

IEPA Log No.: **C-0571-11**
CoE appl. #: **CEMVS-OD-F-2001-3490**

Public Notice Beginning Date: **July 11, 2012**
Public Notice Ending Date: **August 1, 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: Roxana Landfill, Inc. – 4601 Cahokia Creek Rd., Edwardsville, IL
62024

Discharge Location: Near Roxana in SE 1/4 Section 5 of Township 4N, Range 8W of the 3rd P.M. in
Madison County.

Name of Receiving Water: Cahokia Creek

Project Description: Proposed relocation of Cahokia 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 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 Darren Gove at 217/782-3362.

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Fact Sheet for Antidegradation Assessment
For Roxana Landfill, Inc.
IEPA Log No. C-0571-11
COE Log No. CEMVS-OD-F-2001-3490
Contact: Mark T. Books; 217/785-6937
Public Notice Start Date: July 11, 2012

Roxana Landfill, Inc. (“Applicant”) has applied for Section 401 water quality certification for impacts caused by work needed to excavate a new channel for Cahokia Creek which will receive the high flows that are now causing the oxbows in the existing channel to be unstable. The proposed work will specifically occur in Section 5, Township 4 North, Range 8 West, located West of the City of Edwardsville. Three current oxbow sections of the existing Cahokia Creek channel are unstable and are threatening the landfill stability. The proposed project includes installation of three channel blocks in front of these three oxbows which will block off high flows from entering into these three oxbows. The channel blocks will have culverts installed within them which will allow up to 32 cubic feet per second (cfs) of flow to continue to enter the old channels while water is flowing within the creek. The lower ends of the old channels will also remain open which will create oxbow wetland areas within the block portions of the original channel. A total of approximately 3,320 feet of the current stream channel will be impacted. The Applicant will also construct three new channel sections totaling approximately 1600 feet with 66 feet of vegetative tree buffers on both sides. The new channel location will also cause the loss of 0.2 acres of an existing 4.1 acre wetland.

Identification and Characterization of the Affected Water Body.

Cahokia Creek and the wetland have a zero 7Q10 flow and are General Use Waters. Cahokia Creek, Waterbody Segment IL-JQ-05 has been evaluated by the Illinois EPA Surface Water Monitoring Unit in the draft 2010 Illinois Water Quality Report and has been identified as being impaired for Primary Contact Recreation Use due to fecal coliform bacteria. The creek and the wetland are 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*, this portion of the creek and the wetland are not listed as a biologically significant stream nor have they received an integrity rating within the project area. The creek watershed has a drainage area of approximately 217 square miles at the project site.

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. The 0.2 acre portion of the existing wetland affected by this project will eliminate the current habitat from this portion of the wetland. Aquatic life uses in the creek that will be disturbed during construction are anticipated to recover and support approximately the same community structure as 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 SS 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. To offset the loss of the trees that need to be removed for this project the Applicant will plant a 66 foot wide wooded buffer on both sides of the new channel segments. Plans call for about 1.6 acres of Black Willow trees to

be planted next to the stone toe protection area of the new channel. There will also be another 6.7 acres of mixed hardwoods (Green Ash, Sycamore, Walnut, Pin Oak and Bur Oak) planted above the willows. Mitigation will not be required for the partially blocked oxbows because these sections of the creek will continue to receive up to the first 32 cfs of flow and because the Applicant will not fill in the bypassed oxbow except where the earthen block will be installed. The Applicant used the Illinois Stream Mitigation Guidance to determine mitigation needs for this project (8,439 mitigation credits required), and to determine credits generated as a result of the proposed mitigation efforts (10,030 total mitigation bank credits generated).

Purpose and Social & Economic Benefits of the Proposed Activity.

Applicant has stated the following concerning purpose for this project:

“Lateral erosion of Cahokia Creek in the oxbows we are proposing to modify has already undermined one landfill monitoring well resulting in its total loss and threatens at least 3 other monitoring wells with one of these wells being within 3 feet of the eroding oxbow streambank. Monitoring of the lateral migration over the past three years has shown that in some areas the oxbow has eroded as much as 5 feet/year...In addition to concern about the monitoring wells the eroding oxbows are as close as 25 feet to the landfill.”

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

The construction of the proposed project will follow conditions set forth by the Agency and USACE. The Applicant considered three alternatives to this proposed project in addition to the do nothing option. 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 to the landfill. The three alternatives which the Applicant reviewed for this project are described in more detail below:

- “1) Stabilize channel in current location (four different treatments considered),
- 2) Stabilize only most critical reach with partial relocation,
- 3) Stabilize entire reach impacting Roxanna Landfill.”

In discussion of alternative #1 the Applicant has stated the following concerning the condition of the current creek oxbows:

“Research suggests that a ratio of the “bankfull width” (“W”) to “radius of curvature” (“R_c”) should be greater than 1.6 to be considered a stable geometry. Cahokia Creek near the landfill has at least two bends with a radii of 135 feet compared to a bankfull width of 93 feet yielding a R_c/W ratio of 1.45. Such a small ratio of these dimensions strongly suggests that these bendways are not stable and any attempt to stabilize the banks will be problematic at best with a strong likelihood that these bendways will eventually be cutoff and become abandoned oxbows.”

The Applicant has stated that they have already installed within this reach of the creek many gabion baskets in hopes of controlling the extensive erosion. The gabion baskets are failing and have failed to control the erosion problems within the creek.

The Applicant has stated that Alternative #2 improves the radius of curvature in only one of the three oxbows and does not achieve the load reduction of SS as Alternative #3. Concerning Alternative #3 the Applicant has stated the following:

“This alternative will relocate the channel, establishing a stable geometry for long term stability, and provide an estimated 90% reduction from the current loading of sediment and nutrients. In addition this alternative will provide 2 Newbury Rock Riffles to stabilize the streambed and provide additional aeration to increase the DO levels... Alternative #3 is the most technically sound approach as it creates a stable plan form for long term stability, it provides for channel bed stability, and it increases the overall aquatic habitat by 1700 feet of stream due to the maintenance of base flow conditions through the old and new channels.”

Concerning impact to the existing wetland the Applicant has stated the following:

“Original estimates at time of filing for 404 and 401 permits estimated wetland impacts of 0.5 acres. Subsequent adjustments and refined delineation after completion of property survey has reduced the impacted wetland acreage to 0.2 acres. Further reduction in impacted area is not feasible without compromising the integrity of the proposed relocation. To do so would result in changing the ‘confluence’ point with the current channel to an unstable location or creating a ‘radius of curvature’ that would be outside normal guidance for ‘radius of curvature’ over ‘bankfull width’ making it difficult to maintain a stable plan form.”

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

In a letter from Tracy Evans dated February 14, 2012 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 a landfill from erosion damage. Comments received during the 401 Water Quality Certification public notice period will be evaluated before a final decision is made by the Agency.