

IEPA Log No.: **C-0203-10**  
CoE appl. #: **CEMVR-OD-P-2010-0449**

Public Notice Beginning Date: **July 5, 2011**  
Public Notice Ending Date: **August 4, 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  
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 Eureka – 128 N Main St., Eureka, IL 61530

**Discharge Location:** Near Eureka in NE 1/4 Section 24 of Township 26N, Range 2W of the 3 P.M. in Woodford County.

**Name of Receiving Water:** Walnut Creek

**Project Description:** Cut new channel in Walnut Creek to Bypass an erosive oxbow

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.

Fact Sheet for Antidegradation Assessment  
For City of Eureka  
IEPA Log No. C-0203-10  
COE Log No. CEMVR-OD-P-2010-0449  
Contact: Mark Books; 217/785-6937  
Public Notice Start Date: July 5, 2011

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The City of Eureka ("Applicant") has applied for Section 401 water quality certification for impacts caused by work needed to excavate a new channel to bypass an erosive oxbow that is occurring in Walnut Creek within a city park. The proposed work will specifically occur in Section 24, Township 26 North, Range 2 West, within the City of Eureka. The purpose of the project is to stop the severe bank erosion and channel migration which is occurring along the west bank of the existing oxbow. The riparian woodland, along the west bank, is nearly gone. The channel migration will continue to advance through the grass area of the park and will threaten the park's main access road. The proposed project will include installing an earthen block in front of the bypass oxbow and creation of a new channel. The remaining portion of the oxbow not affected by the earthen block construction will be left undisturbed and allowed to naturally stabilize. The downstream end of the oxbow will remain open to allow for stream backflows to enter and to allow flow from a small unnamed creek, which flows into the middle of the oxbow, to discharge. This unnamed stream has about a 0.75 square mile drainage area. The small unnamed stream flow and the backflow from flood water will maintain a wetland aquatic habitat in the remaining oxbow area. The bypassed oxbow is approximately 500 feet long and the proposed new channel will be approximately 200 feet long. The proposed new channel will be excavated in the vicinity of an old cut channel of the creek. Stone toe protection ("STP") will be placed along the toe of the west bank of the new excavated channel, near the toe of the earthen block, and upstream along the west bank. Four bank key trenches will be constructed at the upstream and downstream ends, and in between at 100-foot intervals. A rock riffle will also be constructed at the downstream end where the excavated channel joins the existing channel. A total of approximately 626 tons of class 5A riprap will be used in this project, (120 tons for the stream barbs and stone toe construction, 227 tons for the riffle construction, and 279 tons for protection of the west bank side of the new constructed channel).

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

Walnut Creek has a zero 7Q10 flow and is a General Use water. Walnut Creek, Waterbody Segment IL-DKJ-O1 has been evaluated by the Illinois EPA Surface Water Monitoring Unit and found to be fully supporting aquatic life use in the draft 2010 Illinois Water Quality Report. The creek 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 creek is not listed as a biologically significant stream nor has it received an integrity rating within the project area. The creek watershed has a drainage area of approximately 54.2 square miles at the project site. The creek is likely to be completely dry during the summer/early fall low rainfall periods

The IDNR WIRT system did not list any state threatened or endangered aquatic 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 during the construction of the project.

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

The increase in suspended solids 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. Applicant has stated that temporary Sediment and Erosion Control Plan measures will be followed including an Erosion and Sediment Control Plan and Best Management Practices. Applicant has also stated the following:

"As soon as the project is completed, critical area seeding will be done on any areas that need it following NRCS Standards and Specifications (Critical Area Seeding 342). The channel block will be protected on the stream side with the STP on the lower bank and the critical area seeding

above that on the high bank. The top and back side which will be graded to a 4:1 slope will also be protected with a critical area seeding”.

To offset the loss of the trees that need to be removed for this project the Applicant will plant a 50 foot wide wooded buffer on the east side of the new channel consisting of 10-15' tall, 3-4" diameter hard maple trees. Mitigation will not be required for the bypassed oxbow because the Applicant will not fill in the bypassed oxbow except where the earthen block will be installed.

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

Applicant has stated the following concerning purpose for this project:

“Walnut Creek flows through the Eureka city park. Over the years it has made a new channel for itself, which is severely eroding...The past 10 years, the oxbow has eroded at minimum 10'-15' back towards the road into the lower park. This is the only access to the lower part of the park...The City measured from the road to the edge of the oxbow last September, and just since then it has eroded an additional 2 feet. Left unchecked, this oxbow will eventually work its way west towards the road, eating away ground used for parking and soccer games”.

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

The construction of the proposed project will follow condition set forth by the Agency and USACE. The Applicant considered two alternatives to this proposed project, the do nothing option and the option of constructing bendway weirs, including bank stabilization work, and widening the bend radius of the existing channel.

The do nothing option is not acceptable due to the severe eroding conditions that are occurring in the existing channel and the impact the erosion is causing in the city park.

Constructing bendway weirs, bank stabilization work, and widening the bend radius of the existing channel was determined to be too costly and would not be feasible. The Applicant stated the following concerning this option:

“The stream makes an 80 degree meander to the right and then a sharp 180 degree meander to the left. The 180 degree meander is being undercut along the toe of the bank during storm flows causing the bank to become unsupported. The low shear strengths of the soils in the bank cannot support the bank so it fails and sloughs off into the channel causing the bank to move laterally into usable park recreation area. The radius of curve divided by bank full width (R/W) here of 1.1 is much less than 1.8, and is therefore outside of the normal range of plan form stability. A 1.8 value is the lower acceptable limit to enable the successful use of standard streambank practices. The radius of curve cannot be increased because the inlet and outlet sections are long and parallel to each other.”

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

In a letter from Tracy Evans dated March 1, 2011 the IDNR indicated that an initial report generated through their EcoCAT website indicated the presence of protected resources in the vicinity of the project location. Further review by the IDNR staff concludes that adverse impacts to the protected resources are unlikely; therefore, consultation is 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 benefit the community at large by protecting the City's park resources. Comments received during the 401 Water Quality Certification public notice period will be evaluated before a final decision is made by the Agency.