

IEPA Log No.: **C-0843-09**
CoE appl. #: **none available**

Public Notice Beginning Date: **February 10, 2011**
Public Notice Ending Date: **March 14, 2011**

Section 401 of the Federal Water Pollution Control Act
Amendments of 1972

Section 401 Water Quality Certification to Discharge into Waters of the State

Public Notice/Fact Sheet Issued By:

Illinois Environmental Protection Agency
Bureau of Water
Facility Evaluation Unit
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276
217/782-3362

Name and Address of Discharger: U.S. Army Corps of Engineers, 111 North Canal Street, Suite 600, Chicago, Illinois 60606

Discharge Location: Section 24, T37N, R14E of the 3rd P.M. in Cook County within Chicago

Name of Receiving Water: Unnamed wetland complex

Project Description: Indian Ridge Marsh ecosystem restoration

The Illinois Environmental Protection Agency (IEPA) has received an application for a Section 401 water quality certification to discharge into the waters of the state. The Public Notice period will begin and end on the dates indicated in the heading of this Public Notice. The last day comments will be received will be on the Public Notice period ending date unless a commenter demonstrating the need for additional time requests an extension to this comment period and the request is granted by the IEPA. Interested persons are invited to submit written comments on the project to the IEPA at the above address. Commenters shall provide their names and addresses along with comments on the certification application. Commenters may include a request for public hearing. The certification and notice number(s) must appear on each comment page.

The attached Fact Sheet provides a description of the project and the antidegradation assessment.

The application, Public Notice/Fact Sheet, comments received, and other documents are available for inspection and may be copied at the IEPA at the address shown above between 9:30 a.m. and 3:30 p.m. Monday through Friday when scheduled by the interested person.

If written comments or requests indicate a significant degree of public interest in the certification application, the IEPA may, at its discretion, hold a public hearing. Public notice will be given 30 days before any public hearing. If a Section 401 water quality certification is issued, response to relevant comments will be provided at the time of the certification. For further information, please call Thaddeus Faught at 217/782-3362.

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Fact Sheet for Antidegradation Assessment

U.S. Army Corps of Engineers – Indian Ridge Marsh Restoration Project – Cook County

IEPA Log #C-0843-09

COE Log: None Available

Contact: Mark T. Books at 217/558-2012

February 10, 2011

The U.S. Army Corps of Engineers-Chicago District office (“Applicant”) has applied for Section 401 water quality certification for restoration work in the Indian Ridge Marsh (“IRM”). The IRM area is a complex of wetlands and elevated filled areas located in the Calumet Region of Chicago. Specifically the site is located in Section 24, Township 37 North, and Range 14 East. IRM is situated west of Torrence Avenue, east of the Norfolk and Western Railroad, south of 116th Street, and north of the property line of the Metropolitan Water Reclamation District of Greater Chicago (“MWRDGC”). The site is bisected by 122nd Street, which generally divides the site into north and south units. Approximately 110 acres of the site lies north of 122nd Street (“IRM North”), and approximately 35 acres of the site lies south of 122nd Street (“IRM South”). The purpose of the proposed project is to restore habitat at IRM consistent with the Calumet Region Ecotoxicological Protocol. Proposed restoration features include improvement of habitat by removing woody and other invasive plant species with herbicide applications and prescribed burning; grubbing, seeding, and planting with seed mixes specific to each habitat type; removal of all common carp; clearing and applying soil amendments; installation of water level control structures under 122nd Street; improvement of trail system; and a boardwalk to link the IRM trail system to the MWRDGC’s Sidestream Elevated Pool Aeration (“SEPA”) station along the Calumet River.

Identification and Characterization of the Affected Water Body.

The wetland is a General Use Water with a zero 7Q10 flow. The wetland has not been evaluated by the Illinois EPA Surface Water Monitoring Unit. The wetland is not an enhanced water body pursuant to the dissolved oxygen water quality standard. Using the 2008 Illinois Department of Natural Resources Publication *Integrating Multiple Taxa in a Biological Stream Rating System*, the wetland is not listed as a biologically significant stream nor has it received an integrity rating. The Illinois Department of Natural Resources (“IDNR”) has classified IRM as a Palustrine Wetland in an urban watershed. Existing vegetation at IRM consist of approximately 57 acres of vegetated wetland habitat, 28 acres of woodland habitat, 18 acres of prairie habitat and the remaining approximately 42 acres consist of several wetland pools of varying sizes. Groundwater flows into IRM from the Lake Calumet Cluster Sites located to the west of IRM. Surface water generally flows from IRM North to IRM South and eventually into the Calumet River. Surface runoff enters IRM from different sources, including a culvert located under 116th Street and three culverts located under the Norfolk and Western Railroad.

According to the IDNR WIRT System Blanding’s Turtle was identified as a threatened or endangered aquatic species residing within the project site. IDNR WIRT System also identified numerous threatened or endangered birds that use the IRM area.

Identification of Proposed Pollutant Load Increases or Potential Impacts on Uses.

The pollutant load increases that would occur from this project include some possible increases in suspended solids in surrounding wetlands during the installation of the two new water level control structures.

Fate and Effect of Parameters Proposed for Increased Loading.

The increase in suspended solids will be confined to the immediate vicinity of the construction. Erosion control measures will be utilized to minimize any increase in suspended solids during construction. Applicant has stated that a, "24-in corrugated metal pipe culvert is located under 122nd Street and conveys water from IRM North to IRM South. This culvert controls the water level in IRM North. This existing water level control structure is frequently blocked by sediments or debris that causes the water level to rise on IRM North by several feet and flood Torrence Ave...The ecological rehabilitation of IRM includes design of two water level control structures...The water level control structure located at IRM North will consist of a 6-ft span by 4-ft rise precast concrete box culvert with a concrete variable weir and stoplogs at the upstream end. The box culvert would be located under 122nd Street and adjacent to the Norfolk Southern Railroad. The variable weir is needed for vegetation management. The weir allows the marsh to be drawdown to elevation 581 ft, NGVD for herbicide treatment, prescribe burning, and seeding of emergent and shallow marsh species...The water level control structure located at IRM South consists of a sheetpile variable weir. The weir would be located across a channel about 1,500 feet south of 122nd Street and adjacent to the Norfolk Southern Railroad...The weir will be operated with stoplogs," (page 22 & 23 Design Analysis Report-June, 2009).

Purpose and Social & Economic Benefits of the Proposed Activity.

Applicant has stated that,

"Inventories of the area flora and fauna have shown that, while IRM has habitat suitable for wildlife, the marsh contains invasive plant species and has been subject to fly dumping," (page 4 Design Analysis Report-June, 2009).

The Applicant has also stated that,

"Several aspects of the design plan will improve habitat and water quality at the project site as they relate to current levels of contamination. The design plan calls for adding leaf compost to upland portions (mesic prairie) of Indian Ridge Marsh. Addition of organic carbon to the soils will facilitate binding of metals, pesticides, and PAH constituents found in the soils and sediment at the project site making them less bioavailable. Upland areas of the site will be stabilized with native vegetation and will prevent soil erosion and sediment from entering adjacent waterways, thereby improving existing water quality. Elimination of common carp (*Cyprinus carpio*) will also decrease ammonia, dissolved and suspended solids, and overall nutrient levels as these are very well correlated with increases in common carp biomass, resulting from increased disturbance of sediment and fish excretion...The mycorrhizal inoculation of live plantings, coupled with the addition of leaf compost, will introduce additional populations of microorganisms which should use the leaf compost and other existing carbon sources as utilizable lignocellulosic sources that would allow microorganisms to produce larger amounts of extracellular polysaccharides and chemical interactions, which would reduce metal availability and enhance pollutant degradation," (page 8, August 24, 2010 E-Mail response). "The project would improve the quality of about 145 acres of degraded wetland and upland habitat; improve the potential for the survival of endangered species in the Lake Calumet area; reduce opportunities for contaminant uptake by wildlife in the Lake Calumet area; provide passive recreational opportunities (hiking, bird watching, etc.); and provide opportunities for education in environmental, biological, botanical, or ornithological topics," (page 9 Environmental Assessment report dated December 20, 2000).

Assessments of Alternatives for Less Increase in Loading or Minimal Environmental Degradation.

The construction of the proposed project will follow conditions set forth by the Agency and USACE. Erosion control measures will need to be implemented to prevent additional impacts to the wetlands. Applicant stated concerning installation of the water control structure at IRM north that, “a floating turbidity barrier will be used to reduce impacts of sediment disturbance up and downstream of the installation activity. In addition, a cofferdam, and groundwater removal from the excavation, may be required to install the structure. The means and methods for isolating the work area will be determined by the Contractor; however, the USACE contract will require the Contractor to use a sediment trap to remove solids from the pumped groundwater. Water will infiltrate back into the ground and will not be surface discharged. Riprap is proposed at the end of each wingwall for bank stabilization and slope protection. Approximately 128 CY of riprap will be required”.

The Applicant has stated that, if no action is taken, surface water quality and groundwater quality at the project site will continue to be degraded by flow from off-site sources (adjacent landfills, septic fields, etc.) of contamination. The project site would continue to act as a source of contaminants for uptake by wildlife. Failure to replace the existing water level control structure will allow flooding to occasionally occur on Torrence Avenue. Failure to eradicate the common carp would allow the carp to inhibit the establishment of native plantings, sustain high turbidity and nutrient levels, promote establishment of invasive species, and significantly reduce the success of the restoration of IRM for providing suitable habitat for wetland bird species. The herbicide and rotenone used throughout the site has been approved by U.S.EPA for aquatic application and all applications will be conducted by licensed applicator. The Applicant further states that, “Illinois Department of Natural Resources will apply rotenone in Indian Ridge Marsh to control the carp population during the period when state endangered black crowned night heron are absent from the site (August 26-April 2)”.

Concerning efforts to eliminate the common carp the Applicant has stated that, “draining to freeze water to the bottom of the ponds is not likely to be effective at Indian Ridge Marsh since areas of greater water depths with at least 10’ would not completely freeze to the bottom, potentially leaving a large number of juvenile carp to repopulate the area within a few years. Since effectiveness cannot be assured as a control strategy, this method was ruled-out. Complete eradication needs to be implemented as only a small number of carp in a newly restored shallow wetland could increase in biomass to over 250kg/ha in as little as two years...Draining water in the ponds will be used in conjunction with the rotenone application so that the application will occur in only one of the ponds where the greatest water depths occur. Along with IDNR concurrence, the proposed measure would also not affect the endangered black crowned night heron (BCNH) since the rotenone application would be done during the absence of BCNH (August 26-April 2),” Applicant also stated that native fish will be introduced in coordination with IDNR. Fish planned to be introduced by the Applicant include Mud Minnow, Pickerel, and Johnny Darters.

Summary Comments of the Illinois Department of Natural Resources, Regional Planning Commissions, Zoning Boards or Other Entities

In a letter written by Rick Pietruszka, dated February 17, 2010, IDNR stated that an initial report submitted through the EcoCAT website indicated the presence of protected resources in the vicinity of the project location. The letter further states that the IDNR has evaluated this information and concluded that adverse impacts to protected resources are unlikely; therefore, consultation was terminated.

Agency Conclusion.

This preliminary assessment was conducted pursuant to the Illinois Pollution Control Board regulation for Antidegradation found at 35 Ill. Adm. Code 302.105 (antidegradation standard) and was based on the information available to the Agency at the time this antidegradation review summary was written. We tentatively find that the proposed activity will result in the attainment of water quality standards; that all existing uses of the receiving waters will be maintained; that all technically and economically reasonable measures to avoid or minimize the extent of the proposed increase in pollutant loading have been incorporated into the proposed activity; and that this activity will reduce opportunities for contaminant uptake by wildlife in the Lake Calumet area and benefit the community at large by providing recreational opportunities (hiking, bird watching, etc.); and providing opportunities for education in environmental, biological, botanical, or ornithological topics. Comments received during the 401 Water Quality Certification public notice period will be evaluated before a final decision is made by the Agency.