

IEPA Log No.: **C-0418-03**
CoE appl. #: **N/A**

Public Notice Beginning Date: **December 23, 2011**
Public Notice Ending Date: **January 23, 2012**

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
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 – 111 North Canal St., Suite 600,
Chicago, IL 60600-7206

Discharge Location: Near Riverside in SE/SW Sections 35 & 36 of Township 39N, Range 12E of the
3rd P.M. in Cook County.

Name of Receiving Water: Des Plaines

Project Description: Removal of the Hoffman Dam and stream 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 associated with a Section 404 permit application received by 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 James Blessman at 217/782-3362.

JTB:C-0418-03_401 PN and FS_24Jun11.docx

Fact Sheet for Antidegradation Assessment
For U.S. Army Corps of Engineers
IEPA Log No. C-0418-03
COE Log No.
Contact: Bob Mosher; 217/785-6937
Public Notice Start Date: December 23, 2011

The U.S. Army Corps of Engineers-Chicago District ("Applicant") has applied for Section 401 water quality certification for a project which consists of removing a portion of the Hofmann Dam ("Dam"). Applicant has stated that the project consists of removing a portion of the dam to reconnect the river and restore/return it to its natural fluvial state. The project is located in Sections 35 & 36, Township 39 North, Range 12 East of the 3rd Principal Meridian. The Dam is specifically located between Riverside and Lyons, Illinois. The existing Dam is a run-of-river structure constructed of reinforced concrete on the Des Plaines River ("River"). The Dam is approximately 258.5' across and the height varies from 11' to 13' above the river bed. The impoundment created by the Dam is approximately 6.5 miles in length. The total surface water area in the existing condition is approximately 12 acres, of which, approximately 6 acres is considered the "normal" river flow and 6 acres is considered the approximate impoundment. Approximately 1,000 tons of riprap stone will be placed immediately downstream of the Dam to fill in the scour trench that has developed below the Dam. Approximately 7,500 tons of cobble stone will be placed in the River to protect areas where contaminated sediments have deposited upstream of Hoffman Dam and to protect the toe of the bank from erosion. In addition approximately 30 more tons of riprap, and a flap gate, will also be placed along the banks of the River in the area of Swan Pond Park's drainage pipe discharge point to reduce flood damage runoff from the park. In addition to this permanent riprap and cobble stone placement another 1,150 tons of riprap stone will be used to construct temporary access roads; however, this stone will be removed after construction is completed.

Identification and Characterization of the Affected Water Body.

The Des Plaines River ("River") is a General Use Water with a 7Q10 flow of 88 cfs at this project location. Waterbody segment II_ G-39, is listed in the Illinois Integrated Water Quality Report and Section 303(d) List-2010 as impaired for aquatic life, fish consumption and primary contact recreation. The potential causes of impairment are Aldrin, Arsenic, Chloride, Lindane, Methoxychlor, pH, Phosphorus (total) and other flow alterations (non-pollutant) for aquatic life, Mercury and PCB's for fish consumption and fecal coliform bacteria for primary contact recreation. The Des Plaines River is not an enhanced waterbody 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 River at this location is not listed as a biologically significant stream; however, it has received an integrity rating of C. The Des Plaines River has a drainage area of approximately 635.7 square miles at the project site.

The IDNR WIRT System does not list any threatened or endangered species residing in the project 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 ("SS") during the construction of the project. Aquatic life uses in the portion of the Des Plaines River that will be disturbed during construction may be negatively impacted, but in time, they will recover and support an improved more diverse community structure than what is now found in the existing channel.

Fate and Effect of Parameters Proposed for Increased Loading.

The increase in SS will be local and temporary. Erosion control measures will be utilized to minimize any increase in suspended solids and prevent further impact to the stream. Construction for the proposed project will occur during a period of low flow to further minimize any impact. The Applicant will impose the following conditions upon their Contractor who will actually remove the Dam:

- The Contractor will be required to conduct the removal of the Dam during periods of low flow and in a manner that does not allow erosion of the banks or sediment bars found upstream of the Dam.

- The Contractor will be required to place a silt turbidity curtain in the river downstream of the Dam prior to conducting any activities in the River.
- Contractor will be required to use best management practices to control soil erosion and sediment release from the construction activities.
- Construction will occur in the wet. The removal of the Dam in the dry condition by using a cofferdam will not be allowed because the Applicant has determined that the use of a cofferdam will cause a high probability of upstream flooding during a storm event.
- Newly exposed banks shall be stabilized with erosion control blankets and planted within 7 days of exposure.
- Contractor will be required to comply with details and specifications for soil erosion and sediment control as described in the Illinois Urban Manual and the requirements of the Illinois NPDES Permit #ILR10.
- All equipment accessing the River will be required to use vegetable based hydraulic fluid to prevent contamination of surface waters in the event of equipment malfunction.
- Upon removal of the Dam the contractor will verify the existence of the Legacy Dam, thought to possibly exist just upstream of the Hofmann Dam. If the remnants of the Legacy Dam are found the Contractor will also remove any remnants of this dam.
- Contractor will be required to stabilize all exposed banks with a combination of blanket and stone, and also establish vegetation within 7 days of exposure of banks during dam notching operations.

Concerning sediment transportation the Applicant has also stated the following:

“A detailed sediment investigation conducted in 2006 during the design phase suggests that significant accumulations of fine grained sediments are not present in the Des Plaines River channel itself; the most significant accumulation of sediment in the upstream channel has occurred on the banks of the Des Plaines River where the River does not consistently wash fine-grained sediment bed load downstream...It appears, based on review of the physical data collected as part of the sampling investigation, that sand and gravel is present in the river channel in the majority of the probed locations. Fine-grained materials are present on the banks of the proposed river channel...Because no fine-grained sediments are found upstream of the Hofmann Dam in the cross-section of the proposed notch, sediment removal will not be necessary...Fine-grained materials present, and the toe of the new river banks, will be stabilized with a combination of glacial stone, water willow, erosion control blanket, and shrub planting...Glacial stone will be placed prior to notching the dam...Bed load discharged during dam removal will not exceed the normal sediment bed load in the Des Plaines River. The channel bed will be monitored during construction and long term monitoring will be conducted from Armitage Dam to downstream of Hofmann Dam until the channel bed has reestablished.”

Concerning mitigation for this dam removal project the benefit of removing the dam and restoring the natural stream flow compensate for the impacts of this project. This is a beneficial environmental project and therefore additional mitigation for this project's impact will not be required.

Purpose and Social & Economic Benefits of the Proposed Activity.

The Applicant has stated the following:

“Habitat fragmentation and loss is thought to be one of the chief threats to the long-term viability of riverine systems. Small isolated reaches lose species over time, especially those with rare and vulnerable species that may be affected by single incident events...This project is designed to restore ecological functions Where only isolated reaches flow, this project will create connections that allow these fragments to ecologically communicate with one another...Notching the Hofmann Dam would benefit the environmental quality of the upper Des Plaines River system and would also have a positive impact on the immediate project site. Implementation of the proposed project will result in the reestablishment of natural sediment transport processes and increase the dissolved oxygen concentration in the River; in addition, removal of barriers to fish passage will result in improved habitat diversity (both fauna and vegetation). Social and Economic benefits of notching the dam include removal of a safety hazard (several drowning incidents due to the Hofmann Dam in recent years), improves recreational opportunities of canoeing, boating, and fishing.”

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

The Applicant looked at three alternatives to this proposed project;

- *No action Alternative* would leave the present conditions. The Applicant has stated that, "This alternative does not address the issues of fish recolonization, riverine hydraulics in terms of habitat, recreational boat passage, dam safety, water quality, and restoration of natural sediment transport system."
- The *Full Removal of Hofmann Dam Alternative* would address the adverse impacts on the aquatic ecosystem; however, it has a much higher cost.
- The *Notching of Hofmann Dam Alternative*, which was selected, would consist of removing a portion of the existing Dam in order to reconnect the River and restore/return it to its natural fluvial state. The middle 150' of the Dam will be notched to the river bed (approximately 11' to 13') and an additional 37' feet on both ends will be lowered about 5.25 feet for a total linear feet notch within the Dam of 224'.

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

In a letter from John Rogner dated December 21, 2009 the IDNR stated the following:

"Hoffman Dam presents an obstruction to ecological improvements on the Des Plaines River, and a safety hazard to the recreating public. Interruption of fish migration by the dam and the loss of human life at the dam over the past several years have created concerns for the IDNR. For these reasons, IDNR has participated in the planning of the removal project. IDNR stands ready to support the Hoffman Dam removal project."

Mr. Rogner further states in his letter that;

"Recent questions have been raised regarding the relationship of the Hofmann Dam removal project and the migration of Asian Carp. IDNR sees no relationship between these issues. First, the dam is not high enough to make an effective barrier against the Asian Carp. Secondly, Asian Carp in the Des Plaines above Riverside would have no direct connection to the Great Lakes. Thirdly, leaving Hofmann Dam in place actually makes more attractive habitat for the Asian Carp than the removal of Hofmann Dam."

In a report generated through the IDNR's EcoCAT system dated August 3, 2011, the Illinois Natural Heritage Database contains no record of State-listed threatened or endangered species, Illinois Natural Area Inventory sites, dedicated Illinois Nature Preserves, or registered Land & Water Reserves in the vicinity of the project location; 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 removing the Dam will benefit the community at large by removing a safety hazard and will improve the River's aquatic ecosystem. Comments received during the 401 Water Quality Certification public notice period will be evaluated before a final decision is made by the Agency.