IEPA Log No.: **C-0157-19**
CoE appl. #: **MVS-2017-899**

Public Notice Beginning Date: **October 25, 2019**
Public Notice Ending Date: **November 11, 2019**

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

Section 401 Water Quality Certification for Discharge of Dredged or Fill Material

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: City of Murphysboro – 1101 Walnut Street, Murphysboro, IL 62966

Discharge Location: Near Murphysboro in Section 7 and 8 of Township 9-South, Range 2-West of the West 3rd P.M. in Jackson County.

Name of Receiving Water: Wetlands adjoining Big Muddy River

Project Description: Proposed improvements to existing access road to the Murphysboro Wastewater Treatment Plant.

The Illinois Environmental Protection Agency (IEPA) has received an application for a Section 401 water quality certification to discharge dredged or fill material 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 contact Darren Gove at email darren.gove@illinois.gov or phone no. 217/782-3362.

DRG:C-0157-19_401 PN and FS_18Jul19.docx

Fact Sheet for Antidegradation Assessment
For City of Murphysboro
IEPA Log No. C-0157-19
COE Log No. MVS-2017-899
Contact: Angie Sutton 217/558-2012
Public Notice Start Date: October 25, 2019

The City of Murphysboro ("Applicant") has applied for a 401 Water Quality Certification for impacts associated with the wastewater treatment plant access road improvements. The road will be raised above the 100-yr floodplain to approximately 10.5 feet by adding soil to create a new embankment and constructing a new 10-foot-wide aggregate base course. The road will consist of 16-foot-wide rock and chip surface. This project also proposes replacement of 80 feet of 48-in corrugated metal culvert and 170 feet of 48-inch RCCP with flared end sections, and 42 feet of 14-inch PVC culvert pipe with 110 feet of new 14-inch PVC culvert pipe. The site, located in Murphysboro in Jackson County, can be found in Section 7, Range 2W of Township 9S. The project will impact 1.3 acres (1420 linear feet) of forested wetlands by placing approximately 38,000 cubic yards (CY) of fill on both sides of the constructed roadway where wetlands are adjacent to the road. Impacts are unavoidable due to safety concerns of the roadway, but mitigation credits will be purchased from wetland mitigation banks at a ratio of 3:1. In the past, the access road has been flooded for periods of time of up to 5 months and the proposed project will elevate the road to provide 24/7 access to the facility during these times of flooding.

Information used in this review was obtained from application documents and supporting documents dated September 26, 2019, January 17, 2019, January 8, 2018, February 9, 2018 and November 29, 2017.

Identification and Characterization of the Affected Water Body.

A Wetland Determination was completed and identified 2 subcategories of Freshwater Forested/Shrub Wetland (PFO1/EM1C and PFO1A) and a Freshwater Pond (an old borrow pit from earlier construction). The Illinois Natural Areas Inventory (INAI) classification system (White, 1978) defines much of the lowland as Grade C wet floodplain forest with shrub swamp occupying shallow depressions. Grade C is disturbed, second-growth forest. Frequent flooding in this area has also deposited excessive sediments with moderate amounts of waste materials mixed with woody debris that detract from wetland quality. The Grade C forest consists largely of cottonwood, sycamore, honey-locust, and box elder. Green ash is in the identified areas as well, but declining due to emerald ash borer infestations. There were no conservative or rare plant species found that would suggest that this area has wetland features of "high quality". Overall, the wetland's floristic composition contains common, disturbance-tolerant plants typical of human-impacted floodplain sites. A Grade A or Grade B floodplain forest would have lowland oaks and other hardwood species. Few of these are present in the impacted 1.3 acres, having been cut from the site some years ago. A list of plant species identified both in the project area and in the plots used for delineation are included in the Joint Application documents. Based on field observations and INAI criteria the wetland was determined to be of low to moderate quality.

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 embankment and aggregate base course construction, and culvert replacement. Wetland**s** will be permanently impacted.

Fate and Effect of Parameters Proposed for Increased Loading.

The increase in total suspended solids (TSS) from the construction of the road will be short-term and temporary. The TSS will be reduced by implementation of a perimeter erosion barrier, temporary ditch checks, inlet and pipe protection, temporary seeding, final seeding and installation of erosion control blankets. Mitigation will consist of purchasing wetland credits at a ratio of 3:1 from two different mitigation banks. 1.77 acres of credits from Indian Creek Wetland Mitigation Bank and 2.13 acres of credits from Little Muddy Mitigation Bank for a total of 3.9 acres of wetland credits.

Purpose and Social & Economic Benefits of the Proposed Activity.

The proposed project will address a need for 24/7 access to the Murphysboro Wastewater Treatment Facility by elevating the access road so that is no longer lies in a floodplain. Occasional flooding makes access to the facility difficult and dangerous, and access is required for regular plant management. The road has caved in at places due to saturation and in some places, has been under up to 7 feet of water. Elevation of the road will provide safe travel under all weather-related conditions. Currently, in the event of flooding, employees have had to access the facility by boat or by walking in along the railroad tracks. Both options lead to safety concerns in addition to the question of how to gain access by emergency personnel in the event of an injury at the facility.

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

The Applicant has provided the following alternatives:
<u>Option 1 – Preferred Alternative:</u>
This option impacts 1.3 acres of wetlands but is affordable for a municipal government, while still achieving he purpose and need of the project. It is also the safest option as it complies with IDOT 3:1 road slope guidelines by requiring safe slope sides that can be stabilized and planted to IDOT 4 mixes of grasses and forbs. This alternative is the most environmentally sensitive option as it allows for habitat to be restored for use by indigenous animals for travel, nest-building and roosting areas. The Preferred Alternative was chosen because using the existing road footprint is the most cost-effective and provides the least environmental impact as compared to the other alternatives.

<u>Option 2 –Do Nothing:</u>
This option leaves the road in its current state and remains a hazard due to continued erosion under poor weather conditions. Repairs could be conducted after storms but would lead to impacts to wetlands as gravel and road beds would slough off into wetland and stream areas. The

sloughed material would entail retrieval and would in turn require time for the waterbodies to recover. Because the amount of damage due to repairs and storms would be considerable, this process would be never-ending. Repairs would continue over the years in the same area and would eventually see the same impact as culvert replacement in the preferred alternative as current culverts will eventually need replaced as a result of time. This alternative has the same or more impacts than the preferred alternative. At some point access to the facility will be lost either to failure of the existing road or high-water levels.

Option 3 –Build a bridge:
Under this alternative the entire road would be reconstructed as a bridge over the wetland and upland areas. During construction, the road would have to remain in use to provide facility access, causing new impacts to the existing wetlands on-site. The bridge would require 671 LF of wetland to be spanned along with the construction of support structures in the middle of wetlands and upland areas. These new impacts, both temporary and permanent would exceed the 1.3 acres of wetland impacts outlined in the Preferred Alternative. Wetlands would be filled for construction of a temporary road for access to build the bridge and 8-10 piers built with fill for pier and pier area footings. The old road would remain in place for backup and if the bridge is closed for repairs. This option would require impacts to 450 LF of wetlands along the road, and 671 LF from the bridge construction. Additional fill in the floodplain would require resolution of issues concerning water flow through and under additional structures. The costs under this alternative are very high and are not affordable as a municipal project. Additionally, a bridge would require the use of salt and other de-icing methods that would put unknown amounts of salt into the surrounding wetlands. This option was not chosen.

Option 4 – Drive Steel Pilings:
This option would require driving approximately 2600 LF of steel pilings along the road to keep it above the 100-year flood. The pilings would be driven 15 feet from the road and filled behind it to create a level surface. Placement of the pilings would impact 671 LF of wetland. Over 2000 LF of steel would be driven along upland areas at a high cost and areas could not be vegetated. This results in loss of wetland vegetation along areas where pilings are driven. The pilings also do not allow for most ground species of animal to cross from uplands to wet areas. This option results in approximately 0.25 acres less impacts than the Preferred Alternative, but the Preferred Alternative provides for better habitat quality using vegetation despite impacted 0.25 more acres. This option was not chosen due to costs being very high and unaffordable as a municipal project.

Conclusion:
Option 1 was the option chosen as it is the safest most cost-effective option to achieve the purpose and need of the project. The preferred alternative impacts 0.25 more acres than Option 4, but there is better habitat provided through vegetation. The purchase of mitigated wetland credit from a wetland bank will result in 3.9 acres of wetland mitigation at a ratio of 3:1.

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

An EcoCAT endangered species consultation submitted on February 9, 2018 to the Illinois Department of Natural Resources resulted in a record for the state and federally listed endangered Indiana Bat *(Myotis Sodalis)*. A consultation termination was issued provided the following recommendations for tree clearing in the proposed work areas are taken to ensure the protection of summer roosting and maternity habitat:

- If suitable habitat trees are found within the project area, these trees shall be clearly flagged and/or marked and shall not be cut between April 1-October 14. Suitable habitat trees are defined as trees greater that or equal to 5 inches diameter breast height (dbh), with exfoliating bark. All non-suitable habitat trees may be cut at any time.

- A field visit should be performed by a qualified individual (district biologist, forester or others who have been trained accordingly) to determine if suitable trees are present to provide Indiana Bat habitat. Suitable habitat trees include: shagbark, shellbark and bitternut hickory; green ash; American elm; slippery elm; eastern cottonwood; silver maple; sugar maple; white oak; red oak; post oak; and shingle oak. This includes trees that are dead, dying, broken, or damaged, with slabs or plates of loose or peeling bark on the trunks or limbs.

The project was also reviewed for cultural resource impacts and was determined to be in compliance with the Illinois State Agency Historic Resources Preservation Act.

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 assessment was written. We tentatively find that the proposed activity would 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 would benefit the Murphysboro Wastewater Treatment Facility by providing the facility with 24/7 access for routine management and improving safety concerns with the road itself and to the plant by making access available to emergency personnel when required in the case of any onsite accidents. Comments received during the 401 Water Quality Certification public notice period will be evaluated before a final decision is made by the Agency.