

**Authorization for Incidental Take and Implementing Agreement**

Pursuant to the Illinois Endangered Species Protection Act (520 ILCS 10/5.5) the Illinois Department of Transportation's (IDOT)/Kane County Division of Transportation (KDOT) authorization for the incidental take of the State threatened slippershell mussel (*Alasmidonta viridis*) in Kane County, Illinois (as described/shown in the conservation plan received by the Department on 27 April 2010) is hereby granted, subject to the terms and conditions described in the attached Authorization and Implementing Agreement. The Illinois Department of Natural Resources has determined that this authorized take is incidental to the construction/replacement of the Big Timber Road (FAS 0130) bridge, over Tyler Creek, in Kane County, Illinois.

Procedural History

IDOT and the Kane County Division of Transportation (KDOT) prepared a conservation plan as described by the Illinois Endangered Species Protection Act (520 ILCS 10/5.5). That plan and IDOT/KDOT's request for authorization for incidental take of slippershell mussels were received by the Illinois Department of Natural Resources (Department) on 27 April 2010. Public notice of IDOT/KDOT's request for authorization of incidental take of slippershell mussels was published in the Arlington Heights Daily Herald (Official State newspaper) and The Northwest Daily Herald (local circulation) on May 3, May 10, as well as on May 17, 2010. Public comments on IDOT/KDOT's conservation plan were accepted by the Department until June 16, 2010. No comments were received by the public during the period of May 3, 2010 through June 16, 2010.

Compliance with the Endangered Species Protection Act

The Illinois Endangered Species Protection Act includes six (6) criteria which must be met for the authorization of incidental take of an endangered or threatened species. These criteria and the Department's determination for each criteria are listed below.

- 1. The taking will not be the purpose of, but will only be incidental to, the carrying out of an otherwise lawful activity:

The Kane County Division of Transportation (KDOT) is proposing the replacement of two (2) bridge spans with a single bridge structure on Big Timber Road at Tyler Creek near the intersection with Damisch Road in Rutland Township, Kane County, IL. The project is located in the W 1/2 of Section 26 and the East 1/2 of Section 27, Township 42 North, Range 7 East. KDOT is completing the final stages of the Phase I evaluation. The official ITA Conservation Plan was prepared and submitted to IDNR as part of the final project submittal.

It is anticipated that the project will also require an Individual Section 404 Permit from the United States Army Corps of Engineers (USACE) and Section 401 Water Quality Certification from the Illinois Environmental Protection Agency. As is typical, issuance of the Incidental Take Authorization by IDNR is anticipated to be a special condition of the Section 404 permit.

2. The parties to the conservation plan will, to the maximum extent practicable, minimize and mitigate the impact caused by the taking.

The Kane County Division of Transportation (KDOT) is responsible for securing this final authorization for incidental take of state-listed species; securing all permits including NPDES, Section 404 and Office of Water Resources; as well as inspection of the work and contractor compliance with the contract documents. KDOT, as directed by the Illinois Department of Transportation, exclusively abides by the National Environmental Policy Act (NEPA) and all associated state and federal environmental laws in carrying out its mission of performing the most environmentally sensitive methods of transportation planning and engineering.

The formal conservation plan prepared by IDOT/KDOT, and received by the Department on 27 April 2010, stated that freshwater mussel surveys, and subsequent relocations, would be conducted prior to initiation of bridge construction/repair and most likely during the spring/summer while water temperatures are at or above 50 degrees Fahrenheit. All mussels observed (listed or non-listed species) are to be relocated in order to minimize impacts.

Mussel surveys will be conducted using standard survey techniques including searching by feel to methodically cover the area to be disturbed by the project (viewing boxes, wading in shallow water, SCUBA in deeper water-if applicable, although not likely with this project). All mussels found will be identified to species. Mussels will be relocated into areas of suitable habitat, in the same stream/river, preferably upstream of the construction site. Specifically, the transplant site will be close to the collection area and have similar to better water quality and substrate. The ecological staff/freshwater mussel consultant conducting this mussel relocation effort shall have extensive experience with Midwestern mussels.

The mussel consultant will provide the Department with a report detailing the results of all mussel surveys and relocation efforts within 60 days of completing all surveys/relocations. In summary, mussel surveys and related relocations will occur only after Department authorization and prior to any construction activities.

3. The parties to the conservation plan will ensure that adequate funding for the conservation plan will be provided:

This project is ultimately authorized by the Illinois Department of Transportation (IDOT), who oversees the use of state-distributed funding among local/municipal agencies. In an official correspondence to the IDNR (Department) dated 27 April 2010, KDOT stated that work on this project would not begin without adequate funding to undertake and implement actions identified in the official Conservation Plan. This project will require both financial and engineering plan approval by IDOT prior to official letting. KDOT has agreed to identify funding for all measures within the official Conservation Plan as part of the design process. Additional soil conserving practices and measures necessary to deal with changed and unforeseen circumstances would be funded through change order and force account practices. By law, the erosion and sediment control plan must be in place for the life of the project.

4. Based on the best available scientific data, the Department has determined that the taking will not reduce the likelihood of the survival or recovery of the endangered species or threatened species in the wild in Illinois, the biotic community of which the species is a part, or the habitat essential to the species' existence in Illinois:

According to KDOT, this project will remove only a small reach of channelization and return the stream (Tyler Creek) to a more natural morphology. The relocation of all mussels encountered will make it unlikely that a significant number of individuals will be exposed to lethal threats.

Construction and repair/replacement of the FAS 0130 (Big Timber Road) bridge over Tyler Creek in Kane County, Illinois will most likely not reduce the likelihood of the survival of state-listed threatened or endangered mussels in Illinois. For the purposes of biological comparison, it should be noted that the freshwater mussel fauna of the Fox River and its tributaries in Illinois and Wisconsin were surveyed by Department staff during the summers of 1997-2001. A total of 3,585 live individuals comprised of 23 species were collected from 96 sampling stations. Of this total, 31 slippershell mussels (*Alasmodonta viridis*) were collected.

In North America, the slippershell mussel (*Alasmodonta viridis*) is known from the upper Mississippi, Ohio, Cumberland, and Tennessee river drainages and lower and middle sections of the St. Lawrence. In Illinois, it is known from the Sangamon, Kankakee, Vermilion, and Little Vermilion river systems. This mussel inhabits small to medium sized streams where it is usually found buried in sandy substrates in shallow water. Unfortunately, the slippershell now has a restricted distribution in Illinois, and its numbers have been reduced most likely as a result of increased siltation and channelization in small to medium sized streams throughout the state.

Any live animals that are overlooked during the relocation effort could be at risk of injury or death as a result of construction activities. The relocation of all mussels encountered will make it unlikely that a significant number of individuals will be exposed to threats related to the construction and repair/replacement of the FAS 0130 (Big Timber Road) bridge over Tyler Creek in Kane County, Illinois.

As stated in the April 1996 Technical Report (working draft) titled - "Measures to minimize harm to *Lampsilis higginsii* [federally endangered Higgins Eye mussel] caused by passage of commercial navigation vessels in the upper Mississippi River" [prepared by the U.S. Army Corps of Engineers-Waterways Experiment Station]:

Relocation is one of several methods that can be used to protect freshwater mussels. Relocation can be used to recolonize areas where previous populations were extirpated, to remove mussels from proposed construction sites, to boost numbers of endangered species, or to protect against high densities of the zebra mussel (*Dreissena polymorpha*). The survival of relocated mussels is closely linked to habitat quality.

Relocation sites should have the same conditions of substratum type and stability, and water velocity as the original habitat. Research from the federally endangered Higgins Eye mussel (*Lampsilis higginsii*) recovery team, under the guidance of the United States Fish and Wildlife Service, has determined that minimal mortality (<12%) and high recovery rate (>88%) were shown when aerial exposure of mussels was less than four (4) hours and when relocations were conducted in spring or autumn when air (12-18 C) and water temperature (15-23 C) were moderate.

As per standard IDOT construction guidelines, construction personnel associated with the FAS 0130 (Big Timber Road) bridge over Tyler Creek (Kane County) project will implement sediment control and construction management measures to minimize the extent and duration of project related disturbance(s) to the Fox River watershed and any potential for direct/indirect impacts on mussels and/or mussel habitat. These measures may include, but are not limited to, the use of coffer dams, silt fencing, or other sediment control measures to limit downstream sedimentation during construction.

Again, KDOT will ensure that the contractor performing the work will implement erosion and sediment control best management practices (BMPs) in order to minimize siltation. Best management practices are described in detail in the Illinois Department of Transportation's Bureau of Design and Environment Manual Chapter 59 and IDOT's Standard Specifications for Road and Bridge Construction Section 280 and can be accessed through the IDOT website.

In addition, a Stormwater Pollution Prevention Plan will be included with the project plans regardless of whether or not this project requires NPDES documentation. IDOT's BDE Special Provision for 'National Pollutant Discharge Elimination System/Erosion Control Deficiency Deduction' will be included in the contract documents.

5. Any measures required under Section 5.5 of the Illinois Endangered Species Protection Act [520 ILCS 10/5.5 - 17 IL. Adm. Code Part 1080.40(b)], will be performed:

Additional measures are listed below under "Authorization." This authorization is, by definition, subject to those terms and conditions and official IDOT/KDOT signature(s) on this authorization indicates their commitment to performing those measures.

6. The public has received notice of the application and has had the opportunity to comment before the Department made any decision regarding the application:

IDOT and the Kane County Division of Transportation (KDOT) prepared a conservation plan as described by the Illinois Endangered Species Protection Act (520 ILCS 10/5.5). That plan and IDOT/KDOT's request for authorization for incidental take of slippershell mussels were received by the Illinois Department of Natural Resources (Department) on 27 April 2010. Public notice of IDOT/KDOT's request for authorization of incidental take of slippershell mussels was published in the Arlington Heights Daily Herald (Official State newspaper) and The Northwest Daily Herald (local circulation) on May 3, May 10, as well as on May 17, ~~2009~~<sup>2010</sup>. Public comments on IDOT/KDOT's conservation plan were accepted by the Department until June 16, 2010. No comments were received by the public during the period of May 3, 2010 through June 16, 2010.

#### Authorization

It is the determination of the Department that the measures to be implemented by IDOT and KDOT will adequately minimize and mitigate for the anticipated taking (relocation) of a small number of slippershell mussels due to the construction/replacement of the Big Timber Road (FAS 0130) bridge, over Tyler Creek, in Kane County, Illinois. Further, it is our opinion that the take (relocation) authorized herein would not diminish the likelihood of the survival of the slippershell mussel in the wild within the State of Illinois, the biotic community of which the species is a part or the habitat essential to the species' existence in Illinois.

Pursuant to Section 5.5 of the Illinois Endangered Species Protection Act [520 ILCS 10/5.5 - 17 IL. Adm. Code Part 1080.40(b)], this authorization is issued subject to the following additional terms and conditions:

1. This authorization is effective upon signature of the Department and shall remain in effect for a period of six (6) years after the official "project completion date". "Completion" shall be defined as the date the subject bridge is officially open for public use. This authorization is effective unless terminated pursuant to Section 5.5. of the Illinois Endangered Species Protection Act [520 ILCS 10/5.5 - 17 IL. Adm. Code Part 1080.80].

2. Prior to demolition/repair of the existing bridge and construction of the new Big Timber Road (FAS 0130) bridge, over Tyler Creek, in Kane County, Illinois, IDOT/KDOT shall conduct/facilitate, or cause to be conducted, a thorough survey of the reach of the affected portion of Tyler Creek that will be directly affected by construction activities and shall relocate any and all (listed or non-listed species) freshwater mussels found within the area that will be directly affected by the bridge replacement to suitable habitat preferably upstream of the project site. Handling of mussels shall be in compliance with any and all conditions and/or protocols included in the state and/or federal authorizations for this work. Relocated mussels shall be identified to species and enumerated. A report on the species and numbers of mussels relocated and the location(s) at which they were released shall be provided to the Department within 60 days of completion of the relocation.

3. IDOT/KDOT shall conduct/facilitate, or cause to be conducted, a thorough survey of both the construction area (within existing right-of-way) and the mussel relocation site(s) for freshwater mussels in the second (2<sup>nd</sup>) and fifth (5<sup>th</sup>) year following completion of bridge construction. "Completion" shall be defined as the date the subject bridge is officially open for public use. For example, if the FAS 0130/ Big Timber Road over Tyler Creek bridge is completed in 2011, these surveys shall be conducted in 2013 and 2016. Freshwater mussels located within the construction right-of-way and relocation site(s) shall be identified to species and enumerated and the length of each mussel shall be measured to the nearest millimeter. Handling of mussels shall be in compliance with any and all conditions and/or protocols included in the state and/or federal authorizations for this work. A report on the species, numbers, and sizes of mussels found shall be provided to the Department within 60 days of the completion of each survey. Each report shall also include a qualitative evaluation of the habitat for freshwater mussels being provided by the construction right-of-way area and the relocation site(s) and the manner in which that habitat has changed since the previous survey.

4. All mussels encountered within the State of Illinois during this project shall be subject to the general U.S. Fish and Wildlife Service handling protocol for determining presence/absence of species as found in "Section H" of the attached Federal Fish and Wildlife document.

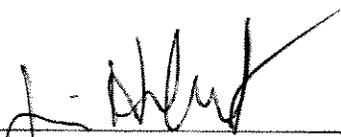
5. Specified erosion and sediment control practices in the Stormwater Pollution Prevention Plan for this project (FAS 0130/Big Timber Road - Kane County, IL.) shall be implemented. Inspections to ensure proper working order and maintenance of practices shall be made daily by the engineering staff with the Kane County Division of Transportation (KDOT). Additional inspections will be made immediately prior to and following events of heavy rain (greater than 0.5") for the area as indicated in the project specific Stormwater Pollution Prevention Plan. If through daily monitoring, eroded soil is observed leaving the jobsite or limits of construction, additional soil conserving practices, including those not included in the Stormwater Pollution Prevention Plan, shall be installed in order to minimize soil erosion.

6. The effective period of this authorization may be altered by mutual agreement between IDOT/KDOT and the Department.

7. This authorization may be revoked pursuant to Section 5.5 of the Act if the Department finds that IDOT/KDOT has failed to comply with any of these terms and conditions or has been responsible for the take of any slippershell mussels beyond that which is incidental to the construction/replacement of the Big Timber Road (FAS 0130) bridge, over Tyler Creek, in Kane County, Illinois.

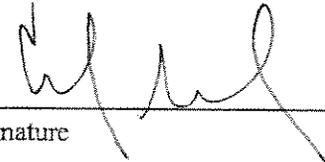
8. The IDOT/KDOT official identified below is authorized to execute this agreement. Execution by IDOT/KDOT indicates acceptance of all terms and conditions described in this document.

For the IL. Department of Natural Resources

  
\_\_\_\_\_  
Dr. Jim Herkert, Office Director  
IDNR, Office of Resource Conservation

3-18-11  
\_\_\_\_\_  
Date Signed

For the IL. Department of Transportation and/or  
the Kane County Division of Transportation

  
\_\_\_\_\_  
Signature

CARL SCHAEDEL  
COUNTY ENGINEER  
\_\_\_\_\_  
Please print name and official title

NOVEMBER 23, 2010  
\_\_\_\_\_  
Date Signed

