

IEPA Log No.: **C-0469-14**  
CoE appl. #: **2014-1164**

Public Notice Beginning Date: **June 27, 2016**  
Public Notice Ending Date: **July 18, 2016**

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, Rock Island District, Post Office Box 2004, Clock Tower Building, Rock Island, IL 61204-2004

**Discharge Location:** Along the Mississippi River between river miles 300 and 580.7.

**Name of Receiving Water:** Mississippi River

**Project Description:** Maintenance dredging of the navigational channel.

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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The U.S. Army Corps of Engineers (Corps), Rock Island District (District), (“Applicant”) has applied for a 401 Water Quality Certification for impacts associated with the proposed dredging of the Mississippi River from river mile (RM) 300.0, approximately 1 mile downstream of Lock and Dam 22 at Saverton, Missouri, to approximately RM 580.7, just north of East Dubuque, Iowa. The project area in Illinois is located along Pike, Adams, Hancock, Henderson, Mercer, Rock Island, Whiteside, Carroll and Jo Daviess Counties. The total project area includes the Upper Mississippi River (UMR) from approximately RM 300.0 to 614.0 and occurs in Missouri, Illinois, Iowa, and Wisconsin. The District is responsible for maintaining the navigation channel on the UMR (9’ deep X 400’ wide) to allow for the transport of commodities in accordance with the River and Harbor Act of 1930. Section 401 certification for the proposed activity has previously been authorized under C-0665-03 and C-0209-09, which expired on December 31, 2014. Locations and quantities of dredging vary from year to year due to the river’s changing hydrologic regime and large sediment load. Since 1993, the total volume of dredged material removed has ranged from 227,000 CY to 630,000 CY. The majority of the dredging occurs during summer and fall and is performed by the *MV GOETZ*, a hydraulic dredge owned and operated by the Corps’ St. Paul District. The purpose of this project is to maintain the UMR navigational channel to allow for the transport of commodities, avoid disruption to the transportation of those commodities, and to avoid channel closures and subsequent groundings of barges. The project will provide adequate sites for the placement of material, primarily fine to medium grain sand or sand/gravel mixture, resulting from the maintenance dredging operations. These placement sites may be terrestrial or aquatic and range in size from one acre to several acres. The location of the dredging operation will determine where the dredged material may be deposited. Dredge material placement areas include Thalweg (Open Water) Placement, Shoreline Placement, Inland Floodplain Placement, Upland or Contained Placement, Temporary Placement, or Beneficial Use Sites. These sites are selected prior to the placement of any dredged material by representatives of the District and the On-Site Inspection Team (OSIT). The OSIT includes Federal and State natural resources and regulatory agency representatives from the U.S. Department of the Interior, Fish and Wildlife Service, Iowa, Illinois, Missouri, and Wisconsin. The issuance of long-term permits provides the District with the flexibility needed to respond to channel maintenance needs while complying with the Clean Water Act. The District has been preparing Clean Water Act Section 404(b)(1) evaluations for the project at 5 year intervals; with this application the District is proposing a 10 year period of authorization.

### **Identification and Characterization of the Affected Water Body.**

The Mississippi River (IL\_ M-12, M-02, K-22, K-17, and K-21) is a General Use Water with estimated 7Q10 flows of 13,495 cfs at RM 580.7 and 16,740 cfs at RM 300.0. According to the draft 2014 Illinois Integrated Water Quality Report and Section 303(d) List, the Mississippi River at the above locations has been assessed by Illinois EPA. Location data and use attainment for each station is listed in Table 1. Only the upper portion of IL\_K-21, between Lock and Dam 21 and 22; RM 300 to RM 325, is in the project area. All stations are listed as fully supporting Aquatic Life use and not supporting Fish Consumption use with causes of impairment listed as Mercury and Polychlorinated biphenyls (PCBs) for all locations. All stations are listed as fully supporting Primary Contact

Recreational use except IL\_K-21; impairment cause is listed as Fecal Coliform. IL\_K-21 was not assessed for Secondary Contact use and IL\_M-12 was not assessed for Aesthetic Quality use, all other stations are listed as fully supporting these uses. The two aforementioned stations, IL\_K-21 and IL\_M-12, were not assessed for Public and Food Processing Water Supplies use. IL\_M-02 is listed as fully supporting while IL\_K-22 and IL\_K-17 are listed as not supporting this use due to Atrazine and Phenols, respectively. The Mississippi River, in the project area, is not listed as a biologically significant stream in the 2008 Illinois Department of Natural Resources Publication *Integrating Multiple Taxa in a Biological Stream Rating System*; nor is it given an integrity rating in that document. The Mississippi River between approximately RM 300 to RM 325 and RM 493.5 to RM 580.7 is designated as an enhanced water pursuant to the dissolved oxygen water quality standard.

**Table 1: IEPA sampling locations on the Mississippi River and Use Attainment (L&D=Lock and Dam)**

| IEPA Station Code                                | M-12                          | M-02                          | K-22                          | K-17                          | K-21                          |
|--|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| Location   | RM 522.5<br>L&D 13            | RM 482.9<br>L&D 15            | RM 364.6<br>L&D 19            | RM 325<br>L&D 21              | RM 273.5<br>L&D24             |
| Uses   | Attainment                    |                               |                               |                               |                               |
| <b>Aquatic Life</b>                              | Fully Supporting              |
| <b>Fish Consumption</b>                          | Not Supporting-Mercury & PCBs |
| <b>Public and Food Processing Water Supplies</b> | Not Assessed                  | Fully Supporting              | Not Supporting-Atrazine       | Not Supporting-Phenols        | Not Assessed                  |
| <b>Primary Contact Recreation</b>                | Fully Supporting              | Fully Supporting              | Fully Supporting              | Fully Supporting              | Not Supporting-Fecal Coliform |
| <b>Secondary Contact</b>                         | Fully Supporting              | Fully Supporting              | Fully Supporting              | Fully Supporting              | Not Assessed                  |
| <b>Aesthetic Quality</b>                         | Not Assessed                  | Fully Supporting              | Fully Supporting              | Fully Supporting              | Fully Supporting              |

**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 total suspended solids. These increases, a normal and unavoidable result of dredging, may occur in the river at the point of dredge activity or during placement of spoil material. Chemical analyses of coarse-grained material have shown an insignificant level of contamination due to the fact that contaminants

generally have a greater affinity for smaller-sized particles. Prior to dredging, substrate grain size is collected and analyzed. If the substrate to be dredged is considered coarse-grained (at least 80%), no further testing will be conducted; if considered greater than 20% fine-grained, chemical analyses will be performed to determine if contaminants are present. Recent chemical analyses were performed on samples collected from the Lock and Dam 14 Upper dredge cut at RM 493.9 and 494 in 2007. Sediment was tested for arsenic, cadmium, chromium, copper, lead, mercury, zinc, PAHs, and PCBs. All analyte concentrations, except for arsenic at RM 493.9, were below their respective consensus-based Threshold Effect Concentration (TEC) values. Arsenic concentrations (17.4 mg/kg) at RM 493.9 exceeded the TEC value (9.79 mg/kg) but were less than the Probable Effect Concentration (PEC) level of 33 mg/kg. The TEC values, developed by MacDonald et al. (2000)<sup>1</sup>, identify contaminant concentrations below which harmful effects on sediment-dwelling organisms are not expected. It should also be noted that fine-grained material such as this is disposed of in upland sites with no dredged material or return water from dredging activities returning back to the waterway.

Aquatic life uses in the portion of the river that will be disturbed during dredging and placement of spoil material may be negatively impacted, but in time, they will recover and support approximately the same community structure as is now found in the existing areas. Due to the size of the river, impacts to aquatic communities should be negligible.

#### **Fate and Effect of Parameters Proposed for Increased Loading.**

The increase in suspended solids will be local and temporary. Historic placement sites will be utilized whenever possible. If these sites are not acceptable, representatives from the District and OSIT members will discuss the preferred placement sites that minimize impacts to fish and wildlife prior to the placement of any dredged material.

#### **Purpose and Social & Economic Benefits of the Proposed Activity.**

The purpose of this project is to remove sediment from the Upper Mississippi River to maintain the navigational channel of not less than 9' in depth and 400' in width, as set forth by the River and Harbor Act of 1930. Maintaining the navigational channel allows for the transport of commodities, avoids disruption to the transportation of those commodities, avoids channel closures and subsequent groundings of barges, and maintains the river for recreational uses including boating and fishing.

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

The dredging of the Upper Mississippi River will follow conditions set forth by the Agency and USACE. The least intrusive alternative would be to not dredge the river. This is not an acceptable alternative given the need to maintain a navigable channel in accordance with the River and Harbor Act of 1930. Nineteen scientific studies (404 studies; 2009) were conducted on sediment transport, vegetation, macroinvertebrates, freshwater mussels, fish, and turtles. These studies were designed to evaluate the effects of dredging and dredged material placement on aquatic and terrestrial habitats

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<sup>1</sup>MacDonald, D.D., C.G. Ingersoll, and T.A. Berger. 2000. Development and Evaluation of Consensus-based Sediment Quality Guidelines for Freshwater Ecosystems. Archives of Environmental Contamination and Toxicology 39:20-31.

within the UMR. The results of the 404 studies were evaluated by a multi-agency 404 Study Team, a subcommittee of the Fish and Wildlife Interagency Committee (FWIC), and are available at <http://www2.mvr.usace.army.mil/projects/Supplements/404%20Studies%20Final%20%20Report.pdf>. While efforts will be made to use historic dredged material placement sites, the findings from the 404 studies will be utilized by the District and OSIT members to develop criteria for selecting alternative placement sites and to create Dredged Material Management Plans (DMMPs). These sites will include shoreline, thalweg, inland floodplain, upland/contained, temporary, and beneficial use sites. The preferred location will be beneficial use sites; however, due to lack of infrastructure and equipment limitations, few of these areas exist. Thalweg placement can be used repeatedly; therefore, these areas will be used where ecological and hydrologic conditions are suitable. Dredging and placement sites chosen will have the least overall impacts to environment, will not result in significant adverse effects on human health and welfare, and will be operationally and economically feasible for the District.

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

No comments have been received from IDNR; however, coordination will be initiated by the District with the appropriate Federal and State resource agencies, including IDNR and OSIT members, on a site by site basis. An EcoCAT endangered species consultation was submitted on June 23, 2016 to IDNR.

### **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 the draft 401 Water Quality Certification was written. We tentatively find that the proposed activity will result in the attainment of water quality standards; 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 benefit the UMR region by maintaining the navigational channel, allowing for the movement of commerce, avoid channel closures, and reduce the risk of subsequent groundings of barges in the river. Comments received during the 401 Water Quality Certification public notice period will be evaluated before a final decision is made by the Agency.