

## Longmeadow Parkway (401 water quality certification log #C-0396-14) Comments and Responses

1. Comment: Environmental Impact Statement (EIS) was done over 14 years ago. A fully updated EIS should be required.

RESPONSE: The Agency does not have authority to administer the National Environmental Policy Act (NEPA). A public hearing regarding the EIS was held on August 30, 2016. On November 22, 2016 the Federal Highway Administration (FHWA) issued a Finding of No Significant Impact that concluded the proposed project will not need a supplemental EIS.

2. Comment: Roadway will go through the Brunner Family Forest Preserve, a 4(f) property under Section 4(f) of the U.S. Department of Transportation Act of 1966 now implemented through 23 CFR Part 774.

RESPONSE: The Agency does not have authority under Section 4(f) of the U.S. Department of Transportation Act of 1966.

3. Comment: Lack of funding.

RESPONSE: Funding is not a water quality issue under the jurisdiction of the Agency.

4. Comment: Safety concerns for nearby school children crossing and using roadway.

RESPONSE: The applicant has stated that the project follows federal, state and county standards to provide a roadway that is as safe as possible. This includes pedestrian accommodations at major and minor intersections and the inclusion of a separate multi-use path along the entire length of the corridor. Pedestrian push-buttons and countdown timers will be installed at the Sleepy Hollow Road intersection near the Westfield Community School.

5. Comment: Concerns about pollution from roadway runoff. What studies have been done regarding the potential for chloride and other pollutants to cause or contribute to violations of water quality standards? What studies have been done on the extent to which salt spray will damage trees, fens and other wetlands?

RESPONSE: The applicant evaluated highway runoff, using FHWA research, regarding the relationship between precipitation events and the Average Daily Traffic (ADT) that a roadway carries. The applicant used a model developed by Driscoll, Shelley, and Strecker that estimates the magnitude and frequency of occurrence of in-stream concentrations of a pollutant under variable and intermittent highway runoff discharges (Driscoll, et al., 1990). The methodology focuses on assessing maximum concentrations as a means to understand potential impacts on the stream. For smaller watersheds, the Driver Method developed from United States Environmental Protection Agency (USEPA) and United States Geological Survey (USGS) data was utilized to assess pollutant loadings and concentrations.

Four pollutants; total suspended solids, copper, lead, and zinc were evaluated with the Driscoll model to represent storm water quality from transportation-related facilities where the ADT is greater than 30,000 vehicles per day. For lower traffic volumes, the pollutant concentrations are approximately three times lower and typically do not pose any water quality issues.

Stream impacts were determined by comparing the Illinois General Use Water Quality standards to a calculated water quality stream concentration for the metals based upon the Driscoll methodology. Pollutant loadings were calculated as well as pollutant concentrations prior to and after the operation of Best Management Practices (BMPs) for storm water. The result of these calculations is that all General Use Water Quality standards for these constituents were achieved.

Salt splash and spray impacts were specifically discussed during the Environmental Impact Statement (EIS) process. Additionally, specific calculations were completed for this project to assess potential chloride concentrations in the streams of the project area. These calculations were completed using the U.S. Geological Survey (USGS) methodology, which is a standard estimating procedure. The USGS methodology does not consider the effects of Best Management Practices (BMPs) or detention basins in estimating water quality concentrations. The results of these calculations indicate the chloride General Use Water Quality Standard of 500 mg/L would be achieved with one exception.

The daily maximum chloride concentration of the tributary to West Branch of the South Tributary to the Fox River was estimated at 513 mg/L prior to any BMP or storm water treatment. Stormwater runoff from this area is directed to a stormwater detention basin prior to discharge. This basin is anticipated to provide mixing and reduce chloride concentration peaks to below 500 mg/L.

Additionally, the Kane County Division of Transportation (KDOT) has been proactive in reducing the impacts of salt. Through the use of computerized/calibrated salt spreaders and Global Positioning Systems (GPS), drivers can more accurately spread the correct amount of salt and better pinpoint the application of salt on its roads. In addition, drivers cannot control the applications which are pre-programmed into the computers. The trucks are regularly calibrated and spot checked. Drivers also receive regular training on de-icing procedures. KDOT continues to evaluate alternate deicers and is constantly monitoring and following the latest industry trends. Currently, KDOT is utilizing an enhanced deicer/salt product that contains sodium chloride and a magnesium chloride pre-wetting agent. The product adheres to the road surface more effectively than dry salt, minimizing loss of deicer from wind and traffic scatter, thereby reducing distribution to adjacent areas.

6. Comment: Kane County has never answered the question of lead contamination clean-up at the former gun club.

RESPONSE: The applicant has stated "Lead removal at the former gun club east of Sandbloom Road will be processed in coordination with the IEPA. This may include the removal of the lead to a sanitary landfill, which requires extensive testing and documentation." The County is currently coordinating with the Illinois EPA Bureau of Land under the Site Remediation Program (SRP). The 401 water quality certification will include conditions such that contaminated soil shall not be placed in any waterways.

7. Comment: Practical alternatives exist.

RESPONSE: The applicant provided an alternatives analysis. Several alternatives were evaluated in the EIS and the proposed alternative was selected as the alternative with the least environmental impacts. A No-Build alternative was evaluated in the EIS and a Longmeadow Parkway Combined Design Report. Due to increasing traffic congestion on neighboring bridges, and failing to enhance community cohesion, it was determined by the applicant that that the No-Build alternative does not meet the project's needs.

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 KDOT:

- Alternative 1: No Build Alternative
- Alternative 2: County Line Road Access
- Alternative 3: Miller Road/Lake Marian Road
- Alternative 4: Boncosky Road
- Alternative 5: Crane Road/Country Club Road
- Alternative 6: Preferred Option: Bolz Road (Longmeadow Parkway)

Alternative 1, as discussed above, was found to not meet the project's need. Alternatives 2 through 5 were determined to have major adverse impacts to the natural and human environment. Several other road corridors were evaluated but were also determined to be 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 meets the project's needs. 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. The alternatives analysis was determined to be acceptable under the Illinois Antidegradation Regulations.

8. Comment: Loss of habitat, including for endangered species. Why hasn't a mussel survey been conducted?

RESPONSE: The applicant coordinated with the Illinois Department of Natural Resources and US Fish and Wildlife Service regarding impacts to endangered and threatened species. Regarding native mussels, the Illinois Natural History Survey (INHS) will conduct a mussel survey prior to construction. If native mussels are identified, they will be relocated. If State listed threatened and endangered species of mussels are identified, an Incidental Take Authorization and Conservation Plan to relocate the mussels will be prepared and coordinated with IDNR.

Species of concern during the coordination with the IDNR and USFWS included the northern long-eared bat (*Myotis septentrionalis*), native mussels, Blanding's turtle (*Emydoidea blandingii*), the river redhorse (*Moxostoma carinatum*), and the starhead topminnow (*Fundulus dispar*). The northern long-eared bat was recently listed as a federally threatened species with Interim 4(d) rule by the USFWS on May 2, 2015. Interim rules issued by the USFWS include a restriction on tree removal during the pup rearing season from June 1st to July 31st. However, more stringent protocols may be required by other agencies. This project will adhere to any rules in place at the time of construction. IDNR and USFWS provided recommendations that the applicant will follow in order to protect the habitats of the river redhorse, starhead topminnow, small mouth bass (*Micropterus dolomieu*), bald eagles, Northern Log-eared bat and the Blanding's turtle.

9. Comment: An assessment of the impacted streams should be done. Many streams in the Fox River Valley are groundwater-fed. Cannot just assume they are 7Q1.1 zero flow streams. The headwaters of the North Tributary to the Fox River that would receive drainage from the proposed project should also have been assessed.

RESPONSE: The applicant provided information on the impacted streams indicating that some may receive groundwater as part of the base flow. Six waterways were evaluated in the anti-degradation report for the Section 401 water quality certification submittal and characterized at various levels during field investigations. Receiving streams were characterized by physical attributes, such as stream substrate, riparian vegetation, stream width/depth, and function. The Fox River has been assessed by the Agency. The native floristic quality index for vegetation (FQI) and the coefficient of conservatism (C-value) were determined for all other receiving streams. FQI values of 0 to 5.0 are considered severely degraded, 5.1 to 9.9 as degraded, 10 to 19.9 are moderate quality with some native character, and those with values greater than 20 have natural characteristics and are considered to be an environmental asset. Areas of high natural quality include native plants with C-values ranging from approximately 4 to 10. The headwaters of the North Tributary to the Fox River will not be directly impacted by the discharge of dredge or fill material. All storm water from the proposed roadway directed to the Fox River and tributaries will be treated through BMPs prior to discharge. The Agency determined it had adequate information to assess the impacted streams.

10. Comment: Concerns with removal of nearly 6000 trees.

RESPONSE: Kane County surveyed the trees within the project corridor. The survey results show the following composition of trees:

Rating	Health	Structure
Excellent	0.3%	0.3%
Good	6.8%	5.0%
Fair	45.0%	36.5%
Poor	35.1%	45.4%
Dead	12.8%	12.8%

About half of the trees to be removed were determined to be in poor health and/or poor structure or dead.

Mitigation for the impact of trees is typically done according to IDOT policy (D&E-18 Preservation and Replacement of Trees) at a 1:1 remove-to-replace ratio. However, after consultation with the U.S. Fish & Wildlife Service (USFWS), the remove-to-replace ratio will be 2:1 to mitigate any potential

impact to the northern long eared bat. For the Longmeadow Parkway project, the majority of the trees are proposed to be replaced within the Longmeadow Parkway right-of-way or within the adjacent Brunner Family Forest Preserve to replace the functionality of removed trees. KDOT is currently coordinating with the Forest Preserve District of Kane County regarding other opportunities for tree replacement.

11. Comment: A rare fen, one of the largest along the Fox River, will be damaged by salt spray. Fen was not addressed in EIS.

RESPONSE: The applicant reviewed the Kane County Advanced Identification (ADID) of Aquatic Resources Map and Fen Watershed Map to determine the presence of mapped fens within the survey limits of the project (approximately 300 feet beyond the construction limits). No fens were identified within the vicinity of the project. The closest mapped fen watershed is approximately 1.93 miles southwest of the survey limits near the intersection of Miller Road and Providence Drive.

Formal wetland delineations, which include a field investigation to identify and delineate boundaries for all wetland types (including fens and seeps) by collecting/recording data on vegetation, soil, and hydrology, were conducted in September and October of 2013 within the survey limits following the *2010 U.S. Army Corps of Engineers (USACE) Midwest Region Manual* (supplement to the *1987 Wetlands*) methods. Fens or seepage areas were not identified within the survey limits at the time of the site visit. A formal jurisdictional determination (JD) was issued by the USACE confirming the results of the wetland investigation.

Due to stakeholder concerns regarding fens in the area, an additional site visit was completed on November 10, 2014 to further document site conditions. While ravines and a floodplain forest were identified, fens or seepage areas were again not identified in the survey limits at the time of the site visit.

While fens were not identified within the survey limits, that does not necessarily preclude their presence along the west bank of the Fox River within the Brunner Family Farm. Impacts are not proposed in any fens or recharge areas as stormwater generated from the construction of Longmeadow Parkway will be directed to vegetative swales. The applicant will provide clay lined ditches, just west of IL Route 31, to reduce the amount of chlorides reaching the shallow groundwater associated with seeps and wetlands west of the Fox River. Two detention basins are proposed uphill of the seeps and wetlands. These basins will be constructed in a clay/loam formation, which provides protection for shallow ground water resources within this area.

Groundwater will be protected in sensitive areas such as wetlands or seeps with clay lined ditches.

12. Comment: Mitigation plan is incomplete. Need to know the location of the mitigation in order to evaluate mitigation vs. impacts.

RESPONSE: The applicant has proposed purchasing credits from wetland mitigation banks for mitigation. Mitigation ratios developed by the Corps of Engineers, the Interagency Wetland Policy Act (IWPA), and Kane County were compared and the proposed mitigation ratios were selected using the most stringent requirement (highest ratio). Mitigation ratios range from 1.5:1 up to 5.5:1. For jurisdictional impacts, mitigation credits were purchased from the Blackberry Creek Mitigation Bank and the Slough Creek Mitigation Bank both within the Fox River watershed. The Corps of Engineers approved the proposed mitigation and ratios as meeting the Federal Mitigation Rule. The applicant acquired wetland credits at Kane County's Johnson's Mound Forest Preserve mitigation project to mitigate for isolated wetland impacts. The proposed mitigation is acceptable under the Illinois Antidegradation regulations.

13. Comment: The project is not in the public interest. The project will do little to reduce traffic. Preserve lands that the public currently enjoys will be impacted.

RESPONSE: The project will benefit the public at large by providing an access road and bridge across the Fox River. 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. See response 2 regarding preserve lands.

14. Comment: What amount of excavation is required for this project? Will all excavated material be used at the Ranging Buffalo ski hill?

RESPONSE: The project will include excavation of approximately 1,360,000 cubic yards of material. Approximately 918,000 cubic yards will be used as fill for embankments including approximately 513,000 cubic yards that will be placed at that Raging Buffalo ski hill. Approximately 442,000 cubic yards of material will be taken off-site and disposed of at a CCDD facility or landfill.

15. Comment: What studies have been done regarding the potential for the project to increase flooding?

RESPONSE: Flooding issues are not under the jurisdiction of the Agency. However, the applicant has stated: "Drainage is designed per IDOT and KDOT standards, including an extensive closed drainage system, open drainage ditches and detention basins. The project will not increase the risk of flooding."

16. Comment: Noise pollution.

RESPONSE: Noise pollution is not under the Agency's 401 water quality certification jurisdiction.

17. Comment: Light pollution.

RESPONSE: Light pollution is not under the jurisdiction of the Agency.

18. Comment: Property values will decrease.

RESPONSE: Property values are not under the jurisdiction of the Agency.

19. Comment: Increased air pollution.

RESPONSE: The applicant has stated:

"Potential air quality impacts come from roadway projects in two forms: construction air quality and post-construction/operational air quality. During construction, provisions in the Illinois Department of Transportation (IDOT) Standard Specifications for Road and Bridge Construction will be followed to minimize dust, erosion, and construction equipment emissions to the greatest extent practical.

The addition of another river crossing in the North Region of Kane County will improve air quality, post construction, by improving the mobility of the region. Improved mobility enhances traffic flow and reduces travel time by reducing time spent in congestion. Generally, improved traffic flow leads to improved air quality, as fewer vehicles spend time idling in congestion. Longmeadow Parkway will reduce congestion and idling time by vehicles. The Longmeadow Parkway project also meets all traffic related federal air quality standards."

20. Comment: The applicant has not corresponded with the Jelkes Creek – Fox River Watershed Coalition regarding the "Action Plan" for the watershed.

RESPONSE: Although not required by regulations, the design elements of the Longmeadow Parkway project align with objectives of the Jelkes Creek Fox River Watershed Action Plan.

The applicant provided a detailed response outlining how the project aligns with the goals of the Jelkes Creek Fox River Watershed Action Plan including: water quality improvement, reduction in nutrient loading, incorporation of BMPs, maintaining existing ecosystems, and preserving natural geology.

21. Comment: The project will impact the capture zones for many municipal wells. Runoff will degrade the aquifers for these water supplies.

RESPONSE: Potential effects on both surface water and ground water were evaluated during the design and permit process. Best Management Practices (BMPs), including storm water treatment, were used to protect water quality. All storm water directed to the Fox River will be treated through BMPs prior to discharge. Areas of disturbed soil will be restored with erosion control blanket and native seeding/plugs. Native vegetation has deep roots to stabilize the disturbed soil, filter suspended solids, oils and nutrients, and promote evapotranspiration and groundwater recharge. All general use water quality standards will be maintained in the Fox River with this treatment.

Stormwater treatment systems have been designed to protect groundwater quality and aquifers. A shallow groundwater zone exists west of the Fox River. This zone is not used for water supply, but may feed water or wetland features within the area. The applicant will provide clay lined ditches, just west of IL Route 31, to reduce the amount of chlorides reaching the shallow groundwater associated with seeps and wetlands west of the Fox River. Two detention basins are proposed uphill of the seeps and wetlands. These basins will be constructed in a clay/loam formation, which provides protection for shallow ground water resources within this area.

Groundwater will be protected in sensitive areas such as wetlands or seeps with clay lined ditches. Maintaining effective storm water handling systems minimizes potential effects on the aquifer used for drinking water. Public and private water wells in the area were evaluated regarding their proximity to the roadway, well construction, the permeability of soils, and well depth to insure protection of these resources.

According to the EIS and reevaluation, roadway excavation will not penetrate the aquifers that are supplying water in the vicinity of the corridor. No impedance to the groundwater flow toward the Fox River is anticipated considering the roadway section and alignment proposed.

Eleven private wells are located within 500 feet of the corridor and two within the ROW will need to be properly abandoned and capped. One well is located on the northwest corner of Longmeadow Parkway and Randall Road and the other is located on Angelina Place, just east of the Fox River. Since the EIS was approved, three wells along Angelina Place have been abandoned and capped. No public wells were noted within 1,500 feet of the corridor. The Agency does not believe the project will result in pollution of groundwater.

22. Comment: Environmental Justice Issues.

RESPONSE: Environmental justice was evaluated in the EIS and the re-evaluation of the EIS. It was determined both times that the proposed project did not result in any disproportionate impacts on low income or minority populations. The Corps of Engineers' joint public notice with the Agency included a link to the Kane County DOT website which included project information in Spanish. The EIS also states that the preferred road alignment was moved further north as a result of public input from residents during a public hearing and coordination with local leaders in order to avoid impacts to census tracts with higher minority populations. It was determined that no disproportionate impacts on low income or minority populations would result from the proposed project.