

IEPA Log No.: **C-0396-14**
CoE appl. #: **2013-00839**

Public Notice Beginning Date: **April 17, 2015**
Public Notice Ending Date: **May 18, 2015**

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: Kane County Division of Transportation, 41W011 Burlington Road, St. Charles, IL 60175

Discharge Location: Sections 1 and 12, T42N, R7E and Sections 1-12, T42N, R8E of the 3rd P.M. in Kane County near Algonquin, Barrington Hills and Carpentersville

Name of Receiving Water: Fox River, Tributaries to the Fox River and Unnamed Wetlands

Project Description: Construction of Longmeadow Parkway.

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 Thaddeus Faught at 217/782-3362.

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Fact Sheet for Antidegradation Assessment

Kane County Division of Transportation – Fox River, Tributaries to the Fox River and Unnamed Wetlands – Kane County

COE # LRC-2013-00839

IEPA Log # C-0396-14

Contact: Diane Shasteen (217) 558-2012

April 17, 2015

The Kane County Division of Transportation (KCDOT, “Applicant”) has applied for Section 401 water quality certification for permanent impacts of approximately 2.35 acres of jurisdictional wetlands and 1.82 acres of non-jurisdictional wetlands. Additional permanent impacts totaling 0.652 acres will occur in other Waters of the U. S. (WOUS) and non-jurisdictional open waters specifically in the Fox River and its associated tributaries. Approximately 0.85 acres of the Fox River will be temporarily impacted by the project. These impacts will include pavement, aggregate, structures, grading, earth, riprap, and subgrade fill in the amount of approximately 8,279 CY in wetlands and 13,550 CY in the Fox River and associated tributaries. The proposed project will construct a 5.6 mile four lane arterial roadway corridor with a median and four lane bridge over the Fox River commencing at Huntley Road and ending at Illinois Route 62. The proposed roadway will pass through portions of the Villages of Algonquin, Barrington Hills, Carpentersville, and unincorporated Kane County Township (T42N, R7E, Sections 1 and 12; T42N, R8E, Sections 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, and 12). The proposed Longmeadow Parkway project includes the following components:

- A new alignment from Huntley Road to IL 62, except for the widening of the existing roadway between Randall Road and White Chapel Lane
- Realignment of Bolz Road from Williams/Sandbloom Road to west of Illinois 25
- Construction of a new bridge over the Fox River with one pier located in the river
- An interchange at Illinois 31 and the newly constructed Fox River Bridge
- Construction of a new bridge over Sandbloom Road
- Construction of multi-use paths throughout the corridor with connections to existing trail systems

The proposed roadway and bridge project includes all associated infrastructure, such as lighting, storm sewers, and the construction of permanent best management practices (BMPs) including naturalized detention basins, bioswales and vegetated swales, and minimization of impervious surfaces. The purpose of this project is to provide a reliable, safe transportation facility that increases east-west access across the Fox River in Kane County. The project will enhance Kane County’s transportation network by reducing congestion and providing more direct routes, allow for efficient access to business districts, employment and commercial centers, and allow for growth in the eastern portion while preserving the rural nature of the western portion of Kane County. The proposed project will permanently impact approximately 4.17 jurisdictional and non-jurisdictional wetland acres and 0.652 acres of other WOUS and non-jurisdictional open waters and temporarily impact approximately 0.85 WOUS acres. Mitigation ratios developed by the COE, Interagency Wetland Policy Act (IWPA), and Kane County were compared. The applicant has committed to mitigation ratios ranging from 2.0:1 to 5.5:1 for permanent impacts to jurisdictional wetlands, non-jurisdictional wetlands and other WOUS which conforms to the IWPA mitigation ratios shown on Table 1 submitted by the applicant. These impacts will be mitigated with the purchase of 20.00 acres of wetland credit from a Kane County Wetland Bank (Table 1; furnished by the Applicant, modified for this assessment).

Identification and Characterization of the Affected Water Body.

Three unnamed tributaries to the Fox River (no Segment Codes; sites 6, 12/13, and 29 in Table 1) and two intermittent streams, West Branch and East Branch of the South Tributary to the Fox River (no Segment Codes; sites 5 and 8) will be impacted by the proposed project. These stream segments have not been assessed by Illinois EPA and are not listed as biologically significant streams in the 2008 Illinois Department of Natural Resources Publication *Integrating Multiple Taxa in a Biological Stream Rating System*, nor are they given an integrity rating in that document. The USGS Illinois Streamstats basin characteristics program gives a watershed size of 0.04, 0.19, and 0.24 square miles for the three unnamed tributaries. The watershed size of West Branch is approximately 0.14 square miles and 0.36 square miles for East Branch. According to the Illinois State Water Survey, these tributaries to the Fox River are likely to be a 7Q1.1 zero flow streams. In this region of Illinois, 7Q1.1 zero flow streams are streams with a watershed area of 1 square miles or less. These streams will exhibit no flow for at least a continuous seven day period nine out of ten years. Aquatic life communities in these headwater streams are tolerant of the effects of drying. Depending on the rainfall received before biological surveys, either a very limited aquatic life community, or no community at all would be found. Given this flow regime, no additional biological characterization would be required.

The Fox River (IL_DT-20), a direct tributary to the Illinois River, is a General Use Water with an estimated 127 cfs 7Q10 flow, at this location. According to the draft 2014 Illinois Integrated Water Quality Report and Section 303(d) List, the Fox River has been assessed by Illinois EPA and is listed as not supporting Aquatic Life and Fish Consumption uses. Causes for Aquatic Life use are Alteration in stream-side or littoral vegetative covers, Other flow regime alterations, and Dissolved Oxygen. The cause listed for Fish Consumption use impairment is Polychlorinated biphenyls (PCBs). Primary Contact Recreation, Secondary Contact, and Aesthetic Quality uses have not been assessed. The Fox River 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*; it is given an integrity rating of "C" in that document. The Fox River, at this location, is not designated as an enhanced water pursuant to the dissolved oxygen water quality standard.

Other WOUS located along the project periphery include the headwaters of the South Branch Kishwaukee River, Spring Creek, and North Tributary to the Fox River, and Woods Creek. These streams have not been assessed by Illinois EPA and there will be no direct crossings of these WOUS by the proposed project. The headwaters of the North Tributary to the Fox River (0.28 square mile watershed) will indirectly receive drainage from the proposed project.

In 1995, the Illinois Natural History Survey (INHS) delineated six wetlands within the Bolz Road Corridor; four additional wetlands were delineated by INHS in 2005 and 2008. Huff and Huff, Inc. surveyed the entire project area in September 2013 on five separate dates. Additional wetland delineations were conducted by Huff and Huff, Inc. during May, July, August, and September 2014. Thirty-three areas were investigated; twenty-seven sites were determined to be wetlands or waters of the United States (WOUS). The Army Corps of Engineers (Chicago District) determined that fifteen sites were jurisdictional waters of the U.S. Portions of ten jurisdictional wetlands and other WOUS totaling 3.002 acres (1C, 5, 6, 7, 8, 10, 11, 12, 13, and 29) and portions of nine isolated non-jurisdictional wetlands and open waters totaling 1.82 acres (1B, 2, 3, 4, 16, 20, 26, 27, and 31) will be impacted by the project. Permanent impacts to jurisdictional and non-jurisdictional waterways will be associated with 4.17 acres of wetlands and 0.652 acres of waterways. Temporary impacts totaling 0.85 acres will occur in WOUS. Table 1 lists wetland types and WOUS delineated, corresponding FQI scores, HQAR classification, and suggested and selected mitigation ratios for each impacted area. Impacts to these wetlands are unavoidable and will be mitigated by the purchase of 20.0 acres of wetland credits from a Kane County wetland bank. Mitigation ratios range from 2.0:1 to 5.5:1 based on the more stringent requirements of the IWPA.

Table 1. Longmeadow Parkway Total Wetland and Waterway Impacts and Mitigation Summary

Site #	Wetland/Waterway Type	JD Status	HQAR (Y/N)	FQI/ C-Value	Existing Wetland/Waterway Acreage	Permanent Wetland Impact (Acres)	Permanent Waterway Impact (Acres)	Temporary Waterway Impact (Acres)	Total Permanent Impact (Acres)	COE Mitigation Ratio*	IWPA Mitigation Ratio**	Kane County Mitigation Ratio***	Assigned Mitigation Factor	Total Mitigation (Acres)
1	Wet meadow/Marsh (ADID)	COE	Yes	16.7/3.1	2.33	-	-	-	-	-	-	-	-	-
1A	Wet meadow	COE	No	13.1/2.7	0.09	-	-	-	-	-	-	-	-	-
1B	Farmed	Isolated	No	4.2/1.3	0.08	0.08	-	-	0.08	N/A	2:01	2:01	2	0.16
1C	Partially farmed	COE	No	12.7/2.3	2.34	0.26	-	-	0.26	1.5:1	2:01	N/A	2	0.52
2	Farmed	Isolated	No	10.7/2.3	1.69	1.15	-	-	1.15	N/A	4:01	2:01	4	4.60
3	Wet meadow (ADID)	Isolated	Yes	9.4/2.0	0.30	0.19	-	-	0.19	N/A	5.5:1	2:01	5.5	1.05
4	Wet meadow	Isolated	No	12.2/2.5	0.17	0.17	-	-	0.17	N/A	2:01	2:01	2	0.34
5	Intermittent tributary/WOUS (C-value)	COE	Yes	8.0/4.0	0.22	-	0.14	-	0.14	1.5	5.5:1	N/A	5.5	0.77
6	Intermittent tributary/WOUS	COE	No	9.3/2.8	0.023	-	0.13	-	0.13	1.5:1	2:01	N/A	2	0.26
7	Forested (ADID)	COE	Yes	12.8/2.3	0.56	0.40	-	-	0.40	5.5:1	5.5:1	N/A	5.5	2.20
8	Unnamed tributary/WOUS/Forested/Wet meadow	COE	No	18.8/2.7	1.35/0.47	0.68	0.27	-	0.95	1.5:1	4:01	N/A	4	3.80
9	Forested (ADID)	COE	Yes	14.0/2.5	0.26	-	-	-	-	-	-	-	-	-
10	Fox River/WOUS	COE	Yes	-	2.44	-	0.06	0.85	0.06	1.5:1	2:01	N/A	2	0.12
11	Forested (ADID)	COE	Yes	16.9/2.5	1.36	1.03	-	-	1.03	5.5:1	5.5:1	N/A	5.5	5.67
12	Tributary/WOUS and associated wetlands	COE	No	11.7/2.5	0.06	-	0.02	-	0.02	1.5:1	2:01	N/A	2	0.04
13	Tributary/WOUS/ Wet meadow/Open Water Pond/Forested	COE	No	16.1/2.5	0.29/1.15	-	0.01	-	0.01	1.5:1	2:01	N/A	2	0.02
16	Wet meadow	Isolated	No	4.4/1.4	0.35	0.07	-	-	0.07	N/A	2:01	2:01	2	0.14
18	Marsh	Isolated	No	7.7/2.6	0.74	-	-	-	-	-	-	-	-	-
19	Farmed	Isolated	No	0.0/0.0	0.18	-	-	-	-	-	-	-	-	-
20	Farmed	Isolated	No	0.0/0.0	0.48	0.13	-	-	0.13	N/A	2:01	2:01	2	0.26
23	Wet meadow	Isolated	No	2.9/1.7	0.17	-	-	-	-	-	-	-	-	-
25	Forested/wet meadow	COE	No	4.1/1.7	0.41	-	-	-	-	-	-	-	-	-
26	Open Water Channel	Isolated	No	-	0.10	-	0.01	-	0.01	N/A	2:01	2:01	2	0.02
27	Open Water Channel	Isolated	No	-	0.01	-	0.01	-	0.01	N/A	2:01	2:01	2	0.02
28	Open Water Channel	Isolated	No	-	0.01	-	-	-	-	-	-	-	-	-
29	Intermittent tributary/WOUS	COE	No	2.1/1.5	0.03	-	0.002	-	0.002	1.5:1	2:01	N/A	2	0.004
31	Forested	Isolated	No	4.9/3.5	0.03	0.01	-	-	0.01	N/A	2:01	2:01	2	0.02
33	Tributary/WOUS and associated wetlands (ADID)	COE	Yes	4.9/1.9	0.30	-	-	-	-	-	-	-	-	-
34	Depressional wetland	Isolated	No	-	0.04	-	-	-	-	-	-	-	-	-
TOTAL						4.17	0.652	0.85	4.82	N/A	N/A	N/A	N/A	20.00

Identification of Proposed Pollutant Load Increases or Potential Impacts on Uses.

The pollutant load increases that would occur during this project include possible increases in suspended solids and heavy metals due to the temporary construction impacts and the increase in impervious surfaces. Soil Erosion and Sediment Control (SESC) measures will be implemented in accordance with the Illinois Urban Manual and approved by the Kane/DuPage County Soil Water Conservation District. Temporary SESC measures will include temporary construction fence, perimeter erosion barrier, seeded and mulched transition slopes, inlet filter baskets, stabilized construction exits, culverts, and cofferdams. Cofferdams and/or a temporary causeway consisting of clean coarse aggregates will be utilized as temporary stream works to facilitate the placement of the bridge pier. The stream channel will be cleared of all temporary stream works upon completion of the project and river contours will be reestablished within acceptable construction tolerances. Staging areas located away from drainage and surface waters will be designated for equipment wash down, repair, and maintenance.

Increases in heavy metals in stormwater runoff during construction and from the increase in impervious surfaces may result from the proposed improvement. Due to this increase and the total land area affected by the construction, an IEPA General Permit for stormwater discharges from construction site activities (NPDES Permit No. ILR10) or an individual NPDES may be required. All stormwater runoff, including runoff from new impervious surfaces, will be treated/ detained via naturalized detention basins, vegetated swales, bioswales, and infiltration prior to draining into WOUS. Permanent SESC measures will include sediment retention basins, bioswales, and other permanent erosion control. Effectively draining stormwater from the roadway into sediment retention basins through vegetated swales, bioswales, and forebays will reduce the effects of heavy metals and salt spray from the roadway. Due to the implementation of the BMP measures, the increased impervious surfaces and consequential stormwater runoff are not expected to create adverse effects to the WOUS and wetland communities in the project area.

Pollutant (copper, lead, zinc, and TSS) loading analyses were conducted and chloride concentrations were projected for the Fox River and the East and West branches of the South Tributary to the Fox River (streams receiving direct roadway runoff). According to these calculations, water quality parameters should not be exceeded. The Kane County Operational Sustainability Plan (http://www.countyofkane.org/mwg-internal/de5fs23hu73ds/progress?id=9iS8TahDXXd_i-8QzVRLp9wP8ScKA8TPbzRZQSLIDBo) includes KCDOT's strategy to reduce material consumed in road construction and maintenance, specifically increased use of recycled asphalt and concrete in road construction and reduced salt use. The use of calcium chloride and sodium chloride can produce chemical runoff that is harmful to aquatic ecosystems, vegetation, and soil health. KCDOT has implemented several BMPs to reduce salt use on county-owned roads including the following:

- Use of computerized salt spreaders and Global Positioning Systems - allows the drivers to spread the correct amount of salt and pinpoint the application of salt
- Addition of a beet juice compound to salt concentrations - helps salt stick to the road and activates salt at lower temperatures
- Installation of temperature sensors on bridges - activates in-road pucks that squirt liquid calcium chloride onto bridge decks prior to snow or heavy freeze conditions. The liquid calcium melts snow at lower temperatures, keeps snow from sticking to road surfaces for easier removal, and reduces corrosion of bridges, by reducing the salt use, and in turn lengthens the life of the bridges.

Aquatic life uses in the portion of the river that will be disturbed during construction may be negatively impacted, but in time, they will recover and support approximately the same community structure as is now found in the existing channel. A mussel survey will be conducted by IDNR prior to construction of the proposed bridge. All mussels collected will be relocated upstream of the project in suitable habitat in the Fox River. 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, along with any increases in heavy metals, will be local and temporary. Erosion control measures will be utilized to minimize any increase in these disturbances and prevent further impacts to the river and the wetlands near the newly constructed bridge. Runoff from the Fox River Bridge will be treated prior to draining into the Fox River and runoff from new impervious surfaces will be minimized, detained, and treated by utilizing permanent BMPS including naturalized detention basins, vegetated swales, bioswales, and forebays. The Applicant will purchase 20.0 acres of wetland credit from a Kane County wetland bank, the result of mitigation ratios ranging from 2.0:1 to 5.5:1 for impacts to jurisdictional and non-jurisdictional wetlands and WOUS totaling 4.822 acres.

Purpose and Social & Economic Benefits of the Proposed Activity.

The proposed roadway and bridge project will provide a reliable, safe transportation facility that increases access across the Fox River, which represents a physical barrier and limits east-west access in Kane County. The project will enhance Kane County's transportation network by reducing congestion and providing more direct routes, allow for efficient access to business districts, employment and commercial centers, and allow for growth in the eastern portion of Kane County while preserving the rural nature of the western portion. The roadway and bridge will provide connectivity between the Villages of Algonquin, Barrington Hills, Carpentersville, and the unincorporated regions of Kane County Township and meet the safety, emergency, and economic needs of the region.

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

Studies analyzing approximately twenty potential Fox River bridge crossings in Kane, McHenry, and Kendall Counties began in 1990. Four of those crossings were advanced by other governmental entities including the Cities of Elgin, St. Charles, and Aurora, and Kendall County. Other alternatives were deemed unacceptable due to major adverse impacts to natural and human environments, lack of traffic congestion relief, or limited continuity. Listed below are six alternatives that were further evaluated by KCDOT.

Alternative 1: No Build Alternative

- Congestion and longer travel times would persist
- Peak travel period in 2010 lasted 3.5 hours with a capacity deficiency (traffic demand above the capacity of the roadway) in excess of 40,000 vehicle equivalents in the north region of Kane County

- Capacity deficiency causes motorists to rearrange their trips to longer, less congested alternatives or to alternate times causing losses in valuable time in excess travel
- Use of these alternate routes leads to trips requiring local access on roadways not designed for additional traffic
- Does not meet the purpose and need of the project to provide a safe and reliable transportation link across the Fox River that meets the needs of the residents of Kane County and surrounding areas

Alternative 2: County Line Road Access

- Major adverse impacts to natural and human environment unavoidable
- Displacement of approximately 50 homes
- Adverse impacts to community cohesion associated with bisecting a residential area

Alternative 3: Miller Road/Lake Marian Road

- Major adverse impacts to natural and human environment unavoidable
- Irreplaceable, high quality wet sedge meadow would be filled
- Potential contamination from a paint and chemical company and an abandoned landfill

Alternative 4: Boncosky Road

- Major adverse impacts to natural and human environment unavoidable
- Irreplaceable, high quality wetlands including hillside seeps would be displaced
- Impacts to threatened and endangered species
- Eastern terminus too close to I-90 off-ramp creating traffic operation problems that would restrict capacity and create a potential traffic hazard

Alternative 5: Crane Road/Country Club Road

- Major adverse impacts to natural and human environment unavoidable
- Displacement of major business facility and associated employees
- Major economic impact to the City of St. Charles and Kane County

Alternative 6: Preferred Option: Bolz Road

- Least amount of adverse impacts to natural and human environment
- Includes intersection improvements for existing cross roads
- Provides multi-use paths with connections to existing trail systems
- Plans include reduced lane and inside gutter widths to reduce impervious area
- Runoff from impervious surfaces to be treated in naturalized detention basins, vegetated swales, bioswales, and forebays.

Several other road corridors were evaluated but were determined undesirable due to major adverse impacts to the natural and human environment. Alternative 6 has been chosen as the best alternative. This alternative provides the least amount of impacts to the natural or human environments and has the support of the local community and its leaders. Only the no build alternative would result in no environmental impacts or discharges to the river. This option is not viable due to the need for traffic congestion relief in the northeastern portion of Kane County.

Conclusion:

The construction of the proposed project will follow conditions set forth by the Agency and USACE. The completion of the roadway and bridge project is the most cost effective, viable means for connecting the northeastern communities of Kane County with the Greater Chicago area. Best management practices (BMPs) will be implemented prior to, during, and post-construction, staging areas for equipment wash down, repair, and maintenance will be designated, and structural BMPs for stormwater runoff will be implemented. Wetland mitigation of 20.0 acres of wetland credit from a Kane County wetland bank will offset the permanent loss of 4.17 acres of jurisdictional and non-jurisdictional wetlands and 0.652 acres of WOUS.

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

An Eco-CAT endangered species consultation submitted on August 14, 2014 to the Illinois Department of Natural Resources resulted in the identification of protected natural areas and threatened or endangered species residing in the area of the proposed roadway. IDNR reviewed this project under their Transportation Program in coordination with Illinois Department of Transportation and potential impacts were mitigated. Since that mitigation agreement, IDNR has also requested that no in-stream work be conducted from April 1 through June 15 due to a smallmouth bass nursery area being located in the Fox River at this location. The EcoCAT consultation letter issued on September 12, 2014 stated that IDNR has no objections to the issuance of the USACE permit if mitigation specifications are met.

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 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 community at large by providing an access road and bridge across the Fox River, reduce congestion and provide a direct east-west route that will allow for efficient access to business districts, employment and commercial centers, and allow for growth in the eastern portion while preserving the rural nature of the western portion of Kane County. Comments received during the 401 Water Quality Certification public notice period will be evaluated before a final decision is made by the Agency.