

### **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)/Winnebago County Highway Department's (WCHD) authorization for the incidental take of the State threatened black sandshell mussel (*Ligumia recta*) in Winnebago County, Illinois (as described/shown in the conservation plan received by the Department on 19 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 improvements/replacement of the Kishwaukee Road (CH3) bridge, over the Kishwaukee River, in Winnebago County, Illinois.

#### Procedural History

IDOT and the Winnebago County Highway Department (WCHD) prepared a conservation plan as described by the Illinois Endangered Species Protection Act (520 ILCS 10/5.5). That plan and IDOT/WCHD's request for authorization for incidental take of black sandshell mussels were received by the Illinois Department of Natural Resources (Department) on 19 April 2010. Public notice of IDOT/WCHD's request for authorization of incidental take of black sandshell mussels was published in the Arlington Heights Daily Herald (Official State newspaper) and The Rockford Register Star on April 26, May 3, and May 10, 2010. Public comments on IDOT/WCHD's conservation plan were accepted by the Department until June 10, 2010. No comments were received by the public during the period of April 26, 2010 through June 10, 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:

This bridge construction project is located in the northeast quarter of the southwest quarter of Section 21, Township 43 North, Range 1 East of the Third Principal Meridian. The project is located within the road right-of-way of County Highway (CH) 3, Kishwaukee Road in the South West corner of the City of Rockford limits in Winnebago County.

The coordinates of the bridge are: latitude 42D 11M 06.48S, longitude 89D 07M 50.04S

The proposed improvements involve the removal and replacement of a structurally deficient bridge with a sufficiency rating of 38.8. The existing four-span bridge will be replaced with a three-span plate girder bridge on wall piers and abutments at the same location, which will require the removal of the three existing piers and the placement of two piers. The bridge and roadway are under the jurisdiction of Winnebago County. *Federal funding will be used for the project.*

The proposed work within the stream channel includes removal of the existing structure, driving of piles for the piers, and placement of rip-rap at the abutments. Temporary work will consist of cofferdams to control water inflow during construction around the piers. After completion of the in-stream activities, any temporary work will be removed and the area will be seeded and restored to its original configuration.

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

The Winnebago County Highway Department (WCHD) 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. The Winnebago County Highway Department, as directed by the Illinois Department of Transportation, exclusively abides by the National Environmental Policy Act 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/WCHD, and received by the Department on 19 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/early fall 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.

OVERALL: All mussels (listed and non-listed), including black sandshell mussels, will be moved from the areas within the construction limits to suitable habitat in the adjacent stream channel. This should prevent the mussels from being affected by construction activity. Erosion and siltation has the greatest potential to harm the remaining mussels downstream from the work site. The Resident Engineer, acting as the Winnebago County's agent, will be responsible to monitor all activities of the Contractor, including compliance with the special provisions regarding mitigation and the use of best management practices (BMP's) to minimize erosion and siltation. National Pollutant Discharge Elimination System (NPDES) documentation will be included regardless whether or not this project requires an NPDES permit. This will include a storm water pollution prevention plan (SWPPP), contractor certification statement, weekly inspections of BMP's and the reporting of incidents of non-compliance.

The Illinois Department of Transportation's Bureau of Design and Environment (BDE) Special Provisions entitled "National Pollutant Discharge Elimination System/Erosion and Sediment Control Deficiency Deduction" and "Temporary Erosion Control" will be included in the contract documents. Regular inspections to ensure proper working order and maintenance of BMP's will be made weekly by the Resident Engineer. Additional inspections will be made right after heavy rain events as indicated in the SWPPP. Additional soil conserving practices, including those not in the SWPPP, will be implemented if eroded soil is noted to be leaving the jobsite of construction limits. Also, to further minimize project impacts, a temporary run-around has been eliminated from consideration. Kishwaukee Road will be closed and traffic will be diverted to other nearby roads.

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

This project is authorized by the Illinois Department of Transportation (IDOT), who oversees the use of state-distributed funding among local agencies. In an official correspondence to the IDNR (Department) dated 19 April 2010, IDOT verified that adequate funding exists to support and implement all (mitigation) activities described in the official Conservation Plan. The project estimated budget includes funding for design and implementation of erosion control and sedimentation measures. Additional soil conserving practices and measures, not included in the initial construction contract, will be implemented by change order or force account. By law, the erosion and sediment control plan must be in place for the life of the project. *Federal funding will be used for 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:

The area of the work zone has been minimized to reduce the impact to the mussel habitat. The total area is approximately 18,000 square feet (approximately 0.4 acres). The length of impact along the stream channel will be 150 linear feet and construction activity will be limited to the existing right of way, 75 feet on either side of the road centerline. The amount of habitat affected is equal to the area required to complete the in-stream portion of the work.

Similar habitat is located both upstream and downstream of the work area including the Rock River which is immediately downstream. The streambed and habitats will be controlled by natural processes, namely flooding, after the work activities are completed. Mussels should move back into the area over time since measures will be taken to minimize substrate disturbances in the area around the bridge.

Construction improvements/replacement of the Kishwaukee River (CH3) bridge, over the Kishwaukee River, in Winnebago 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 (*Alasmidonta viridis*) were collected.

In North America, the slippershell mussel (*Alasmidonta 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 improvements/replacement of the Kishwaukee Road (CH3) bridge, over the Kishwaukee River, in Winnebago 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 Kishwaukee Road (CH3) bridge project will implement sediment control and construction management measures to minimize the extent and duration of project related disturbance(s) to the Kishwaukee 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, the Winnebago County Highway Department 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/WCHD 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 Winnebago County Highway Department (WCHD) prepared a conservation plan as described by the Illinois Endangered Species Protection Act (520 ILCS 10/5.5). That plan and IDOT/WCHD's request for authorization for incidental take of black sandshell mussels were received by the Illinois Department of Natural Resources (Department) on 19 April 2010. Public notice of IDOT/WCHD's request for authorization of incidental take of black sandshell mussels was published in the Arlington Heights Daily Herald (Official State newspaper) and The Rockford Register Star on April 26, May 3, and May 10, 2010. Public comments on IDOT/WCHD's conservation plan were accepted by the Department until June 10, 2010. No comments were received by the public during the period of April 26, 2010 through June 10, 2010.

## Authorization

It is the determination of the Department that the measures to be implemented by IDOT and the WCHD will most likely adequately minimize and mitigate for the anticipated taking (relocation) of a small number of black sandshell mussels due to the construction and repair/replacement of the Kishwaukee Road (CH3) bridge, over the Kishwaukee River, in Winnebago County, Illinois. Further, it is our opinion that the take (relocation) authorized herein would not diminish the likelihood of the survival of the black sandshell 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.

The Illinois Department of Natural Resources has determined that this authorized take is incidental to the construction improvements/replacement

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 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 Kishwaukee Road (CH3) bridge, over the Kishwaukee River, in Winnebago County, Illinois, IDOT/WCHD shall conduct/facilitate, or cause to be conducted, a thorough survey of the reach of the affected Kishwaukee River 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/WCHD 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 (2nd) and fifth (5<sup>th</sup>) year following completion of bridge construction. "Completion" shall be defined as the date the bridge is officially open for public use. For example, if the Kishwaukee Road (CH3) bridge is completed in 2010, these surveys shall be conducted in 2012 and 2015. 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.

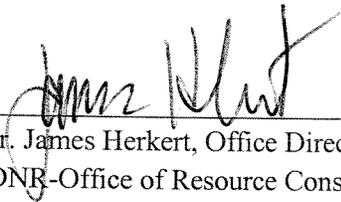
5. Specified erosion and sediment control practices in the Stormwater Pollution Prevention Plan for this project (Kishwaukee Road (CH3) bridge, over the Kishwaukee River, in Winnebago County, Illinois) shall be implemented. Inspections to ensure proper working order and maintenance of practices shall be made daily by the engineering staff with the Winnebago County Highway Department (WCHD). 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/WCHD and the Department.

7. This authorization may be revoked pursuant to Section 5.5 of the Act if the Department finds that IDOT/WCHD has failed to comply with any of these terms and conditions or has been responsible for the take of any black sandshell mussels (or any other State listed species) beyond that which is incidental to the construction and repair/replacement of the Kishwaukee Road (CH3) bridge, over the Kishwaukee River, in Winnebago County, Illinois.

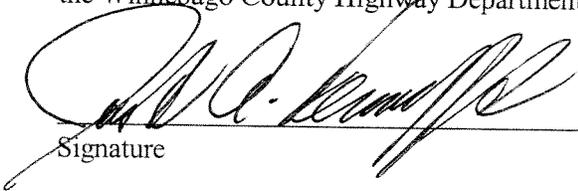
8. The IDOT/WCHD official identified below is authorized to execute this agreement. Execution by IDOT/WCHD indicates acceptance of all terms and conditions described in this document.

For the IL. Department of Natural Resources

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

9-17-10  
\_\_\_\_\_  
Date Signed

For the IL. Department of Transportation and/or  
the Winnebago County Highway Department

  
\_\_\_\_\_  
Signature

Joseph H. Vanderwerff Sr  
Please print name and official title County Engineer

09/08/10  
\_\_\_\_\_  
Date Signed

