



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

14 SEP 2015

Technical Services Division  
Design Branch  
Hydraulics and Environmental Engineering Section

Mr. James Casey, P.E.  
Illinois Department of Natural Resources  
Office of Water Resources  
160 North LaSalle Street, Suite S-703  
Chicago, Illinois 60601

RECEIVED  
SEP 16 2015

OFFICE OF WATER RESOURCES  
DIVISION OF RESOURCE MANAGEMENT

Dear Mr. Casey:

The U.S. Army Corps of Engineers, Chicago District, will be constructing an ecosystem restoration project at McCormick, Janes, Hutchinson, Scott, Bartlett, and Schenck Ravines and adjacent shoreline, extending through Lake Forest, Highland Park, and Highwood.

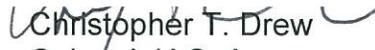
The U.S. Army Corps of Engineers, Chicago District, requests a Federal Consistency Determination from the Illinois Coastal Management Program for the project. The proposed activity complies with Illinois' approved coastal management program and will be conducted in a manner consistent with such policies. The U.S. Army Corps of Engineers, Chicago District also requests an IDNR Shore Protection permit. Based on a review of Part 3700 and 3708, a Floodway Construction Permit is not required for proposed in-ravine project features.

The U.S. Army Corps of Engineers, Chicago District, is also notifying you that this project, to be undertaken in partnership with the Lake County Forest Preserve District, Openlands, and Lake Forest Openlands, complies with the terms and conditions of the Regional Permit Program for Wetland and Stream Restoration Enhancement activities (Regional Permit No. 5), including the IEPA Section 401 Water Quality Certification conditions.

The proposed project will stabilize the ravines' geomorphology, naturalize the flow characteristics, reduce channel incision, and remove and prevent the recurrence of invasive species. The proposed project will also expand existing dune habitat and increase the ecological outputs of spaces currently utilized by existing revetment structures. Planned restoration measures will include cobble riffles and step-pools, cobble plunge-pools, placement of material for the construction of dune habitat, removal of invasive species, and native plant community reestablishment.

Any additional questions regarding this project may be directed to Jeff Fuller at 312-846-5516, or [jeff.a.fuller@usace.army.mil](mailto:jeff.a.fuller@usace.army.mil); or to Jay Semmler, Chief, Hydraulic and Environmental Engineering Section at 312-846-5500, or [jay.a.semmler@usace.army.mil](mailto:jay.a.semmler@usace.army.mil).

Sincerely,

  
Christopher T. Drew  
Colonel, U.S. Army  
District Commander

Enclosures

## JOINT APPLICATION FORM FOR ILLINOIS

ITEMS 1 AND 2 FOR AGENCY USE

1. Application Number	2. Date Received
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3. and 4. (SEE SPECIAL INSTRUCTIONS) NAME, MAILING ADDRESS AND TELEPHONE NUMBERS		
3a. Applicant's Name:  Company Name (if any): Lake County Forest Preserve District Address: 1899 West Winchester Road Libertyville, IL 60048  Email Address:	3b. Co-Applicant/Property Owner Name (if needed or if different from applicant):  Company Name (if any): Openlands Address: 25 East Washington Street Suite 1650 Chicago, IL 60602-1708  Email Address:	4. Authorized Agent (an agent is not required):  Company Name (if any): U.S. Army Corps of Engineers, Chicago District Address: 231 S. LaSalle Street Chicago, IL 60601  Email Address: jeff.a.fuller@usace.army.mil
Applicant's Phone Nos. w/area code Business: Residence: Cell: Fax:	Applicant's Phone Nos. w/area code Business: Residence: Cell: Fax:	Agent's Phone Nos. w/area code Business: Residence: Cell: Fax:

**STATEMENT OF AUTHORIZATION**

I hereby authorize, USACE, Chicago District to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this permit application.

Applicant's Signature \_\_\_\_\_

Date 7 January 2016

5. ADJOINING PROPERTY OWNERS (Upstream and Downstream of the water body and within Visual Reach of Project)		
Name	Mailing Address	Phone No. w/area code
a. SEE ATTACHED		
b.		
c.		
d.		

6. PROJECT TITLE:  
**Ft. Sheridan Ravine and Coastal Restoration**

7. PROJECT LOCATION:					
LATITUDE: 42.20864 °N		UTMs			
LONGITUDE: 87.80325 °W		Northing: 4673253.97			
		Easting: 433694.53      Zone 16T			
STREET, ROAD, OR OTHER DESCRIPTIVE LOCATION	LEGAL DESCRIPT	QUARTER	SECTION	TOWNSHIP NO.	RANGE
Leonard Wood Drive, Highland Park, IL					
<input type="checkbox"/> IN OR <input checked="" type="checkbox"/> NEAR CITY OF TOWN (check appropriate box)		WATERWAY		RIVER MILE (if applicable)	
Municipality Name Highland Park, IL		Lake Michigan		N/A	
COUNTY	STATE	ZIP CODE			
Lake	IL	60037			

Revised 2010

Corps of Engineers

IL Dep't of Natural Resources

IL Environmental Protection Agency

Applicant's Copy

8. PROJECT DESCRIPTION (Include all features):

The project involves the construction of habitat restoration features (e.g. riffles, step-pools, dunes) in the upland, backshore, and ravine portions of the site in order to improve habitat for associated plant and animal species. Measures to be permitted include placement of material along the toe of the bluff. See attached information for full details.

9. PURPOSE AND NEED OF PROJECT:

This is an ecosystem restoration project, intended to improve and increase aquatic and terrestrial habitats and improve ecological functions along the coast of Lake Michigan. See attached information for full details.

**COMPLETE THE FOLLOWING FOUR BLOCKS IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED**

10. REASON(S) FOR DISCHARGE:

Fill material will be placed along the toe of the bluff at select locations in order to create dune habitat. These locations are selected based on features consistent with sites with limited exposure to waves (i.e. the presence of vegetation or a scarp lakeward of the current toe).

11. TYPE(S) OF MATERIAL BEING DISCHARGED AND THE AMOUNT OF EACH TYPE IN CUBIC YARDS FOR WATERWAYS:

TYPE: Concrete/Crushed VCP; Sand;  
 AMOUNT IN CUBIC YARDS: 150 CY; 1,300 CY;

12. SURFACE AREA IN ACRES OF WETLANDS OR OTHER WATERS FILLED (See Instructions)

No fill will be placed directly into Lake Michigan. 1.0 acres of regulated backshore will receive fill material.

13. DESCRIPTION OF AVOIDANCE, MINIMIZATION AND COMPENSATION (See Instructions)

Impacts to the waters of Lake Michigan are minimized by placing only clean fill materials. Placement locations have been selected to minimize the exposure of fill material to wave action. See attached information for full details.

14. Date activity is proposed to commence: 01 OCT 2015  
 Date activity is expected to be completed: 30 SEP 2017

15. Is any portion of the activity for which authorization is sought now complete? Yes  No  NOTE: If answer is "YES" give reasons in the Project Description and Remarks section. Indicate the existing work on drawings.

16. List all approvals or certification and denials received from other Federal, interstate, state, or local agencies for structures, construction, discharges or other activities described in this application.

Issuing Agency	Type of Approval	Identification No.	Date of Application	Date of Approval	Date of Denial
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17. CONSENT TO ENTER PROPERTY LISTED IN PART 7 ABOVE IS HEREBY GRANTED. Yes  No

18. APPLICATION VERIFICATION (SEE SPECIAL INSTRUCTIONS)

Application is hereby made for the activities described herein. I certify that I am familiar with the information contained in the application, and that to the best of my knowledge and belief, such information is true, complete, and accurate. I further certify that I possess the authority to undertake the proposed activities.

\_\_\_\_\_  
 Signature of Applicant or Authorized Agent  
 Signature of Applicant or Authorized Agent  
 Signature of Applicant or Authorized Agent

\_\_\_\_\_  
 Date  
 Date  
 Date

\_\_\_\_\_  
 Christopher T. Drew  
 Major, U.S. Army  
 District Commander

- Corps of Engineers Revised 2010  IL Dep't of Natural Resources  IL Environmental Protection Agency  Applicant's Copy

SEE INSTRUCTIONS FOR ADDRESS



**U.S. Army Corps of Engineers  
Ft. Sheridan 506  
IDNR Permit Application**

Additional information specifically required for the joint permit application is provided below.

Project Location (Block 7):

The project site is located along the Lake Michigan shoreline and is bounded by Lake Michigan to the east and Sheridan Road to the west. The northern limit includes the McCormick Ravine watershed (i.e. McCormick Drive and Lock Lane) while the southern project limit includes the Schenck Ravine watershed (i.e. Johnstone Drive). The project area includes the watersheds of McCormick, Janes, Hutchinson, Scott, Bartlett, and Schenck Ravines and the shoreline bounded by these locations.

Several locations can be used to access the site:

- Follow Sheridan Road to Simonds Way and turn left on Leonard Wood Avenue North. Continue on Leonard Wood Avenue to Gilgare Lane; parking is available at the end of Gilgare Lane. This location provides access to McCormick, Janes, Hutchinson, and Scott Ravines.
- Follow Sheridan Road to First Street. Immediately turn left onto Lyster Road. The first right turn leads to limited parking at the head of Bartlett Ravine. This location provides access to Bartlett Ravine.
- Follow Sheridan Road to Walker Avenue. Turn left onto Patton Avenue and immediately turn right onto Veterans Drive. This location provides access to Schenck Ravine.

Project Description (Block 8):

Fort Sheridan Ravine and Coastal Restoration involves the construction of habitation restoration features in the backshore, ravine, and upland portions of the site in order to improve habitat for shoreline and ravine plant and animal species. Measures are shown on the attached plan sheets and include contouring; ravine channel stabilization with naturalized engineered structures such as cobble riffles, step-pools, and plunge pools; and construction of dune habitat along the shoreline. This last activity – construction of dune habitat along the shoreline – involves fill within the regulated boundary of Lake Michigan and is described in greater detail below.

**Dune construction in the backshore** will take place in selected areas along the Lake Michigan shoreline, covering a total area of 1.0 acres. These selected areas are typically characterized by locations in the backshore fronted by established vegetation and/or a pronounced scarp, illustrated in Figures 1 and 2, suggesting that the location is infrequently exposed to wave action. These locations include reaches not only where revetment is already present, but also unarmored portions. Where revetment is already present, sand will cover the armor stone to a total depth of 6". Along the unarmored lengths, concrete (broken into pieces no larger than 18" in diameter and free of protruding rebar) and crushed vitrified clay pipe (material removed from McCormick Ravine) will be placed along the toe of the bluff and similarly covered with sand. To reduce post-construction settlement, the fill will be washed into the voids of the armor stone. Native shoreline vegetation will be planted in the sand which, once established, will help to stabilize the dune.

Purpose of Project (Block 9):

This ecosystem restoration project is being carried out in order to improve ecological functions along the coast of Lake Michigan and improve and increase habitats for fish, amphibians, reptiles, and migratory birds. Upland ecosystem improvements, including creation of in-channel refuges to provide spawning habitat for native fish, and grading and replanting the site to establish native plant communities will be undertaken in conjunction with the measures being permitted.

The **dune construction in the backshore** will restore nearshore habitat that has been degraded as a result of the interruption of littoral processes along the Illinois shoreline. Select areas for this activity will be targeted based on the likelihood of longevity of the completed works.

Reason for Discharge of Fill Material (Block 10):

**Dune construction in the backshore:** Fill material will not be discharged directly into Lake Michigan, but will be placed within the area regulated as public waters. This material will be used to rebuild backshore dune habitat degraded as a result of interruption of local and regional littoral processes. It will provide a medium into which native shoreline vegetation, including several species which are state listed, will be planted.

Type of Material Being Discharged and Amount (Block 11):

**Dune construction in the backshore** will place materials of the following types and quantities within the regulated area adjacent to Lake Michigan:

Sand: 1,300 CY

Concrete and Crushed VCP: 150 CY

The sand will be clean material, consistent in gradation with the native material on-site. This material will be obtained from an upland local commercial source.

The concrete will be composed of a portion of the material removed from McCormick, Janes, and Scott Ravine, crushed to a no larger than 18" in diameter. Any rebar encountered will be cut flush. The vitrified clay pipe is defunct infrastructure encountered in McCormick Ravine. Portions of it will be removed from the ravine and crushed to a size consistent with that of the concrete.

Surface Area of Fill (Block 12):

**Dune construction in the backshore** will cover a total surface area of 1.0 acres.

Description of Avoidance, Minimization, and Compensation (Block 13):

**Dune construction in the backshore** will take place in selected areas typically characterized by locations in the backshore fronted by established vegetation and/or a pronounced scarp, suggesting that the location is infrequently exposed to wave action. While the potential exists that fluctuating lake levels could eventually expose these areas to wave action, ecologists have suggested that plant community recruitment along the proposed dunes will enhance the structures resilience against periodic wave forces.



**Figure 1: Typical shoreline reached identified as potential location for dune construction**



**Figure 2: Typical shoreline reached identified as potential location for dune construction**