

IEPA Log No.: **C-0449-11**

CoE appl. #: **N/A**

Public Notice Beginning Date: **May 2, 2014**

Public Notice Ending Date: **June 2, 2014**

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
Division of Water Pollution Control
Permit Section
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, Chicago District, 231 South LaSalle Street, Suite 1500, Chicago, IL 60604

Discharge Location: Sections 28 and 29, T46N, R8E of the 3rd P.M. in McHenry County within Glacial Park

Name of Receiving Water: Nippersink Creek

Project Description: Ecosystem restoration along Nippersink Creek.

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 associated with an application received from the U.S. Army Corps of Engineers. 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 Chicago District – Nippersink Creek – McHenry County

IEPA Log #C-0449-11

COE Log # N/A

Contact: Eric Runkel (217) 558-2012

May 2, 2014

The United States Army Corps of Engineers - Chicago District (“Applicant”) has applied for Section 401 water quality certification for impacts associated with the restoration of Nippersink Creek and surrounding habitats within Glacial Park Conservation Area located in McHenry County, Illinois. The Applicant proposes to restore degraded areas to their historic conditions and protect adjacent areas that are currently considered intact and high quality. This will include steambank grading along 22 acres of Nippersink Creek to reduce stream channel incision, placement of cobble riffles to provide instream habitat as well as reduce channel incision, removal of invasive species and successional woodland from the 507.4 acre site, seeding using local seed source from surrounding natural areas with similar habitats and species.

Identification and Characterization of the Affected Water Body.

The North Branch of Nippersink Creek (Segment Code IL_DTKA-04) is classified as General Use water body with a 9.2 cfs 7Q10 flow. The water body has been assessed under the Agency’s 305(b)/303(d) program and found to be fully supportive for Aquatic Life. The creek is listed as biologically significant in the 2008 Illinois Department of Natural Resources publication Integrating Multiple Taxa in a Biological Stream Rating System and been given an integrity rating of “C”. The creek is considered enhanced in regards to the dissolved oxygen water quality standard.

Nippersink Creek (Segment Code IL_DTK-04) is classified as General Use water body with a 7.6 cfs 7Q10 flow. The water body has been assessed under the Agency’s 305(b)/303(d) program and found to be fully supportive for Aquatic Life; however it has been assessed as impaired for Fish Consumption with Mercury and polychlorinated biphenyls as the causes of this impairment and impaired for Primary Contact Recreation with fecal coliform given as the cause of the impairment. The creek has not been listed as biologically significant in the 2008 Illinois Department of Natural Resources publication Integrating Multiple Taxa in a Biological Stream Rating System, however it has been given an integrity rating of “C”. The creek is considered enhanced in regards to the dissolved oxygen water quality standard.

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

The pollutant load increases that would occur from this project include possible increases in suspended solids locally while construction occurs within the project area. The project will use approximately 600 cubic yards of natural cobbles for the riffles and 800 cubic yards of earthen material to fill a man-made pond. Existing benthos would be covered by filling activities and riffles construction. A new box culvert is proposed to replace an existing culvert used as crossings for snowmobiles and mowers.

Fate and Effect of Parameters Proposed for Increased Loading.

The increase in suspended solids will be local and temporary. Staging and access areas were located to minimize environmental impacts. Construction activities will occur during non-reproductive or rearing seasons. The new box culvert will provide a wide opening (5 feet high by 10 feet wide and 15 feet

long) with 2 feet of cobble in the bottom of the culvert, so as not to impede stream flow and to maintain suitable substrate in the stream bottom. Overall effects to the benthic invertebrates and aquatic organisms would be positive through the enhancement of riverine hydraulics, which would greatly increase species richness. Only beneficial effects are expected as a result of the restoration activities. No significant adverse effects on water quality are expected from this project. A five year monitoring plan following completion of construction will be implemented for the project area.

Purpose and Social & Economic Benefits of the Proposed Activity.

The purpose is to restore riverine and floodplain corridor hydrology, hydraulics, and physical habitat structure. The overall cumulative impact of the Nippersink Creek restoration project is considered to be beneficial environmentally, socially, and economically.

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

No Action

The future without-project conditions in general would continue to maintain a degraded state in terms of non-native species domination, low remnant habitat acreage, and overall poor riparian habitat structure. Invasive species would continue to spread and replace native plant species, creating habitats that favor generalists over specialists, thereby decreasing or eliminating foraging and breeding habitat for native fauna. Riverine conditions would remain roughly the same, or become slightly more degraded due primarily to increased urbanization within the watershed. Riverine biological diversity would be negatively impacted by this further degradation.

Stream Restoration (SR 1& SR 2)

The measure SR1 would include the addition of approximately 4 riffles in the channel to provide stream habitat, stream stability, and remove channel incision (riverine).

The measure SR2 would include the addition of a riffle at the head of the prairie slough habitat. The purpose of the riffle would be to raise the water table (riverine).

Ditch Filling (DF)

This measure includes the filling of a manmade drainage ditch located in the western portion of the project area. Filling the ditch would help to restore the natural hydrology, allowing the rewetting of surrounding adjacent wetlands (riverine).

Stream Bank (SB)

Stream bank restoration along the western portion of the project area would be tailored to the specific needs of the area. From the edge of the 2-year floodplain, a gently sloping bank terrace would be graded and immediately planted with a dense cover crop to prevent colonization by invasive plants. Once the stream and terraced banks have been stabilized, this zone would be heavily planted predominantly with sedges, and other wetland flora to provide a lush grassy riparian zone that would be host to many macroinvertebrate and amphibian species. This measure includes approximately 22 acres of riverine habitat (riverine).

Prairie Slough Restoration (PS)

This measure includes the creation of approximately 2.8 acres of prairie slough habitat and is dependent upon the implementation of measure DF and SR2. In order to naturalize the area with filled drainage ditch, the area would be contoured to create a depressional wetland. The prairie slough would then be appropriately planted with native wetland plugs such as sedges, bur reed, pickerel weed, and spike rushes (floodplain).

Sedge Meadow (SM)

This measure seeks to restore approximately 284.9 acres of sedge meadow habitat. All invasive and non-native vegetation would be eradicated physically or through the use of herbicide. High densities of native species plugs and seeds would then be planted throughout the designated areas. The restored grassy riparian zone would be a refuge to many macroinvertebrate and amphibian species (floodplain).

Wet Prairie (WP)

This measure seeks to restore approximately 96.8 acres of prairie. All invasive and non-native vegetation would be eradicated physically or through the use of herbicide. Weedy grass species along with new growth weedy trees would need to be removed in order to set the stage for wet prairie restoration. After all invasive species are removed, a native wet prairie seed mix would be sown (floodplain).

Wet Mesic Oak Savanna (OS)

This measure seeks to restore approximately 97.2 acres of savanna habitat to complete the restoration of Nippersink Creek’s riparian zone. All invasive and non-native vegetation would be eradicated physically or through the use of herbicide. Any mature oaks or other mature savanna tree species would be preserved. After all invasive herbaceous species and secondary woody growth are removed; a savanna native plant seed mix would be sown. Various savanna trees and shrubs would also be planted in a sparse fashion to achieve appropriate savanna canopy cover and structure (floodplain).

Eight riverine and eight floodplain alternative combinations were analyzed for decision-making and cost analysis.

Alternative	Category		Alternative	Category
No Action Plan			No Action Plan	
SR1	Riverine		OS	Floodplain
SR2,DF,PS	Riverine		WP	Floodplain
SR1,SR2,DF,PS	Riverine		WP,OS	Floodplain
SB	Riverine		SM	Floodplain
SR1,SB	Riverine		SM,OS	Floodplain
SR2,DF,SB,PS	Riverine		SM,WP	Floodplain
SR1,SR2,DF, B,PS	Riverine		SM,WP,OS	Floodplain

The alternative plans recommended are the combination riverine alternative (SR1, SR2, DF, SB, PS) and the combination floodplain alternative (SM, WP, OS). A detailed description of all the alternatives and the selection process can be found in the document: *Aquatic Ecosystem Restoration, Feasibility Study and Environmental Assessment* (August 2011) provided with the Joint Application Form submitted on August 17, 2011.

The original *Aquatic Ecosystem Restoration, Feasibility Study and Environmental Assessment* (August 2011) document submitted with an August 17, 2011 USACE, Joint Application Form for the project included two separate stream restoration projects (SR1 and SR2) and a ditch filling (DF) component. This revised request combines the stream restoration projects into one (SR1) with the addition of two new riffles (for a total of 7) and removed the ditch filling (DF) component. The revised request added the removal of a man-made berm and the filling of a man-made pond to re-create the natural floodplain feature of the area. A new box culvert is also being proposed to replace a deteriorated culvert and allow better access for heavy equipment during construction and enhance the existing snowmobile trail system. All other components of the original plan stay the same.

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

The Applicant completed a consultation on endangered species consultation with Illinois Department of Natural Resources. In a letter dated March 11, 2014, IDNR replied that if the following conditions were met; limit or do not work in the vicinity of Lost Valley Marsh between mid-April and Late June to avoid nesting birds, post photos and educate all personnel working on-site about Blanding's Turtles and necessary actions to take if encountered, limit construction activities to between October 1 and April 1 to curtail Blanding's Turtles hatchling disturbance, then consultation is terminated for project number 1406735. The Corps agrees to the conditions of IDNR's consultation.

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 enhance the natural biotic community in Glacial Park. Comments received during the 401 Water Quality Certification public notice period will be evaluated before a final decision is made by the Agency.