendered unstable;
- Injection of Controlled Low Strength Material (CLSM) under portions of the concrete protection that has been undermined but with this stabilization will support loads imposed by construction and placement of supplemental revetment;
- Supplementing existing and damaged areas of revetment with large riprap; and,
- Placement of large concrete block on paved areas to provide additional protection.

Since this is an emergency construction project, the contract for the proposed project is anticipated to be awarded in February 2020. Construction activities are anticipated to begin in mid-March 2020, with completion anticipated by the end of April 2020.

As part of Section 7 of the Endangered Species Act, Federal agencies are directed to ensure that the actions they take, including those they fund or authorize, do not jeopardize the existence of any listed species. This memorandum initiates the Section 7 consultation process for the Chicago Shoreline 45th to 51st Street (Morgan Shoal) Storm Protection Emergency Repair, Chicago, Illinois. USACE used the U.S. Fish and Wildlife Service's Environmental Conservation Online System Information for Planning and Consultation (ECOS-IPaC) to obtain an official species list dated January 16, 2020. Ten federally listed threatened, endangered, or candidate species were identified as potentially occurring within the proposed project area. Critical habitat has been designated for the piping plover and the Hine's emerald dragonfly; however, the project location is outside the critical habitat area for both of these species. The following includes the assessment by the USACE with regard to potential impacts to listed

species from implementation of the proposed project. This assessment is also included in the draft environmental assessment that has been prepared for the proposed project.

Federally-listed Species with the Potential of Occurring within the Project Area.

Name	Federal Status	Habitat	Potential to Occur
northern long-eared bat (*Myotis septentrionalis*)	Threatened	Hibernates in caves and mines – swarming in surrounding wooded areas in autumn. Roosts and forages in upland forests and woods during the summer.	**Not expected to occur**; lack of suitable habitat.
piping plover (*Charadrius melodus*)	Endangered	Found along Lake Michigan beaches.	**Not expected to occur**; lack of suitable habitat.
rufa red knot (*Calidris canutus rufa*)	Threatened	Found in coastal areas or large wetland complexes. Migratory window is May 1 through September 30.	**Not expected to occur**; lack of suitable habitat.
eastern massasauga (*Sistrurus catenatus*)	Threatened	Found in graminoid dominated plant communities (e.g., fens, sedge meadows, peatlands, wet prairies, open woodlands, and shrublands).	**Not expected to occur**; lack of suitable habitat.
Hine's emerald dragonfly (*Somatochlora hineana*)	Endangered	Found in spring fed wetlands, wet meadows and marshes. Critical habitat has been designated for this species within Cook County; however, it is not within the vicinity of the project footprint.	**Not expected to occur**; lack of suitable habitat.
rattlesnake-master borer moth (*Papaipema eryngii*)	Candidate	Found in undisturbed prairie and woodland openings that contain their only food plant, rattlesnake-master (*Eryngium yuccifolium*).	**Not expected to occur**; lack of suitable habitat.
rusty patched bumble bee (*Bombus affinis*)	Endangered	Found in grasslands with flowering plants from April through October, underground and abandoned rodent cavities or clumps of grasses above ground as nesting sites, and undisturbed soil for	**Not expected to occur**; lack of suitable habitat.

Name	Federal Status	Habitat	Potential to Occur
		hibernating queens to overwinter.	
eastern prairie fringed orchid (*Platanthera leucophaea*)	Threatened	Found in mesic to wet prairies.	**Not expected to occur**; lack of suitable habitat.
prairie bush clover (*Lespedeza leptostachya*)	Threatened	Found in dry to mesic prairies with gravelly soil.	**Not expected to occur**; lack of suitable habitat.
leafy prairie-clover (*Dalea foliosa*)	Endangered	Found in prairie remnants along the Des Plaines River in Illinois, in thin soils over limestone substrate.	**Not expected to occur**; lack of suitable habitat.
Mead's milkweed (*Asclepias meadii*)	Threatened	Found in moderately wet to moderately dry upland tallgrass prairie or glade/barren habitat characterized by vegetation adapted for drought and fire. Persists in stable late-successional prairie.	**Not expected to occur**; lack of suitable habitat.

Northern Long-eared Bat
Status. The northern long-eared bat (*Myotis septentrionalis*) is federally listed as threatened.

Distribution and Habitat. The northern long-eared bat's range includes much of the eastern and north central United States. The species' range contains 37 states, including Illinois. During the summer, northern long-eared bats roost singly or in colonies underneath bark, in cavities or in crevices of both live trees and snags. Males and non-reproductive females may also roost in cooler places, like caves and mines. During the winter, northern long-eared bats hibernate in caves and mines (USFWS 2015).

Potential for Occurrence. There are no known hibernacula within the vicinity of the project. In addition, there is no suitable roosting habitat present at the project location. Therefore, this species is not expected to occur within the vicinity of the project location.

Piping Plover
Status. The piping plover (*Charadrius melodus*) is federally listed as endangered.

Distribution and Habitat. Piping plovers are migratory birds. In the spring and summer they breed in the northern United States and Canada. There are three locations where piping plovers nest in North American: the shorelines of the Great Lakes, the shores of rivers and lakes in the Northern Great Plains, and along the Atlantic Coast. In the fall, plovers migrate south and winter along the coast of the Gulf of Mexico or other southern locations. Piping plovers use wide, flat, open, sandy beaches with very little grass or other vegetation. Nesting territories often include small creeks or wetlands (USFWS 2001).

Potential for Occurrence. In 2018 a pair of piping plovers nested at Montrose Beach in Chicago. Montrose Beach is located approximately 11 miles north of the project location. With regard to the project location, there is no suitable nesting habitat present for the piping plover. Nearest suitable beach habitat is located approximately 1 mile north at 41st Street beach and 1 mile south at 57th Street beach. Since there is no suitable habitat for piping plover within the immediate vicinity of the project location, this species is not expected to occur.

Rufa Red Knot
Status. The rufa red knot (*Calidris canutus rufa*) is federally listed as threatened.

Distribution and Habitat. The rufa red knot nesting range centers in Canada north of the Arctic Circle. Range during the winter primarily is in southern South America. The rufa red knot is known to migrate along the Great Lakes Flyway which includes the Chicago area. The migratory period for the species extends from May 1 through September 30. The rufa red knot uses different habitats for breeding, wintering, and migration. Breeding habitats are elevated and sparsely vegetated ridges or slopes. They are often adjacent to wetlands and lake edges for feeding. Wintering and migration habitats are often muddy or sandy coastal areas, such as the mouths of bays and estuaries, and tidal flats (NatureServe 2019).

Potential for Occurrence. The rufa red knot, which could potentially migrate through the area, would primarily be utilizing sand and dune habitat. With regard to the project location, there is no suitable migration habitat present for the rufa red knot. Nearest suitable sand and dune habitat is located approximately 1 mile north at 41st Street beach and 1 mile south at 57th Street beach. Since there is no suitable habitat for rufa red knot within the immediate vicinity of the project location, this species is not expected to occur.

Eastern Massasaugua
Status. The eastern massasauga (*Sistrurus catenatus*) is federally listed as threatened.

Distribution and Habitat. Eastern massasaugas live in an area that extends from central New York and southern Ontario to southcentral Illinois and eastern Iowa. Historically, the snake's range covered this same area, but within this large area the number of populations and numbers of snakes within populations have steadily shrunk. Generally, only small, isolated populations remain. Massasaugas live in wet areas including wet prairies, marshes, and low areas along rivers and lakes. In many areas massasaugas also use adjacent uplands during part of the year. They often hibernate in crayfish burrows but may also be found under logs and tree roots or in small mammal burrows.

Potential for Occurrence. There is no suitable habitat (e.g., fens, sedge meadows, peatlands, wet prairies, open woodlands, and shrublands) within the vicinity of the project for this species. Therefore, the eastern massasauga is not expected to occur within the vicinity of the project location.

Hine's Emerald Dragonfly
Status. The Hine's emerald dragonfly (*Somatochlora hineana*) is federally listed as endangered.

Distribution and Habitat. Historically, the Hine's emerald dragonfly was found in Alabama, Indiana, and Ohio and probably has been extirpated in those states. Today the dragonfly can only be found in Illinois, Michigan, Missouri, and Wisconsin. The Hine's emerald dragonfly lives in calcareous (high in calcium carbonate) spring-fed marshes and sedge meadows overlaying dolomite bedrock (USFWS 2006).

Potential for Occurrence. There is no suitable habitat within the vicinity of the project for this species. Therefore, the Hine's emerald dragonfly is not expected to occur within the project area.

Rattlesnake-master borer moth
Status. The rattlesnake-master borer moth (*Papaipema eryngii*) is a federal candidate species for listing.

Distribution and Habitat. This species is endemic to the continental United States and its range includes Arkansas, Illinois, Indiana, Iowa, Kentucky, North Carolina, and Oklahoma. It is presumed to have occurred from Missouri and the states between the prairie region and North Carolina, although no records are known from these areas. Rattlesnake-master borer moths are obligate residents of undisturbed prairie and woodland openings that contain their only food plant, rattlesnake-master (Mankowski et al. 2014).

Potential for Occurrence. This species has been observed in Cook County since 2002, however, it was observed further south in the county and further west of the lake. In addition to having never been observed within the vicinity of the project, there is no suitable habitat for this species present in the area. Therefore, this species is not expected to occur within the project area.

Rusty Patched Bumble Bee
Status. The rusty patched bumble bee (*Bombus affinis*) is federally listed as endangered.

Distribution and Habitat. Historically, the rust patched bumble bee was broadly distributed across the eastern United States and Upper Midwest, from Maine in the U.S. and southern Quebec and Ontario in Canada, south to the northeast corner of Georgia, reaching west to the eastern edges of North and South Dakota. The species has been reported from 13 states, including Illinois. Rusty patched bumble bees once occupied grasslands and tallgrass prairies of the Upper Midwest and Northeast (USFWS 2019).

Potential for Occurrence. The rusty patched bumble bee map (https://www.fws.gov/midwest/endangered/insects/rpbb/rpbbmap.html) was used to determine if there were any areas of high potential for this species within the vicinity of the project location. Per the mapper, the closest area with high potential for the rust patched bumble bee is approximately 10 miles northwest of the project location. In addition, there is no suitable habitat present at the site for the rusty patched bumble bee. Therefore, this species is not expected to occur within the project area.

Eastern Prairie Fringed Orchid
Status. The eastern prairie fringed orchid (*Platanthera leucophaea*) is federally listed as threatened.

Distribution and Habitat. The range of this species occurs mostly east of the Mississippi River in fewer than 60 sites in Illinois, Iowa, Maine, Michigan, Ohio, Virginia, Wisconsin, and in Ontario, Canada. The eastern prairie fringed orchid occurs in a wide variety of habitats, from mesic prairie to wetlands such as sedge meadows, marsh edges, even bogs. A symbiotic relationship between the seed and soil fungi, called mycorrhizae, is necessary for seedlings to become established (USFWS 2005a).

Potential for Occurrence. There is no suitable habitat within the vicinity of the project for this species. Therefore, the eastern prairie fringed orchid is not expected to occur within the project area.

Prairie Bush Clover
Status. The prairie bush clover (*Lespedeza leptostachya*) is federally listed as threatened.

Distribution and Habitat. The prairie bush clover is endemic to the tallgrass prairie region of the upper Mississippi River Valley in the Midwestern United States (USFWS 2009).

Potential for Occurrence. There is no suitable habitat within the vicinity of the project for this species. Therefore, the prairie bush clover is not expected to occur within the project area.

Leafy Prairie-Clover
Status. The leafy prairie-clover (*Dalea foliosa*) is federally listed as endangered.

Distribution and Habitat. This species is found in prairie remnants along the Des Plaines River in Illinois, in this soils over limestone substrate. It favors sites with a wet spring and fall and a dry summer (USFWS 1997).

Potential for Occurrence. There is no suitable habitat within the vicinity of the project for this species. Therefore, the leafy prairie-clover is not expected to occur within the project area.

Mead's Milkweed
Status. The Mead's milkweed (*Asclepias meadii*) is federally listed as threatened.

Distribution and Habitat. This milkweed formerly occurred throughout the eastern tallgrass prairie region of the central United States, from Kansas through Missouri and Illinois and north to southern Iowa and northwest Indiana. Mead's milkweed requires moderately wet to moderately dry upland tallgrass prairie or glade/barren habitat characterized by vegetation adapted for drought and fire. It persists in stable late-successional prairie (USFWS 2005b).

Potential for Occurrence. There is no suitable habitat within the vicinity of the project for this species. Therefore, Mead's milkweed is not expected to occur within the project area.

Based on the information presented above, the USACE has determined that the project will have "no affect" on listed species, their habitats, or proposed or designated critical habitat. Please provide any comments, concerns, or questions you may have regarding this proposed project and the USACE's "no effect" determination within 30 days of receipt of this letter. Address your responses to Mrs. Shawna Herleth-King of our Planning Branch by telephone (312) 846-5407, in writing to our address above (ATTN: Planning Branch – Herleth-King), or email: Shawna.S.Herleth-King@usace.army.mil.

Enclosures (2)

Sincerely,

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

References:

Mankowski, A., T. Esker, and J. Walk. 2014. Final Recovery Planning Outline with Listing Status Review Triggers for the Illinois Endangered Eryngium Stem Borer (*Papaipema eryngii*). Accessed at: https://www.dnr.illinois.gov/ESPB/Documents/Recovery%20Docs/recovery_planning_outline_papaipema_eryngii_Final_062514.pdf

NatureServe. 2019. Explorer: Calidris canutus rufa (Red Knot). Accessed at: http://explorer.natureserve.org/servlet/NatureServe?searchName=Calidris+canutus+rufa

USFWS. 2019. Midwest Region Endangered Species: Fact Sheet Rusty Patched Bumble Bee (*Bombus affinis*). Accessed at: https://www.fws.gov/midwest/endangered/insects/rpbb/factsheetrpbb.html

USFWS. 2015. Midwest Region Endangered Species: Northern Long-Eared Bat (*Myotis septentrionalis*). Accessed at: https://www.fws.gov/midwest/endangered/mammals/nleb/nlebfactsheet.html

USFWS. 2009. Midwest Region Endangered Species: Prairie Bush Clover (*Lespedeza leptostachya*). Accessed at: https://www.fws.gov/midwest/endangered/plants/prairiebushclover/prairieb.html

USFWS. 2006. Midwest Region Endangered Species: Hine's Emerald Dragonfly (*Somatochlora hineana*). Accessed at: https://www.fws.gov/midwest/endangered/insects/hed/hins_fct.html

USFWS. 2005a. Midwest Region Endangered Species: Eastern Prairie Fringed Orchid (*Platanthera leucophaea*). Accessed at: https://www.fws.gov/midwest/endangered/plants/epfo/epfo.html

USFWS. 2005b. Midwest Region Endangered Species: Mead's Milkweed (*Asclepias meadii*). Accessed at: https://www.fws.gov/midwest/endangered/plants/meads/meadsmil.html

USFWS. 2001. Midwest Region Endangered Species: Piping Plover Fact Sheet. Accessed at: https://www.fws.gov/midwest/endangered/pipingplover/pipingpl.html

USFWS. 1997. Midwest Region Endangered Species: Leafy Prairie-clover (*Dalea foliosa*). Accessed at: https://www.fws.gov/midwest/endangered/plants/leafypra.html

Enclosure 1

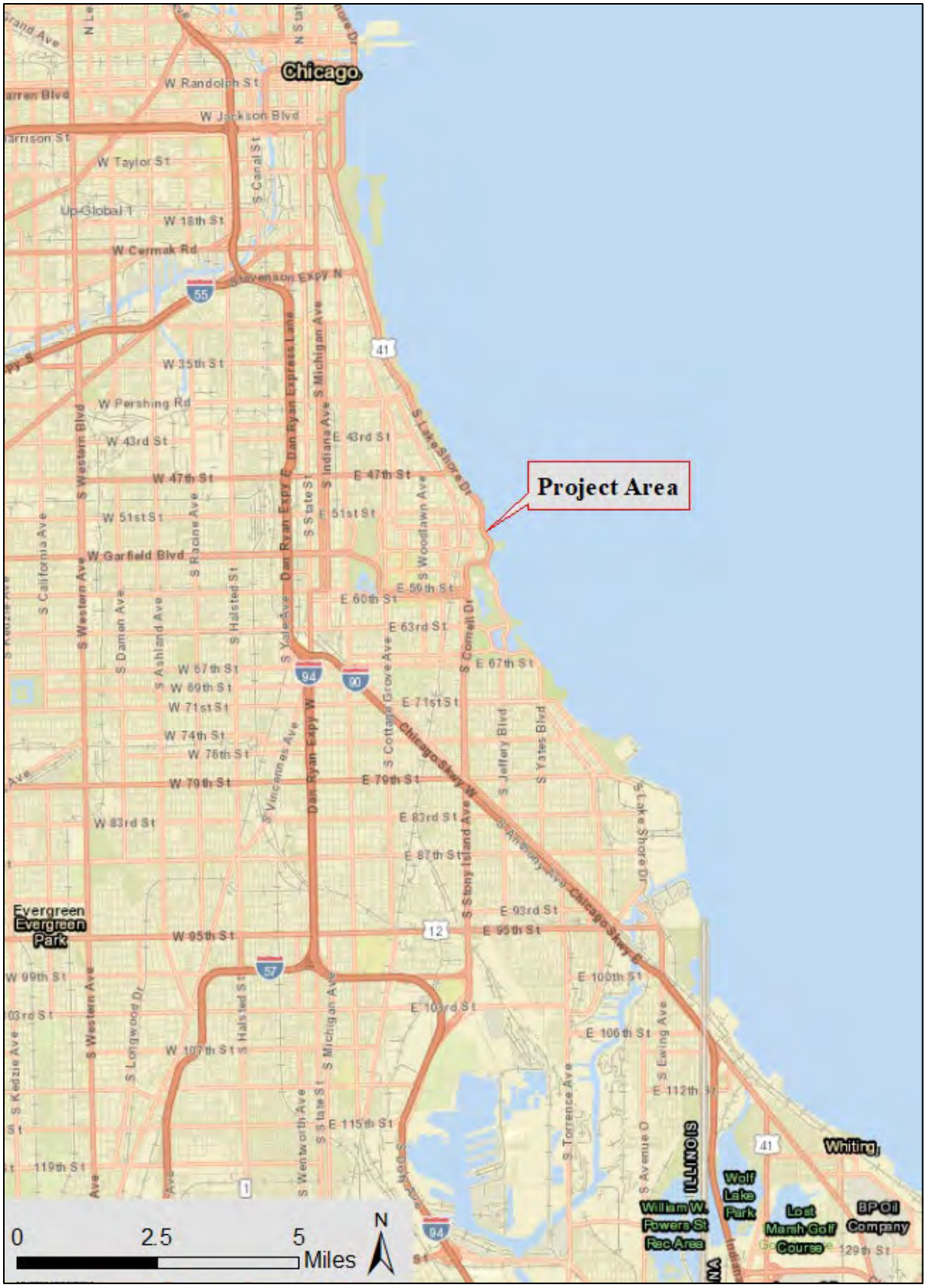

Figure 1: Location of Project Area within the Chicago Region.

Enclosure 1

Figure 2: Aerial of Project Area.

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Enclosure 2

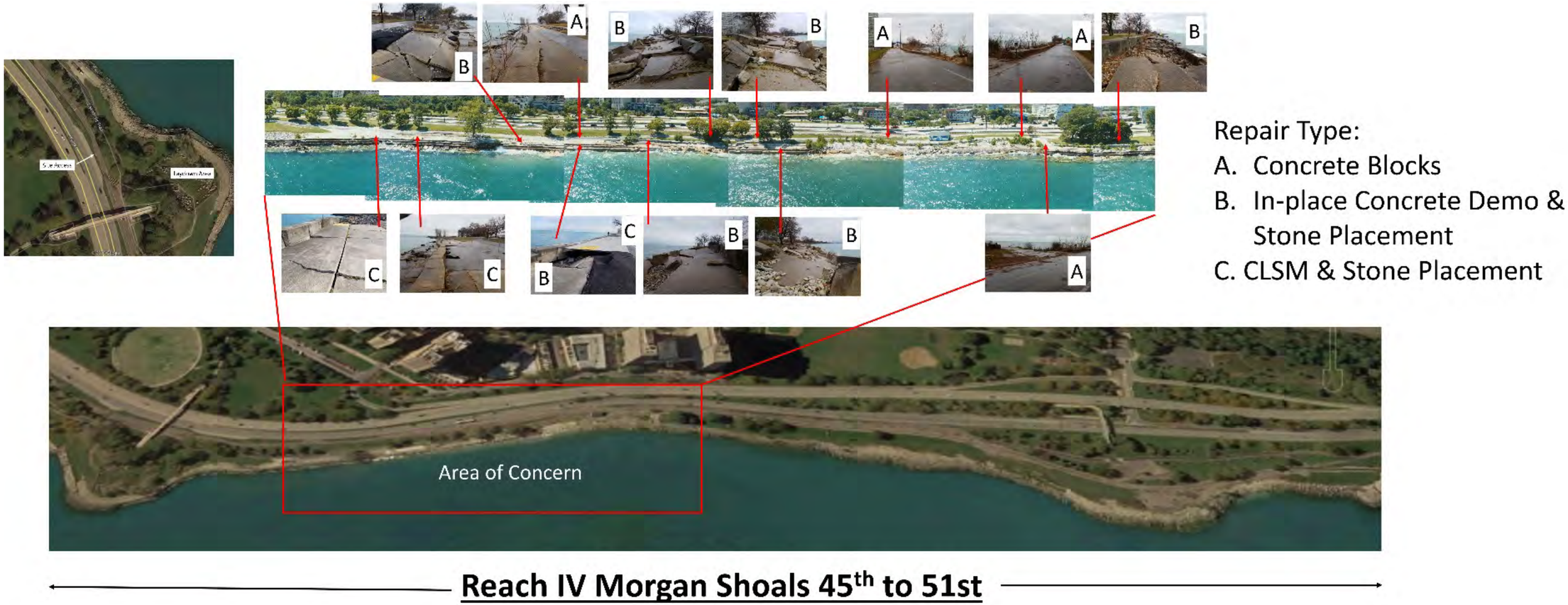

Figure 3: Draft Scope of Proposed Project

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

February 10, 2020

NO OBJECTION
U.S. Fish & Wildlife Services
Chicago Illinois Field Office
Acting Supervisor Shawn Cirton 2-14-2020
Date

Planning Branch

Mr. Shawn Cirton
U.S. Fish and Wildlife Service
Chicago Illinois Field Office
230 South Dearborn St., Suite 2938
Chicago, IL 60604

Dear Mr. Cirton:

The U.S. Army Corps of Engineers (USACE), Chicago District, is undertaking emergency temporary storm damage protection construction between 45th and 51st Streets in Chicago, Cook County, Illinois (Enclosure 1). The shoreline in this area is a portion of the Chicago Shoreline project that had been identified for storm damage protection measures authorized by Congress in the Water Resources Development Act (WRDA 1996 and 1999). However, the portion of shoreline between 45th and 51st Streets (also known as the Morgan Shoal area) includes areas that have not been constructed and remain distressed in the face of near-record lake elevations and storms. Due to the proximity of the area to U.S. Highway 41 (i.e., Lake Shore Drive), a major transportation artery in the City of Chicago, and the near record lake levels combined with the deteriorated conditions make it necessary to perform emergency temporary storm damage protection construction.

The Proposed Emergency Project includes the following components (Enclosure 2):

- Demolition of concrete slab portions that have been undermined and rendered unstable;
- Injection of Controlled Low Strength Material (CLSM) under portions of the concrete protection that has been undermined but with this stabilization will support loads imposed by construction and placement of supplemental revetment;
- Supplementing existing and damaged areas of revetment with large riprap; and,
- Placement of large concrete block on paved areas to provide additional protection.

Since this is an emergency construction project, the contract for the proposed project is anticipated to be awarded in February 2020. Construction activities are anticipated to begin in mid-March 2020, with completion anticipated by the end of April 2020.

As part of Section 7 of the Endangered Species Act, Federal agencies are directed to ensure that the actions they take, including those they fund or authorize, do not jeopardize the existence of any listed species. This memorandum initiates the Section 7 consultation process for the Chicago Shoreline 45th to 51st Street (Morgan Shoal) Storm Protection Emergency Repair, Chicago, Illinois. USACE used the U.S. Fish and Wildlife Service's Environmental Conservation Online System Information for Planning and Consultation (ECOS-IPaC) to obtain an official species list dated January 16, 2020. Ten federally listed threatened, endangered, or candidate species were identified as potentially occurring within the proposed project area. Critical habitat has been designated for the piping plover and the Hine's emerald dragonfly; however, the project location is outside the critical habitat area for both of these species. The following includes the assessment by the USACE with regard to potential impacts to listed

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2.0 – State Historic Preservation Office

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

February 25, 2020

Planning Branch

Ms. Carol Wallace
Illinois State Historic Preservation Office
Old State Capitol Building, 2nd Floor
One Old State Capitol Plaza
Springfield, IL 62701

Dear Ms. Wallace:

The U.S. Army Corps of Engineers (USACE), Chicago District, is undertaking emergency temporary storm damage protection construction between 45th and 51st Streets in Chicago, Cook County, Illinois (Enclosure 1). The purpose of this letter is to provide notification of this action under Section 106 of the National Historic Preservation Act. Since this is an emergency action in response to an immediate threat to property, the USACE is following procedures outlined in 36 CFR Section 800.12(b)(2).

The area is a portion of the Chicago Shoreline project that had been identified for storm damage protection measures authorized by Congress in the Water Resources Development Act (WRDA 1996 and 1999). However, the area between 45th and 51st Streets (also known as the Morgan Shoal area) includes portions that have not been constructed and remain distressed in the face of near-record lake elevations and storms. Due to the proximity of the area to U.S. Highway 41 (i.e., Lake Shore Drive), a major transportation artery in the City of Chicago, and the near record lake levels combined with the deteriorated conditions make it necessary to perform emergency temporary storm damage protection construction.

The Proposed Emergency Project includes the following components (Enclosure 2):

- Demolition of concrete slab portions that have been undermined and rendered unstable;
- Injection of Controlled Low Strength Material (CLSM) under portions of the concrete protection that has been undermined but with this stabilization will support loads imposed by construction and placement of supplemental revetment;
- Supplementing existing and damaged areas of revetment with large riprap; and,
- Placement of large concrete block on paved areas to provide additional protection.

Since this is an emergency action, the contract for the project is anticipated to be awarded in February 2020. Construction activities are anticipated to begin in mid-March 2020, with completion anticipated by the end of April 2020. Planning and development of the emergency project has identified the Area of Potential Effect (APE). The above project components are all within the Project APE, between 45th and 51st Streets and the APE consists of approximately 3.5 terrestrial acres (Enclosure 3).

Within the Project APE, the Lake Michigan shoreline consists entirely of post-1920 landfill, armored with deteriorated limestone-block revetments (installed in 1925) and topped with a concrete walkway (built ca. 1946-1949). A search of the National Register of Historic Places

Within a 0.25 mile radius of the Project APE is the Hyde Park-Kenwood Historic District (Reference Number 79000824) located just west of the project location across South Shore Drive (Enclosure 3 and Enclosure 4). The Historic District is roughly bounded by 47th Street, Cottage Grove Avenue to 59th Street, and Lake Park Avenue in Chicago, IL. The Historic District includes multiple domestic dwellings, educations buildings, religious buildings, and landscapes from the late 19th and early 20th centuries. In addition, the Narragansett (Reference Number 05000107) and the Chicago Beach Hotel (Reference Number 86001193) are historic places listed on the National Register that are also within a 0.25 mile radius of the Project APE (Enclosure 3 and Enclosure 4). The Narragansett is a historic apartment building located at 1640 E. 50th Street, Chicago, IL. The Chicago Beach Hotel is located at 5100 S. Cornell Avenue, Chicago, IL. The USACE could not find any reference to other historic places on the National Register, other than those listed above, within a 0.25 mile radius of the Project APE.

Although not listed on the NRHP, the Project APE is near the remains (e.g., the ship's metal boiler, propeller, etc.) of the Silver Spray wreck located in Lake Michigan at the Morgan Shoal area (Enclosure 3 and Enclosure 4). The Silver Spray, a 109-foot passenger steamer, ran aground the Morgan Shoal in July 1914, just a few hundred feet off Hyde Park's 49th Street Beach.

Given the extent of the ground disturbance that occurred during the installation of the original armoring, it is unlikely that any intact archeological sites remain within the APE. In the event that archeological material or human remains are discovered during the proposed undertaking, the work near the discovery will be halted as soon as is possible from a safety standpoint and the USACE shall engage in consultation with the Illinois State Historic Preservation Office, federally recognized tribes, and other consulting parties.

Due to the location of the above cultural resources listed in the NRHP in relation to the APE, the USACE has determined that the proposed emergency action would have "no effect" to historic properties as there are no known properties eligible for or listed on the NRHP within the APE. The USACE is interested in any concerns your agency may have regarding the emergency action and we request concurrence of "no historic properties affected" for the APE. If no comments or response is received within 7 days receipt of this correspondence, the USACE will assume that your agency agrees with our findings and has no concerns. Any questions regarding this correspondence can be directed to Ms. Shawna Herleth-King of my staff at (312) 846-5407 or Shawna.S.Herleth-King@usace.army.mil.

Sincerely,

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

Enclosures (4)

Similar Letters Sent to:

Ms. Jaime Loichinger, Assistant Director
Advisory Council on Historic Preservation
401 F Street NW, Suite 308
Washington, DC 20001

Dr. John Eddins, Program Analyst
Advisory Council on Historic Preservation
401 F Street NW, Suite 308
Washington, DC 20001

Ms. Carol Wallace, Cultural Resources Coordinator
Illinois State Historic Preservation Office
Old State Capitol Building, 2nd Floor
One Old State Capitol Plaza
Springfield, IL 62701

Kickapoo Tribe of Oklahoma
P.O. Box 70
McCloud, OK 74851
Attn: Mr. Estavio Elzondo, Chairman

Little Traverse Bay Bands of Odawa Indians
7500 Odawa Circle
Harbor Springs, MI 49740
Attn: Mr. Wesley Andrews, Tribal Historic Preservation Officer

Menominee Indian Tribe of Wisconsin
P.O. Box 910
Keshena, WI 54135
Attn: Mr. David Grignon, Tribal Historic Preservation Officer

Kickapoo of Kansas
1107 Goldfinch Rd.
Horton, KS 66439
Attn: Mr. Lester Randall, Chairman

Kickapoo Traditional Tribe of Texas
HC 1 Box 9700
Eagle Pass, TX 78852-9752
Attn: Ms. Jennie Hernandez, Tribal Administrator

Miami Tribe of Oklahoma
P.O. Box 1326
Miami, OK 74355
Attn: Ms. Diana Hunter, Tribal Historic Preservation Officer

Citizen Potawatomi Nation
1899 S. Gordon Cooper Dr.
Shawnee, OK 74801
Attn: Ms. Kelli Mosteller, Tribal Historic Preservation Officer

Forest County Potawatomi Community of Wisconsin
5320 Wensaut Lane
P.O. Box 340
Crandon, WI 54520
Attn: Mr. Michael LaRonge, Tribal Historic Preservation Officer

Nottawaseppi Huron Band of the Potawatomi
2221 One-and-a-half Mile Rd.
Fulton, MI 49052
Attn: Mr. Homer Mandoka, Chairperson

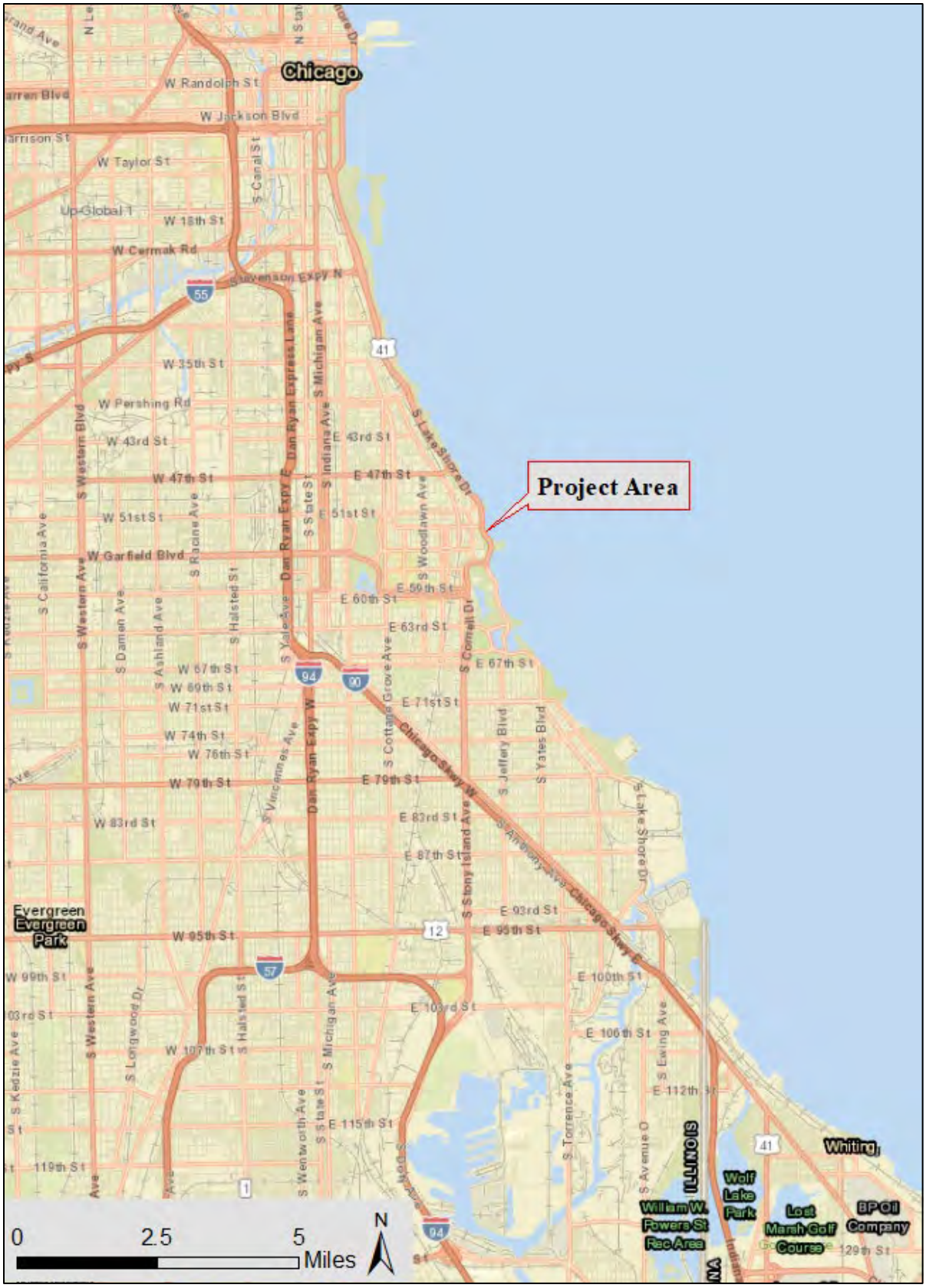
Hannahville Indian Community
N 14911 Hannahville B1 Road
Wilson, MI 49896
Attn: Mr. Kenneth Meshigaud, Chairperson

Prairie Band Potawatomi Nation
16280 Q Rd.
Mayetta, KS 66509
Attn: Mr. Thomas Wabmum, Tribal Historic Preservation Officer

Pokagon Band of Potawatomi Indians
P.O. Box 180
Dowagiac, MI 49047
Attn: Mr. Marcus Winchester, Tribal Historic Preservation Officer

Ho-Chunk Nation
P.O. Box 667
Black River Falls, WI 54615
Attn: Mr. William Quackenbush, Tribal Historic Preservation Officer

Enclosure 1: General Location of the Emergency Project in the Chicago Region.



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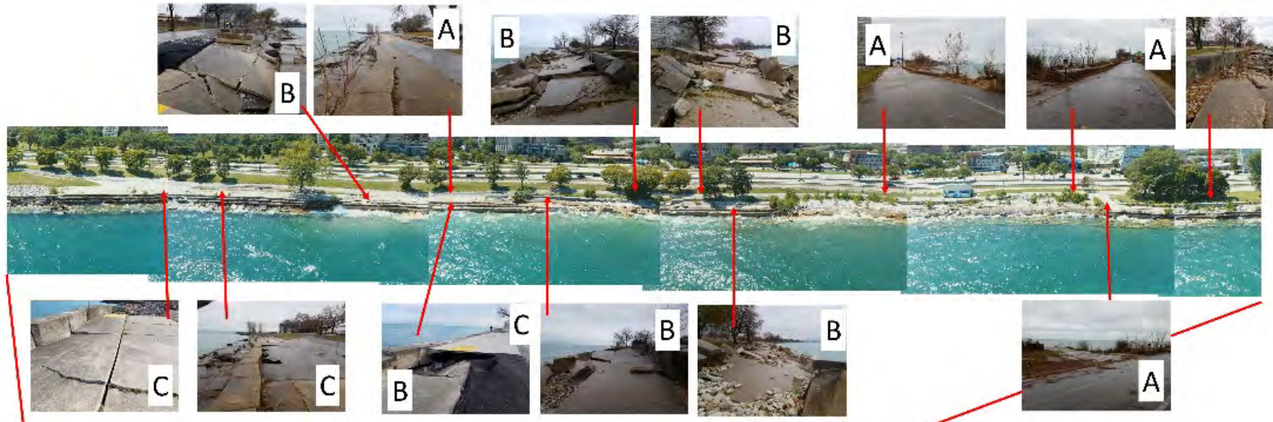
Enclosure 2: Map of the Emergency Project Components and General Area where Components would be Implemented.



Repair Type:

A. Concrete Blocks
B. In-place Concrete Demo & Stone Placement
C. CLSM & Stone Placement

Reach IV Morgan Shoals 45th to 51st

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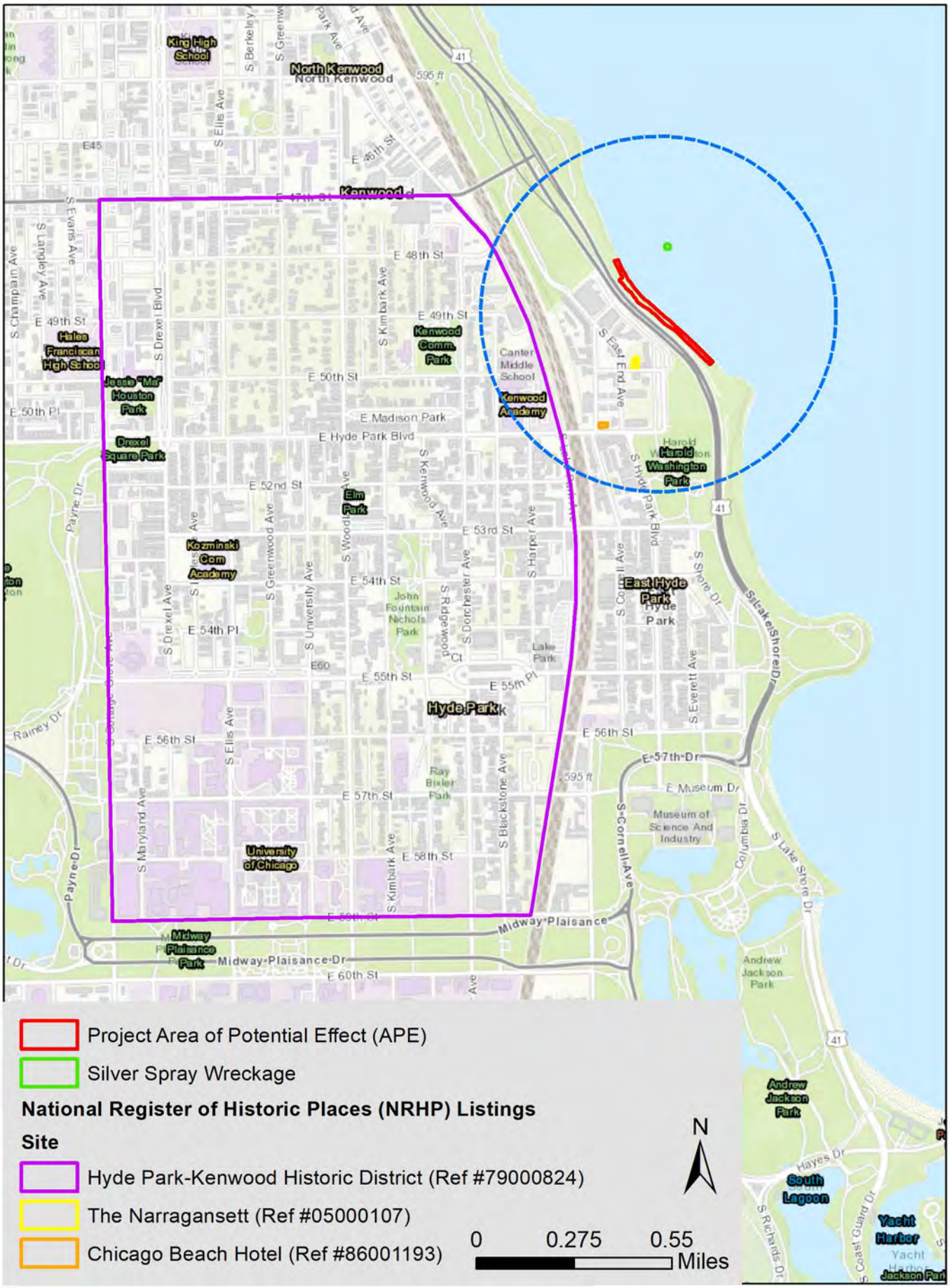
Enclosure 3: Map of the Project's Area of Potential Effect (APE) and Historical Resources Located within a 0.25 Mile Radius (Blue Dashed Line) of the APE.

Enclosure 4: Map of the Project's Area of Potential Effect (APE) and Historical Resources Located within a 0.25 Mile Radius (Blue Dashed Line) of the APE.



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: Shawna.S.Herleth-King@usace.army.mil

February 26, 2020

Ms. Shawna Herleth-King
U.S. Army Corps of Engineers, Chicago District
231 South LaSalle Street, Suite 1500
Chicago, IL 60604

Re: Emergency temporary storm damage protection construction between 45th and 51st Streets, Chicago – Comments of the Miami Tribe of Oklahoma

Dear Ms. Herleth-King:

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

Diane Hunter
Tribal Historic Preservation Officer

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ILLINOIS
DEPARTMENT OF NATURAL RESOURCES

Illinois Department of Natural Resources

One Natural Resources Way Springfield, Illinois 62702-1271
www.dnr.illinois.gov
Mailing Address: 1 Old State Capitol Plaza, Springfield, IL 62701

JB Pritzker, Governor
Colleen Callahan, Director

FAX (217) 524-7525

Cook County
Chicago
Emergency Temporary Storm Damage Protection Construction
Reach IV, Morgan Shoals, 45th St. to 51st St.
SHPO Log #005022520

March 2, 2020

Shawna Herleth-King
Department of the Army
U.S. Army Corps of Engineers, Chicago District
231 S. LaSalle St., Suite 1500
Chicago, IL 60604

Dear Ms. Herleth-King:

We have reviewed the documentation provided for the referenced project. Burnham Park, of which Morgan Shoal is a component, is eligible for listing to the National Register of Historic Places. It is included as a resource in the Historic Resources of the Chicago Park District Multiple Property Documentation Form approved by the National Park Service on May 21, 1990, and it was covered under the now-expired Memorandum of Agreement for the Illinois Shoreline Erosion Interim 3 Project, executed on August 16, 1993.

In our opinion the emergency project meets the Secretary of the Interior's "Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings" and we concur in a finding of no adverse effect pursuant to 36 CFR Part 800 provided that the following condition is met:

1. All historic limestone blocks must remain on the site. They must not be broken up or covered by the proposed new riprap. Because their positions have shifted over time, the historic blocks may be relocated as needed along the shoreline within Morgan Shoals.

Notifying our office of agreement with these conditions and their subsequent implementation constitutes compliance with Section 106 of the National Historic Preservation Act of 1966, as amended.

If you have any questions, please call 217/782-4836.

Sincerely,

Robert F. Appleman
Deputy State Historic
Preservation Officer

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

March 11, 2020

Planning Branch

Mr. Robert F. Appleman
State Historic Preservation Office
Illinois Department of Natural Resources
1 Old State Capitol Plaza
Springfield, IL 62701

Dear Mr. Appleman:

The U.S. Army Corps of Engineers (USACE), Chicago District, notified the State Historic Preservation Office (SHPO) concerning the emergency temporary storm damage protection construction between 45th and 51st Streets in Chicago, Cook County, Illinois via letter dated February 25, 2020 (Enclosure 1). The initial letter was logged by your agency as SHPO Log #005022520. Your agency provided a response letter to our notification on March 2, 2020 (Enclosure 2). The letter noted that the SHPO concurred with the USACE's finding of 'no adverse effect' providing that the following condition is met during construction of the emergency project:

1. All historic limestone blocks must remain on site. They must not be broken up or covered by the proposed new riprap. Because their positions have shifted over time, the historic blocks may be relocated as needed along the shoreline within Morgan Shoals.

This letter serves as notification to the SHPO that the USACE is unable to meet the above condition and requests that the SHPO reconsider the condition as stated. On March 10, 2020, the USACE followed up with the SHPO via telephone call to discuss the condition placed on the emergency action. During the call it was reiterated that the proposed project is an emergency measure to prevent the ongoing erosion of the lakefront toward Lake Shore Drive due to unusually high lake levels in 2019 and 2020. The emergency action is an interim measure and is not part of the comprehensive rehabilitation project proposed for the Morgan Shoal area that is part of the Chicago Shoreline Project.

Currently, the comprehensive rehabilitation project proposed for the Morgan Shoal area is one of the two remaining segments of the Chicago Shoreline Project, which began in 1999, awaiting funding to proceed into the detailed design phase. The rehabilitation project (Enclosure 3) is estimated to cost approximately $126,000,000 and will comprehensively restore the Morgan Shoal segment of shoreline. The final design of the Morgan Shoal segment of the Chicago Shoreline Project has not yet been initiated, but when commenced in the future, one of the first orders of business would be to coordinate with the SHPO as required for federal projects.

Meanwhile, the proposed interim emergency action will temporarily protect Lake Shore Drive and preserve the status of the current shoreline to avoid higher costs for the planned future rehabilitation project. With regard to the proposed interim emergency action, the USACE will

take every precaution to avoid breaking up the historic limestone blocks as stated in the above condition by the SHPO. However, according to the interim emergency action design, it will be impossible to avoid covering up the historic limestone blocks with erosion prevention materials such as riprap (a requirement of the condition).

In light of the additional contextual information that was provided via the March 10, 2020 phone call and the additional information provided in this letter, the USACE requests that the SHPO reconsider the condition discussed above. The USACE thanks the SHPO for their timely coordination with regard to this emergency action. Any questions regarding this correspondence can be directed to Ms. Shawna Herleth-King of my staff at (312) 846-5407 or Shawna.S.Herleth-King@usace.army.mil.

Sincerely,

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

Enclosures (3)

Enclosure 1

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

February 25, 2020

Planning Branch

Ms. Carol Wallace
Illinois State Historic Preservation Office
Old State Capitol Building, 2nd Floor
One Old State Capitol Plaza
Springfield, IL 62701

Dear Ms. Wallace:

The U.S. Army Corps of Engineers (USACE), Chicago District, is undertaking emergency temporary storm damage protection construction between 45th and 51st Streets in Chicago, Cook County, Illinois (Enclosure 1). The purpose of this letter is to provide notification of this action under Section 106 of the National Historic Preservation Act. Since this is an emergency action in response to an immediate threat to property, the USACE is following procedures outlined in 36 CFR Section 800.12(b)(2).

The area is a portion of the Chicago Shoreline project that had been identified for storm damage protection measures authorized by Congress in the Water Resources Development Act (WRDA 1996 and 1999). However, the area between 45th and 51st Streets (also known as the Morgan Shoal area) includes portions that have not been constructed and remain distressed in the face of near-record lake elevations and storms. Due to the proximity of the area to U.S. Highway 41 (i.e., Lake Shore Drive), a major transportation artery in the City of Chicago, and the near record lake levels combined with the deteriorated conditions make it necessary to perform emergency temporary storm damage protection construction.

The Proposed Emergency Project includes the following components (Enclosure 2):

- Demolition of concrete slab portions that have been undermined and rendered unstable;
- Injection of Controlled Low Strength Material (CLSM) under portions of the concrete protection that has been undermined but with this stabilization will support loads imposed by construction and placement of supplemental revetment;
- Supplementing existing and damaged areas of revetment with large riprap; and,
- Placement of large concrete block on paved areas to provide additional protection.

Since this is an emergency action, the contract for the project is anticipated to be awarded in February 2020. Construction activities are anticipated to begin in mid-March 2020, with completion anticipated by the end of April 2020. Planning and development of the emergency project has identified the Area of Potential Effect (APE). The above project components are all within the Project APE, between 45th and 51st Streets and the APE consists of approximately 3.5 terrestrial acres (Enclosure 3).

Within the Project APE, the Lake Michigan shoreline consists entirely of post-1920 landfill, armored with deteriorated limestone-block revetments (installed in 1925) and topped with a concrete walkway (built ca. 1946-1949). A search of the National Register of Historic Places

Within a 0.25 mile radius of the Project APE is the Hyde Park-Kenwood Historic District (Reference Number 79000824) located just west of the project location across South Shore Drive (Enclosure 3 and Enclosure 4). The Historic District is roughly bounded by 47th Street, Cottage Grove Avenue to 59th Street, and Lake Park Avenue in Chicago, IL. The Historic District includes multiple domestic dwellings, educations buildings, religious buildings, and landscapes from the late 19th and early 20th centuries. In addition, the Narragansett (Reference Number 05000107) and the Chicago Beach Hotel (Reference Number 86001193) are historic places listed on the National Register that are also within a 0.25 mile radius of the Project APE (Enclosure 3 and Enclosure 4). The Narragansett is a historic apartment building located at 1640 E. 50th Street, Chicago, IL. The Chicago Beach Hotel is located at 5100 S. Cornell Avenue, Chicago, IL. The USACE could not find any reference to other historic places on the National Register, other than those listed above, within a 0.25 mile radius of the Project APE.

Although not listed on the NRHP, the Project APE is near the remains (e.g., the ship's metal boiler, propeller, etc.) of the Silver Spray wreck located in Lake Michigan at the Morgan Shoal area (Enclosure 3 and Enclosure 4). The Silver Spray, a 109-foot passenger steamer, ran aground the Morgan Shoal in July 1914, just a few hundred feet off Hyde Park's 49th Street Beach.

Given the extent of the ground disturbance that occurred during the installation of the original armoring, it is unlikely that any intact archeological sites remain within the APE. In the event that archeological material or human remains are discovered during the proposed undertaking, the work near the discovery will be halted as soon as is possible from a safety standpoint and the USACE shall engage in consultation with the Illinois State Historic Preservation Office, federally recognized tribes, and other consulting parties.

Due to the location of the above cultural resources listed in the NRHP in relation to the APE, the USACE has determined that the proposed emergency action would have "no effect" to historic properties as there are no known properties eligible for or listed on the NRHP within the APE. The USACE is interested in any concerns your agency may have regarding the emergency action and we request concurrence of "no historic properties affected" for the APE. If no comments or response is received within 7 days receipt of this correspondence, the USACE will assume that your agency agrees with our findings and has no concerns. Any questions regarding this correspondence can be directed to Ms. Shawna Herleth-King of my staff at (312) 846-5407 or Shawna.S.Herleth-King@usace.army.mil.

Sincerely,

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

Enclosures (4)

Similar Letters Sent to:

Ms. Jaime Loichinger, Assistant Director
Advisory Council on Historic Preservation
401 F Street NW, Suite 308
Washington, DC 20001

Dr. John Eddins, Program Analyst
Advisory Council on Historic Preservation
401 F Street NW, Suite 308
Washington, DC 20001

Ms. Carol Wallace, Cultural Resources Coordinator
Illinois State Historic Preservation Office
Old State Capitol Building, 2nd Floor
One Old State Capitol Plaza
Springfield, IL 62701

Kickapoo Tribe of Oklahoma
P.O. Box 70
McCloud, OK 74851
Attn: Mr. Estavio Elzondo, Chairman

Little Traverse Bay Bands of Odawa Indians
7500 Odawa Circle
Harbor Springs, MI 49740
Attn: Mr. Wesley Andrews, Tribal Historic Preservation Officer

Menominee Indian Tribe of Wisconsin
P.O. Box 910
Keshena, WI 54135
Attn: Mr. David Grignon, Tribal Historic Preservation Officer

Kickapoo of Kansas
1107 Goldfinch Rd.
Horton, KS 66439
Attn: Mr. Lester Randall, Chairman

Kickapoo Traditional Tribe of Texas
HC 1 Box 9700
Eagle Pass, TX 78852-9752
Attn: Ms. Jennie Hernandez, Tribal Administrator

Miami Tribe of Oklahoma
P.O. Box 1326
Miami, OK 74355
Attn: Ms. Diana Hunter, Tribal Historic Preservation Officer

Citizen Potawatomi Nation
1899 S. Gordon Cooper Dr.
Shawnee, OK 74801
Attn: Ms. Kelli Mosteller, Tribal Historic Preservation Officer

Forest County Potawatomi Community of Wisconsin
5320 Wensaut Lane
P.O. Box 340
Crandon, WI 54520
Attn: Mr. Michael LaRonge, Tribal Historic Preservation Officer

Nottawaseppi Huron Band of the Potawatomi
2221 One-and-a-half Mile Rd.
Fulton, MI 49052
Attn: Mr. Homer Mandoka, Chairperson

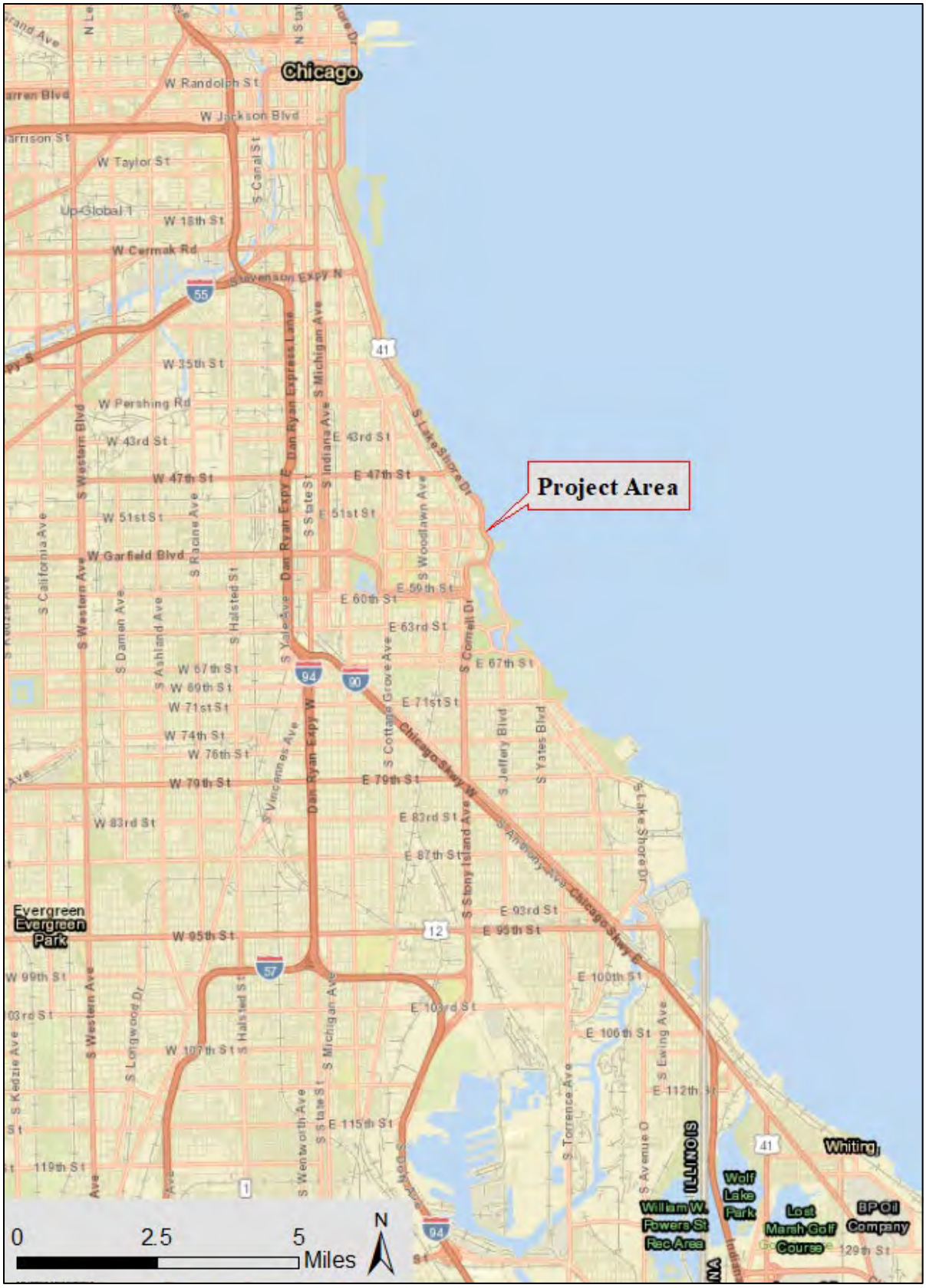
Hannahville Indian Community
N 14911 Hannahville B1 Road
Wilson, MI 49896
Attn: Mr. Kenneth Meshigaud, Chairperson

Prairie Band Potawatomi Nation
16280 Q Rd.
Mayetta, KS 66509
Attn: Mr. Thomas Wabmum, Tribal Historic Preservation Officer

Pokagon Band of Potawatomi Indians
P.O. Box 180
Dowagiac, MI 49047
Attn: Mr. Marcus Winchester, Tribal Historic Preservation Officer

Ho-Chunk Nation
P.O. Box 667
Black River Falls, WI 54615
Attn: Mr. William Quackenbush, Tribal Historic Preservation Officer

Enclosure 1: General Location of the Emergency Project in the Chicago Region.



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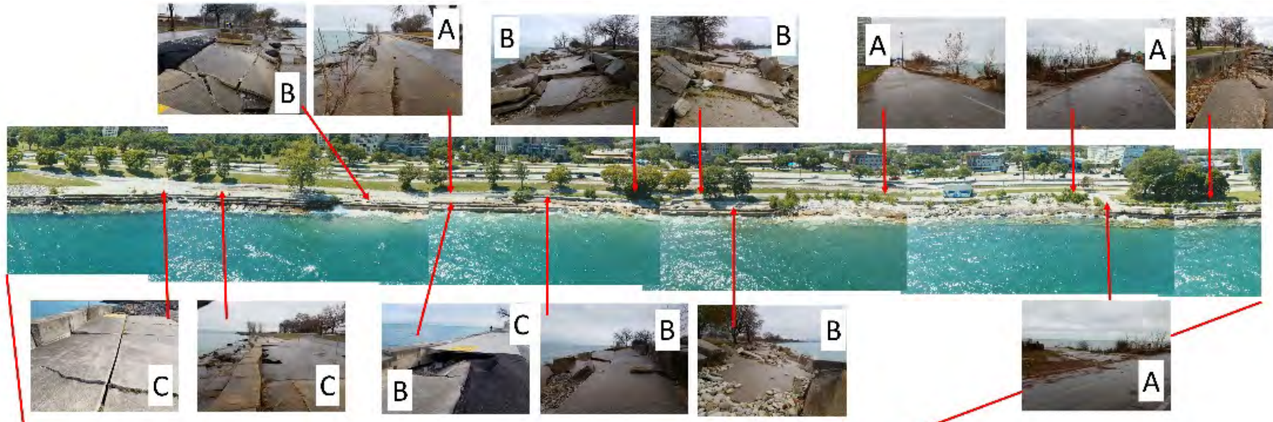
Enclosure 2: Map of the Emergency Project Components and General Area where Components would be Implemented.



Repair Type:

A. Concrete Blocks
B. In-place Concrete Demo & Stone Placement
C. CLSM & Stone Placement

Reach IV Morgan Shoals 45th to 51st

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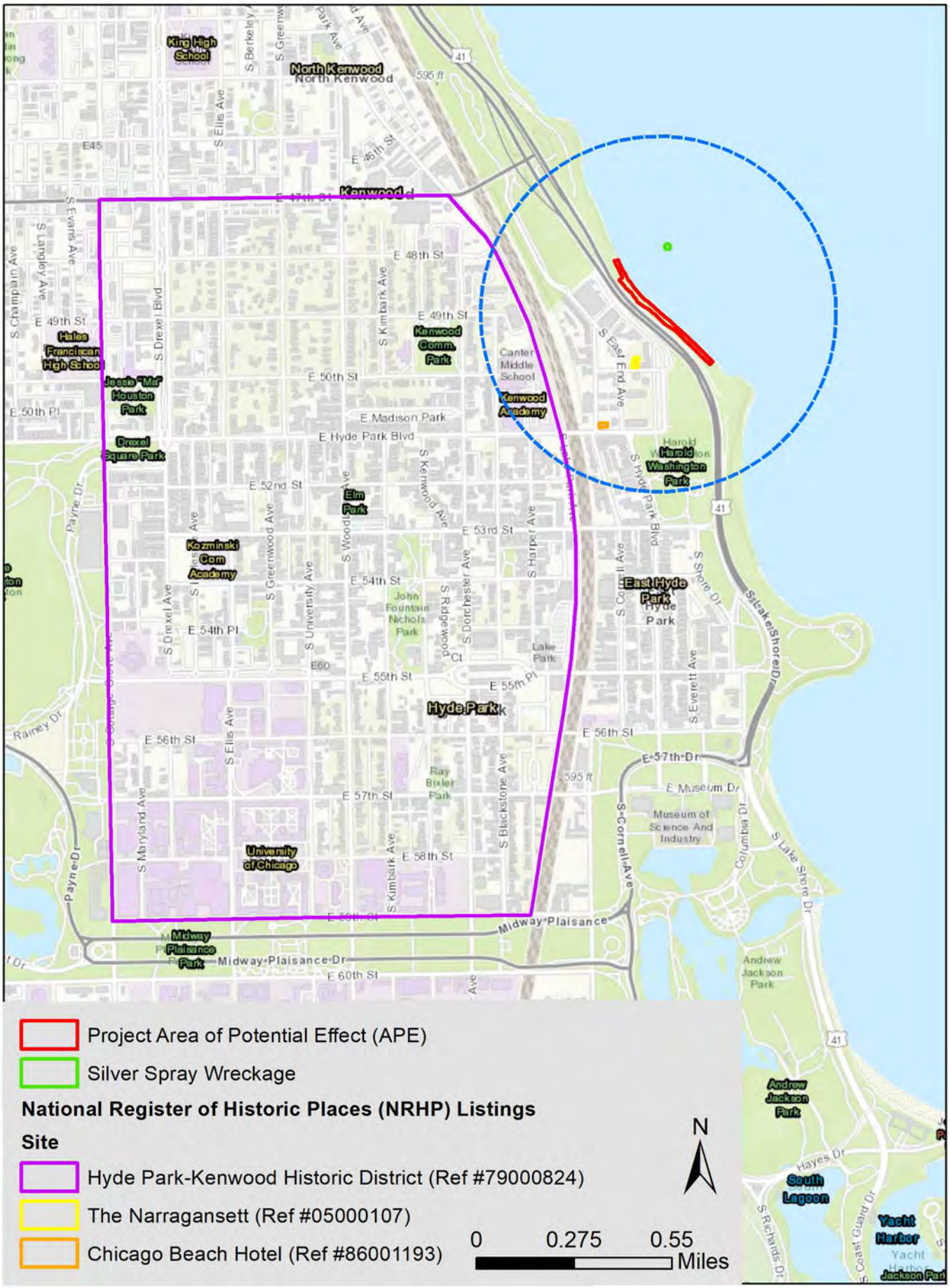

Enclosure 2

ILLINOIS DEPARTMENT OF NATURAL RESOURCES

Illinois Department of Natural Resources

One Natural Resources Way Springfield, Illinois 62702-1271
www.dnr.illinois.gov
Mailing Address: 1 Old State Capitol Plaza, Springfield, IL 62701

JB Pritzker, Governor
Colleen Callahan, Director

FAX (217) 524-7525

Cook County
Chicago
Emergency Temporary Storm Damage Protection Construction
Reach IV, Morgan Shoals, 45th St. to 51st St.
SHPO Log #005022520

March 2, 2020

Shawna Herleth-King
Department of the Army
U.S. Army Corps of Engineers, Chicago District
231 S. LaSalle St., Suite 1500
Chicago, IL 60604

Dear Ms. Herleth-King:

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Notifying our office of agreement with these conditions and their subsequent implementation constitutes compliance with Section 106 of the National Historic Preservation Act of 1966, as amended.

If you have any questions, please call 217/782-4836.

Sincerely,

Robert F. Appleman
Deputy State Historic
Preservation Officer

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Enclosure 3

MARCH 2015

MORGAN SHOAL

shoal { SHōl }
A raised area of exposed bedrock under the surface of the water.

At Morgan Shoal, bedrock comes within a few feet of the water's surface. Bedrock near the shoreline limits traditional construction techniques, but also creates many recreational and interactive opportunities.

WHAT IS MORGAN SHOAL?

The Morgan Shoal Framework Plan provides an important link along the Lake Michigan waterfront, and creates an active and interesting place for people to visit and embrace the water through access, recreational opportunities and education.

Over the past 20 years the City of Chicago and the Chicago Park District have made significant improvements along the Lake Michigan shoreline. Led by the Burnham Park Framework Plan, much of the south lakefront now has increased park access, preserved views, new beaches, increased parkland, accommodations for a variety of activities, and an enhanced natural landscape character. In addition, the Chicago Shoreline Protection Program has improved almost the entire length of Chicago's Lake Michigan shoreline to protect Burnham Park and Lake Shore Drive from storms, flooding and erosion. The area of Burnham Park from 45th Street to 51st Street is one of the last remaining segments requiring shoreline protection.

As an integral part of the south lakefront communities, Burnham Park provides respite from busy city life and provides many recreational opportunities. While the park is a valuable amenity to local residents, it also serves neighborhoods much further north and south because of connections created by the lakefront trail and Lake Michigan access. The Morgan Shoal Framework Plan strengthens these connections by creating a series of destinations.

Just offshore along the Chicago lakefront is a rare underwater bedrock formation of dolomite limestone formed 300 million years ago. This formation, called Morgan Shoal, is one of a small handful in the area.
As one of the shallowest, nearest to the shore and most accessible shoals, the Morgan Shoal is also unique in that it is the location of one of Chicago's only remaining visible shipwrecks. The 1914 shipwreck of the Silver Spray, a 109-foot passenger steamer, is an historic artifact serving as an attraction for anyone out in the water. The ship's boiler, propeller and other artifacts still remain today and await underwater exploration! During low lake levels, there are even times when portions of the ship are visible from shore. Drawing on the unique geology, historic remnants and cultural community connection, the Morgan Shoal Framework Plan protects the shoal, focuses attention toward the water, and tells a story of the unique history of this piece of Burnham Park.

TRANSFORM

Transforming a narrow strip of parkland into a rich and vibrant place for the community and wildlife alike, the Morgan Shoal Framework Plan builds upon the activities taking place there today and makes it a place for all to enjoy.

Used mainly as a north-south corridor for walkers, joggers and bikers, the narrow parkland and crumbling shoreline limit water access and other recreation in the park. A small existing pebble beach created by the waves washing up stones from the surrounding shoreline and shoal is used periodically for swimming and snorkeling. Picnickers use the open lawn, and anyone looking for a quiet respite can find a nook between the stones along the shoreline.

Habitat + Recreational Opportunities

The Morgan Shoal Framework Plan focuses attention toward the water to one of the area's most unique geologic features while increasing water and land based habitat and recreational opportunities. Increased parkland opens up space for native savanna / prairie landscape throughout, allows for a buffer along Lake Shore Drive, and creates a separation of paths for different activities. As part of previous Burnham Park projects, a harbor and sand beaches have been created nearby, opening up the opportunity for something completely different in this area. A pebble beach, centered on the shoal will serve as the main attraction of the project site, creating water access and a recreational amenity unique in Chicago.

PHOTO: DAN PETERMAN

What is a Pebble Beach?

A pebble beach is similar to a sandy beach except that the materials that make up the stretch of land above and below the waterline are small stones (rounded individual stones ranging in size from a fraction of an inch to nearly a foot in diameter). At Morgan Shoal, the stones will be roughly 3 inches in diameter, forming a beach that allows access to and from the lake. The force of waves move the stones around, slowly shifting the shape and size of the beach over time.

Much of what we see around Chicago was constructed in relatively recent history, but the story of Morgan Shoal starts much earlier.

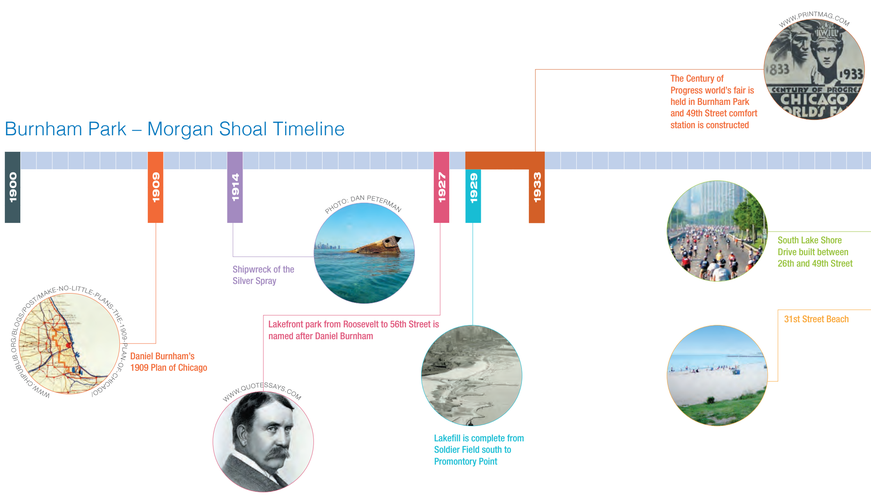
The last glaciers receded from Chicago around 13,000 years ago, uncovering bedrock that was laid during the Cambrian Period 300 to 400 million years ago. Dolomite limestone, a type of sedimentary rock, was formed during this time period while Chicago was submerged by sea numerous times. Most of the Chicagoland area is covered by material left by the glaciers, but there are a few places where the bedrock is still visible such as at Morgan Shoal. The Cambrian Period was also known as the "Age of Trilobites," and fossils of these creatures can be found under water out on the shoal.

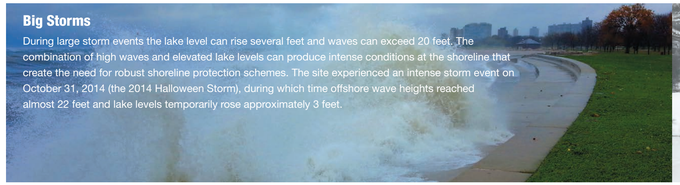
The majority of Burnham Park was created by lakefill placed in the 1920s as envisioned by Daniel Burnham's 1909 Plan of Chicago. This lakefill provided open space to city residents and also served the function of protecting Lake Shore Drive from Lake Michigan. Today, the original stone and wood pile shoreline protection structures have failed. New long term solutions for shoreline protection need to be considered.

Decades of use, as well as damage from the October 2014 storm has left the Morgan Shoal area of Burnham Park in need of comprehensive improvement. Aside from the damaged shoreline, there are some distinct physical features that characterize the space and some that are key opportunities for change. Much of the area is flat and narrow, bound by Lake Shore Drive and Lake Michigan, but is contrasted by larger areas at the north and south ends and a large hill at the 47th Street pedestrian bridge. Lawn covers most of the parkland, with isolated outcroppings of trees and a larger stand near the 51st Street pedestrian bridge. At 49th Street there is a small comfort station painted with murals that provides very few amenities to park visitors. Located across the Lakefront Trail from the pebble beach, it is an area frequented by locals.

As detailed in the timeline, many other projects have been implemented in the surrounding area including sand beaches, a playground, a harbor, parking access and large areas of landscape enhancements with ecological functions. The Morgan Shoal area of Burnham Park has the opportunity to build upon these amenities and larger landscape installations and make something special, drawing from the unique history and character of the area.

Burnham Park – Morgan Shoal Timeline





HISTORY

DISCOVERY

Community involvement from three public meetings generated valuable input that helped drive design ideas aimed at preserving the shoal, creating a more passive park experience, and providing viewing areas along the lake shore.

Meeting Input / Summary

- **October 2014** – Three initial concepts depicting variations for shoreline protection, lakefill, recreational opportunities and landscaping were brought to the first public meeting. Feedback from the community centered on preserving and embracing the shoal, minimizing over-development of recreational opportunities and enhancing wildlife habitat.
- **December 2014** – Two revised and refined concepts were brought to the second public meeting, showing less lakefill but still creating some additional usable parkland. Meeting attendees broke into three groups, giving feedback on the plans and various activities and program elements. Representatives from each group presented their ideas back to the larger group for discussion. Desires to preserve the shoal and restore the pebble beach, while maintaining continuity with the rest of Burnham Park, and not over-designing or commercializing the area, were echoed throughout the meeting.
- **February 2015 –** The final concept plan was presented at the third meeting, incorporating program elements recommended by the community back in December. Feedback from the community focused on getting the plan implemented, and organizing an advisory council.

PLAN

Legend

- Project Boundary
- Existing Shoreline
- Lawn
- Native Savanna / Prairie / Woodland Landscape
- Lakefront Trail
- Secondary Trail
- Overlook
- Picnic Area
- Fitness Station
- Art Opportunity
- Stepped Concrete Revetment
- Sloped Stone Revetment
- Stepped Stone Revetment
- Pebble Beach
- Topographic Contours

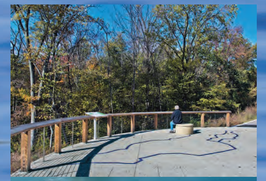
The Morgan Shoal Framework Plan includes a series of destinations along the length of the park catering to all types of park visitors.

An additional **7 acres of parkland** help to create a buffer between active park space and Lake Shore Drive, and opens up space for **recreation** previously unavailable. The addition of separate secondary paths help reduce traffic on the lakefront trail and allows for an alternative strolling experience. Large areas of natural savanna / prairie landscape transform the park into a wildlife haven and creates endless viewing and **learning opportunities.**

Park Ambiance

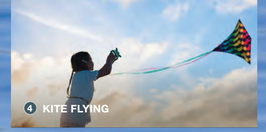
The new stone shoreline creates habitat for wildlife and an area of stepped stone and pebble beach provides **water access** to park visitors. Three overlooks showcase viewing opportunities and include interpretive elements giving greater meaning to the surrounding landscape. The undulating pathways, rolling landscape and nodes of activity through the park create a continuously changing experience, enticing visitors to come back again and again.

ENGAGE



2 PICNICKING — What is better in the summer than making a trip to the lake and spending all day picnicking? Get set up at a table sited to maximize views and have access to some of the park's greatest features.

3 FISHING



4 KITE FLYING

5 BIKING

6 BIKE FACILITIES – Take a break from speeding down the lakefront trail to stop at the pebble beach and check out Morgan Shoal.

7 COMFORT STATION

8 SNORKELING

9 SWIMMING – Hop in the water to explore the rocky bottom of the shoal and one of Chicago's two visible shipwrecks.

PHOTO: MATT PIA

10 FITNESS STATIONS

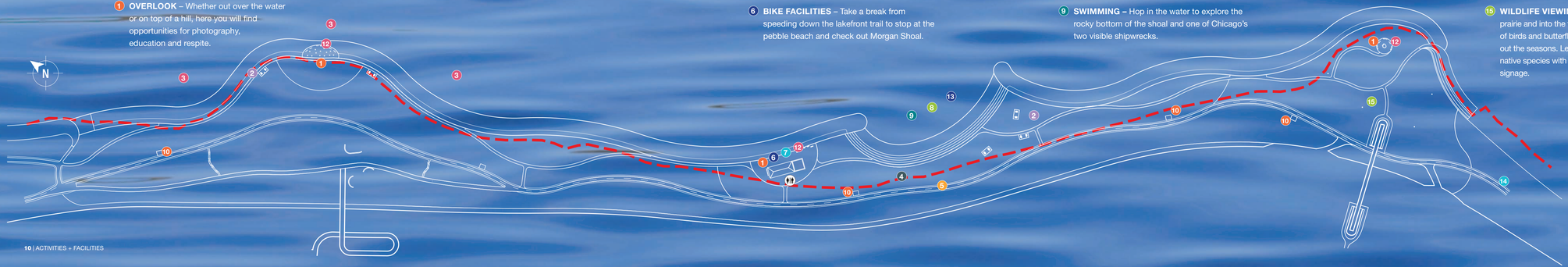
11 SEATING

12 TELESCOPE

13 KAYAKING

14 INTERPRETIVE ELEMENTS

15 WILDLIFE VIEWING – Look across the prairie and into the treetops to view a variety of birds and butterflies that change throughout the seasons. Learn to identify these native species with interactive exhibits and signage.



Activities + Facilities

Building upon the activities already available at the lakefront, the proposed Morgan Shoal Framework Plan offers more amenities and opportunities for varied experiences along this stretch.

In addition to biking and jogging along the lakefront trail, there will be fitness stations roughly every 1,000 feet with structures that mimic an obstacle course. Some open lawn areas are maintained for picnicking, kite flying or yoga while large swaths of savanna / prairie / woodland landscape create opportunities for bird watching, education and nature play. An amphitheater-like setting of stepped stones creates a path down to a new, larger pebble beach. This is an area where people can swim, kayak, snorkel and lounge by the shoal.

Amenities + Concessions

A new comfort station and plaza will be an incredible amenity to the Morgan Shoal area of Burnham Park. The existing facility, while painted with beautiful murals, is deteriorating and foreboding to enter. The new comfort station will include restrooms and additional space for concessions. Its adjacency to the pebble beach makes it a logical meeting place for families and the canopy will provide a great area for picnicking. Bike parking, with the possibility of having a bike service station, will be a hub for bikers on the lakefront trail. Space for vendors to pull-up and sell food or rent kayaks, etc., makes this a very flexible and dynamic place. With a focus on the shoal, interpretive elements will be integrated into the building design with more elements along the shoreline. Telescopes will be installed at the overlooks for visitors to view the shoal and city skyline. The addition of seating areas will make this a gathering space with opportunities to learn, relax and recreate.

ACCESS

Legend

- Project Boundary
- Metra Rail
- Major Road
- Bus Route
- Bike Route
- Lakefront Trail
- Secondary Trail
- Exploration Path
- Metra Station
- Parking
- Bus Stop
- Restroom Facility
- Shipwreck
- Divvy Stations

Morgan Shoal is a key link in the lakefront park system and has strong connections to the community and Lake Michigan. This destination can be reached easily by bike, kayak or on foot from a variety of public transit and parking options nearby.

The area of Burnham Park is accessed primarily from the Lakefront Trail which traverses through the park and continues north and south for a total of 18.5 miles. Morgan Shoal is also accessed from the west by two pedestrian bridges over Lake Shore Drive, one at 47th Street and another at 51st Street. Parking, a CTA bus stop and designated bike routes are located within ¼ mile, and Metra Stations are located within ½ mile of each bridge. As part of the Morgan Shoal Framework Plan, the Lakefront Trail is moved further east from Lake Shore Drive with additional buffering from earthen berms and taller prairie plantings.

Supplementing the Lakefront Trail, a separate smaller paved path is created closer to shore that undulates through open lawn areas, as well as natural savanna / prairie landscape, giving a varied experience to anyone traveling along the path. This path connects lakefront features, allowing one to travel the entire length of the project site without having to cross the Lakefront Trail. All paved paths are ADA accessible. The remainder of the park is free to explore: climb on boulders, step down the stones to the pebble beach or run through the lawn. Exploration extends into the water for activities such as swimming, snorkeling and kayaking.

What is the Lake Michigan Water Trail?

The LMWT is a continuous water trail for human-powered watercraft (the traditional mode of travel in the Great Lakes for thousands of years) all the way around the lake. By providing water access, this plan helps to bring this activity back as part of the development of the longest, continuous loop, freshwater sea kayaking trail in the world.

Learning is an element that will be infused throughout Morgan Shoal. Key nodes for interpretive elements will be integrated into the overlooks at the north and south end of the park, as well as around the comfort station. While these elements could be signage, they could also be interactive, change with the seasons, be integrated into the building design or include a technology component.

Telescopes will be located at each of these nodes, allowing visitors to get a better view of the shoal, city to the north, and steel mills to the south. At the overlook near the 51st Street bridge there will also be a mounted set of binoculars to view birds and other wildlife in the surrounding lush planted landscape. These educational elements can tell stories of Morgan Shoal, the Silver Spray Shipwreck, native plantings, and key species such as the mudpuppy salamander.

An art element called a wave chime is another feature that brings awareness to the nearby shoal. Constructed within the overlook at 47th Street, the wave chime utilizes winds coming off the lake and varying levels of water created by waves through underground and underwater pipes to create sound. The soft sound coming from this structure offers an additional sensory perception and a destination for visitors to Lake Michigan.


Art Opportunities

Interpretive Elements

PHOTO: DAN PETERMAN


1914 Shipwreck of the Silver Spray

EDUCATION

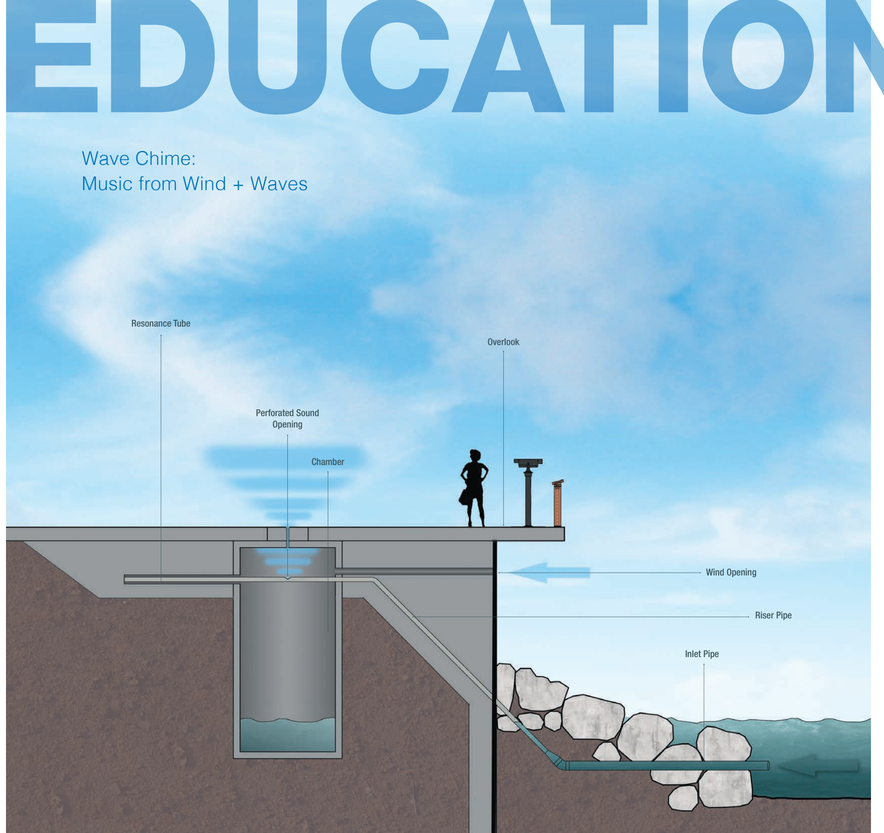


PHOTO: DAN PETERMAN

ECOLOGY

The main ecological community proposed at Morgan Shoal is a savanna / prairie.

The savanna / prairie landscape is primarily a grassland community with occasional trees and shrubs. Savanna is a fire-dependent community, meaning that prescribed fire serves as the primary management tool for maintaining an open canopy.

Total tree canopy generally ranges from 25-50% and consists of oak and hickory species. All oaks provide excellent wildlife benefits. Wood ducks, blue jays, thrushes, redheaded and red-bellied woodpeckers, yellow-shafted flickers, flying and red squirrels, eastern chipmunks, white-footed mice and many other animals feast on acorns each fall. Oak trees also make good den trees for cavity-dwelling birds and mammals.

Feasting on Foliage

A large number of insects feed on the wood, foliage, plant juices and other parts of hickories. Caterpillars of butterflies feed on these trees, as do caterpillars of many moths. Vertebrate animals also use shagbark hickory as a food source. The sweet edible nuts of shagbark hickory are an important source of food for the gray squirrel, red squirrel and eastern chipmunk. Among birds, species such as the ring-necked pheasant, blue jay and red-bellied woodpecker eat the nuts. Because hickory trees attract so many insects, they also attract many species of flycatchers, vireos, chickadees,

PHOTO: ERIN HOKANSON

Papilio polyxenes (back swallowtail) is resting on Queen Anne's lace (*Daucus carota*)

PHOTO: DAN PETERMAN

PHOTO: ERIN HOKANSON

The *Bombus* species (bumblebee) is resting on a wingstem (*Verbesina alternifolia*) plant)

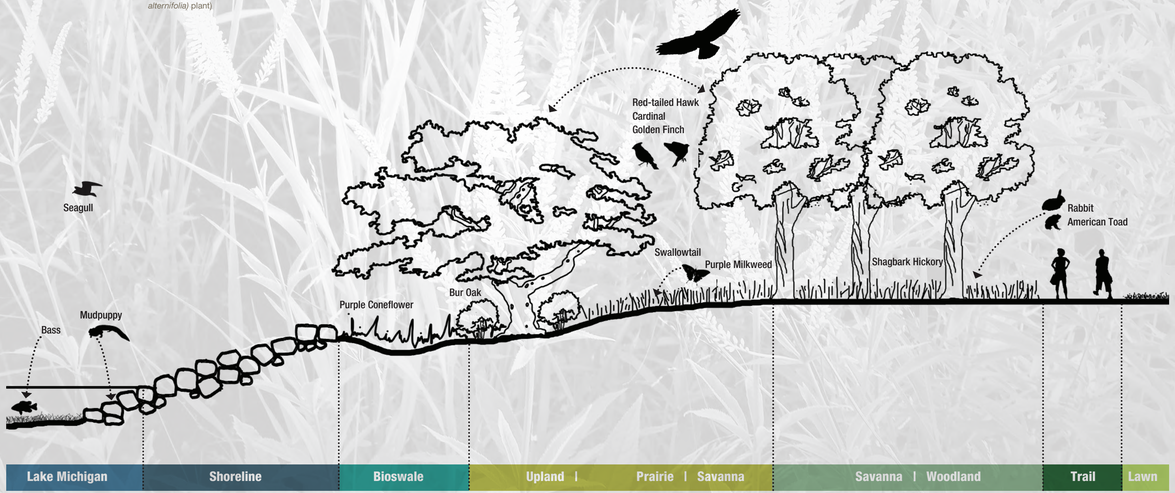
PHOTO: ERIN HOKANSON

Actias luria (luna moth) is resting on a white snakeroot (*Ageratina altissima*) leaf

Agelaius phoeniceus (red-winged blackbird)

Micropterus dolomieu (smallmouth bass)

Savanna / Prairie Landscape



gnatcatchers, warblers and other insectivorous birds that prefer wooded habitats. The shagbark hickory's peeling bark creates crevices that provide protective cover for many insects, particularly during the winter. The bark crevices also provide summer roosting habitat for the endangered Indiana bat and the threatened northern long-eared bat, and nesting habitat for a small bird, the brown creeper.

Prairie + Woodland Species

Herbaceous species in a savanna include a mix of prairie and woodland species, and a few specialists that are only found in savannas. Grasses and forbs within the plant mix provide many ecological benefits including food and shelter for native butterflies, insects and birds. Plants such as purple milkweed and butterfly weed are excellent sources of nectar for many butterflies and are food for monarch butterflies. The pollen and nectar of flowering spurge attracts bees and small butterflies, including the endangered Karner blue. Wild bergamot is another important species included in the savanna / prairie landscape because the nectar of the flowers attracts long-tongued bees, bee flies, butterflies, skippers and hummingbird moths. The ruby-throated hummingbird also visits the flowers.

In addition to the savanna / prairie landscape, areas of open lawn are located in key areas of active recreation. Buffalo grass lawn mix, a slow growing lawn mix with a maximum height of 4-8" requiring little or no mowing and less than 1" of water per week, provides an alternative to traditional high-maintenance turf grass, such as Kentucky bluegrass, fescue and rye.

Aquatic Habitat

Placement of a stone revetment along the shore will provide increased habitat for macroinvertebrate and juvenile fish in the form of cavities and spaces of varying sizes formed by the irregularly stacked rocks.

The mudpuppy *(Necturus maculosus)*, a totally aquatic nocturnal salamander on the Illinois Threatened Species list, inhabits rocky crevices nearshore. New potential habitat will be created for the mudpuppy by using stone revetments. Winter habitat for young salmonids is often rock crevices. Yellow perch, in the absence of rooted aquatic vegetation, prefer to spawn on rocky cobble versus sand in Lake Michigan. Aquatic fauna will benefit from the placement of a rocky revetment along the shoreline in the form of increased habitat in comparison to sandy bottom substrates alone.

PHOTO: NATIONAL PARK SERVICE

What is a Mudpuppy?

Mudpuppies, also called waterdogs, are one of only a few salamanders that make noise. They get their name from the somewhat embellished notion that their squeaky vocalizations sound like a dog's bark.

Among the largest of the salamanders, mudpuppies can exceed 16 inches in length, and have an average lifespan of 11 years.

SOURCE: http://animals.nationalgeographic.com/animals/amphibians/mudpuppy/

PROTECT

Chicago's shoreline protection was originally built between 1910 and 1931. Known as revetments, the existing shoreline protection is comprised of deteriorating wood pile cribs filled with stones in the shape of steps.

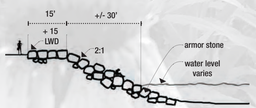
The Lake Michigan shoreline segment between 45th and 51st Streets is located adjacent to a geologic formation known as the Morgan Shoal, which is one of a series of rock outcrops found in this area of Lake Michigan. The presence of the shoal allows for consideration of **unique shoreline protection** measures, since the shallow offshore water depths reduce the incident wave conditions and the presence of shallow bedrock increases the difficulty and cost of driving sheetpile. The original revetment structures along this reach of the Chicago shoreline were constructed in 1925 and consisted of rock-filled parallel timber pile bulkheads. The area between 45th and 51st Streets has been subject to several partial rehabilitation efforts and enhancements over the course of its life. Currently, the structures are again in disrepair, having suffered deterioration from wave and ice impact, freeze-thaw cycles and lake-level change.

The modern standard for protecting Chicago's Lake Michigan shoreline is a stepped concrete revetment structure, which requires steel sheetpile to be driven deep into the ground. In the vicinity of Morgan Shoal, however, the top of bedrock is close to the surface, which limits the ability to drive sheetpile to the depth necessary to support this type of construction. Therefore, a stepped concrete revetment is not the preferred strategy in this area. Instead, the preferred shoreline protection scheme is a **rubblemound slope constructed with large quarried stone.** To combat Lake Michigan's waves and storm surges, the top of the new rubblemound slope will be roughly three feet higher than the existing shoreline. This sloped rubblemound revetment will start at 45th Street and form the shoreline south to approximately 49th Street.

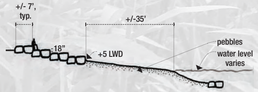
Starting at 49th Street, the shoreline will transition to a **stepped stone revetment with a pebble beach.** The stepped stone revetment also uses large quarried stone, but these stones must meet more stringent shape requirements in order to be laid in relatively flat planes that are easier for park visitors to traverse. The pebble beach acts as a type of **dynamic revetment,** which means that the pores between the small stones disrupt and dissipate the wave energy by adjusting shape in response to the prevailing wave conditions. The combined stepped stone revetment and pebble beach will provide this segment with adequate shoreline protection. This strategy is possible because the nearby shoal helps break waves and provides a degree of **natural shoreline protection.** The natural wave-breaking ability of the shoal also allows for the top of the stepped stone revetment to be a few feet lower than the adjacent rubblemound revetment sections, opening up views to the lake for car travelers on Lake Shore Drive.

South of the pebble beach and stepped stone revetment, the rubblemound revetment will continue until the south side of the 51st Street bump-out. The final several hundred feet of shoreline will be a stepped concrete revetment, which will transition the shoreline protection measures to match up with the existing stepped concrete revetment to the south of the project site. The goal of the shoreline protection is to have a lifespan of a minimum of 75 years and is designed to meet the standards established by the United States Army Corps of Engineers.

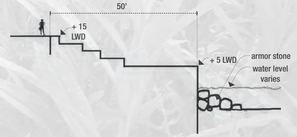
Sloped Stone Revetment



Stepped Stone Revetment



Stepped Concrete Revetment



This report was prepared by the Chicago Park District under award number NA12NOS4190105 from NOAA's Office of Ocean and Coastal Resource Management, U.S. Department of Commerce. The statements, findings, conclusions and recommendations are those of the author(s) and do not necessarily reflect the views of NOAA's Office of Ocean and Coastal Resource Management or the U.S. Department of Commerce.

SMITHGROUP JJR

MWH

REPORT DESIGN BY

STUDIO V DESIGN

ILLINOIS
DEPARTMENT OF NATURAL RESOURCES

Illinois Department of **Natural Resources**

One Natural Resources Way Springfield, Illinois 62702-1271
www.dnr.illinois.gov
Mailing Address: 1 Old State Capitol Plaza, Springfield, IL 62701

JB Pritzker, Governor
Colleen Callahan, Director

FAX (217) 524-7525

Cook County
Chicago
Emergency Temporary Storm Damage Protection Construction
Reach IV, Morgan Shoals, 45th St. to 51st St.
SHPO Log #005022520

March 11, 2020

Mike Padilla
U.S. Army Corps of Engineers, Chicago District
231 S. LaSalle St., Suite 1500
Chicago, IL 60604

Dear Mr. Padilla:

Thank you for your March 10, 2020 email that agrees to take care to avoid breaking up the historic limestone blocks and explains that this emergency undertaking is an interim project in anticipation of a larger project to stabilize Morgan Shoal. We were not aware of the Morgan Shoal Framework Masterplan because the U.S. Army Corps of Engineers (USACE) has not yet initiated consultation. Since the USACE has agreed to retain the historic limestone blocks on the site and our office is now aware that the emergency undertaking is a temporary stabilization in advance of a permanent improvement whose scope of work will be submitted by USACE, we concur in a finding of no adverse effect as defined in 36 CFR Part 800.5 (b).

If these plans should be modified, please notify our office. Please retain this letter as evidence of compliance with Section 106 of the National Historic Preservation Act of 1966, as amended.

If you have any questions, please call 217/782-4836.

Sincerely,

Robert F. Appleman
Deputy State Historic
Preservation Officer

c: Shawna Herleth-King, Department of the Army

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3.0 – Illinois Department of Natural Resources

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EcoCAT
Ecological Compliance Assessment Tool

ILLINOIS DEPARTMENT OF NATURAL RESOURCES

Applicant: U.S. Army Corps of Engineers
Contact: Shawna Herleth-King
Address: 231 S. LaSalle, Suite 1500
Chicago, IL 60604

IDNR Project Number: 2005568
Date: 01/16/2020

Project: Chicago Shoreline Emergency Repairs (45th to 51st Streets)
Address: 45th Street, Chicago

Description: Emergency repairs to Chicago shoreline coastal protection features. Location is between 45th and 51st Streets, Chicago, Cook County, Illinois.

Natural Resource Review Results

The Illinois Natural Heritage Database shows the following protected resources may be in the vicinity of the project location:

Black-Crowned Night-Heron *(Nycticorax nycticorax)*
Longnose Sucker *(Catostomus catostomus)*
Yellow-Crowned Night-Heron *(Nyctanassa violacea)*

An IDNR staff member will evaluate this information and contact you to request additional information or to terminate consultation if adverse effects are unlikely.

Location

The applicant is responsible for the accuracy of the location submitted for the project.

County: Cook

Township, Range, Section:
38N, 14E, 2
38N, 14E, 11
38N, 14E, 12

IL Department of Natural Resources Contact
Bradley Hayes
217-785-5500
Division of Ecosystems & Environment

Government Jurisdiction
U.S. Army Corps of Engineers

Disclaimer

The Illinois Natural Heritage Database cannot provide a conclusive statement on the presence, absence, or condition of natural resources in Illinois. This review reflects the information existing in the Database at the time of this inquiry, and should not be regarded as a final statement on the site being considered, nor should it be a substitute for detailed site surveys or field surveys required for environmental assessments. If additional protected resources are encountered during the project's implementation, compliance with applicable statutes and regulations is required.

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Illinois Department of
Natural Resources

One Natural Resources Way Springfield, Illinois 62702-1271
http://dnr.state.il.us

JB Pritzker, Governor
Colleen Callahan, Director

January 17, 2020

Shawna Herleth-King
U.S. Army Corps of Engineers
231 S. LaSalle, Suite 1500
Chicago, IL 60604 1437

RE: Chicago Shoreline Emergency Repairs (45th to 51st Streets)
Project Number(s): 2005568
County: Cook

Dear Applicant:

This letter is in reference to the project you recently submitted for consultation. The natural resource review provided by EcoCAT identified protected resources that may be in the vicinity of the proposed action. The Department has evaluated this information and concluded that adverse effects are unlikely. Therefore, consultation under 17 Ill. Adm. Code Part 1075 is terminated.

This consultation is valid for two years unless new information becomes available that was not previously considered; the proposed action is modified; or additional species, essential habitat, or Natural Areas are identified in the vicinity. If the project has not been implemented within two years of the date of this letter, or any of the above listed conditions develop, a new consultation is necessary.

The natural resource review reflects the information existing in the Illinois Natural Heritage Database at the time of the project submittal, and should not be regarded as a final statement on the site being considered, nor should it be a substitute for detailed site surveys or field surveys required for environmental assessments. If additional protected resources are encountered during the project's implementation, you must comply with the applicable statutes and regulations. Also, note that termination does not imply IDNR's authorization or endorsement of the proposed action.

Please contact me if you have questions regarding this review.

Bradley Hayes
Division of Ecosystems and Environment
217-785-5500

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4.0 – Illinois Coastal Management Program

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ILLINOIS DEPARTMENT OF NATURAL RESOURCES

COASTAL Management Program
IL Dept of Natural Resources

BJ Pritzker, Governor
Colleen Callahan, Illinois Department of Natural Resources Director
160 N. LaSalle St., Suite S-703 • Chicago, Illinois 60601 • 312-814-1405 • www.dnr.illinois.gov/cmp

March 3, 2020

Jeff Fuller
U.S. Army Corps of Engineers
Chicago District
231 S. LaSalle Street, Suite 1500
Chicago, IL 60604

RE: IDNR/CMP Federal Consistency Determination IFC2020001 by the U.S. Army Corps of Engineers for an emergency shoreline repair project, along Lake Michigan, between 45th and 51st Streets, Chicago, IL

Dear Mr. Fuller,

Thank you for the above referenced Illinois Coastal Management Program (ICMP) Federal Consistency Determination (FCD). Department staff has reviewed the FCD and concur that the proposed activity complies with the enforceable policies of the ICMP and will be conducted in a manner consistent with the ICMP.

If you have any questions, feel free to contact me at 312 793-5947 or james.casey@illinois.gov.

Sincerely,

James P. Casey

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